SIEMENS

System variable manual 1

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SINUMERIK 840D sl/840Di sl
SINUMERIK 840D/840Di/810D

List of System Variables

Parameter Manual

Valid for

Control

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11/2006 Edition

SINUMERIK® Documentation

Printing history

Brief details of this edition and previous editions are listed below.

The status of each edition is shown by the code in the "Remarks" column.

Status codes in the "Remarks" column.

A .... New documentation.

B .... Unrevised reprint with new Order No.

C .... Revised edition with new status.

Edition	Order-No.	Remarks
03.04	6FC5298-7AE10-0BP0	**A**
10.04	6FC5298-7AE10-0BP1	**C**
04.05	6FC5298-7AE10-0BP2	**C**
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Preface

Structure of the documentation

The SINUMERIK documentation is organized in 3 parts:

- General documentation
- User documentation
- Manufacturer/service documentation

An overview of publications (updated monthly) indicating the language versions available can be found on the Internet at:

http://www.siemens.com/motioncontrol
Select "Support" -> "Technical Documentation" ->"Overview of Publications"

The Internet version of the DOConCD (DOConWEB) is available at:
http://www.automation.siemens.com/doconweb

Information about training courses and FAQs (Frequently Asked Questions) can be found at the following web site:

http://www.siemens.com/motioncontrol under menu option "Support"

Target group

This documentation is intended for project engineers, commissioning engineers, machine operators, service and maintenance personnel.

Benefits

The Parameter Manual enables the intended target group to evaluate error and fault indications and to respond accordingly.

With the help of the Parameter Manual, the target group has an overview of the various diagnostic options and diagnostic tools.

Standard version

This Parameter Manual only describes the functionality of the standard version. Extensions or changes made by the machine tool manufacturer are documented by the machine tool manufacturer.

Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

Further, for the sake of simplicity, this documentation does not contain all detailed information about all types of the product and cannot cover every conceivable case of installation, operation or maintenance.

Technical Support

If you have any questions, please get in touch with our Hotline:f

	Europe / Africa	Asia / Australia	America
Phone	+49 180 5050 - 222	+86 1064 719 990	+1 423 262 2522
Fax	+49 180 5050 - 223	+86 1064 747 474	+1 423 262 2289
Internet	http://www.siemens.de/automation/support-request		
E-mail	mailto:adsupport@siemens.com		

Note

Country telephone numbers for technical support are provided under the following Internet address:

http://www.siemens.com/automation/service&support

Questions about the documentation

If you have any queries (suggestions, corrections) in relation to this documentation, please fax or e-mail us:

Fax	+49 9131 98 - 63315
E-Mail	mailto:docu.motioncontrol@siemens.com

Fax form: See the reply form at the end of the document.

SINUMERIK Internet address

http://www.siemens.com/sinumerik

Objective

The Parameter Manual is intended for programmers. This manual uses the same data source as the relevant software version. A new List of System Variables manual is delivered with the new software versions.

EC declaration of conformity

The EC Declaration of Conformity for the EMC Directive can be found/obtained

"on the Internet:

http://support.automation.siemens.com

under product/order no. 15257461

"at the relevant regional office of the Siemens AG division A&D MC.

Safety Instructions

This Manual contains information which you should carefully observe to ensure your own personal safety and the prevention of material damage. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring to property damage only have no safety alert symbol The warnings appear in decreasing order of risk as given below.

Danger

Indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury or in substantial property damage.

t

Warning

Indicates that death or severe personal injury will result if proper precautions are not taken.

Caution

with a warning triangle indicates that minor personal injury can result if proper precautions are not taken.

Caution

without a warning triangle indicates that property damage **can** result if proper precautions are not taken.

Notice

indicates a potential situation which, if not avoided, **may** result in an undesirable event or state.

If several hazards of different degrees occur, the hazard with the highest degree must always be given priority. A warning notice accompanied by a safety alert symbol indicating a risk of bodily injury can also indicate a risk of property damage.

Qualified Personnel

The associated device/system may only be set up and operated using this documentation. Commissioning and operation of a device/system may only be performed by qualified personnel. Qualified persons are defined as persons who are authorized to commission, to ground, and to tag circuits, equipment, and systems in accordance with established safety practices and standards.

Content

System variable manual 1

1.1 List of system variables

Properties of system variables

You will find the information below in the table entries of the system variables:

1st line: Data type, identifier, in some cases with index 1, index 2, short name (may not be defined as yet), reference to literature

2nd line: Description

3rd line: Description of field limits [index 1, index 2]

4th line: Axes, NCK version number for introduction of system variables

5th line: Unit, minimum value, maximum value

6th line: Headings of properties with the entries listed below:

- Preprocessing: Update is performed during preprocessing
- Main run: Update is performed during main run
- PreProc stop: Preprocessing stop
- MR sync: Main run synchronization
- PP: Use in part program possible
- SA: Use in synchronized actions possible
- OPI: Access possible via operator panel interface
- OEM: Access possible from OEM compile cycles
- Level: Access level required for writing system variables

7th line: read: read properties; possible if X is set

8th line: write: write properties; possible if X is set

9th line: Headings of properties with the entries listed below:

- Attributes
- Global (refers to all channels)
- Block search
- Link

10th line: Values of attributes

1.1.1 Arrangement of system variable information

Type	**Identifier[Field limit 1,Field limit 2]**							description:	Reference to literature
description: Description lines ...									
description of field limits: Description of field limit 1 Description of field limit 2									
axis identifier:	Axis type 1 Axis type 2, ...				NCK version:		Version		
unit:	Unit	min.:	Minimum value			max.:	Maximum value		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X	X		X	X	X	X	Access level
attributes:	global	block search				link				
	X	Search run condition				Link condition				

1.1.2 R parameters

DOUBLE	**R[n]**							description:	
description: Array variable Rn or R[n] is an arithmetic variable of type Real and is user-definable. Rn or R[n] is used to program the variable in the part program. $Rn or $R[n] is used to program the variable in a synchronized action. The arithmetic variables are stored in SRAM and can be read in and out using the data backup feature.									
description of field limits: The maximum number of R variables is defined in $MC_MM_NUM_R_PARAM.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

1.1.3 Channel-specific synchronized action variables

INT	**$AC_MARKER[n]**							description:	
description: Array variable $AC_MARKER[n] is used to store application-related integer arithmetic results. The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_MARKER. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.									
description of field limits: The dimension is defined in MD $MC_MM_NUM_AC_MARKER.									
axis identifier:					NCK version:		43.02.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AC_SYSTEM_MARKER[n]**							description:	
description: Array variable $AC_SYSTEM_MARKER[n] is used to store application-related integer arithmetic results. The variable is reserved for SIEMENS applications. The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_MARKER. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.									
description of field limits: The dimension is defined in MD $MC_MM_NUM_AC_SYSTEM_MARKER.									
axis identifier:					NCK version:		46.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_PARAM[n]**							description:	
description: Array variable $AC_PARAM[n] is used to store application-related Real arithmetic results. The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_PARAM. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.									
description of field limits: The dimension is defined in MD $MC_MM_NUM_AC_PARAM.									
axis identifier:					NCK version:		43.02.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_SYSTEM_PARAM[n]**							description:	
description: Array variable $AC_SYSTEM_PARAM[n] is used to store application-related Real arithmetic results. The variable is reserved for SIEMENS applications. The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_PARAM. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.									
description of field limits: The dimension is defined in MD $MC_MM_NUM_AC_SYSTEM_PARAM.									
axis identifier:					NCK version:		46.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.4 Frames

FRAME	**$P_UIFR[n]**						description:		
description: Array variable $P_UIFR[n] is used to program settable data management frames. G500, G54 .. G599 can be used to activate the corresponding data management frame. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
description of field limits: $MC_MM_NUM_USER_FRAMES is used to program the number of settable frames.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR[n]**						description:		
description: Array variable $P_CHBFR[n] is used to program channel-specific basic frames in the data management system. G500, G54 .. G599 can be used to activate the data management frames. All active basic frames are chained together to produce the overall basic frame $P_ACTBFRAME. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
description of field limits: $MC_MM_NUM_BASE_FRAMES is used to program the number of channel basic frames.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_SETFR**								description:	
description:										
Variable $P_SETFR is used to program the system frame in the data management system for preset actual value memory and scratching. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_EXTFR**								description:	
description:										
Variable $P_EXTFR is used to program the system frame in the data management system for the external work offset. This frame is activated by the PLC. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 1 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_PARTFR**							description:	
description:									
Variable $P_PARTFR is used to program the system frame in the data management system for TCARR and PAROT. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_TOOLFR**							description:	
description:									
Variable $P_TOOLFR is used to program the system frame in the data management system for TOROT and TOFRAME. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_WPFR**						description:		
description:									
Variable $P_WPFR is used to program the system frame in the data management system for workpiece reference points. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 4 in $MC_CHSFRAME_RESET_CLEAR_MASK.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	44.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CYCFR**						description:		
description:									
Variable $P_CYCFR is used to program the system frame in the data management system for cycles. This frame should only be manipulated and activated by cycles. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 5 in $MC_CHSFRAME_RESET_CLEAR_MASK.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	44.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_TRAFR**							description:		
description:										
Variable $P_TRAFR is used to program the system frame in the data management system for transformations. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		50.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ISO1FR**							description:		
description:										
Variable $P_ISO1FR is used to program the system frame in the data management for the ISO G code G51.1 mirroring.This frame should only be manipulated and activated via the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On reset, the system frame can be deleted via the configuration of bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ISO2FR**								description:	
description: Variable $P_ISO2FR is used to program the system frame in the data management for the ISO G68 2DROT.This frame should only be manipulated and activated via the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On reset, the system frame can be deleted via the configuration of bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ISO3FR**								description:	
description: Variable $P_ISO3FR is used to program the system frame in the data management for the ISO G68 3DROT.This frame should only be manipulated and activated via the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On reset, the system frame can be deleted via the configuration of bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ISO4FR**							description:		
description:										
Variable $P_ISO4FR is used to program the system frame in the data management for the ISO G code G51 Scale.This frame should only be manipulated and activated via the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On reset, the system frame can be deleted via the configuration of bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFR[n]**							description:		
description:										
Array variable $P_NCBFR[n] is used to program global basic frames in the data management system. G500, G54 .. G599 can be used to activate the data management frames. All active basic frames are chained together to produce the overall basic frame $P_ACTBFRAME. The data management frames are stored in SRAM and can be read in and out using the data backup feature.										
description of field limits:										
$MN_MM_NUM_GLOBAL_BASE_FRAMES is used to program the number of NCU basic frames.										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		16.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_UBFR**							description:	
description:									
Variable $P_UBFR is used to program the 1st basic frame in the data management system. G500, G54 .. G599 can be used to activate the corresponding data management frame. The data management frames are stored in SRAM and can be read in and out using the data backup feature. $P_UBFR is equivalent to $P_CHBFR[0]. Application: $P_UBFR = ctrans(x,10) : crot(z,45) $P_UBFR[y,tr] = 5									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		13.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_SETFRAME**							description:	
description:									
Variable $P_SETFRAME is used to program the active system frame for preset actual value memory and scratching. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit0 in $MC_CHSFRAME_RESET_MASK									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_EXTFRAME**								description:	
description:										
Variable $P_EXTFRAME is used to program the active system frame for the external work offset. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit1 in $MC_CHSFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_PARTFRAME**								description:	
description:										
Variable $P_PARTFRAME determines the active system frame for TCARR and PAROT. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[51] $MC_GCODE_RESET_VALUES[51]										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_TOOLFRAME**								description:	
description:										
Variable $P_TOOLFRAME determines the active system frame for TOROT and TOFRAME. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[52] $MC_GCODE_RESET_VALUES[52]										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		41.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_WPFRAME**								description:	
description:										
Variable $P_WPFRAME is used to program the active system frame for workpiece reference points. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit4 in $MC_CHSFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		44.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CYCFRAME**							description:	
description:									
Variable $P_CYCFRAME is used to program the active system frame for cycles. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit5 in $MC_CHSFRAME_RESET_MASK									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		44.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_TRAFRAME**							description:	
description:									
Variable $P_TRAFRAME is used to program the active system frame for transformations. This system frame is configured as follows when a transformation is selected with TRANSMIT or TRACYL: $MN_FRAME_GEOAX_CHANGE_MODE = 1 oder 2 $MC_TRANSMIT_ROT_AX_FRAME_1 = 2 $MC_TRANSMIT_ROT_AX_FRAME_2 = 2 $MC_TRACYL_ROT_AX_FRAME_1 = 2 $MC_TRACYL_ROT_AX_FRAME_2 = 2									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		50.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CHBFRAME[n]**							description:	
description:									
Array variable $P_CHBFRAME[n] is used to program the nth active basic frame in the channel. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MC_CHBFRAME_RESET_MASK									
description of field limits:									
The dimension is defined in $MC_MM_NUM_BASE_FRAMES.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		16.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME[n]**							description:	
description:									
Array variable $P_NCBFRAME[n] is used to program the nth active global basic frame. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MN_NCBFRAME_RESET_MASK									
description of field limits:									
The dimension is defined in $MN_MM_NUM_GLOBAL_BASE_FRAMES.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		16.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_ACTBFRAME**							description:		
description:										
Variable $P_ACTBFRAME determines the active chained overall basic frame. This frame is produced by chaining together all valid (see $P_NCBFRMASK) global basic frames and all valid (see $P_CHBFRMASK) basic frames in the channel. The overall basic frame is always recalculated when a basic frame is activated. On a Reset, the activation of the basic frames depend on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MN_NCBFRAME_RESET_MASK $MC_CHBFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		16.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_BFRAME**							description:		
description:										
Variable $P_BFRAME is used to program the 1st active basic frame in the channel. The variable is equivalent to $P_CHBFRAME[0]. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MC_CHBFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		13.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_IFRAME**						description:	
description:								
Variable $P_IFRAME is used to program the active settable frame. A settable data management frame $P_UIFR[n] becomes the active settable frame on execution of G500, G54 to G599. On a Reset, the activation of the settable frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[7] $MC_GCODE_RESET_VALUES[7]								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_PFRAME**						description:	
description:								
Variable $P_PFRAME is used to program the active programmable frame. The programmable frame is retained on a Reset when the following setting is configured: $MC_PFRAME_RESET_MODE = 1								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_ACTFRAME**							description:	
description:									
The variable $P_ACTFRAME determines the active chained total frame. The active total frame is calculated using the following formula: $P_ACTFRAME = $P_PARTFRAME : $P_SETFRAME : $P_EXTFRAME : $P_ISO1FRAME : $P_ISO2FRAME : $P_ISO3FRAME : $P_ACTBFRAME : $P_IFRAME : $P_TOOLFRAME : $P_WPFRAME : $P_TRAFRAME : $P_PFRAME : $P_ISO4FRAME : $P_CYCFRAME The total frame is recalculated each time a frame belonging to the frame chain is activated and upon a reset.									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		06.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_UIFRNUM**							description:	
description:									
Variable $P_UIFRNUM is used to determine the number of the active settable frame. A settable data management frame $P_UIFR[n] becomes the active settable frame on execution of G500, G54 to G599. G500: $P_UIFRNUM = 0 G54: $P_UIFRNUM = 1 G599: $P_UIFRNUM = 99 On a Reset, the activation of the settable frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[7] $MC_GCODE_RESET_VALUES[7]									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	99	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_NCBFRMASK**						description:		
description:									
Variable $P_NCBFRMASK is used to define the NCU-global basic frame included in the calculation of the overall basic frame $P_ACTBFRAME. The variable is implemented in the form of a bit mask in which the global basic frames can be selected. On a Reset, the mask is initialized by $MN_NCBFRAME_RESET_MASK.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:	0			max.:	0xFFFF		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_CHBFRMASK**						description:		
description:									
Variable $P_CHBFRMASK is used to define the channel-specific basic frame included in the calculation of the overall basic frame $P_ACTBFRAME. The variable is implemented in the form of a bit mask in which the basic frames can be selected. On a Reset, the mask is initialized by $MC_CHBFRAME_RESET_MASK.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:	0			max.:	0xFFFF		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_CHSFRMASK**						description:		
description:									
Variable $P_CHSFRMASK is used to define the channel-specific system frame included in the calculation of the overall frame $P_ACTFRAME. The variable is implemented in the form of a bit mask in which the system frames can be selected. On a Reset, the mask is initialized by $MC_CHSFRAME_RESET_MASK.									
axis identifier:					NCK version:		51.03.00		
unit:	-	min.:	0			max.:	0x7FF		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$P_AD[34]**							description:	
description: $P_AD[n] Active tool offsets n: Parameter numbers 1 - 31 n = 1-25 $TC_DP1 to $TC_DP25 n = 26 $TC_DPCE n = 27 $TC_DPH n = 28 $TC_DPV n = 29 $TC_DPV3 n = 30 $TC_DPV4 n = 31 $TC_DPV5									
description of field limits: n: Parameter numbers 1 - 31									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**$P_ADT[34]**							description:	
description: $P_AD[n] Active tool offsets transformed n: Parameter numbers 1 - 31 n = 1-25 $TC_DP1 to $TC_DP25 n = 26 $TC_DPCE n = 27 $TC_DPH n = 28 $TC_DPV n = 29 $TC_DPV3 n = 30 $TC_DPV4 n = 31 $TC_DPV5									
description of field limits: n: Parameter numbers 1 - 31									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**$P_DLNO**						description:	
description:								
$P_DLNO Active additive offset number DL=0 - DL='max.'; 'max'= value of $MN_MM_MAX_SUMCORR_PER_CUTTEDGE								
axis identifier:				NCK version:		20.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TOOL**						description:	
description:								
$P_TOOL Active tool cutting edge D0 - D'max.'; 'max'= value of $MN_MM_MAX_CUTTING_EDGE_NO								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TOOLNO**						description:	
description:								
$P_TOOLNO Active tool number T0 - T32000; T can be an 8-digit number when 'flat D number' function is active This command should not generally be used when magazine management is active. When magazine management is active, GETEXET should be used instead. (T number programming always works reliably when $MC_CUTTING_EDGE_DEFAULT=-1, or> 0. In cases where $MC_CUTTING_EDGE_DEFAULT=0, or =-2, T number read errors can occur. The T number mechanism is also reliable if it is programmed after D> 0. Notice: Particularly with a setting of $MC_CUTTING_EDGE_DEFAULT=-2, $P_TOOLNO (the T no. of the active tool with which the currently active D offset has been calculated) and GETEXET (the changed tool) can return different T numbers. ->see also $P_MTHSDC and the documentation relating to the subject of multiple toolholders/spindles.								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:	32000		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TOOLP**						description:	
description:								
$P_TOOLP Last programmed tool number T0 - T32000 (in operation without magazine management). This command cannot be used when magazine management is active. When magazine management is active, GETSELT must be used instead. If the function 'T alarm delay after M06' is active, the result T number = -1 if the preceding T address has been programmed incorrectly.								
axis identifier:					NCK version:		20.00.00	
unit:	-	min.:				max.:	32000	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

DOUBLE	**$P_TOOLL[3]**						description:	
description:								
$P_TOOLL[n] Active tool total length								
description of field limits:								
n: Length 1 - 3								
axis identifier:					NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$P_TOOLO[3]**						description:	
description:								
$P_TOOLO[n] Active tool orientation								
description of field limits:								
n: Components 1 - 3								
axis identifier:					NCK version:		44.00.00	
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AC_TOOLO_ACT[3]**						description:	
description: $AC_TOOLO_ACT[n] Active command orientation								
description of field limits: n: Components 1 - 3								
axis identifier:				NCK version:	51.00.00			
unit:	-	min.:	-1.0		max.:	1.0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AC_TOOLO_END[3]**						description:	
description: $AC_TOOLO_END[n] End orientation of active block								
description of field limits: n: Components 1 - 3								
axis identifier:				NCK version:	51.00.00			
unit:	-	min.:	-1.0		max.:	1.0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AC_TOOLO_DIFF**						description:	
description: $AC_TOOLO_DIFF Remaining angle of tool orientation in active block								
axis identifier:				NCK version:	51.00.00			
unit:	deg.	min.:	0.0		max.:	360.0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$VC_TOOLO[3]**						description:	
description: $VC_TOOLO[n] Actual orientation								
description of field limits: n: Components 1 - 3								
axis identifier:				NCK version:	51.00.00			
unit:	-	min.:	-1.0		max.:	1.0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$VC_TOOLO_DIFF**						description:	
description: $VC_TOOLO_DIFF Angle between command and actual orientation								
axis identifier:				NCK version:	51.00.00			
unit:	deg.	min.:	0.0		max.:	180.0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$VC_TOOLO_STAT**						description:	
description: $VC_TOOLO_STAT Status of calculation of actual orientation								
axis identifier:				NCK version:	51.00.00			
unit:	-	min.:	-1		max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TC**						description:	
description: $P_TC Active toolholder								
axis identifier:				NCK version:		20.00.00		
unit:	-	min.:			max.:	99999999		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$AC_TC**						description:	
description: $AC_TC Active toolholder								
axis identifier:				NCK version:		49.00.00		
unit:	-	min.:			max.:	99999999		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TCNUM**						description:	
description: $P_TCNUM Number of available toolholders in the channel								
axis identifier:				NCK version:		52.00.00		
unit:	-	min.:			max.:	99999999		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$P_TCANG[2]**						description:	
description: $P_TCANG[n] Active angle of a toolholder axis								
description of field limits: n: Angle 1 - 2								
axis identifier:				NCK version:	16.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$P_TCDIFF[2]**						description:	
description: $P_TCDIFF[n] Difference between calculated and used angle of a toolholder axis with angle incrementation (Hirth tooth system)								
description of field limits: n: Angle 1 - 2								
axis identifier:				NCK version:	20.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TCSOL**						description:	
description: $P_TCSOL Number of solutions when angle of axis of rotation of an orientatable toolholder is defined from a frame In the case of 0 to 2 solutions, the relevant value is returned. The return value is 3 when the number of solutions is infinite. If the angles are specified (TCOABS), the number of solutions is always 1.								
axis identifier:				NCK version:	43.00.00			
unit:	-	min.:			max.:	3		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TCSTAT**							description:	
description: $P_TCSTAT Specifies the status of an orientatable toolholder. The variable is bit-coded with the following bit meanings: 0x1 The first axis of rotation exists 0x2 The second axis of rotation exists 0x4 The angles used in the calculation are acquired from an orientation in the frame direction 0x8 The angles used in the calculation have been specified absolutely 0x10 The polar axis angle is uncertain with the toolholder orientated in the frame direction 0x1000 Only the tool is rotatable (kinematic type T) 0x2000 Only the workpiece is rotatable (kinetmatic type P) 0x4000 Tool and workpiece are rotatable (kinematic type M) The bits specified here are not currently assigned.									
axis identifier:						NCK version:		49.00.00	
unit:	-	min.:					max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$P_TOOLR**							description:	
description: $P_TOOLR Active tool radius (total)									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLND[32000]**						description:	
description: $P_TOOLND[t] Number of tool edges of tool t								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

BOOL	**$P_TOOLEXIST[32000]**						description:	
description: $P_TOOLEXIST[t] Does the tool with T no. t exist								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$P_D**						description:	
description: $P_D Programmed D number in ISO_2 language mode The D number is the tool offset number in ISO mode 2 (millling). If no tool offset is active, the value 0 is output. The tool offset can be selected with D or H. However, this variable only ever contains the D value.								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$P_H**						description:	
description: $P_H Programmed H number in ISO_2 language mode The H number is the tool offset number in ISO mode 2 (millling). If no tool offset is active, the value 0 is output. The tool offset can be selected with D or H. However, this variable only ever contains the H value.								
axis identifier:					NCK version:	18.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$A_TOOLMN[32000]**						description:	
description: $A_TOOLMN[t] Magazine number of tool t								
description of field limits: t: T number 1 - 32000								
axis identifier:					NCK version:	13.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$A_TOOLMLN[32000]**						description:	
description: $A_TOOLMLN[t] Magazine location number of tool t								
description of field limits: t: T number 1 - 32000								
axis identifier:					NCK version:	13.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$A_MYMN[32000]**						description:	
description: $A_MYMN[t] Number of home magazine of tool with T no. t. (A magazine becomes the home magazine of the tool if the tool is being loaded onto a magazine location of kind 1 ($TC_MPP1=1).) Resulting value = 0 = tool is not loaded (if $A_TOOLMN> 0, then manual tool). Resulting value = -1 = tool management is not active Resulting value = -2 = tool with T no. t does not exist.								
description of field limits: t: T number 1 - 32000								
axis identifier:					NCK version:	41.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$A_MYMLN[32000]**						description:	
description: $A_MYMLN[t] Number of the home magazine location of the tool with T no. t. (A magazine location becomes the home magazine location of a tool if the tool is being loaded onto a magazine location of kind 1 ($TC_MPP1=1).) Resulting value = 0 = tool is not loaded (if $A_TOOLMLN> 0, then manual tool). Resulting value = -1 = tool management is not active Resulting value = -2 = tool with T no. t does not exist.								
description of field limits: t: T number 1 - 32000								
axis identifier:					NCK version:	41.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$A_MONIFACT**							description:	
description:									
$A_MONIFACT Factor for tool life monitoring									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLNG**							description:	
description:									
$P_TOOLNG Number of defined tool groups assigned to the channel OPI block type= TM									
axis identifier:					NCK version:		42.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX]		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLNT**							description:	
description:									
$P_TOOLNT Number of defined tools assigned to the channel OPI block type= TV									
axis identifier:					NCK version:		42.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX]		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLT[600]**						description:	
description: $P_TOOLT[i] ith tool number T OPI block type= TV								
description of field limits: i= 1,..., $P_TOOLNT								
axis identifier:				NCK version:	42.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX]		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_TOOLD[32000,12]**						description:	
description: $P_TOOLD[t,i] ith D no. of tool with T no. t; i=1,2... If t is the value of an undefined tool, -2 is returned If i is a value outside the permissible range, 0 is returned OPI block type= TO								
description of field limits: t = 1, ..., 32000 i = 1,....., $P_TOOLND								
axis identifier:				NCK version:	42.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX]		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_USEKT**							description:	
description: $P_USEKT (= USE Kind of Tool) Is a bit-coded value All tools whose parameter $TC_TP11 has set one of the bits of $P_USEKT are available for the following tool changes. The value 'zero' has the equivalent content of 'all bits are set' OPI block= C/S									
axis identifier:						NCK version:		43.00.00	
unit:	-	min.:	INT_MIN				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLNDL[32000,32000]**							description:	
description: $P_TOOLNDL[t,d] Number of DL offsets of D offset specified by T no. t and D no. d >0 Number of DL offsets 0No DL offset for this D offset -1Additive offset function not active -2t is the value of an undefined tool -3 d is the value of an undefined D offset OPI block type= TOS; TOE									
description of field limits: t = 1, ..., 32000 d = 1,....., 32000									
axis identifier:						NCK version:		43.00.00	
unit:	-	min.:	INT_MIN				max.:	INT_MAX]	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGN**						description:	
description: $P_MAGN Number of defined magazines assigned to the channel. > 0Successful read access 0No magazine defined -1WZMG is not active OPI block= TM								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_MAG[32]**						description:	
description: $P_MAG[i] ith magazine number > 0Successful read access 0i is outside the permissible range -1WZMG is not active OPI block= TM								
description of field limits: i= 1,..., $P_MAGN								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_MAGNDIS[32000,32000]**							description:	
description: P_MAGNDIS[n, m] Number of magazines connected to location m of internal magazine n. > 0Successful read access 0No magazine is connected to the buffer location -1WZMG is not active -2n is not the number of an internal magazine -3m is not the number of an internal magazine location OPI block TPM									
description of field limits: n= must be the number of the buffer magazine or load magazine m= 1,..., max. number of a location in the specified internal magazine									
axis identifier:						NCK version:	43.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGDISS[32000,32]**							description:	
description: P_MAGDISS[l, i] Number of ith magazine connected to location l of the buffer magazine. > 0Successful read access 0i is outside the permissible range -1WZMG is not active -2m is not the number of a buffer magazine location -3 no buffer magazine defined OPI block TPM									
description of field limits: l= 1,..., max. number of a location in the buffer magazine i= 1,..., $P_MAGNDIS[no. of buffer magazine, refLoc]									
axis identifier:						NCK version:	43.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGDISL[32000,32]**							description:	
description: P_MAGDISL[l, i] Number of ith magazine connected to location l of the load magazine. > 0Successful read access 0i is outside the permissible range -1WZMG is not active -2m is not the number of a load magazine location -3 no load magazine defined OPI block TPM									
description of field limits: l= 1,..., max. number of a location in the load magazine i= 1,..., $P_MAGNDIS[no. of load magazine, refLoc]									
axis identifier:						NCK version:	43.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGNS**							description:	
description: $P_MAGNS Number of spindle locations / toolholder locations in the buffer assigned to the channel. > 0Successful read access 0No spindle locations defined -1WZMG is not active -3No buffer magazine defined									
axis identifier:						NCK version:	43.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGS[20]**						description:	
description: $P_MAGS[n] nth number of spindle / of toolholder in buffer > 0Successful read access 0n is outside the permissible range -1WZMG is not active -3No buffer magazine defined								
description of field limits: n= 1,..., max. toolholder number								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_MAGNREL[20]**						description:	
description: $P_MAGNREL[n] Number of buffers assigned to the spindle number / toolholder number n > 0Successful read access 0No buffer location assigned to spindle location -1WZMG is not active -2n is not the number of a spindle location -3No buffer magazine defined								
description of field limits: n= 1,..., max. toolholder number								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$P_MAGREL[20,600]**								description:	
description: P_MAGREL[n, m] mth buffer number of nth spindle number / toolholder number > 0Successful read access 0m is outside the permissible range -1WZMG is not active -2n is not the number of a spindle location -3No buffer magazine defined										
description of field limits: n= 1,..., max. toolholder number m= 1,..., $P_MAGNREL										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGNH**								description:	
description: $P_MAGNH Number of defined magazine location type hierarchies assigned to the channel. > 0Successful read access 0No location type hierarchies are defined -1WZMG is not active OPI block= TT										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGNHLT[MD_SLMAXHIERARCHYNUMBER]**								description:	
description: $P_MAGNHLT[n] Number of defined location types in the nth defined hierarchy > 0Successful read access 0n is outside the defined range -1Function 'Location type hierachy' or TMMG is not active OPI block= TT										
description of field limits: n= 1,..., $P_MAGNH										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGHLT[MD_SLMAXHIERARCHYNUMBER,MD_SLMAXHIERARCHYENTRIES]**								description:	
description: P_MAGHLT[n, m] mth location type of hierarchy n; n= 1,..., $P_MAGNH; m= 1,..., $P_MAGNHLT > 0Successful read access 0m is outside the defined range -1Function 'Location type hierachy' or TMMG is not active -2Hierarchy n has no defined location types OPI block= TT										
description of field limits: n= 1,..., $P_MAGNH m= 1,..., $P_MAGNHLT										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGNA**						description:	

description:
$P_MAGNA
Number of defined adapters assigned to the channel.
> 0Successful read access
0No adapters defined
-1'Adapter' function or TMMG is not active
OPI block= AD

axis identifier:			NCK version:		43.00.00				
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MAGA[600]**						description:	

description:
$P_MAGA[i]
ith adapter number
> 0Successful read access
0i is outside the permissible range
-1'Adapter' function or TMMG is not active
OPI block= AD

description of field limits:
i= 1,..., $P_MAGNA

axis identifier:			NCK version:		43.00.00				
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_MTHSDC**								description:	
description:										
$P_MTHSDC Master toolholder no. or master spindle no. with reference to which the active tool is determined for the next D offset selection. >0Successful read access 0No master toolholder or master spindle available. The next D offset works with T0. -1TMMG not available. If read as an OPI variable, this is valid for the status in the current main run block										
axis identifier:						NCK version:		48.00.00		
unit:	-	min.:	-1				max.:	20		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_MONMIN**								description:	
description:										
$AC_MONMIN Relation between tool monitoring actual value and setpoint. Threshold for tool search strategy "Load only tools with an actual value higher than threshold"										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_VDITCP[SLTOMA_MAX_NUM_FREE_PARAM]**								description:	
description:										
$P_VDITCP[n] Free parameters for tool management in VDI interface										
description of field limits:										
n: Index 1 - 3										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$P_ATPG[9]**						description:	
description: $P_ATPG[n] Current tool-related grinding data								
description of field limits: n: Parameter numbers 1 -9								
axis identifier:					NCK version:	13.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$P_TOOLENV[1]**						description:	
description: $P_TOOLENV[i] Supplies the name of the tool environment stored under the (internal) index i. If i does not refer to a defined data block, a zero string is returned. If index i is invalid, i.e. less than 1 or greater than the maximum number of data blocks for tool environments ($MN_MM_NUM_TOOLENV), an alarm is generated.								
description of field limits: A maximum number of tool environments can be configured via								
axis identifier:					NCK version:	45.00.00		
unit:	-	min.:				max.:		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TOOLENVN**						description:	
description: $P_TOOLENVN Specifies the number of defined data blocks for defining tool environments.								
axis identifier:					NCK version:	45.00.00		
unit:	-	min.:				max.:	INT_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$P_AP**						description:	
description: $P_AP Programmed angle with polar coordinates in degrees								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

AXIS	**$P_AXN1**						description:	
description: Variable $P_AXN1 supplies the current address of the geometry axis for the abscissa.								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$P_AXN2**						description:	
description: Variable $P_AXN2 supplies the current address of the geometry axis for the ordinate.								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$P_AXN3**								description:	
description:										
Variable $P_AXN3 supplies the current address of the geometry axis for the applicate.										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

AXIS	**$P_ACTGEOAX[3]**								description:	
description:										
Variable $P_ACTGEOAX[n] supplies the current geometry axis identifier depending on the plane. The geometry axis assignment corresponds to the programmed GEOAX(1,X,2,Y,3,Z) values. The assignment can also change on a Reset and on selection and deselection of transformations.										
description of field limits:										
Array index 1-3 for 1st - 3rd geometry axis										
axis identifier:						NCK version:		13.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_GG[MAX_GGROUP]**								description:	
description:										
$P_GG[n] Read active G function of G function group n The index of the G function is supplied as described in the Programming Guide Fundamentals, Section "List of G functions/preparatory functions". (This also matches the index output at the PLC interface when configured accordingly) Example: ;Check for G55 IF $P_GG[8] == 3 GOTOF LABEL_G55										
description of field limits:										
n: Number of G function group										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_EXTGG[MAX_EXT_GGROUP]**							description:	
description: $P_EXTGG[n] Read active G function of G function group n of external language. The index of the G function is supplied as described in the Function Description "ISO Dialects" Section "G commands". (This also matches the index output at the PLC interface when configured accordingly) Example: ;Check for G55 in ISO Dialect T IF $P_EXTGG[14] == 2 GOTOF LABEL_G55									
description of field limits: n: Number of G function group									
axis identifier:						NCK version:		16.00.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_GG[MAX_GGROUP]**							description:	
description: $A_GG[n] Read active G function of G function group n in synchronized action The index of the G function is supplied as described in the Programming Guide Fundamentals, Section "List of G functions/preparatory functions". (This also matches the index output at the PLC interface when configured accordingly) Example: ;Check for G55 in synchronized action WHEN $A_GG[8] == 3 DO ...									
description of field limits: n: Number of G function group									
axis identifier:						NCK version:		16.00.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_SEARCH**						description:	
description:								
$P_SEARCH Returns TRUE (1) if block search is active								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_SEARCH1**						description:	
description:								
$P_SEARCH1 Returns TRUE (1) if block search with calculation is active.								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_SEARCH2**						description:	
description:								
$P_SEARCH2 Returns TRUE (1) if last selected search type was "block search without calculation".								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SEARCHL**						description:	
description:								
$P_SEARCHL supplies the last selected search type: (coding analogous to PI service _N_FINDBL) 0 : No search 1 : Search without calculation 2 : Search with calculation on contour 3 : Reserved 4 : Search with calculation at end of block 5 : Search in extended program test								
axis identifier:					NCK version:		16.00.00	
unit:	-	min.:	0			max.:	5	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_SUBPAR[n]**						description:	
description:								
$P_SUBPAR[n] Interrogate whether parameter n was actually programmed (TRUE) on subroutine call with parameter transfer, or whether the system has applied a default parameter (FALSE).								
description of field limits:								
n: Parameter numbers 1 to n according to definition in PROC instruction								
axis identifier:					NCK version:		14.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_CTABDEF**						description:	
description:								
Variable $P_CTABDEF determines whether a curve table definition is active.								
axis identifier:					NCK version:		13.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_IPTRLOCK**							description:	
description: $P_IPTRLOCK Status of disable for updating the interruption pointer (OPI block InterruptionSearch) due to part program command IPTRLOCK/IPTRUNLOCK or machine data $MC_AUTO_IPTR_LOCK: FALSE (0) -> interruption pointer is updated when interruption occurs TRUE (1) -> the halt block is stored in the interruption pointer									
axis identifier:					NCK version:		52.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_DELAYFST**							description:	
description: $P_DELAYFST Interrogation whether delay stop area is active or not depending on part program command DELAYFSTON/DELAYFSTOF. Note: Delay stop areas defined by G331/G332 can be interrogated only by a synchronized action due to the restriction to motion blocks and dwell times (see $AC_DELAYFST). FALSE (0) -> Delay stop area is not active TRUE (1) -> Delay stop area is active									
axis identifier:					NCK version:		54.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AC_DELAYFST**							description:	
description: $AC_DELAYFST Interrogation in synchronized actions whether delay stop area is active or not due to part program command DELAYFSTON/DELAYFSTOF or G331/G332. Note: If $AC_DELAYFST is used outside synchronized actions in the part program, then, analogous to $P_DELAYFST, the delay stop areas defined with G331/G332 cannot be interrogated owing to the restriction to motion blocks and dwell times (see $P_DELAYFST). FALSE (0) -> Delay stop area is not active TRUE (1) -> Delay stop area is active									
axis identifier:						NCK version:		54.00.00	
unit:	-	min.:	FALSE				max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_MC**							description:	
description: $P_MC Status of modal subroutine call FALSE (0) -> no modal subroutine call TRUE (1) -> modal subroutine call active									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	FALSE				max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_REPINF**						description:	
description:								
$P_REPINF Status info for repositioning with REPOS command FALSE (0) -> Axis cannot be repositioned with REPOS command for following reasons - Call is not issued in an Asub - Call is issued by an Asub that has been started in the Reset state - Call is issued by an Asub that has been started in JOG mode TRUE (1) -> Axis can be repositioned with REPOS								
axis identifier:					NCK version:		13.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_SIM**						description:	
description:								
$P_SIM Returns TRUE (1) if HMI simulation is running								
axis identifier:					NCK version:		06.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$P_DRYRUN**						description:	
description:								
$P_DRYRUN Returns TRUE (1) if dry run feed is selected, or else FALSE (0).								
axis identifier:					NCK version:		06.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_OFFN**						description:	
description:								
$P_OFFN Programmed offset contour normal:								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$PI**						description:	
description:								
Variable $PI determines the circle constant PI = 3.1415927.								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	3.1415927		max.:	3.1415927		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Independent			No restrictions				

INT	**$P_PROG_EVENT**						description:	
description:								
System variable $P_PROG_EVENT can be used to query whether the program has been activated implicitly by an event configured with $MC_PROG_EVENT_MASK or $MN_SEARCH_RUN_MODE. $P_PROG_EVENT supplies an integer value between 0 and 5 with the following meaning: 0:Explicit activation by NC Start or Asub Start via VDI or Asub interface 1: Implicit activation by "Part program start" event 2:Implicit activation by "Part program end" event 3:Implicit activation by "Operator panel reset" event 4:Implicit activation by "Boot" event 5:Implicit activation after output of last action block after a block search								
axis identifier:				NCK version:		42.00.00		
unit:	-	min.:	0		max.:	5		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$P_PROGPATH**							description:	
description: $P_PROGPATH Supplies the path where the program currently being processed is stored in the file system. Example: Subprogram "/_N_WKS_DIR/_N_WELLE_DIR/_N_MYSUB_SPF" is running. $P_PROGPATH returns the string "/_N_WKS_DIR/_N_WELLE_DIR/".									
axis identifier:				NCK version:		06.00.00			
unit:	-	min.:			max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$P_PROG[INMAXFILESTACK]**							description:	
description: $P_PROG[n] Supplies the name of the program on program level n. Example: $P_PROG[0] Supplies the name of the program on program level 0 = main program name.									
description of field limits: n: Defines the program level from which the program name is to be read.									
axis identifier:				NCK version:		17.00.00			
unit:	-	min.:			max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_STACK**					description:	
description:							
$P_STACK Supplies the program level on which the current part program is running.							
axis identifier:				NCK version:	17.00.00		
unit:	-	min.:	0	max.:	11		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_ISO_STACK**					description:	
description:							
$P_ISO_STACK The variable supplies the current program level in ISO mode. Unlike Siemens mode, not every subprogram or macro call changes the program level in ISO mode. Subprogram/macro calls and their effect on $P_ISO_STACK: M98 Pxx ,subprogram call$P_ISO_STACK remains the same G65 Pxx ,non-modal macro$P_ISO_STACK is incremented G66 Pxx ,modal macro$P_ISO_STACK is incremented M macro substitution$P_ISO_STACK is incremented M subprogram substitution$P_ISO_STACK remains the same T substitution$P_ISO_STACK remains the same G substitution$P_ISO_STACK is incremented 802S/C:Value range = [0,5]							
axis identifier:				NCK version:	52.00.00		
unit:	-	min.:		max.:	11		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

STRING	**$P_PATH[INMAXFILESTACK]**							description:	
description: $P_PATH[n] Supplies the path where the program being processed on program level n is stored in the file system. Examples: $P_PATH[0] supplies the directory of the main program, e.g. "/_N_WKS_DIR/_N_WELLE_WPD/". $P_PATH[$P_STACK - 1] supplies the path of the calling program.									
description of field limits: n: Defines the program level from which the program path is to be read.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_ACTID[16]**							description:	
description: Variable $P_ACTID[n] determines whether the first 16 modal synchronized actions with ID n are programmed.									
description of field limits: Index 1 - 16 corresponds to the nth modal synchronized action.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_STAT**						description:	
description: $AC_STAT -1: Invalid 0: Channel in Reset state 1: Channel interrupted 2: Channel active								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	-1		max.:	2		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_PROG**						description:	
description: $AC_PROG -1: Invalid 0: Program in Reset state 1: Program stopped 2: Program active 3: Program waiting 4: Program interrupted								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	-1		max.:	4		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_SYNA_MEM**							description:	
description:									
Variable $AC_SYNA_MEM determines the number of free synchronized action elements. The maximum number of elements is configured by $MC_MM_NUM_SYNC_ELEMENTS. The value is read from the part program without a preprocessing stop.									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:	0			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_IPO_BUF**							description:	
description:									
Variable $AC_IPO_BUF determines the current fill level of the interpolator buffer. The value is read from the part program without a preprocessing stop.									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:	0			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_BLOCKTYPE**					description:				
description:										
Variable $AC_BLOCKTYPE determines the type of the current main run block. The following values are possible: 0: Block is programmed block (main block). 1: Block was generated by the system as an intermediate block. 2: Block was generated by chamfers/rounding 3: Smooth approach and retraction (SAR) 4: Block was generated by tool offset 5: Block was generated by smoothing 6: Block was generated by TLIFT (tangential follow-up) 7: Block was generated by path segmentation 8: Block was generated by compile cycles 9: Block was generated due to orientation changes on path-relative interpolation of tool orientation (ORIPATH/ORIROTC) 10: Block was generated by pole treatment of orientation transformations which is activated by the the machine data $MC_POLE_ORI_MODE										
axis identifier:						NCK version:		51.00.00		
unit:	-	min.:	0				max.:	9		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_BLOCKTYPEINFO**		description:	

description:
System variable $AC_BLOCKTYPEINFO can be used to interrogate more
detailed information about variable $AC_BLOCKTYPE.
Depending on the value of system variable $AC_BLOCKTYPE, various values can be
returned:
1. General, internally generated block: $AC_BLOCKTYPE = 1
$AC_BLOCKTYPEINFO = 1000 and contains no further information.
2. Chamfer/rounding: $AC_BLOCKTYPE = 2
2001: Straight
2002: Circle
3. SAR: $AC_BLOCKTYPE = 3
3001: Approach with straight line
3002: Approach with quadrant
3003: Approach with semicircle
4. Tool compensation: $AC_BLOCKTYPE = 4
4001: Approach block after STOPRE
4002: Connection blocks if intersection point not found
4003: Point-type circle on inner corners (with TRACYL only)
4004: Bypass circle (or conical cut) at outer corners
4005: Approach blocks with offset suppression
4006: Approach blocks on repeated WRC activation
4007: Block split due to excessive curvature
4008: Compensation blocks with 3D face milling (tool vector || area vector)
5. Smoothing: $AC_BLOCKTYPE = 5
5001: Smoothing contour by means of G641
5002: Smoothing contour by means of G642
5003: Smoothing contour by means of G643
5004: Smoothing contour by means of G644
6. TLIFT: $AC_BLOCKTYPE = 6
6001: TLIFT block with linear movement of tangential axis and without lift motion.
6002: TLIFT block with nonlinear movement of tangential axis (polynomial)
and without lift movement.
6003: TLIFT block with lift motion, tangential axis motion and lift motion
start simultaneously.
6004: TLIFT block with lift motion, tangential axis starts first if specific lift
position is reached.
7. Path segmentation: $AC_BLOCKTYPE = 7
7001: Programmed path segmentation without active punching/nibbling
7002: Programmed path segmentation with active punching/nibbling
7003: Automatic, internally generated path segmentation
8. Compile cycles: $AC_BLOCKTYPE = 8
In this case, system variable $AC_BLOCKTYPEINFO contains the ID of the compile cycles
Application which created the block
9. Path-relative interpolation of tool orientation (ORIPATH/ORIROTC)
9000: interpolation of tool orientation (ORIPATH)
9001: interpolation of rotation of tool (ORIROTC)
10: Pole treatment for orientstion transformations
10000: Look ahead of position of pole axis for orientation transformations
10001 Inserted block for traversing the pole cone at orientation transformations:

axis identifier:				NCK version:		54.00.00			
unit:	-	min.:	0		max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X		
write:									

attributes:	global	block search	link	
		Not classified	Not classified	

INT	**$AC_SPLITBLOCK**		description:	

description:
System variable $AC_SPLITBLOCK is capable of detecting all blocks generated internally and programmed blocks which were truncated as a result.
It can return the following values:
= 0 : It is an unchanged programmed block (a block generated by the compressor is viewed here as a programmed block).
<> 0: Block has been truncated or is an internally generated block, the variable can assume the following values (variable is bit-coded):
= 1: It is an internally generated block or a truncated original block
= 3: It is the last block in a chain of internally generated blocks or truncated original blocks

axis identifier:						NCK version:		54.00.00		
unit:	-	min.:	0				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_TANEB**		description:	

description:
$AC_TANEB determines the angle between the path tangent at the end of the current block and the path tangent at the start of the next block. This variable should only be applied to programmed main blocks. $AC_BLOCKTYPE can be used to determine whether the current block is a main block.

axis identifier:						NCK version:		51.00.00		
unit:	-	min.:	-180.0				max.:	180.0		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_SYNC_ACT_LOAD**						description:	
description: Variable $AC_SYNC_ACT_LOAD supplies the current runtime for synchronized actions of the last interpolator cycle in the channel.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_SYNC_MAX_LOAD**						description:	
description: Variable $AC_SYNC_MAX_LOAD supplies the longest runtime for synchronized actions of an interpolator cycle in the channel.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_SYNC_AVERAGE_LOAD**						description:	
description: Variable $AC_SYNC_AVERAGE_LOAD supplies the average runtime per interpolator cycle for synchronized actions in the channel.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_IW_STAT**						description:	
description:								
Variable $AC_IW_STAT describes the position information of the articulated joints (transformation-specific) for cartesian PTP travel. The variable is relevant only for transformations which support PTP.								
axis identifier:				NCK version:	19.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_IW_TU**						description:	
description:								
Variable $AC_IW_TU describes the position information of the axes (MCS) for cartesian PTP travel. The variable is relevant only for transformations which support PTP.								
axis identifier:				NCK version:	19.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TRANS_SYS**						description:	
description:								
$AC_TRANS_SYS Reference system for translation with cartesian manual travel 0: Axis-spec. manual trav. active 1: Cart. manual trav. in BCS 2: Cart. manual trav. in WCS 3: Cart. manual trav. in TCS Only appropriate in connection with transformations which support cart. manual travel.								
axis identifier:				NCK version:	46.00.00			
unit:	-	min.:	0		max.:	3		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_JOG_COORD**						description:		
description:									
Variable $AC_JOG_COORD is used to set the coordinate system frame for manual travel. The following values are possible: 0: Manual travel in WCS 1: Manual travel in SZS									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	1		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_ROT_SYS**						description:		
description:									
$AC_ROT_SYS Reference system for orientation with cartesian manual travel 0: Axis-spec. manual trav. active 1: Cart. manual trav. in BCS 2: Cart. manual trav. in PCS 3: Cart. manual trav. in TCS Only appropriate in connection with transformations which support cart. manual travel.									
axis identifier:					NCK version:		47.00.00		
unit:	-	min.:	0			max.:	3		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEA[2]**						description:		
description:									
$AC_MEA[n] Probe with number [n] has switched if TRUE (1)									
description of field limits:									
n: Number of probe									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TRAFO**							description:	
description:									
$AC_TRAFO Code number of active transformation according to machine data $MC_TRAFO_TYPE_n . Note special meaning in the case of parameterized persistent transformation (bit 1 of $MC_TRAFO_MODE_MASK set to 1): The parameters of the first chained transformation are returned in the case of TRACON. 0 is returned if only the persistent transformation is active.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_TRAFO**							description:	
description:									
$P_TRAFO Code number of programmed transformation according to machine data $MC_TRAFO_TYPE_n . Note special meaning in the case of parameterized persistent transformation (bit 1 of $MC_TRAFO_MODE_MASK set to 1): The first chained transformation is returned in the case of TRACON. 0 is returned if only the persistent transformation is active.									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_TRAFO_PAR[n]**							description:	
description:									
$AC_TRAFO_PAR[n] Selection parameters of active transformation . Please note special meaning when persistent transformation is configured (Bit 1 of $MC_TRAFO_MODE_MASK is set to 1): The parameters of the first chained transformation are returned in the case of TRACON. 0 is returned if only the persistent transformation is active.									
description of field limits:									
n: Number of parameter									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	DOUBLE_MIN			max.:	DOUBLE_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_TRAFO_PAR[n]**							description:	
description:									
$P_TRAFO_PAR[n] Selection parameters of programmed transformation . Please note special meaning when persistent transformation is configured (Bit 1 of $MC_TRAFO_MODE_MASK is set to 1): The parameters of the first chained transformation are returned in the case of TRACON. 0 is returned if only the persistent transformation is active.									
description of field limits:									
n: Number of parameter									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	DOUBLE_MIN			max.:	DOUBLE_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TRAFO_PARSET**							description:	
description: $AC_TRAFO_PARSET Number of active transformation data block Variable is '0' is no transformation is active . Please note special meaning when persistent transformation is configured (Bit 1 of $MC_TRAFO_MODE_MASK is set to 1): The number of the data set of the first chained transformation is returned in the case of TRACON. is returned. 0 is returned if only the persistent transformation is active.									
axis identifier:					NCK version:		44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_TRAFO_PARSET**							description:	
description: $P_TRAFO_PARSET Number of programmed transformation data block Variable is '0' is no transformation is active . Please note special meaning when persistent transformation is configured (Bit 1 of $MC_TRAFO_MODE_MASK is set to 1): The number of the data set of the first chained transformation is returned in the case of TRACON. is returned. 0 is returned if only the persistent transformation is active.									
axis identifier:					NCK version:		44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_LIFTFAST**							description:	
description:									
$AC_LIFTFAST Information about execution of rapid lift. 0: Initial state. 1: Rapid lift has been executed. The variable is set internally to "1" by the NC at the beginning of the rapid lift process. The variable must be reset to its initial state ($AC_LIFTFAST=0) by the evaluating program (if one is configured) so that any subsequent rapid lift process can be detected again.									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_LIFTFAST**							description:	
description:									
$P_LIFTFAST Information about execution of rapid lift. 0: Initial state. 1: Rapid lift has been executed. The variable is set internally to "1" by the NC at the beginning of the rapid lift process. The variable must be reset to its initial state ($AC_LIFTFAST=0) by the evaluating program (if one is configured) so that any subsequent rapid lift process can be detected again. The variable is reset by writing $AC_LIFTFAST!									
axis identifier:					NCK version:		44.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_ASUP**		description:	

description:
$AC_ASUP
Code number for the reason for activating an Asub. The reasons are bit-coded
and have the following meaning:
BIT0: Activation due to: user interrupt "ASUB with Blsync"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable Reorg or Ret
BIT1: Activation due to: User interrupt "ASUB"
To continue the program with Repos, the position immediately prior
to the interrupt is stored.
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT2: Activation due to: user interrupt "ASUB from channel state Ready"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT3: Activation due to: user interrupt "ASUB in a manual mode
and channel state not READY"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT4: Activation due to: Activation due to: User interrupt "ASUB".
To continue the program with Repos, the current position at the moment
of interrupt is stored.
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT5: Activation due to: Cancelation of subroutine repeat
Activation by: VDI signal
Continued by: Execution of system Asub REPOS
BIT6: Activation due to: Activation of decoding single block
Activation by: VDI signal (+OPI)
Continued by: Execution of system Asub REPOS
BIT7: Activation due to: Activation of delete distance to go
Activation by: VDI signal
Continued by: Execution of system Asub Ret
BIT8: Activation due to: Activation of axis synchronization
Activation by: VDI signal
Continued by: Execution of system Asub REPOS
BIT9: Activation due to: Mode change
Activation by: VDI signal
Continued by: Execution of system Asub REPOS or RET (see MD.)
BIT10: Activation due to: Program continuation under TeachIn or after TeachIn deactivation
Activation by: VDI signal
Continued by: Execution of system Asub Ret
BIT11: Activation due to: Overstore selection
Activation by: Pi selection
Continued by: Execution of system Asub REPOS
BIT12: Activation due to: Alarm with reaction 'offset block with Repos' (COMPBLOCKWITHREORG)
Activation by: Internal
Continued by: Execution of system Asub REPOS
BIT13: Activation due to: Retraction with G33 and Stop
Activation by: Internal
Continued by: Execution of system Asub Ret
BIT14: Activation due to: Activation of dry run feedrate
Activation by: Vdi

Continued by: Execution of system Asub REPOS
BIT15: Activation due to: Deactivation of dry run feedrate
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT16: Activation due to: Activation of block suppression
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT17: Activation due to: Deactivation of block suppression
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT18: Activation due to: Activate machine data
Activation by: Pi
Continued by: Execution of system Asub REPOS
BIT19: Activation due to: Activate tool offset
Activation by: Pi "_N_SETUDT"
Continued by: Execution of system Asub REPOS
BIT20: Activation due to: System Asub after search type SERUPRO has reached the search target.
Activation by: Pi "_N_FINDBL" Parameter == 5
Continued by: Execution of system Asub REPOS

axis identifier:						NCK version:		13.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_ISTEST**						description:	

description:
$P_ISTEST
Returns TRUE (1) if program test is active.

axis identifier:						NCK version:		13.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

STRING	**$P_MMCA**						description:	
description: $P_MMCA Task acknowledgement for MMC command								
axis identifier:				NCK version:		13.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$A_PROTO**						description:	
description: $A_PROTO Activate / deactivate logging function for the first user. Corresponds to $A_PROTOC[0].								
axis identifier:				NCK version:		13.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
attributes:	global	block search			link				
	X	Not classified			Not classified				

BOOL	**$A_PROTOC[EX_MAX_NUM_PROT_USER]**							description:	
description: $A_PROTOC Activate / deactivate logging function for a user. Corresponds to OPI variable protocUserActive.									
description of field limits: Index of the user of the logging function.									
axis identifier:					NCK version:		42.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

BOOL	**$A_PROT_LOCK[EX_MAX_NUM_PROT_USER]**							description:	
description: $A_PROT_LOCK Disable / enable logging function temporarily for a user									
description of field limits: 0 - EX_MAX_NUM_PROT_USER-1, USER									
axis identifier:					NCK version:		51.04.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FIFO1[n]**		description:	

description:

Variable $AC_FIFO1[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO2[n]**		description:	

description:

Variable $AC_FIFO2[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO3[n]**		description:	

description:

Variable $AC_FIFO3[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO4[n]**		description:	

description:

Variable $AC_FIFO4[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO5[n]**		description:	

description:

Variable $AC_FIFO5[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO6[n]**		description:	

description:

Variable $AC_FIFO6[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO7[n]**		description:	

description:

Variable $AC_FIFO7[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO8[n]**		description:	

description:

Variable $AC_FIFO8[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO9[n]**		description:	

description:

Variable $AC_FIFO9[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:				NCK version:		13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX			

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AC_FIFO10[n]**								description:	
description:										
Variable $AC_FIFO10[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations. $MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10. The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO. $MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored. R variables assigned to FIFO areas should not be written elsewhere. The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated: $MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6) The FIFO variable is an array variable. Indices 0 - 5 have special meanings: n = 0: When written with index 0, a new value is stored in the FIFO. When read with index 0, the oldest element is read and removed from the FIFO. n=1: Access to the first element read n=2: Access to the second element read n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set. n=4: Number of elements available in the FIFO n=5: Current write index relative to the start of the FIFO n=6: Oldest element n=7: Second oldest etc.										
description of field limits:										
The dimension is defined in $MC_LEN_AC_FIFO.										
axis identifier:						NCK version:		13.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_IN[n]**								description:	
description:										
Variable $A_IN[n] is used to interrogate digital inputs.										
description of field limits:										
The dimension is defined in $MN_FASTIO_DIG_NUM_INPUTS.										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_OUT[n]**							description:	
description: Variable $A_OUT[n] is used to interrogate digital outputs.									
description of field limits: The dimension is defined in $MN_FASTIO_DIG_NUM_OUTPUTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_INA[n]**							description:	
description: Variable $A_INA[n] is used to access the analog inputs.									
description of field limits: The dimension is defined in $MN_FASTIO_ANA_NUM_INPUTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_OUTA[n]**							description:	
description: Variable $A_OUTA[n] is used to access the analog outputs. When written the value does not become operative until the next interpolator cycle and can then be read back.									
description of field limits: The dimension is defined in $MN_FASTIO_ANA_NUM_OUTPUTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_INCO[2]**							description:	
description: Variable $A_INCO[n] is used to access the comparator inputs.									
description of field limits: nth comparator input.									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DBB[1024]**							description:	
description: Array variable $A_DBB[n] is used to read and write a data byte (8 bits) from PLC. The byte is unsigned and can be read in the range from 0 to 255 and written in the range from -128 to 255. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBSB[n].									
description of field limits: n: Position offset within I/O area 0 - ...									
axis identifier:					NCK version:	13.00.00			
unit:	-	min.:	-128			max.:	255		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DBW[1024]**								description:	
description:										
Array variable $A_DBW[n] is used to read and write a data word (16 bits) from PLC. The byte is unsigned and can be read in the range from 0 to 65535 and written in the range from -32768 to 65535. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBSW[n].										
description of field limits:										
n: Position offset within I/O area 0 - ...										
axis identifier:					NCK version:		13.00.00			
unit:	-	min.:	-32768			max.:	65535			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DBD[1024]**								description:	
description:										
Array variable $A_DBD[n] is used to read and write a data doubleword (32 bits) from PLC. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory.										
description of field limits:										
n: Position offset within I/O area 0 - ...										
axis identifier:					NCK version:		13.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_DBR[1024]**						description:	
description: Array variable $A_DBR[n] is used to read and write Real data (32 bits) from PLC. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory.								
description of field limits: n: Position offset within I/O area 0 - ...								
axis identifier:					NCK version:	13.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_DLB[n]**						description:	
description: Variable $A_DLB[n] enables reading and writing of a data byte (8 bits) which can be transmitted to other channels or NCUs across the NCU link. $MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx). The negative value range of this variable applies to write operations only. The variable can thus store negative values. Only the corresponding positive value can be read back.								
description of field limits: The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.								
axis identifier:					NCK version:	14.00.00		
unit:	-	min.:	-128		max.:	255		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_DLW[n]**							description:	
description:									
Variable $A_DLW[n] enables reading and writing of a data word (16 bits) which can be transmitted to other channels or NCUs across the NCU link. $MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx). The negative value range of this variable applies to write operations only. The variable can thus store negative values. Only the corresponding positive value can be read back.									
description of field limits:									
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.									
axis identifier:					NCK version:		14.00.00		
unit:	-	min.:	-32768			max.:	65535		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DLD[n]**							description:	
description:									
Variable $A_DLD[n] enables reading and writing of a data doubleword (32 bits) which can be transmitted to other channels or NCUs across the NCU link. $MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).									
description of field limits:									
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.									
axis identifier:					NCK version:		14.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_DLR[n]**						description:	
description: Variable $A_DLR[n] enables reading and writing of a Real value which can be transmitted to other channels or NCUs across the NCU link. $MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).								
description of field limits: The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.								
axis identifier:				NCK version:	14.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_LINK_TRANS_RATE**						description:	
description: Variable $A_LINK_TRANS_RATE determines the number of bytes which can still be transferred by NCU link in the current interpolation cycle.								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_PBB_IN[32]**						description:	
description: Array variable $A_PBB_IN[n] is used to read and write a data byte (8 bits) from the PLC I/O.								
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.								
axis identifier:				NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_PBW_IN[32]**							description:	
description: Array variable $A_PBW_IN[n] is used to read and write a data word (16 bits) from the PLC I/O.									
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_PBD_IN[32]**							description:	
description: Array variable $A_PBD_IN[n] is used to read a data doubleword (32 bits) from the PLC I/O.									
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_PBR_IN[32]**							description:	
description: Array variable $A_PBR_IN[n] is used to read Real data (32 bits) from the PLC I/O.									
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_PBB_OUT[32]**						description:	
description: Array variable $A_PBB_OUT[n] is used to write a data byte (8 bits) to the PLC I/O.								
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.								
axis identifier:				NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_PBW_OUT[32]**						description:	
description: Array variable $A_PBW_OUT[n] is used to write a data word (16 bits) to the PLC I/O.								
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.								
axis identifier:				NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_PBD_OUT[32]**						description:	
description: Array variable $A_PBD_OUT[n] is used to write a data doubleword (32 bits) to the PLC I/O.								
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.								
axis identifier:				NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$A_PBR_OUT[32]**							description:	
description: Array variable $A_PBR_OUT[n] is used to write Real data (32 bits) to the PLC I/O.									
description of field limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$C_IN[16]**							description:	
description: $C_IN[n] Signal from the PLC to cycle Reserved for SIEMENS applications! 16 input signals (i.e. 2 bytes) are available. Data transfer is cyclic.									
description of field limits: n: Number of input 1 - ...									
axis identifier:					NCK version:		41.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$C_OUT[16]**							description:	
description: $C_OUT[n] Signal from cycle to the PLC Reserved for SIEMENS applications! 16 output signals (i.e. 2 bytes) are available. Data transfer is cyclic.									
description of field limits: n: Number of output 1 - ...									
axis identifier:					NCK version:		41.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_CMDT**						description:	
description:								
$AC_TC_CMDT Trigger variable: $AC_TC_CMDT (CoMmadTrigger) assumes the value '1' for an interpolation cycle whenever a new command from the magazine management is output to the PLC.								
axis identifier:					NCK version:	44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_ACKT**						description:	
description:								
$AC_TC_ACKT Trigger variable: $AC_TC_ACKT (ACKnowledgeTrigger) assumes the value '1' for an interpolation cycle whenever the PLC acknowledges a TM command.								
axis identifier:					NCK version:	44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_CMDC**						description:	
description:								
$AC_TC_CMDC Counter variable: $AC_TC_CMDC (CoMmandCounter) is incremented by 1 every time the TM sends a command to the PLC.								
axis identifier:					NCK version:	44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X	X	X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_ACKC**						description:	
description:								
$AC_TC_ACKC Counter variable: $AC_TC_CMDC (ACKnowledgeCounter) is incremented by 1 every time the PLC acknowledges a command from the TM.								
axis identifier:					NCK version:	44.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X	X	X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_FCT**						description:	
description:								
$AC_TC_FCT Command number. This specifies the requested operation. -1: No TM command is active at the instant the variable is read.								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_STATUS**						description:	
description:								
$AC_TC_STATUS Current status of the command - to be read via $AC_TC_FCT. -1: No TM command is active at the instant the variable is read.								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_TC_THNO**							description:	
description: $AC_TC_THNO Number of the toolholder (specifically the spindle no.) to which the new tool is to be loaded. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	15.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_TNO**							description:	
description: $AC_TC_TNO NCK internal T number of the new (to be loaded) tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	15.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_MMYN**							description:	
description: $AC_TC_MMYN Home magazine number of the new (to be loaded) tool. 0: There is no new tool, or the new tool (if $AC_TC_TNO> 0) is not loaded (manual tool). -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	49.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_LMYN**							description:	
description: $AC_TC_LMYN Home location number of the new (to be loaded) tool. 0: There is no new tool, or the new tool (if $AC_TC_TNO> 0) is not loaded (manual tool). -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:		49.00.00		
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_MFN**							description:	
description: $AC_TC_MFN Source magazine number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_LFN**							description:	
description: $AC_TC_LFN Source location number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_MTN**							description:	
description:									
$AC_TC_MTN Target magazine number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_LTN**							description:	
description:									
$AC_TC_LTN Target location number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_MFO**							description:	
description:									
$AC_TC_MFO Source magazine number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_LFO**							description:	
description: $AC_TC_LFO Source location number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_MTO**							description:	
description: $AC_TC_MTO Target magazine number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TC_LTO**							description:	
description: $AC_TC_LTO Target location number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
axis identifier:					NCK version:	16.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_YEAR**						description:	
description:								
$A_YEAR System time year								
axis identifier:				NCK version:		00.00.00		
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_MONTH**						description:	
description:								
$A_MONTH System time month								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_DAY**						description:	
description:								
$A_DAY System time day								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_HOUR**						description:	
description: $A_HOUR System time hour								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_MINUTE**						description:	
description: $A_MINUTE System time minute								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_SECOND**						description:	
description: $A_SECOND System time second								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_MSECOND**						description:	
description:								
$A_MSECOND System time millisecond								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_TIME**						description:	
description:								
Variable $AC_TIME determines the time from the block start in seconds.								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_TIMES**						description:	
description:								
$AC_TIMES Time from block start (REAL) in seconds (excluding times for internally generated intermediate blocks). Each programmed block can be divided into a sequence of sub-blocks for sequential processing. $AC_TIMES is set to zero o_n_l_y during the 1st cycle of the 1st block in the sequence. It is then incremented in seconds. The variable therefore allows time measurements to be taken over the whole block sequence. The variable can be accessed only from synchronized actions.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_TIMEC**							description:	
description:									
Variable $AC_TIMEC determines the number of interpolation cycles which have elapsed since the block start.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	0			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_TIMESC**							description:	
description:									
$AC_TIMESC Time from block start (Real) in IPO cycles (excluding cycles for internally generated intermediate blocks). Each programmed block can be divided into a sequence of sub-blocks for sequential processing. $AC_TIMESC is set to zero o_n_l_y during the 1st cycle of the 1st block in the sequence. It is then incremented in IPO cycles. The variable therefore allows time measurements to be taken over the whole block sequence. The variable can be accessed only from synchronized actions									
axis identifier:					NCK version:		54.00.00		
unit:	-	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_TIMER[1]**								description:	
description:										
Array variable $AC_TIMER[n] is an application-related timer. The time in seconds is counted in multiples of an interpolation cycle. The timer is started by assigning a value: $AC_TIMER[n]=<start value> The timers can be stopped by assigning a negative value: $AC_TIMER[n]=-1 The current timer count can be read while the time variable is running or stopped. When the time variable is stopped by assigning -1, the last count value remains stored in the variable and can continue to be read.										
description of field limits:										
The dimension is defined in $MC_MM_NUM_AC_TIMER.										
axis identifier:						NCK version:		13.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PRTIME_M**								description:	
description:										
$AC_PRTIME_M "ProgramRunTIME-Main" Setting (initialization) of the calculated program run time (main time) During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. This value is cleared by writing a value to the variable.										
axis identifier:						NCK version:		13.00.00		
unit:	-	min.:					max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:										
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PRTIME_A**							description:	
description:									
$AC_PRTIME_A "ProgramRunTIME-Auxilary" Setting (initialization) of the calculated program run time (auxiliary time) During a block search, the anticipated processing time (auxiliary time) of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeA'. This value is cleared by writing a value to the variable.									
axis identifier:						NCK version:		13.00.00	
unit:	-	min.:					max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:										
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PRTIME_M_INC**							description:	
description:									
$AC_PRTIME_M_INC "ProgramRunTIME-Main-INCrement" Incrementation of the calculated program run time (main time) During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. Since certain times (e.g. PLC times) are not considered, the calculated program runtime can be corrected by setting this variable explicitly.									
axis identifier:						NCK version:		13.00.00	
unit:	-	min.:					max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:										
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PRTIME_A_INC**							description:	
description:									
$AC_PRTIME_A_INC "ProgramRunTIME-Auxilary-INCrement" Incrementation of accumulated program run time (auxiliary time) During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. Since certain times (e.g. PLC times) are not considered, the calculated program runtime can be corrected by setting this variable explicitly.									
axis identifier:						NCK version:		13.00.00	
unit:	-	min.:					max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:										
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PATHN**						description:	
description:								
Variable $AC_PATHN is a normalized path parameter whose value varies between 0 at the block start and 1 at the block end.								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	0		max.:	1		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_DTBW**						description:	
description:								
Variable $AC_DTBW determines the geometric distance from the block start in the workpiece coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
axis identifier:				NCK version:	06.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_REPOS_PATH_MODE**						description:	
description:								
$AC_REPOS_PATH_MODE Type of Repos mode 0 not defined. 1 == RMB Repos approach to start of interrupted block 2 == RMI Repos approach to interruption point in interrupted block 3 == RME Repos approach to end of interrupted block 4 == RMN Repos approach to next geometric point in interrupted block The variable is defined if a REPOS command is currently being executed, or if a new REPOS mode has been specified via the VDI.								
axis identifier:				NCK version:	51.00.00			
unit:	-	min.:			max.:	4		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AC_DTBB**						description:	
description:								
Variable $AC_DTBB determines the geometric distance from the block start in the basic coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
axis identifier:					NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_DTEW**						description:	
description:								
Variable $AC_DTEW determines the geometric distance from the block end in the workpiece coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
axis identifier:					NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_DTEB**						description:	
description:								
Variable $AC_DTEB determines the geometric distance from the block end in the basic coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
axis identifier:					NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_PLTBB**					description:	
description: Variable $AC_PLTBB determines the path from the block start in the basic coordinate system.							
axis identifier:				NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN	max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PLTEB**					description:	
description: Variable $AC_PLTEB determines the path to the block end in the basic coordinate system.							
axis identifier:				NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN	max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_DELT**					description:	
description: Variable $AC_DELT is used to read the stored path distance to go in the workpiece coordinate system after delete distance to go in motion-synchronous actions.							
axis identifier:				NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN	max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_APDV**						description:	
description: $P_APDV Returns True if the position values which can be read with $P_APR[X] or $P_AEP[X] (respectively starting point or contour point in the case of smooth approach and retraction) are valid.								
axis identifier:				NCK version:		13.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_F**						description:	
description: Variable $P_F is used to read the last programmed path feed F.								
axis identifier:				NCK version:		06.00.00		
unit:	mm/min	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_F**						description:	
description: Variable $AC_F is used to read the active programmed path feed F.								
axis identifier:				NCK version:		20.10.00		
unit:	mm/min	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_F_G0**						description:	
description: Variable $AC_F_G0 returns the maximum rapid traverse velocity in the block.								
axis identifier:				NCK version:	53.00.00			
unit:	mm/min	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_OVR**						description:	
description: The variable $AC_OVR determines the path override specifiable via synchronized action. The path override must be set by assigning a value cyclically to $AC_OVR in each interpolation cycle. Otherwise $AC_OVR is reset to 100%. The total path override can be read via $AC_TOTAL_OVR. The total path override without the programmable override (e.g. OVR = 10) is limited to the maximum value defined by the machine data $MN_OVR_FACTOR_LIMIT_BIN or $MN_OVR_FACTOR_FEEDRATE[31]. Values less than 0 are not allowed.								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:		X				X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_PLC_OVR**							description:	
description:									
The variable $AC_PLC_OVR determines the path override defined by the PLC. This is the feedrate override that is set via the Machine Control Panel. The rapid traverse override (settable on the Machine Control Panel) is effective with G0 blocks. If the rapid traverse reduction has been activated via the operator interface, then, with G0 blocks, $SC_OVR_RAPID_FACTOR is also taken into account multiplicatively.									
axis identifier:				NCK version:		54.00.00			
unit:	-	min.:			max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_TOTAL_OVR**							description:	
description:									
The variable $AC_TOTAL_OVR supplies the total path override. The value is calculated from the override from the PLC, the synchronized action override ($AC_OVR) and the programmable override (e.g. OVR = 10). $AC_TOTAL_OVR = $AC_PLC_OVR * $AC_OVR * OVR /10000.									
axis identifier:				NCK version:		54.00.00			
unit:	-	min.:			max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_VC**						description:	
description: $AC_VC Additive path feed override for synchronized actions The override value must be rewritten in every Ipo cycle or else a value of 0 is applied. The override value is ignored with an override of 0. Otherwise, the override value is applied independent of the override. The total feedrate cannot be made negative by an override value. An upper limit is applied to ensure that the maximum axis velocities and acceleration rates cannot be exceeded. The maximum feedrate is limited by $MN_OVR_FACTOR_LIMIT_BIN, $MN_OVR_FACTOR_FEEDRATE[30] (see machine data). The override value is not included in the calculation in the case of G0, G33, G331, G332 and G63. The variable can be accessed only from synchronized actions.								
axis identifier:						NCK version:	06.00.00	
unit:	Linear / angular speed	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:		X					X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PATHACC**						description:	
description: $AC_PATHACC Defines an increased path acceleration for override changes and stop/start events. $AC_PATHACC is taken into account only if the value is higher than the prepared acceleration limit. A value of 0 deselects the function. Values which cause machine axis acceleration rates twice the rate configured in $MA_MAX_AX_ACCEL[..] are limited internally.								
axis identifier:						NCK version:	45.00.00	
unit:	m/s²	min.:	0.			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_PATHJERK**						description:	
description:								
$AC_PATHJERK Defines an increased path jerk for override changes and stop/start events. $AC_PATHJERK is taken into account only if the value is higher than the prepared jerk limit. A value of 0 deselects the function.								
axis identifier:				NCK version:		45.00.00		
unit:	m/s³	min.:	0.		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_VACTB**						description:	
description:								
$AC_VACTB Path velocity in the basic coordinate system. The velocity is calculated from the velocities of the geometry axes - independent of FGROUP. The variable can be accessed only from synchronized actions								
axis identifier:				NCK version:		06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_VACTW**						description:	
description:								
$AC_VACTW Path velocity in the workpiece coordinate system The velocity is calculated from the velocities of the geometry axes - independent of FGROUP. The variable can be accessed only from synchronized actions								
axis identifier:				NCK version:		06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_S[n]**						description:	
description: $P_S[n] n: Number of spindle Last programmed spindle speed								
description of field limits: n: Spindle number								
axis identifier:	SPINDLE			NCK version:	06.00.00			
unit:	rpm	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_S[1]**						description:	
description: $AA_S[n] n: Number of spindle Actual spindle speed. The sign corresponds to the direction of rotation.								
description of field limits: n: Spindle number								
axis identifier:				NCK version:	06.00.00			
unit:	rpm	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_CONSTCUT_S[n]**						description:	
description: $P_CONSTCUT_S[n] n: Number of spindle Last programmed constant cutting rate								
description of field limits: n: Spindle number								
axis identifier:				NCK version:	42.00.00			
unit:	m/min	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_CONSTCUT_S[n]**							description:	
description: $AC_CONSTCUT_S[n] n: Number of spindle Current constant cutting rate.									
description of field limits: n: Spindle number									
axis identifier:	SPINDLE				NCK version:		42.00.00		
unit:	m/min	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_SEARCH_S[n]**							description:	
description: $P_SEARCH_S[n] n: Number of spindle Last programmed spindle speed collected during block search or cutting rate									
description of field limits: n: Spindle number									
axis identifier:	SPINDLE				NCK version:		20.01.00		
unit:	rpm	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SDIR[n]**							description:	
description: $P_SDIR[n] n: Number of spindle Last programmed direction of spindle rotation 3: CW spindle rotation, 4: CCW spindle rotation, 5: Spindle stop									
description of field limits: n: Spindle number									
axis identifier:	SPINDLE				NCK version:		06.00.00		
unit:	-	min.:	3			max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_SDIR[n]**						description:	
description: $AC_SDIR[n] n: Number of spindle Current direction of spindle rotation 3: CW spindle rotation, 4: CCW spindle rotation, 5: Spindle stop								
description of field limits: n: Spindle number								
axis identifier:	SPINDLE			NCK version:	06.00.00			
unit:	-	min.:	3		max.:	5		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_SEARCH_SDIR[n]**						description:	
description: $P_SEARCH_SDIR[n] n: Number of spindle Last programmed direction of spindle rotation collected during block search 3: M3 CW spindle rotation 4: M4 CCW spindle rotation 5: M5 Spindle stop -19: M19, SPOS, SPOSA spindle positioning, position and approach mode is read from SEARCH variables 70: M70 Changeover to axis mode -5: No direction of rotation programmed, not output.								
description of field limits: n: Spindle number								
axis identifier:	SPINDLE			NCK version:	20.01.00			
unit:	-	min.:	3		max.:	70		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_SMODE[n]**						description:	
description: $P_SMODE[n] n: Number of spindle The spindle mode resulting from the last spindle programming action is returned. 0: No spindle programmed in channel, or spindle is active in another channel, or is being used by the PLC (FC18) or synchronized actions. 1: Speed control mode 2: Positioning mode 3: Synchronous mode 4: Axis mode								
description of field limits: n: Spindle number								
axis identifier:	SPINDLE				NCK version:	06.00.00		
unit:	-	min.:			max.:	4		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_SMODE[n]**						description:	
description: $AC_SMODE[n] n: Number of spindle Current spindle mode: 0: No spindle programmed in channel 1: Speed control mode 2: Positioning mode 3: Synchronous mode 4: Axis mode								
description of field limits: n: Spindle number								
axis identifier:	SPINDLE				NCK version:	13.00.00		
unit:	-	min.:			max.:	4		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SGEAR[n]**								description:	
description: $P_SGEAR[n] n: Number of spindle Spindle gear stage last programmed or requested by S programming in the case of M40 1: 1. Gear stage requested .... 5: 5. Gear stage requested										
description of field limits: n: Spindle number										
axis identifier:						NCK version:		41.00.00		
unit:	-	min.:	1				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_SGEAR[n]**								description:	
description: $AC_SGEAR[n] n: Number of spindle Active spindle gear stage 1: 1. Gear stage is active .... 5: 5. Gear stage is active										
description of field limits: n: Spindle number										
axis identifier:						NCK version:		41.00.00		
unit:	-	min.:	1				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SAUTOGEAR[n]**						description:	
description: $P_SAUTOGEAR[n] n: Number of spindle Automatic gear stage change (M40) is programmed. 0: Gear stages are requested by M41..M45 1: Gear stage is calculated and requested according to programmed speed (S) (M40 automatic gear stage change is active)								
description of field limits: n: Spindle number								
axis identifier:				NCK version:		41.00.00		
unit:	-	min.:			max.:	1		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_SEARCH_SGEAR[n]**						description:	
description: $P_SEARCH_SGEAR[n] n: Number of spindle Last programmed gear stage M function collected during block search 40: M40 automatic gear stage change 41: M41 1st gear stage requested ... 45: M45 5th gear stage requested								
description of field limits: n: Spindle number								
axis identifier:				NCK version:		20.01.00		
unit:	-	min.:	1		max.:	5		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_SEARCH_SPOS[n]**							description:	
description: $P_SEARCH_SPOS[n] n: Number of spindle Spindle position or traversing path last programmed via M19, SPOS or SPOSA and collected during block search. Position: 0...359,999 if the value in MD 30330 MODULO_RANGE is 360.0 degrees Path: -100000000 ... 100000000 degrees. The sign specifies the direction of travel.									
description of field limits: n: Spindle number									
axis identifier:					NCK version:		20.01.00		
unit:	deg.	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SEARCH_SPOSMODE[n]**							description:	
description: $P_SEARCH_SPOSMODE[n] n: Number of spindle Position approach mode last programmed via M19, SPOS or SPOSA and collected during block search. 0: DC 1: AC 2: IC 3: DC 4: ACP 5: ACN									
description of field limits: n: Spindle number									
axis identifier:					NCK version:		20.01.00		
unit:	-	min.:				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_NUM_SPINDLES**						description:	
description:								
$P_NUM_SPINDLES Calculates the maximum number of spindles in the channel 0: No spindle programmed in channel. 1..n: Number of spindles in channel.								
axis identifier:				NCK version:	20.01.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_MSNUM**						description:	
description:								
$P_MSNUM Returns the number of the master spindle. 0: No spindle programmed in channel 1..n: Number of master spindle								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MSNUM**						description:	
description:								
$AC_MSNUM Returns the number of the current master spindle. 0: No spindle configured 1..n: Number of master spindle								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_MTHNUM**						descriptio n:		
description:									
$P_MTHNUM - meaningful only when magazine management is active Returns the number of the master toolholder. 0: No master toolholder configured 1..n: Number of master toolholder									
axis identifier:					NCK version:		20.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MTHNUM**						descriptio n:		
description:									
$AC_MTHNUM - meaningful only when magazine management is active Returns the number of the current master toolholder: 0: No master toolholder configured 1..n: Number of master toolholder									
axis identifier:					NCK version:		20.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_GWPS[31]**						descriptio n:		
description:									
$P_GWPS[n] Constant grinding wheel surface speed ON if TRUE									
description of field limits:									
n: Spindle number									
axis identifier:					NCK version:		06.00.00		
unit:	Linear / angular speed	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT1LL**								description:	
description:										
Variable $AC_FCT1LL is used to define the lower limit for the first polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT2LL**								description:	
description:										
Variable $AC_FCT2LL is used to define the lower limit for the second polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT3LL**								description:	
description:										
Variable $AC_FCT3LL is used to define the lower limit for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT1UL**						description:	
description:								
Variable $AC_FCT1UL is used to define the upper limit for the first polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_FCT2UL**						description:	
description:								
Variable $AC_FCT2UL is used to define the upper limit for the second polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_FCT3UL**						description:	
description:								
Variable $AC_FCT3UL is used to define the upper limit for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_FCT1C[4]**								description:	
description: Array variable $AC_FCT1C[n] is used to program polynomial coefficients a0 - a3 for the first polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
description of field limits: n: Degree of order of coefficient 0 - 3										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT2C[4]**								description:	
description: Array variable $AC_FCT2C[n] is used to program polynomial coefficients a0 - a3 for the second polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
description of field limits: n: Degree of order of coefficient 0 - 3										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT3C[4]**							description:	
description:									
Array variable $AC_FCT3C[n] is used to program polynomial coefficients a0 - a3 for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits:									
n: Degree of order of coefficient 0 - 3									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCTLL[n]**							description:	
description:									
Array variable $AC_FCTLL[n] is used to define the lower limit for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits:									
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCTUL[n]**							description:	
description:									
Array variable $AC_FCTUL[n] is used to define the upper limit for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits:									
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT0[n]**							description:	
description: Array variable $AC_FCT0[n] is used to program the a0 coefficient for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits: The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT1[n]**							description:	
description: Array variable $AC_FCT1[n] is used to program the a1 coefficient for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits: The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT2[n]**							description:	
description: Array variable $AC_FCT2[n] is used to program the a2 coefficient for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits: The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FCT3[n]**							description:	
description:									
Array variable $AC_FCT3[n] is used to program the a3 coefficient for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
description of field limits:									
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_ALARM_STAT**							description:	
description:									
Variable $AC_ALARM_STAT returns selected alarm responses. The following bits are possible: 0x04Channel status NOREADY 0x40Stop due to alarm 0x200Signal to PLC 0x11Axes in follow-up									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AN_ESR_TRIGGER**							description:	
description:									
$AN_ESR_TRIGGER = 1 Trigger "Extended stop and retract"									
axis identifier:					NCK version:		16.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:		X					X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AN_BUS_FAIL_TRIGGER**						description:		
description:									
Reserved for Siemens									
axis identifier:					NCK version:		51.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:		X					X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AC_ESR_TRIGGER**						description:		
description:									
$AC_ESR_TRIGGER = 1 Trigger "numerically controlled ESR"									
axis identifier:					NCK version:		42.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:		X					X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_OPERATING_TIME**						description:		
description:									
$AC_OPERATING_TIME measures the total operating time of all NC programs in AUTOMATIC mode between NC Start and end of program / NC Reset (in seconds) The timer is zeroed after each Power On. The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER: Bit 0 = 1$AC_OPERATING_TIME measurement is active. The following selection of further measurement conditions is possible: Bit 4 = 0No measurement when dryrun feed active Bit 4 = 1Measurement even when dryrun feed active Bit 5 = 0No measurement during program test Bit 5 = 1Measurement even during program test Use in NC program: IF $AC_OPERATING_TIME < 12000 GOTOB STARTMARK									
axis identifier:					NCK version:		19.00.00		
unit:	s	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_CYCLE_TIME**							description:	
description:									
$AC_CYCLE_TIME measures the operating time of the selected NC program between NC Start and end of program/NC Reset (in seconds). The timer is cleared after each program start. The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER: Bit 1 = 1$AC_CYCLE_TIME measurement of current program operating time is active. The following selection of further measurement conditions is possible: Bit 4 = 0No measurement when dryrun feed active Bit 4 = 1Measurement even when dryrun feed active Bit 5 = 0No measurement during program test Bit 5 = 1Measurement even during program test Use in NC program: IF $AC_CYCLE_TIME> 2400 GOTOF ALARM01									
axis identifier:						NCK version:		19.00.00	
unit:	s	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_CUTTING_TIME**							description:	
description:									
$AC_CUTTING_TIME is used to measure the machining time (in seconds). This time is defined as the operating time of the path axes (at least one is active) excluding periods when rapid traverse is active in all NC programs between NC Start and end of program / NC Reset optionally including/not including active tool. The measurement is also interrupted whenever a dwell time is active. The timer is automatically reset each time the control boots with default values. The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER: Bit 2 = 1$AC_CUTTING_TIME measurement is active. The following selection of further measurement conditions is possible: Bit 4 = 0No measurement when dryrun feed active Bit 4 = 1Measurement even when dryrun feed active Bit 5 = 0No measurement during program test Bit 5 = 1Measurement even during program test Use in NC program: IF $AC_CUTTING_TIME> 6000 GOTOF ACT_M06									
axis identifier:						NCK version:		19.00.00	
unit:	s	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_REQUIRED_PARTS**							description:	
description:									
$AC_REQUIRED_PARTS can be used to define the number of workpieces which, when reached, causes the number of actual workpieces $AC_ACTUAL_PARTS to be reset (workpiece target). Channel MD 27880 $MC_PART_COUNTER can be used to activate the display alarm "workpiece target reached" and channel VDI signal "workpiece target reached": Bit 0 = 1:$AC_REQUIRED_PARTS counter is active Further meaning of bit 1 only when bit 0 = 1: Bit 1 = 0: Alarm/VDI output when $AC_ACTUAL_PARTS matches $AC_REQUIRED_PARTS Bit 1 = 1: Alarm/VDI output when $AC_SPECIAL_PARTS matches $AC_REQUIRED_PARTS Use in NC program: $AC_REQUIRED_PARTS = ACTUAL_LOS e.g. for defining a batch size, a daily production output ...									
axis identifier:						NCK version:		19.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_TOTAL_PARTS**							description:	
description:									
The $AC_TOTAL_PARTS counter indicates the number of all workpieces machined since the start time. The counter is incremented by 1 when the MC command defined in channel MD 27882$MC_PART_COUNTER_MCODE[0] is output to the PLC. The counter is automatically reset only when the control boots with default values. Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer: Bit 4 = 1: $AC_TOTAL_PARTS counter is active Further meaning of bits 5-6 only when bit 4 = 1: Bit 5 = 0: The $AC_TOTAL_PARTS counter is incremented by 1 on a VDI output of M02/M30 Bit 5 = 1: The $AC_TOTAL_PARTS counter is incremented by 1 when the M command from MD PART_COUNTER_MCODE[0] is output. Bit 6 = 0:$AC_TOTAL_PARTS active even during program test/block search Bit 6 = 1:No processing of $AC_TOTAL_PARTS during program test/block search Use in NC program: IF $AC_TOTAL_PARTS> SERVICE_COUNT GOTOF MARK_END									
axis identifier:						NCK version:		19.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_ACTUAL_PARTS**		description:	

description:

The $AC_ACTUAL_PARTS counter records the number of all workpieces machined since the start time. When the workpiece target is reached ($AC_REQUIRED_PARTS), the counter is automatically reset ($AC_REQUIRED_PARTS not equal to 0).
The counter is incremented by 1 when the MC command defined in channel MD 27882$MC_PART_COUNTER_MCODE[1] is output to the PLC.
The counter is automatically reset only when the control boots with default values.
Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer:
Bit 4 = 1: $AC_TOTAL_PARTS counter is active

Further meaning of bits 5-6 only when bit 4 = 1:
Bit 5 = 0: The $AC_TOTAL_PARTS counter is incremented by 1 on a VDI output of M02/M30
Bit 5 = 1: The $AC_TOTAL_PARTS counter is incremented by 1 when the M command from MD PART_COUNTER_MCODE[0] is output.
Bit 6 = 0:$AC_TOTAL_PARTS active even during program test/block search
Bit 6 = 1:No processing of $AC_TOTAL_PARTS during program test/block search

Use in NC program:
IF $AC_ACTUAL_PARTS == 0 GOTOF NEW_RUN

axis identifier:						NCK version:		19.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_SPECIAL_PARTS**							description:	
description:									
The $AC_SPECIAL_PARTS counter allows the user to apply his own strategy for counting workpieces. Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer: Bit 12 = 1: $AC_SPECIAL_PARTS counter is active Further meaning of bits 13-15 only when bit 12 = 1: Bit 13 = 0: The $AC_SPECIAL_PARTS counter is incremented by 1 on a VDI output of M02/M30 Bit 13 = 1: The $AC_SPECIAL_PARTS counter is incremented by 1 when the M command from MD PART_COUNTER_MCODE[2] is output. Bit 14 = 0: $AC_SPECIAL_PARTS active even during program test/block search Bit 14 = 1: No processing of $AC_SPECIAL_PARTS during program test/block search Use in NC program: $AC_SPECIAL_PARTS = R20									
axis identifier:						NCK version:		19.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AC_G0MODE**							description:	
description:									
$AC_G0MODE 0: G0 not active 1: G0 and linear interpolation active 2: G0 and non-linear interpolation active. The response of the path axes to G0 depends on machine data $MC_G0_LINEAR_MODE (Siemens mode) or $MC_EXTERN_G0_LINEAR_MODE (ISO mode): With linear interpolation, the path axes traverse together, With non-linear interpolation, the path axes are traversed as positioning axes.									
axis identifier:						NCK version:		42.00.00	
unit:	-	min.:					max.:	2	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_SEMA**							description:		
description:										

Variable for workpiece and tool measurement.
Variable $AA_MEAS_SEMA is used to synchronize measuring processes. The variable should be set to 1 before each assignment of the measurement interface and set to 0 when releasing it. Only one measurement interface is available for each channel and should be assigned only if the $AC_MEAS_SEMA contains the value 0.
Application:
if ($AC_MEAS_SEMA == 0)
  $AC_MEAS_SEMA = 1 ; Assign measurement interface
endif										

axis identifier:						NCK version:		43.00.00		
unit:	-	min.:					max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_LATCH[4]**							description:		
description:										
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_LATCH[n] is used to unlatch all current axis positions with reference to a selected coordinate system. Variable $AC_MEAS_P1_COORD is used to select the coordinate system. $AC_MEAS_P4_COORD. Application: $AA_MEAS_LATCH[0] = 1 ; Unlatch 1st measuring point of all axes $AA_MEAS_LATCH[1] = 1 ; Unlatch 2nd measuring point of all axes $AA_MEAS_LATCH[2] = 1 ; Unlatch 3rd measuring point of all axes $AA_MEAS_LATCH[3] = 1 ; Unlatch 4th measuring point of all axes The unlatched measuring point is stored in $AA_MEAS_POINT1[ax].										
description of field limits:										
0: 1st measuring point, .. , 3: 4th measuring point										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:					max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_P1_COORD**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_P1_COORD is used to set the coordinate system frame for the 1st measuring point. Application: $AC_MEAS_P1_COORD = 0 ; WCS $AC_MEAS_P1_COORD = 1 ; BCS $AC_MEAS_P1_COORD = 2 ; MCS $AC_MEAS_P1_COORD = 3 ; SZS									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_P2_COORD**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_P2_COORD is used to set the coordinate system frame for the 2nd measuring point. Application: $AC_MEAS_P2_COORD = 0 ; WCS $AC_MEAS_P2_COORD = 1 ; BCS $AC_MEAS_P2_COORD = 2 ; MCS $AC_MEAS_P2_COORD = 3 ; SZS									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_P3_COORD**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_P3_COORD is used to set the coordinate system frame for the 3rd measuring point. Application: $AC_MEAS_P3_COORD = 0 ; WCS $AC_MEAS_P3_COORD = 1 ; BCS $AC_MEAS_P3_COORD = 2 ; MCS $AC_MEAS_P3_COORD = 3 ; SZS									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_P4_COORD**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_P4_COORD is used to set the coordinate system frame for the 4th measuring point. Application: $AC_MEAS_P4_COORD = 0 ; WCS $AC_MEAS_P4_COORD = 1 ; BCS $AC_MEAS_P4_COORD = 2 ; MCS $AC_MEAS_P4_COORD = 3 ; SZS									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_SET_COORD**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AC_MEAS_SET_COORD is used to set the coordinate system for the position setpoint. Application: $AC_MEAS_SET_COORD = 0 ; WCS $AC_MEAS_SET_COORD = 1 ; BCS $AC_MEAS_SET_COORD = 2 ; MCS $AC_MEAS_SET_COORD = 3 ; SZS								
axis identifier:					NCK version:		50.00.00	
unit:	-	min.:	0			max.:	3	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_MEAS_WP_SETANGLE**						description:	
description:								
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_WP_SETANGLE is used to define an angle setpoint for the workpiece position.								
axis identifier:					NCK version:		43.00.00	
unit:	deg.	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_MEAS_CORNER_SETANGLE**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AA_MEAS_CORNER_SETANGLE is used to define an angle setpoint for the corner of a workpiece.								
axis identifier:					NCK version:		43.00.00	
unit:	deg.	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_DIR_APPROACH**							description:		
description:										
Variable for workpiece and tool measurement. Variable $AA_MEAS_DIR_APPROACH is used to define the direction of approach to the workpiece. The following values are possible: 0:+x 1:-x 2:+y 3:-y 4:+z 5:-z										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	0				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_ACT_PLANE**							description:		
description:										
Variable for workpiece and tool measurement. Variable $AC_MEAS_ACT_PLANE is used to define the working plane. The working plane is needed in order to define the tool orientation. The following values are possible: 0: G17 working plane x/y infeed direction z 1: G18 working plane z/x infeed direction y 2: G19 working plane y/z infeed direction x										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	0				max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_FINE_TRANS**						description:	
description:								
Variable for workpiece and tool measurement. When measuring workpieces, translation offsets can be entered in the fine offset component of the selected frame. Variable $AC_MEAS_FINE_TRANS is used for this purpose. The following values are possible: 0: Translation offset is entered in coarse offset 1: Translation offset is entered in fine offset								
axis identifier:				NCK version:		45.00.00		
unit:	-	min.:	0		max.:	1		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_FRAME_SELECT**		description:	

description:

Variable for workpiece and tool measurement.
Variable $AC_MEAS_FRAME_SELECT is used to select the frame in which the calculated frame is entered.
The following values are possible:
0:$P_SETFRAME
1:$P_PARTFRAME
2:$P_EXTFRAME
10..25:$P_CHBFRAME[0..15]
50..65:$P_NCBFRAME[0..15]
100..199:$P_IFRAME
500:$P_TOOLFRAME
501:$P_WPFRAME
502:$P_TRAFRAME
503:$P_PFRAME
504:$P_CYCFRAME
1010..1025: $P_CHBFRAME[0..15], when G500 is active
1050..1065: $P_NCBFRAME[0..15], when G500 is active
2000: $P_SETFR
2001:$P_PARTFR
2002:$P_EXTFR
2010..2025: $P_CHBFR[0..15]
2050..2065: $P_NCBFR[0..15]
2100..2199: $P_UIFR[0..99]
2500:$P_TOOLFR
2501:$P_WPFR
2502:$P_TRAFR
2504:$P_CYCFR
3010..3025: $P_CHBFR[0..15], when G500 is active
3050..3065: $P_NCBFR[0..15], when G500 is active

axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	0				max.:	3065		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_CHSFR**						description:	
description:								
Variable for workpiece and tool measurement. In order to convert a position from one coordinate system to another, $AC_MEAS_CHSFR can be used to define the composition of the desired frame chain. The value of the variable should be selected according to the system frame bitmask $MC_MM_SYSTEM_FRAME_MASK. Application: $AC_MEAS_CHSFR = 'B1001' Only the system frames for preset actual value and TOROT are included in the calculation of the new overall frame.								
axis identifier:				NCK version:		50.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_NCBFR**						description:	
description:								
Variable for workpiece and tool measurement. In order to convert a position from one coordinate system to another, $AC_MEAS_NCBFR can be used to define the composition of the desired frame chain. The value of the variable should be interpreted as a bitmask from 0x0 to 0xFFFF for the global basic frames (up to 16 frames in total). Application: $AC_MEAS_NCBFR = 'B11' Only the first two global basic frames are included in the calculation of the new overall frame.								
axis identifier:				NCK version:		50.00.00		
unit:	-	min.:	0		max.:	0xFFFF		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_CHBFR**							description:		
description:										
Variable for workpiece and tool measurement. In order to convert a position from one coordinate system to another, $AC_MEAS_CHBFR can be used to define the composition of the desired frame chain. The value of the variable should be interpreted as a bitmask from 0x0 to 0xFFFF for the channel basic frames (up to 16 frames in total). Application: $AC_MEAS_CHBFR = 'B11' Only the first two channel basic frames are included in the calculation of the new overall frame.										
axis identifier:						NCK version:		50.00.00		
unit:	-	min.:	0				max.:	0xFFFF		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_UIFR**							description:		
description:										
Variable for workpiece and tool measurement. In order to convert a position from one coordinate system to another, $AC_MEAS_UIFR can be used to define the composition of the desired frame chain. The variable range for the settable frames is from 0 to 99 (up to 100 in total). Application: $AC_MEAS_UIFR = 1 The G54 frame is included in the calculation of the new overall frame.										
axis identifier:						NCK version:		50.00.00		
unit:	-	min.:	0				max.:	99		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_MEAS_PFRAME**							description:	
description:									
Variable for workpiece and tool measurement. In order to convert a position from one coordinate system to another, $AC_MEAS_PFRAME can be used to define the composition of the desired frame chain. The following values are allowed: $AC_MEAS_PFRAME = 1 ; Programmable frame is not included in calculation $AC_MEAS_PFRAME = 0 ; Programmable frame is included in calculation									
axis identifier:					NCK version:		50.00.00		
unit:	-	min.:	0			max.:	1		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_T_NUMBER**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_T_NUMBER is used to select the tool for workpiece and tool measurement. The tool number of the active tool must match the selected tool. The active tool is included in the calculation when T0 is selected. If no tool is selected, the tool selected by $AC_MEAS_T_NUMBER is used in the calculation.									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	0			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_TOOL_MASK**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AC_MEAS_TOOL_MASK specifies the tool position and considers the tool lengths for workpiece and tool measurement. The following values are possible: 0x0:Default setting; all tool lengths are included 0x1:The radius of the tool is not included in the calculation 0x2:The tool position is in the x direction (G19) 0x4:The tool position is in the y direction (G18) 0x8:The tool position is in the z direction (G17) 0x10:The length of the tool is not included in the calculation. Whether or not the radius of a milling tool is included in the calculation is determined from the tool position and direction of approach. If the direction of approach is not specified explicitly, it is derived from the selected plane. The direction of approach is in -z for G17, -y for G18 and -x for G19.								
axis identifier:					NCK version:		50.00.00	
unit:	-	min.:	0			max.:	0x10	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_D_NUMBER**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AC_MEAS_D_NUMBER is used to select the tool cutting edge for workpiece and tool measurement. The tool cutting edge number of the active tool must match the selected cutting edge. The active cutting edge is included in the calculation when D0 is selected. If no tool is selected, the cutting edge selected by $AC_MEAS_D_NUMBER is used in the calculation.								
axis identifier:					NCK version:		43.00.00	
unit:	-	min.:	0			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_TYPE**		description:	

description:

Variable for workpiece and tool measurement.
Variable $AC_MEAS_TYPE is used to select the type of measurement.
The following values are possible:
0: Default setting
1: x edge
2: y edge
3: z edge
4: Corner 1
5: Corner 2
6: Corner 3
7: Corner 4
8: Hole
9: Shaft
10: Tool length
11: Tool diameter
12: Groove
13: Web
14: Preset actual value memory for geo and special axes
15: Preset actual value memory for special axes only
16: Inclined edge
17: Plane_Angles (2 solid angles in one plane)
18: Plane_Normal (3 solid angles in one plane with specified setpoint)
19: Dimension_1 (1-dimensional setpoint specification)
20: Dimension_2 (2-dimensional setpoint specification)
21: Dimension_3 (3-dimensional setpoint specification)
22: ToolMagnifier (ShopTurn: Measurement of tool lengths with magnifier)
23: ToolMarkedPos (ShopTurn: Measurement of a tool length with marked position)
24: Coordinate transformation of a position
25: Rectangle

axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	0		max.:	25		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7

attributes:	global	block search	link	
		Not classified	Not classified	

INT	**$AC_MEAS_VALID**		description:	

description:

Variable for workpiece and tool measurement.
Variable $AC_MEAS_VALID is used to define which system variables are valid for the current measurement. The value should be set to 0 before every measurement
The individual bits are set implicitly when the corresponding variables are written.
Bit 0: $AA_MEAS_POINT1[axis]
Bit 1: $AA_MEAS_POINT2[axis]
Bit 2:$AA_MEAS_POINT3[axis]
Bit 3: $AA_MEAS_POINT4[axis]
Bit 4: $AA_MEAS_SETPOINT[axis]
Bit 5: $AC_MEAS_WP_SETANGLE
Bit 6: $AC_MEAS_CORNER_SETANGLE
Bit 7: $AC_MEAS_T_NUMBER
Bit 8: $AC_MEAS_D_NUMBER
Bit 9: $AC_MEAS_DIR_APPROACH
Bit 10: $AC_MEAS_ACT_PLANE
Bit 11:$AC_MEAS_FRAME_SELECT
Bit 12: $AC_MEAS_TYPE
Bit 13: $AC_MEAS_FINE_TRANS
Bit 14: $AA_MEAS_SETANGLE[axis]
Bit 15: $AC_MEAS_SCALEUNIT
Bit 16: $AC_MEAS_TOOL_MASK
Bit 17: $AC_MEAS_P1_COORD
Bit 18: $AC_MEAS_P2_COORD
Bit 19: $AC_MEAS_P3_COORD
Bit 20: $AC_MEAS_P4_COORD
Bit 21: $AC_MEAS_SET_COORD
Bit 22: $AC_MEAS_CHSFR
Bit 23: $AC_MEAS_NCBFR
Bit 24: $AC_MEAS_CHBFR
Bit 25: $AC_MEAS_UIFR
Bit 26: $AC_MEAS_PFRAME

axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

FRAME	**$AC_MEAS_FRAME**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_FRAME is the result frame for workpiece measurement. This frame is calculated by the MEASURE() function or a PI service and is not part of the active frame chain. The calculated result frame can then be copied into the selected frame ($AC_MEAS_FRAME_SELECT) by the part program or a further PI service.									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_MEAS_WP_ANGLE**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_WP_ANGLE is the calculated workpiece position angle for workpiece measurement. The value specifies the relative position of the workpiece in the workpiece coordinate system (WCS).									
axis identifier:					NCK version:		43.00.00		
unit:	deg.	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_MEAS_CORNER_ANGLE**							description:	
description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_CORNER_ANGLE is the calculated cutting angle of the corner for workpiece measurement.									
axis identifier:					NCK version:		43.00.00		
unit:	deg.	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_MEAS_DIAMETER**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AC_MEAS_DIAMETER is the calculated diameter for tool measurement.								
axis identifier:				NCK version:	43.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_MEAS_TOOL_LENGTH**						description:	
description:								
Variable for workpiece and tool measurement. Variable $AC_MEAS_TOOL_LENGTH is the calculated tool length for tool measurement.								
axis identifier:				NCK version:	43.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_MEAS_RESULTS[10]**						description:	
description:								
Variable for workpiece and tool measurement. Array variable $AC_MEAS_RESULTS[n] contains the calculation results. The measurement type ($AC_MEAS_TYPE) determines which elements of the array are written.								
description of field limits:								
Measurement results								
axis identifier:				NCK version:	45.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AC_MEAS_SCALEUNIT**							description:		
description:										
Variable for workpiece and tool measurement. Variable $AC_MEAS_SCALEUNIT defines the unit of measurement according to the configuration for input and output values. The following values are possible: 0: Unit of measurement as configured (default setting) 1: Unit of measurement with reference to active G code is INCH: G70/G700 METRIC: G71/G710										
axis identifier:						NCK version:		48.00.00		
unit:	-	min.:	0				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_CHANNO**							description:		
description:										
Interrogate current channel number.										
axis identifier:						NCK version:		48.00.00		
unit:	-	min.:	1				max.:	10		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_SERUPRO**							description:		
description:										
$AC_SERUPRO Interrogate whether search type Serupro is active. (Serupro: "Block search via program test") Can be used in Synacts and the part program $AC_SERUPRO == 0 Search type Serupro is not active $AC_SERUPRO == 1 Search type Serupro is active										
axis identifier:						NCK version:		48.00.00		
unit:	-	min.:					max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_VACTBF**						description:	
description:								
$AC_VACTBF supplies the path velocity in the basic coordinate system. FGroup and FGREF are taken into account.								
axis identifier:				NCK version:	55.00.00			
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X		
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_VACTWF**						description:	
description:								
Path velocity in workpiece coordinate system. FGROUP and FGREF are taken into account.								
axis identifier:				NCK version:	55.00.00			
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X			
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

FRAME	**$P_CHBFR0**						description:	
description:								
Access to 1st channel basic frame. Corresponds to $P_CHBFR[0].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR1**						description:	
description: Access to 2nd channel basic frame. Corresponds to $P_CHBFR[1].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR2**						description:	
description: Access to 3rd channel basic frame. Corresponds to $P_CHBFR[2].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR3**						description:	
description: Access to 4th channel basic frame. Corresponds to $P_CHBFR[3].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR4**						description:	
description: Access to 5th channel basic frame. Corresponds to $P_CHBFR[4].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR5**						description:	
description: Access to 6th channel basic frame. Corresponds to $P_CHBFR[5].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR6**						description:	
description: Access to 7th channel basic frame. Corresponds to $P_CHBFR[6].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR7**						description:	
description: Access to 8th channel basic frame. Corresponds to $P_CHBFR[7].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR8**						description:	
description: Access to 9th channel basic frame. Corresponds to $P_CHBFR[8].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR9**						description:	
description: Access to 10th channel basic frame. Corresponds to $P_CHBFR[9].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR10**						description:	
description: Access to 11th channel basic frame. Corresponds to $P_CHBFR[10].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR11**						description:	
description: Access to 12th channel basic frame. Corresponds to $P_CHBFR[11].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR12**						description:	
description: Access to 13th channel basic frame. Corresponds to $P_CHBFR[12].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR13**							description:	
description: Access to 14th channel basic frame. Corresponds to $P_CHBFR[13].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR14**							description:	
description: Access to 15th channel basic frame. Corresponds to $P_CHBFR[14].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFR15**							description:	
description: Access to 16th channel basic frame. Corresponds to $P_CHBFR[15].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR0**					description:	
description: Access to 1st NCU-global basic frame. Corresponds to $P_NCBFR[0].							
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN	max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFR1**					description:	
description: Access to 2nd NCU-global basic frame. Corresponds to $P_NCBFR[1].							
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN	max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFR2**					description:	
description: Access to 3rd NCU-global basic frame. Corresponds to $P_NCBFR[2].							
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN	max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFR3**						description:	
description: Access to 4th NCU-global basic frame. Corresponds to $P_NCBFR[3].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR4**						description:	
description: Access to 5th NCU-global basic frame. Corresponds to $P_NCBFR[4].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR5**						description:	
description: Access to 6th NCU-global basic frame. Corresponds to $P_NCBFR[5].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR6**						description:	
description: Access to 7th NCU-global basic frame. Corresponds to $P_NCBFR[6].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR7**						description:	
description: Access to 8th NCU-global basic frame. Corresponds to $P_NCBFR[7].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR8**						description:	
description: Access to 9th NCU-global basic frame. Corresponds to $P_NCBFR[8].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR9**						description:	
description: Access to 10th NCU-global basic frame. Corresponds to $P_NCBFR[9].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR10**						description:	
description: Access to 11th NCU-global basic frame. Corresponds to $P_NCBFR[10].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR11**						description:	
description: Access to 12th NCU-global basic frame. Corresponds to $P_NCBFR[11].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR12**						description:	
description: Access to 13th NCU-global basic frame. Corresponds to $P_NCBFR[12].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR13**						description:	
description: Access to 14th NCU-global basic frame. Corresponds to $P_NCBFR[13].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR14**						description:	
description: Access to 15th NCU-global basic frame. Corresponds to $P_NCBFR[14].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFR15**						description:	
description: Access to 16th NCU-global basic frame. Corresponds to $P_NCBFR[15].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME0**						description:	
description: Access to 1st current channel basic frame. Corresponds to $P_CHBFRAME[0].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME1**						description:	
description: Access to 2nd current channel basic frame. Corresponds to $P_CHBFRAME[1].								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	56.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME2**						description:	
description: Access to 3rd current channel basic frame. Corresponds to $P_CHBFRAME[2].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME3**						description:	
description: Access to 4th current channel basic frame. Corresponds to $P_CHBFRAME[3].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME4**						description:	
description: Access to 5th current channel basic frame. Corresponds to $P_CHBFRAME[4].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME5**						description:	
description: Access to 6th current channel basic frame. Corresponds to $P_CHBFRAME[5].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME6**						description:	
description: Access to 7th current channel basic frame. Corresponds to $P_CHBFRAME[6].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME7**						description:	
description: Access to 8th current channel basic frame. Corresponds to $P_CHBFRAME[7].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME8**						description:		
description: Access to 9th current channel basic frame. Corresponds to $P_CHBFRAME[8].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME9**						description:		
description: Access to 10th current channel basic frame. Corresponds to $P_CHBFRAME[9].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME10**						description:		
description: Access to 11th current channel basic frame. Corresponds to $P_CHBFRAME[10].									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME11**							description:	
description: Access to 12th current channel basic frame. Corresponds to $P_CHBFRAME[11].									
axis identifier:	GEOAX CHANAX MACHAX					NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CHBFRAME12**							description:	
description: Access to 13th current channel basic frame. Corresponds to $P_CHBFRAME[12].									
axis identifier:	GEOAX CHANAX MACHAX					NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CHBFRAME13**							description:	
description: Access to 14th current channel basic frame. Corresponds to $P_CHBFRAME[13].									
axis identifier:	GEOAX CHANAX MACHAX					NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_CHBFRAME14**						description:	
description: Access to 15th current channel basic frame. Corresponds to $P_CHBFRAME[14].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_CHBFRAME15**						description:	
description: Access to 16th current channel basic frame. Corresponds to $P_CHBFRAME[15].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME0**						description:	
description: Access to 1st current NCU-global basic frame. Corresponds to $P_NCBFRAME[0].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME1**						description:	
description: Access to 2nd current NCU-global basic frame. Corresponds to $P_NCBFRAME[1].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME2**						description:	
description: Access to 3rd current NCU-global basic frame. Corresponds to $P_NCBFRAME[2].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME3**						description:	
description: Access to 4th current NCU-global basic frame. Corresponds to $P_NCBFRAME[3].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME4**						description:	
description: Access to 5th current NCU-global basic frame. Corresponds to $P_NCBFRAME[4].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME5**						description:	
description: Access to 6th current NCU-global basic frame. Corresponds to $P_NCBFRAME[5].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME6**						description:	
description: Access to 7th current NCU-global basic frame. Corresponds to $P_NCBFRAME[6].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME7**						description:	
description: Access to 8th current NCU-global basic frame. Corresponds to $P_NCBFRAME[7].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME8**						description:	
description: Access to 9th current NCU-global basic frame. Corresponds to $P_NCBFRAME[8].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME9**						description:	
description: Access to 10th current NCU-global basic frame. Corresponds to $P_NCBFRAME[9].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME10**						description:	
description: Access to 11th current NCU-global basic frame. Corresponds to $P_NCBFRAME[10].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME11**						description:	
description: Access to 12th current NCU-global basic frame. Corresponds to $P_NCBFRAME[11].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME12**						description:	
description: Access to 13th current NCU-global basic frame. Corresponds to $P_NCBFRAME[12].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_NCBFRAME13**						description:	
description: Access to 14th current NCU-global basic frame. Corresponds to $P_NCBFRAME[13].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFRAME14**						description:	
description: Access to 15th current NCU-global basic frame. Corresponds to $P_NCBFRAME[14].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_NCBFRAME15**						description:	
description: 16. 16th current NCU-global basic frame Corresponds to $P_NCBFRAME[15].								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$P_TRAFO_CHAIN[MAX_CONCATENATED_TRAFOS]**							description:	
description: $P_TRAFO_CHAIN[n] Code numbers of chained transformations of programmed TRACON according to machine data $MC_TRAFO_TYPE_m. . Supplies the code number of the nth chained transformation of the programmed TRACON, starting with n=0. $P_TRAFO_CHAIN[0] is the 1st chained transformation if a TRACON is programmed. If a TRACON command is not programmed, the code number of the programmed transformation is returned (e.g. 257 for TRANSMIT). If there is no transformation programmed, the value '0' is returned. $P_TRAFO_CHAIN[1] is the 2nd chained transformation if a TRACON is programmed. Otherwise a '0' is returned. The same applies accordingly for $P_TRAFO_CHAIN[2] and $P_TRAFO_CHAIN[3].									
description of field limits: n: Index of the chained transformation.									
axis identifier:						NCK version:		51.06.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_TRAFO_CHAIN[MAX_CONCATENATED_TRAFOS]**							description:	
description: $AC_TRAFO_CHAIN[n] Code numbers of chained transformations of active TRACON according to machine data $MC_TRAFO_TYPE_m. . Supplies the code number of the nth chained transformation of the active TRACON, starting with n=0. $AC_TRAFO_CHAIN[0] is the 1st chained transformation if a TRACON is programmed. If a TRACON command is not active, the code number of the programmed transformation is returned (e.g. 257 for TRANSMIT). If no transformation is active, the value '0' is returned. $AC_TRAFO_CHAIN[1] is the 2nd chained transformation if a TRACON is active. Otherwise a '0' is returned. The same applies accordingly for $AC_TRAFO_CHAIN[2] and $AC_TRAFO_CHAIN[3].									
description of field limits: n: Index of the chained transformation.									
axis identifier:						NCK version:		51.06.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_MEAS_INPUT[10]**								description:	
description: Variable for workpiece and tool measurement. Array variable $AC_MEAS_INPUT[n] is used to enter measuring input parameters for workpiece and tool measurement. The control effect of the parameters is documented in the measurement variants.										
description of field limits: n=0..9: Measuring input parameter										
axis identifier:						NCK version:		51.08.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DBSB[1024]**								description:	
description: Array variable $A_DBSB[n] is used to read and write a data byte (8 bits) from PLC. The byte is signed and can be read and written in the range from -128 to 127. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBB[n].										
description of field limits: n: Position offset within I/O area 0 - ...										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-128				max.:	127		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_DBSW[1024]**						description:	
description:								
Array variable $A_DBSW[n] is used to read and write a data word (16 bits) from PLC. The word is signed and can be read and written in the range from -32768 to 32767. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBW[n].								
description of field limits:								
n: Position offset within I/O area 0 - ...								
axis identifier:			NCK version:		58.00.00			
unit:	-	min.:	-32768		max.:		32767	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X		X	X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_SUB_AXFCT**						description:	
description:								
Returns a bitmask according to machine data $MA_AXIS_LANG_SUB_MASK. An enabled bit means that the substitution of the corresponding function is active: Bit 0 = 1:Automatic gear stage change (M40) and direct gear stage change (M41-M45) Bit 1 = 1:Spindle positioning with SPOS/SPOSA/M19								
axis identifier:			NCK version:		58.00.00			
unit:	-	min.:	0		max.:		3	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$P_SUB_GEAR**						description:	
description:								
Returns the programmed or calculated gear stage in the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK. Outside the substitution subprogram, the variable returns the gear stage of the master spindle.								
axis identifier:					NCK version:	58.00.00		
unit:	-	min.:	41		max.:	45		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**$P_SUB_AUTOGEAR**						description:	
description:								
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable indicates whether an automatic gear stage change (M40) was active in the part program line which initiated the substitution process. Outside the substitution process, the variable returns the current setting in the interpreter.								
axis identifier:					NCK version:	58.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**$P_SUB_LA**						description:	
description:								
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable supplies the axis identifier of the leading spindle of the active coupling which initiated the substitution process. Outside the substitution process, the variable aborts program execution and triggers an alarm.								
axis identifier:					NCK version:	58.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**$P_SUB_CA**								description:	
description:										
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable supplies the axis identifier of the following spindle of the active coupling which initiated the substitution process. Outside the substitution process, the variable aborts program execution and triggers an alarm.										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**$P_BLOCKNO[INMAXFILESTACK]**								description:	
description:										
$P_BLOCKNO[n] Supplies the last programmed block number of program level n. Example: $P_BLOCKNO[0] Supplies the modal block number of the program on program level 0 = main program name. MD 10284 $MN_DISPLAY_FUNCTION_MASK Bit0 must be = 1. Block numbers programmed during DISPLOF cannot be read with $P_BLOCKNO.										
description of field limits:										
n: Defines the program level from which the block number is to be read.										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_LINENO[INMAXFILESTACK]**							description:	
description: $P_LINENO[n] Supplies the last programmed line number of program level n. Example: $P_LINENO[0] Supplies the line number of the program on program level 0 = main program level.									
description of field limits: n: Defines the program level from which the line number is to be read.									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_AUTO_JOG_STATE**							description:	
description: 1: Automatic is selected, $MN_JOG_MODE_MASK is set and the mode group is "BAG-Reseted". By actuating the +/- buttons or the handwheel, you can jog in Auto mode. 2: After a JOG movement has been performed, this mode group was switched by the system to JOG. The VDI and OPI still display Automatic mode. 0: Other Remark: This information covers the whole mode group and is available to each mode group channel via $AC_AUTO_JOG_STATE.									
axis identifier:					NCK version:		59.00.00		
unit:	-	min.:	0			max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_FIFO[n,m]**		description:	

description:

Variable $AC_FIFO[n,m] access the n-th. first in first out stack. See also $AC_FIFO1 .. $AC_FIFO10.
$MC_NUM_AC_FIFO is used to define the range of n values and thus the number of FIFO Stacks $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO stacks is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be stored:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
m = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
m=1: Access to the first element read
m=2: Access to the last element read
m=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
m=4: Number of elements available in the FIFO
m=5: Current write index relative to the start of the FIFO
m=6: Oldest element
m=7: Second oldest etc.

description of field limits:

The dimension is defined in $MC_NUM_AC_FIFO.
The dimension is defined in $MC_LEN_AC_FIFO.

axis identifier:			NCK version:		60.00.00				
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_AUXFU_M_VALUE[64]**							description:		
description:										
The array variable $AC_AUXFU_M_VALUE[n] is used to read the value of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the value of the M auxiliary function output last for the 1st group. If an auxiliary function has not yet been output for the group specified, the variable returns the value -1. The relevant extension can be determined with the variable $AC_AUXFU_M_EXT[n]. The variable $AC_AUXFU_M_STATE[n] determines the current output status.										
description of field limits:										
The index corresponds to the auxiliary function group number decremented by one.										
axis identifier:					NCK version:		59.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_AUXFU_M_EXT[64]**							description:		
description:										
The array variable $AC_AUXFU_M_EXT[n] is used to read the extension of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the extension of the M auxiliary function output last for the 1st group. If an auxiliary function has not yet been output for the group specified, the variable returns the value -1. The relevant value of the auxiliary function can be determined with the variable $AC_AUXFU_M_VALUE[n]. The variable $AC_AUXFU_M_STATE[n] determines the current output status.										
description of field limits:										
The index corresponds to the auxiliary function group number decremented by one.										
axis identifier:					NCK version:		59.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_AUXFU_M_STATE[64]**							description:	
description:									
The array variable $AC_AUXFU_M_STATE[n] is used to read the output status of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the status of the M auxiliary function output last for the 1st group. If an auxiliary function has not yet been output for the group specified, the variable returns the value 0. If the value is greater than 0, the relevant auxiliary function value can be determined with the variable $AC_AUXFU_M_VALUE[n]. The variable $AC_AUXFU_M_EXT[n] determines the current extension of the auxiliary function. The variable returns the following values: 0: Auxiliary function not available 1: M-auxiliary function collected via search run 2: M-auxiliary function output to the PLC 3: M-auxiliary function output to the PLC, transfer has been acknowledged. 4: M-auxiliary function managed by the PLC and integrated into the PLC. 5: M-auxiliary function managed by the PLC, function has been acknowledged.									
description of field limits:									
The index corresponds to the auxiliary function group number decremented by one.									
axis identifier:						NCK version:		59.00.00	
unit:	-	min.:	0				max.:	5	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_THREAD_PITCH**							description:	
description:									
$P_THREAD_PITCH provides the lead with G33, G34, G35, G331 and G332 programmed under the address I, J or K. Value 0 is supplied in the RESET state or if no lead has been programmed. With G33, G34 and G35 a positive value is always returned. With G331 and G332, the sign results from the spindle rotation direction: positive in clockwise direction (as with M3) or negative in counterclokckwise direction (as with M4). In the following example, $P_THREAD_PITCH provides the value "1.5". ... N11 M4 S500 N12 G33 Z10 K1.4 N13 G33 Z12 K1.5 N14 R1=$P_THREAD_PITCH ;R1=1.5									
axis identifier:						NCK version:		60.00.00	
unit:	THREAD_PITCH	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_THREAD_PITCH_INC**							description:	
description:									
$P_THREAD_PITCH_INC supplies the value programmed under the address F for the lead change (G34/G35). Value 0 is supplied in the RESET state or if no lead change has been programmed. The returned value is positive in the case of G34 or negative in the case of G35. Example: M3 S400 G35 F2 Z10 K5 R1=$P_THREAD_PITCH_INC ;R1= -2									
axis identifier:						NCK version:		60.00.00	
unit:	THREAD_PITCH_INCREMENT	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_THREAD_PITCH**							description:	
description:									
$AC_THREAD_PITCH provides the lead for G33, G34, G35, G331 and G332 programmed under address I, J or K. In the RESET state or if no lead has been programmed, the value 0 is given. With G33, G34 and G35, a positive value is always returned. With G331 and G332, the sign from the spindle rotating direction is as follows: positive for clockwise rotation (as with M3) or negative for counterclockwise rotation (as with M4). In the following example, $AC_THREAD_PITCH provides the value "1.5" : ... N11 M4 S500 N12 G33 Z10 K1.4 N13 G33 Z12 K1.5 N14 R1=$AC_THREAD_PITCH ;R1= 1.5									
axis identifier:						NCK version:		60.00.00	
unit:	THREAD_PITCH	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_THREAD_PITCH_INC**							description:	
description:									
$AC_THREAD_PITCH_INC provides the value programmed under the address F for lead change (G34/G35). In the RESET state or if a change in lead has not been programmed, the value 0 is supplied. The returned value is positive for G34 and negative for G35. Example: M3 S400 G34 F4 Z10 K2 R1=$P_THREAD_PITCH_INC ;R1= 4									
axis identifier:					NCK version:		60.00.00		
unit:	THREAD_PITCH_INCREMENT	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_THREAD_PITCH_ACT**							description:	
description:									
$AC_THREAD_PITCH_ACT provides the current value for the lead. This value is continuously updated in blocks with G34 or G35 according to the value programmed under F. Only with thread blocks (G33, G34, G35, G331 and G332) a value unequal zero is supplied.									
axis identifier:					NCK version:		60.00.00		
unit:	THREAD_PITCH	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_TOOLROT[3]**							description:	
description: $P_TOOLROTn] Programmed tool rotation vector Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1. 1: x-component 2: y-component 3: z-component If no tool is active, the following unit vector is returned, depending on the active plane: G17: (0, 1, 0) G18: (1, 0, 0) G19: (0, 0, 1)									
description of field limits: n: Components 1 - 3									
axis identifier:						NCK version:	60.00.00		
unit:	-	min.:	-1.0			max.:	1.0		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_TOOLR_ACT[3]**							description:	
description: $AC_TOOLR_ACT[n] Active command rotation vector Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1. 1: x-component 2: y-component 3: z-component If no tool is active, the following unit vector is returned, depending on the active plane: G17: (0, 1, 0) G18: (1, 0, 0) G19: (0, 0, 1)									
description of field limits: n: Components 1 - 3									
axis identifier:						NCK version:	60.00.00		
unit:	-	min.:	-1.0			max.:	1.0		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_TOOLR_END[3]**							description:	
description: $AC_TOOLR_END[n] End rotation vector of active block Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1. 1: x-component 2: y-component 3: z-component If no tool is active, the following unit vector is returned, depending on the active plane: G17: (0, 1, 0) G18: (1, 0, 0) G19: (0, 0, 1)									
description of field limits: n: Components 1 - 3									
axis identifier:						NCK version:		60.00.00	
unit:	-	min.:	-1.0				max.:	1.0	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_TOOLR_DIFF**							description:	
description: $AC_TOOLR_DIFF Remaining angle of tool rotation in active block in degree in the range 0 ... 180 degree.									
axis identifier:						NCK version:		60.00.00	
unit:	deg.	min.:	0.0				max.:	180.0	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$VC_TOOLR[3]**							description:	
description: $VC_TOOLR[n] Actual tool rotation Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1. 1: x-component 2: y-component 3: z-component If no tool is active, the following unit vector is returned, depending on the active plane: G17: (0, 1, 0) G18: (1, 0, 0) G19: (0, 0, 1)									
description of field limits: n: Components 1 - 3									
axis identifier:						NCK version:		60.00.00	
unit:	-	min.:	-1.0				max.:	1.0	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$VC_TOOLR_DIFF**							description:	
description: $VC_TOOLR_DIFF Angle between command and actual tool rotation in degree in the range 0 ... 180 degree.									
axis identifier:						NCK version:		60.00.00	
unit:	deg.	min.:	0.0				max.:	180.0	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$VC_TOOLR_STAT**							description:	
description:									
$VC_TOOLR_STAT Status of calculation of actual tool rotation: 0: MCS -> BCS Transformation in one ipo cycle -1: MCS -> BCS transformation not in one ipo cycle possible									
axis identifier:					NCK version:		60.00.00		
unit:	-	min.:	-1			max.:	0		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

BOOL	**$P_SIMUL**							description:	
description:									
Value==TRUE The part program is executed in the control under the Simulation search run mode. The simulation search run is a search run (with calculation) which is aborted with an internal M30 once the end of the program has been reached. The control is internally in search run mode, the variables $P_SEARCH, $P_SERACH1, $P_SEARCH2 and $P_SERACHL are also correctly supplied. Parts program adjustments can be made through variables $P_SEARCH* or $P_SIMUL. $P_SIMUL is designed only for adjustments restricted to the simulation search run. Value==FALSE No simulation search run is active.									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Current value			Not classified				

INT	**$P_SUB_STAT**							description:	
description:									
A replacement of the tool programming has been configured (address D, DL, T or M function through which the tool change cycle is called up). $P_SUB_STAT now permits polling to see if the substitution process is active and if the process is executed at the start or the end of the block: Value 0:Substitution subprogram not active Value 1:Substitution subprogram active, call-up at start of block Value 2:Substitution subprogram active, call-up at end of block The system variable is influenced by machine data $MN_T_NO_FCT_CYCLE_MODE bit1 and 2.									
axis identifier:						NCK version:		61.00.00	
unit:	-	min.:	0				max.:	2	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**$A_USEDND[SLMDMAXMAGLOCATIONSWITHDISTANCE]**							description:	
description:									
$A_USEDND[toolHolder] The number of cutting edges used in tool holder s, counted since the last setpiece command, including the currently active cutting edge. toolHolder=1,...,maximum tool holder number toolHolder=0 = The master tool holder is selected Result = >0 = Number of cutting edges that have been used. Result = 0 = There have been no cuts since the last setpiece command. Result = -1 = Tool Management Tool Monitoring is not active. Result = -2 = toolHolder is not the value of a defined tool holder.									
description of field limits:									
toolHolder: Spindle number / Tool holder number									
axis identifier:						NCK version:		62.00.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_USEDT[SLMDMAXMAGLOCATIONSWITHDISTANCE,1500]**							description:	
description: $A_USEDT[toolHolder, usedCuttingEdgeIndex] T-Number for the i-th cutting edge used with tool holder s since the last setpiece command, including the currently active cutting edge. toolHolder=1,...,maximum tool holder number toolHolder=0 = The master tool holder is selected Result = >0 = T-Number (can occur several times) (if different D-corrections of the tool were used). Result = 0 = There have been no cuts since the last setpiece command. Result = -1 = Tool Management Tool Monitoring is not active. Result = -2 = toolHolder is not the value of a defined tool holder.									
description of field limits: toolHolder: Spindle number / Tool holder number usedCuttingEdgeIndex: index									
axis identifier:						NCK version:		62.00.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_USEDD[SLMDMAXMAGLOCATIONSWITHDISTANCE,1500]**							description:	
description: $A_USEDD[toolHolder, usedCuttingEdgeIndex] D-Number for the i-th cutting edge used with tool holder s since the last setpiece command, including the currently active cutting edge. toolHolder=1,...,maximum tool holder number toolHolder=0 = The master tool holder is selected Result = >0 = D-Number (can occur several times) (if different D-corrections of the tool were used). Result = 0 = There have been no cuts since the last setpiece command. Result = -1 = Tool Management Tool Monitoring is not active. Result = -2 = toolHolder is not the value of a defined tool holder.									
description of field limits: toolHolder: Spindle number / Tool holder number usedCuttingEdgeIndex: index									
axis identifier:						NCK version:		62.00.00	
unit:	-	min.:	0				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AC_AUXFU_M_TICK[64]**							description:	
description:									
Field variable $AC_AUXFU_M_TICK[n] is used to read the time stamp of the M auxiliary function collected (search run) or output last for an auxiliary function group. Auxiliary functions are assigned to groups. The index corresponds to a group number decremented by one. Index 0 therefore determines the value of the M auxiliary function of the 1st group, which was output last. If no auxiliary function has been output for the specific group, the variable indicates value -1. The respective value can be determined using variable $AC_AUXFU_M_VALUE[n] and the respective extension using variable $AC_AUXFU_M_EXT[n]. Variable $AC_AUXFU_M_STATE[n] determines the current output state.									
description of field limits:									
The index corresponds to the auxiliary function group number decremented by one.									
axis identifier:					NCK version:		63.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_CONE_ANGLE**							description:	
description:									
$AC_CONE_ANGLE Currently active cone angle for cone turning. The cone angle is set by default via the setting data $SC_CONE_ANGLE and is active in JOG mode only.									
axis identifier:					NCK version:		62.03.00		
unit:	deg.	min.:	-90			max.:	90		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$P_TECCYCLE**						description:	
description:								

To control the context-specific interpretation of program parts in technology cycles, preprocessing variable $P_TECCYCLE is available. Using this variable, programs can be subdivided into synchronized action program parts and preprocessing program parts.
 	
Example:
if ($P_TECCYCLE == TRUE)
; Program sequence for a technology cycle in synchronized action
else
; Program sequence for parts program cycle
endif								

axis identifier:				NCK version:		64.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AC_WORKAREA_CS_PLUS_ENABLE[n]**						description:	
description:								
TRUE: The limitation in the positive direction for the stated axis of the active coordinate system-specific working area limitation is valid. (See $AC_WORKAREA_CS_LIMIT_PLUS[ax])								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:		65.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$AC_WORKAREA_CS_MINUS_ENABLE[n]**							description:	
description: TRUE: The limitation in the negative direction for the stated axis of the active coordinate system-specific working area limitation is valid. (See $AC_WORKAREA_CS_LIMIT_MINUS[ax])									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		65.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_WORKAREA_CS_LIMIT_PLUS[n]**							description:	
description: The limitation in the positive direction for the stated axis of the stated group of the coordinate system-specific working area limitation. This value is only evaluated if $AC_WORKAREA_CS_PLUS_ENABLE = TRUE.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		65.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_WORKAREA_CS_LIMIT_MINUS[n]**							description:	
description: The limitation in the negative direction for the stated axis of the stated group of the coordinate system-specific working area limitation. This value is only evaluated if $AC_WORKAREA_CS_MINUS_ENABLE = TRUE.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		65.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AC_WORKAREA_CS_COORD_SYSTEM**							description:	
description: Coordinate system in which the active, coordinate-specific working area limitation applies. The following values apply: Working area limitation applies in the WCS Working area limitation applies in the SZS									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		65.00.00		
unit:	-	min.:	0			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AC_WORKAREA_CS_GROUP**						description:	
description:								
Number of the active group of the coordinate system-specific working area limitation. The value is determined in the NC program by the G code WALCS0-WALCS10.								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:		65.00.00		
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:				X			X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_ISO1FRAME**						description:	
description:								
Variable $P_ISO1FRAME is used to program the active system frame for ISO G51.1 mirroring. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit7 in $MC_CHSFRAME_RESET_MASK								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_ISO2FRAME**						description:	
description:								
The variable $P_ISO2FRAME is used to program the active system frame for ISO G68 2DROT. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit8 in $MC_CHSFRAME_RESET_MASK								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

FRAME	**$P_ISO3FRAME**								description:	
description:										
The variable $P_ISO3FRAME is used to program the active system frame for ISO G68 3DROT. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit9 in $MC_CHSFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ISO4FRAME**								description:	
description:										
The variable $P_ISO4FRAME is used to program the active system frame for ISO G51 Scale. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit10 in $MC_CHSFRAME_RESET_MASK										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

FRAME	**$P_ACSFRAME**							description:	
description:									
The variable $P_ACSFRAME determines the active chained total frame between BCS and SZS. The following applies to $MC_FRAME_ACS_SET = 0: $P_ACSFRAME = $P_PARTFRAME : $P_SETFRAME : $P_EXTFRAME : $P_ISO1FRAME : $P_ISO2FRAME : $P_ISO3FRAME : $P_ACTBFRAME : $P_IFRAME : $P_TOOLFRAME : $P_WPFRAME The following applies to $MC_FRAME_ACS_SET = 1: $P_ACSFRAME = $P_PARTFRAME : $P_SETFRAME : $P_EXTFRAME : $P_ISO1FRAME : $P_ISO2FRAME : $P_ISO3FRAME : $P_ACTBFRAME : $P_IFRAME : $P_TOOLFRAME : $P_WPFRAME : $P_TRAFRAME : $P_PFRAME : $P_ISO4FRAME									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		66.00.00	
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$P_CUT_INV**							description:	
description:									
$P_CUT_INV This system variable is used to indicate whether or not the direction of spindle rotation has to be inverted for machining with the currently active tool. The variable has the value TRUE if the four following conditions are fulfilled: 1. A turning tool is active (tool types 500 to 599). 2. The cutting edge influencing has been activated with the language command CUTMOD = 1 or CUTMOD =2. 3. A tool carrier with orientation capability is active. 4. The tool carrier with orientation capability rotates the tool so that the resulting normal of the tool cutting edge to the initial position is rotated more than 90 degrees (typically 180 degrees). The content of the variable is FALSE if at least one of the four conditions has not been fulfilled.									
axis identifier:						NCK version:		66.00.00	
unit:	-	min.:	FALSE				max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$AC_CUT_INV**							description:	
description:									
$AC_CUT_INV This system variable is used to indicate whether or not the direction of spindle rotation has to be inverted for machining with the currently active tool. The variable has the value TRUE if the four following conditions are fulfilled: 1. A turning tool is active (tool types 500 to 599). 2. The cutting edge influencing has been activated with the language command CUTMOD = 1 or CUTMOD =2. 3. A tool carrier with orientation capability is active. 4. The tool carrier with orientation capability rotates the tool so that the resulting normal of the tool cutting edge to the initial position is rotated more than 90 degrees (typically 180 degrees). The content of the variable is FALSE if at least one of the four conditions has not been fulfilled.									
axis identifier:						NCK version:		66.00.00	
unit:	-	min.:	FALSE				max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$P_CUTMOD**							description:	
description:									
$P_CUTMOD Reads the current valid value that was last programmed with the language command CUTMOD (number of the tool carrier for which the cutting edge data modification is to be activated). If the last programmed value was CUTMOD = -2 (activation with the currently active tool carrier with orientation capability), $P_CUTMOD does not return the value -2 but the number of the active tool carrier with orientation capability at the time of programming.									
axis identifier:						NCK version:		66.00.00	
unit:	-	min.:	-2				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$AC_CUTMOD**							description:	
description:									
$AC_CUTMOD Reads the currently valid value of the language command CUTMOD in the current block (number of the tool carrier for which the cutting edge data modification is to be activated).									
axis identifier:					NCK version:		66.00.00		
unit:	-	min.:	-2			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$P_CUTMOD_ANG**							description:	
description:									
$P_CUTMOD_ANG Reads the angle through which a tool has been rotated in the active machining plane, and on which the determination of modified cutting edge data with the functions CUTMOD and/or $SC_CUTDIRMOD is based.									
axis identifier:					NCK version:		66.00.00		
unit:	deg.	min.:	-360			max.:	360		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AC_CUTMOD_ANG**		description:	

description:

$AC_CUTMOD_ANG
Reads the angle through which a tool has been rotated in the active machining plane and on which the determination of modified cutting edge data with the functions CUTMOD and/or $SC_CUTDIRMOD is based.

axis identifier:						NCK version:		66.00.00		
unit:	deg.	min.:	-360				max.:	360		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$P_SUB_SPOS**		description:	

description:

Returns an NC language substitution TRUE (1) configured with $MA_AXIS_LANG_SUB_MASK bit1 = 1 in the substitution subprogram if the substitution was activated by the SPOS command.

axis identifier:						NCK version:		66.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Program sensitive				No restrictions				

BOOL	**$P_SUB_SPOSA**						description:	
description:								
Returns an NC language substitution TRUE (1) configured with $MA_AXIS_LANG_SUB_MASK bit1 = 1 in the substitution subprogram if the substitution was activated by the SPOSA command.								
axis identifier:				NCK version:		66.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**$P_SUB_M19**						description:	
description:								
Returns an NC language substitution TRUE (1) configured with $MA_AXIS_LANG_SUB_MASK bit1 = 1 in the substitution subprogram if the substitution was activated by M19.								
axis identifier:				NCK version:		66.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

DOUBLE	**$P_SUB_SPOSIT**							description:	
description:									
Returns the programmed position of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK bit1 = 1 in the substitution subprogram. If the variable is called outside this substitution process, the program execution is canceled with alarm 14055.									
axis identifier:					NCK version:		66.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$P_SUB_SPOSMODE**							description:	
description:									
Returns the position approach mode for the spindle position returned by $P_SUB_SPOSIT of a language substitution configured by $MA_AXIS_LANG_SUB_MASK bit1 = 1 in the substitution subprogram. 0: DC 1: AC 2: IC 3: DC 4: ACP 5: ACN If the variable is called outside this substitution process, the program execution is canceled with alarm 14055.									
axis identifier:					NCK version:		66.00.00		
unit:	-	min.:	0			max.:	5		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**$AC_SAFE_SYNA_MEM**							description:		
description:										
The variable $AC_SAFE_SYNA_MEM determines the number of free synchronized action elements for Safety Integrated. The maximum number of elements is configured by $MC_MM_NUM_SAFE_SYNC_ELEMENTS. The value is read from the part program without a preprocessing stop.										
axis identifier:						NCK version:		67.00.00		
unit:	-	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_ACT_PROG_NET_TIME**							description:		
description:										
The current net runtime of the current program in seconds, that means the time in which the program was stopped, is deducted. actProgNetTime is automatically reset to zero on part program start in automatic mode, channel status RESET. actProgNetTime can be further manipulated with $AC_PROG_NET_TIME_TRIGGER.										
axis identifier:						NCK version:		67.00.00		
unit:	s	min.:	0				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				No restrictions				

DOUBLE	**$AC_OLD_PROG_NET_TIME**							description:	
description: oldProgNetTime is the net runtime of the just correctly ended program in seconds, that is the program was not canceled with RESET, but terminated normally with M30. If a new program is started, oldProgNetTime remains unaffected until M30 is reached again. The implicit procedure of copying actProgNetTime to oldProgNetTime only takes place if progNetTimeTrigger is not written.									
axis identifier:						NCK version:		67.00.00	
unit:	s	min.:	0				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				No restrictions				

INT	**$AC_PROG_NET_TIME_TRIGGER**		description:	

description:

Serves for the selective measurement of program sections, that is the time measurement can be switched on and off again by the program by writing progNetTimeTrigger.

1Starts the measurement and sets actProgNetTime to zero
2Terminates the measurement and copies actProgNetTime -> oldProgNetTime

Certain values of ProgNetTimeTrigger are given a special function in order to fully exploit all trigger options:

0 Neutral status.

1Terminate

Terminates the measurement and copies actProgNetTime -> oldProgNetTime. actProgNetTime is set to zero and then runs on again.

2Start

Starts the measurement and sets actProgNetTime to zero. oldProgNetTime remains unchanged.

3Stop

Stops the measurement. Does not change oldProgNetTime and holds actProgNetTime constant until resume.

4Resume

Resumption of the measurement, that is a previously stopped measurement is resumed. actProgNetTime runs on. oldProgNetTime remains unchanged.

axis identifier:						NCK version:		67.00.00		
unit:	s	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X	X		X	X			7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**$AC_OLD_PROG_NET_TIME_COUNT**					description:	

description:

Is zero in the power ON status. oldProgNetTimeCount is always increased when the NCK has newly written oldProgNetTime. This enables the user to ensure that oldProgNetTime has been written, that is, if the user cancels the current program with reset, oldProgNetTime and oldProgNetTimeCount remain unchanged.
Note: Two programs running consecutively can have identical runtimes and be correctly terminated. The user can then only detect this by the changed oldProgNetTimeCount.

axis identifier:						NCK version:		67.00.00		
unit:	s	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				No restrictions				

1.1.5 Tool carrier data

DOUBLE	**$TC_CARR1[n]**					description:	

description:

$TC_CARR1[n]
x component of offset vector l1
Attention! All system parameters beginning with '$TC_' are parameters belonging to the TOA area.
The special characteristic of this area is that machine data 28085 = MM_LINK_TOA_UNIT can be set to allow
different NCK channels to access these parameters.
If this type of parameter setting has been selected by the NCK, you must be aware that changing these data can have
a negative impact on other channels. Before you change any data settings, make sure that the changes will have
only a local effect on the channel in which they are made.

description of field limits:

The maximum number of toolholders can be set in

axis identifier:						NCK version:		13.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR2[n]**						description:	
description: $TC_CARR2[n] y component of offset vector l1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	13.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR3[n]**						description:	
description: $TC_CARR3[n] z component of offset vector l1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	13.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR4[n]**						description:	
description: $TC_CARR4[n] x component of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	13.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR5[n]**						description:	
description: $TC_CARR5[n] y component of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR6[n]**						description:	
description: $TC_CARR6[n] z component of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR7[n]**						description:	
description: $TC_CARR7[n] x component of rotary axis v1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR8[n]**						description:	
description: $TC_CARR8[n] y component of rotary axis v1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR9[n]**						description:	
description: $TC_CARR9[n] z component of rotary axis v1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR10[n]**						description:	
description: $TC_CARR10[n] x component of rotary axis v2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR11[n]**						description:	
description: $TC_CARR11[n] y component of rotary axis v2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR12[n]**						description:	
description: $TC_CARR12[n] z component of rotary axis v2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR13[n]**						description:	
description: $TC_CARR13[n] Angle of rotation alpha1 (in degrees)								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR14[n]**						description:	
description: $TC_CARR14[n] Angle of rotation alpha2 (in degrees)								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR15[n]**						description:	
description: $TC_CARR15[n] x component of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	13.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR16[n]**						description:	
description: $TC_CARR16[n] y component of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	14.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR17[n]**						description:	
description: $TC_CARR17[n] z component of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	14.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR18[n]**						description:	
description: $TC_CARR18[n] x component of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	14.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR19[n]**						description:	
description: $TC_CARR19[n] y component of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	20.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR20[n]**						description:	
description: $TC_CARR20[n] z component of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	20.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

AXIS	**$TC_CARR21[n]**						description:	
description: $TC_CARR21[n] Axis identifier of 1st rotary axis								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	20.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

AXIS	**$TC_CARR22[n]**						description:	
description: $TC_CARR22[n] Axis identifier of 2nd rotary axis								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	20.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

CHAR	**$TC_CARR23[n]**						description:	
description: $TC_CARR23[n] Type of kinematics: P: Rotatable workpiece (Part) M: Rotatable tool and rotatable workpiece (Mixed) T or any other character apart from P and M: Rotatable tool								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	20.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR24[n]**						description:	
description: $TC_CARR24[n] Offset of 1st rotary axis in degrees Specifies the angle in degrees of the 1st rotary axis at which the axis assumes its initial position.								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	43.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR25[n]**						description:	
description: $TC_CARR25[n] Offset of 2nd rotary axis in degrees Specifies the angle in degrees of the 2nd rotary axis at which the axis assumes its initial position.								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR26[n]**						description:	
description: $TC_CARR26[n] Specifies the offset of the 1st rotary axis if its position is not continuously variable (Hirth tooth system). It is evaluated only if $TC_CARR28 is set to a value other than zero. For exact meanings, please refer to the description of $TC_CARR28								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR27[n]**						description:	
description: $TC_CARR27[n] Specifies the offset of the 1st rotary axis if its position is not continuously variable (Hirth tooth system). It is evaluated only if $TC_CARR29 is set to a value other than zero. For exact meanings, please refer to the description of $TC_CARR29								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR28[n]**						description:	
description: $TC_CARR28[n] Specifies the size of the minimum increment (in degrees) by which the rotary axis can change position (e.g. for Hirth tooth systems). A programmed or calculated angle is rounded to the nearest value calculated from phi = s + n * d when n is an integer. In this equation s = $TC_CARR28 d = $TC_CARR26 If $TC_CARR28 equals zero, $TC_CARR26 and $TC_CARR28 are not used. The settings in machine data $MC_TOCARR_ROT_ANGLE_INCR[i] and $MC_TOCARR_ROT_ANGLE_OFFSET[i] are applied instead.								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR29[n]**								description:	
description:										
$TC_CARR29[n] Specifies the size of the minimum increment (in degrees) by which the second rotary axis can change position (e.g. for Hirth tooth systems). A programmed or calculated angle is rounded to the nearest value calculated from phi = s + n * d when n is an integer. In this equation s = $TC_CARR29 d = $TC_CARR27 If $TC_CARR29 equals zero, $TC_CARR28 and $TC_CARR29 are not used. The settings in machine data $MC_TOCARR_ROT_ANGLE_INCR[i] and $MC_TOCARR_ROT_ANGLE_OFFSET[i] are applied instead.										
description of field limits:										
The maximum number of toolholders can be set in										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR30[n]**								description:	
description:										
$TC_CARR30[n] Specifies the minimum position of the 1st rotary axis. Zu vollstaendigen For description, see $TC_CARR32										
description of field limits:										
The maximum number of toolholders can be set in										
axis identifier:						NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR31[n]**						description:	
description:								
$TC_CARR31[n] Specifies the minimum position of the 2nd rotary axis. Zu vollstaendigen For description, see $TC_CARR33								
description of field limits:								
The maximum number of toolholders can be set in								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR32[n]**						description:	
description:								
$TC_CARR32[n] Specifies the maximum position of the 1st rotary axis. When the angle of the 1st rotary axis of an orientatable toolholder aligned according to a frame (TCOFR) is calculated, the only acceptable solutions are those which lie within the $TC_CARR30 to $TC_CARR32 range. The same applies when the rotary angle is programmed absolutely (TCOABS). If both $TC_CARR30 and $TC_CARR32 equal zero, the limits are not evaluated.								
description of field limits:								
The maximum number of toolholders can be set in								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR33[n]**							description:	
description: $TC_CARR33[n] Specifies the maximum position of the 2nd rotary axis. When the angle of the 2nd rotary axis of an orientatable toolholder aligned according to a frame (TCOFR) is calculated, the only acceptable solutions are those which lie within the $TC_CARR31 to $TC_CARR33 range. The same applies when the rotary angle is programmed absolutely (TCOABS). If both $TC_CARR31 and $TC_CARR33 equal zero, the limits are not evaluated.									
description of field limits: The maximum number of toolholders can be set in									
axis identifier:						NCK version:	43.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$TC_CARR34[n]**							description:	
description: $TC_CARR34[n] Contains a freely definable string. This is provided as a free identifier for the orientatable toolholder. Within the NCK, however, it has no significance at all and is therefore not evaluated. This identifier should not be used for other purposes as it may be used in a future upgrade to allow the activation of an orientatable toolholder via a name rather than a number.									
description of field limits: The maximum number of toolholders can be set in									
axis identifier:						NCK version:	48.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$TC_CARR35[n]**							description:	
description:									
$TC_CARR35[n] Contains a freely definable string. This is provided as a free identifier for the first rotary axis. Within the NCK, however, it has no significance at all and is therefore not evaluated. It can also be used for any other purpose.									
description of field limits:									
The maximum number of toolholders can be set in									
axis identifier:						NCK version:		48.00.00	
unit:	-	min.:					max.:		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$TC_CARR36[n]**							description:	
description:									
$TC_CARR36[n] Contains a freely definable string. This is provided as a free identifier for the second rotary axis. Within the NCK, however, it has no significance at all and is therefore not evaluated. It can also be used for any other purpose.									
description of field limits:									
The maximum number of toolholders can be set in									
axis identifier:						NCK version:		48.00.00	
unit:	-	min.:					max.:		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_CARR37[n]**							description:	
description: $TC_CARR37[n] Contains an integer number for identifying the toolholder. Within the NCK, however, it has no significance at all and is therefore not evaluated.									
description of field limits: The maximum number of toolholders can be set in									
axis identifier:					NCK version:	48.00.00			
unit:	-	min.:			max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR38[n]**							description:	
description: $TC_CARR38[n] Contains a position (X component of retraction position) Within the NCK, however, it has no significance at all and is therefore not evaluated.									
description of field limits: The maximum number of toolholders can be set in									
axis identifier:					NCK version:	48.00.00			
unit:	-	min.:			max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR39[n]**						description:	
description: $TC_CARR39[n] Contains a position (Y component of retraction position) Within the NCK, however, it has no significance at all and is therefore not evaluated.								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	48.00.00			
unit:	-	min.:		max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR40[n]**						description:	
description: $TC_CARR40[n] Contains a position (X component of retraction position) Within the NCK, however, it has no significance at all and is therefore not evaluated.								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	48.00.00			
unit:	-	min.:		max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR41[n]**						description:	
description: $TC_CARR41[n] x component of fine offset of offset vector l1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	52.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR42[n]**						description:	
description: $TC_CARR42[n] y component of fine offset of offset vector l1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR43[n]**						description:	
description: $TC_CARR43[n] z component of fine offset of offset vector l1								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR44[n]**						description:	
description: $TC_CARR44[n] x component of fine offset of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR45[n]**						description:	
description: $TC_CARR45[n] y component of fine offset of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR46[n]**						description:	
description: $TC_CARR46[n] x component of fine offset of offset vector l2								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR55[n]**						description:	
description: $TC_CARR55[n] x component of fine offset of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR56[n]**						description:	
description: $TC_CARR56[n] y component of fine offset of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR57[n]**						description:	
description: $TC_CARR57[n] z component of fine offset of offset vector l3								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR58[n]**						description:	
description: $TC_CARR58[n] x component of fine offset of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:					NCK version:	52.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_CARR59[n]**						description:	
description: $TC_CARR59[n] y component of fine offset of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	52.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR60[n]**						description:	
description: $TC_CARR60[n] z component of fine offset of offset vector l4								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	52.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR64[n]**						description:	
description: $TC_CARR64[n] Fine offset of offset ($TC_CARR24) of 1st rotary axis in degrees								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:	52.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_CARR65[n]**						description:	
description: $TC_CARR65[n] Fine offset of offset ($TC_CARR25) of 2nd rotary axis in degrees								
description of field limits: The maximum number of toolholders can be set in								
axis identifier:				NCK version:		52.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.6 Channel-specific protect

BOOL	**$SC_PA_ACTIV_IMMED[n]**						description:	
description: $SC_PA_ACTIV_IMMED[n] Protection zone immediately active after boot TRUE: The protection zone is activated immediately the control has booted and the axes have been referenced FALSE: The protection zone is not immediately active Note: This variable can only be written as a system variable and is not affected by the NC commands between NPROTDEF(..) and EXECUTE(n). Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI								
description of field limits: n: Number of protection zone								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

CHAR	**$SC_PA_T_W[n]**							description:	
description: $SC_PA_T_W[n] Protection zone specific to workpiece/tool 0: Workpiece-specific protection zone 3: Tool-specific protection zone Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	3	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SC_PA_ORI[n]**							description:	
description: $SC_PA_ORI[n] Orientation of protection zone 0: Polygon definition in the plane from the 1st and 2nd geo axes (G17) 1: Polygon definition in the plane from the 3rd and 1st geo axes (G18) 2: Polygon definition in the plane from the 2nd and 3rd geo axes (G19) Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	2	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SC_PA_LIM_3DIM[n]**							description:	
description:									
$SC_PA_LIM_3DIM[n] Identifier for limitation of protection zone in the axis perpendicular to the polygon definition 0: No limitation 1: Limitation in the positive direction 2: Limitation in the negative direction 3: Limitation in both directions Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits:									
n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	3	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_PLUS_LIM[n]**							description:	
description:									
$SC_PA_PLUS_LIM[n] Positive limitation of protection zones in the axis perpendicular to the polygon definition. Effective only if $SC_PA_LIM_3DIM[n]=1 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits:									
n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_MINUS_LIM[n]**							description:	
description: $SC_PA_MINUS_LIM[n] Negative limitation of protection zone in minus direction in the axis perpendicular to the polygon definition Effective only if $SC_PA_LIM_3DIM[n]=2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SC_PA_CONT_NUM[n]**							description:	
description: $SC_PA_CONT_NUM[n] Number of valid contour elements Protection zones need at least 2 contour elements for a complete description. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	10	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SC_PA_CONT_TYP[n,m]**							description:	
description:									
$SC_PA_CONT_TYP"[n,m] Type (G1, G2, G3) of contour element =0: Contour not defined =1: Straight =2: Circle element (clockwise) =3: Circle element (counterclockwise) The end point is determined by $SC_PA_CONT_ORD or $SC_PA_CONT_ABS. With contour types G2 and G3, $SC_PA_CENT_ORD or $SC_PA_CENT_ABS determines the center point of the circle element. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits:									
n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	3	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_CONT_ORD[n,m]**							description:	
description:									
$SC_PA_CONT_ORD[n,m] End point of contour element (ordinate) See also description of $SC_PA_CONT_TYP Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits:									
n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_CONT_ABS[n,m]**								description:	
description: $SC_PA_CONT_ABS[n,m] End point of contour element (abscissa) See also description of $SC_PA_CONT_TYP Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.										
description of field limits: n: Number of protection zone m: Number of the contour element										
axis identifier:						NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_CENT_ORD[n,m]**								description:	
description: $SC_PA_CENT_ORD[n,m] Center point of contour element (ordinate) Relevant only if $SC_PA_CONT_TYP[n,m] = 2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.										
description of field limits: n: Number of protection zone m: Number of the contour element										
axis identifier:						NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SC_PA_CENT_ABS[n,m]**							description:	
description: $SC_PA_CENT_ABS[n,m] Center point of contour element (abscissa) Relevant only if $SC_PA_CONT_TYP[n,m] = 2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI CHAx: x=channel no.									
description of field limits: n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.7 Tool parameters

INT	**$TC_DP1[32000,32000]**							description:	
description: $TC_DP1[t,d] Tool type When the 'flat D number management' function is active, the syntax is as follows: $TC_DP1[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	INT_MIN				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP2[32000,32000]**							description:	
description: $TC_DP2[t,d] Tool point direction When the 'flat D number management' function is active, the syntax is as follows: $TC_DP2[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:						NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP3[32000,32000]**							description:	
description: $TC_DP3[t,d] Geometry - length 1 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP3[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:						NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP4[32000,32000]**						description:	
description: $TC_DP4[t,d] Geometry - length 2 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP4[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP5[32000,32000]**						description:	
description: $TC_DP5[t,d] Geometry - length 3 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP5[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP6[32000,32000]**							description:	
description: $TC_DP6[t,d] Geometry - radius When the 'flat D number management' function is active, the syntax is as follows: $TC_DP6[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP7[32000,32000]**							description:	
description: $TC_DP7[t,d] Slotting saw: Corner radius When the 'flat D number management' function is active, the syntax is as follows: $TC_DP7[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP8[32000,32000]**							description:	
description: $TC_DP8[t,d] Slotting saw: Length When the 'flat D number management' function is active, the syntax is as follows: $TC_DP8[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP9[32000,32000]**							description:	
description: $TC_DP9[t,d] Reserved When the 'flat D number management' function is active, the syntax is as follows: $TC_DP9[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP10[32000,32000]**							description:	
description: $TC_DP10[t,d] Angle between tool face and toroidal surface When the 'flat D number management' function is active, the syntax is as follows: $TC_DP10[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP11[32000,32000]**							description:	
description: $TC_DP11[t,d] Angle between tool longitudinal axis and upper end of toroidal surface When the 'flat D number management' function is active, the syntax is as follows: $TC_DP11[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP12[32000,32000]**							description:	
description: $TC_DP12[t,d] Wear - length 1 - $TC_DP3 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP12[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP13[32000,32000]**							description:	
description: $TC_DP13[t,d] Wear - length 2 - $TC_DP4 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP13[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP14[32000,32000]**						description:	
description: $TC_DP14[t,d] Wear - length 3 - $TC_DP5 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP14[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP15[32000,32000]**						description:	
description: $TC_DP15[t,d] Wear - radius - $TC_DP6 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP15[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP16[32000,32000]**						description:	
description: $TC_DP16[t,d] Slotting saw: Wear - corner radius - $TC_DP7 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP16[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP17[32000,32000]**						description:	
description: $TC_DP17[t,d] Slotting saw: Wear length - $TC_DP8 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP17[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP18[32000,32000]**							description:	
description: $TC_DP18[t,d] Wear - reserved - $TC_DP9 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP18[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP19[32000,32000]**							description:	
description: $TC_DP19[t,d] Wear - angle between tool face and toroidal surface - $TC_DP10 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP19[d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP20[32000,32000]**						description:	
description: $TC_DP20[t,d] Wear - angle between tool longitudinal axis and upper end of toroidal surface - $TC_DP11 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP20[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP21[32000,32000]**						description:	
description: $TC_DP21[t,d] Basis - length 1 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP21[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DP22[32000,32000]**						description:	
description: $TC_DP22[t,d] Basis - length 2 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP22[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP23[32000,32000]**						description:	
description: $TC_DP23[t,d] Basis - length 3 When the 'flat D number management' function is active, the syntax is as follows: $TC_DP23[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP24[32000,32000]**						description:	
description: $TC_DP24[t,d] Clearance angle When the 'flat D number management' function is active, the syntax is as follows: $TC_DP24[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DP25[32000,32000]**						description:	
description: $TC_DP25[t,d] Reserved When the 'flat D number management' function is active, the syntax is as follows: $TC_DP25[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_DPCE[32000,32000]**						description:	
description:								
$TC_DPCE[t,d] = 'cutting edge number' of compensation data block t,d When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCE[d] CE stands for <C>utting<E>dge Value range of legal 'cutting edge numbers': 1 up to value of machine data $MN_MM_MAX_CUTTING_EDGE_PERTOOL.								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		16.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_DPH[32000,32000]**						description:	
description:								
$TC_DPH[t,d] = 'H cutting edge number' of compensation data block t,d for Fanuc0 M When the 'flat D number management' function is active, the syntax is as follows: $TC_DPH[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_DPV[32000,32000]**						description:	
description: $TC_DPV[t,d] = tool cutting edge orientation When the 'flat D number management' function is active, the syntax is as follows: $TC_DPV[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPV3[32000,32000]**						description:	
description: $TC_DPV3[t,d] = L1 component of tool cutting edge orientation When the 'flat D number management' function is active, the syntax is as follows: $TC_DPV3[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPV4[32000,32000]**						description:	
description: $TC_DPV4[t,d] = L2 component of tool cutting edge orientation When the 'flat D number management' function is active, the syntax is as follows: $TC_DPV4[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPV5[32000,32000]**						description:	
description: $TC_DPV5[t,d] = L3 component of tool cutting edge orientation When the 'flat D number management' function is active, the syntax is as follows: $TC_DPV5[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPVN3[32000,32000]**						description:	
description: $TC_DPVN3[t,d] = L1 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN3[d]								
description of field limits: t: T number 1 - 32000 d: tool cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		58.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPVN4[32000,32000]**						description:	
description: $TC_DPVN4[t,d] = L2 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN4[d]								
description of field limits: t: T number 1 - 32000 d: tool cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		58.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPVN5[32000,32000]**						description:	
description: $TC_DPVN5[t,d] = L3 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN5[d]								
description of field limits: t: T number 1 - 32000 d: tool cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		58.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.8 Cutting edge data for OEM users

DOUBLE	**$TC_DPC1[32000,32000]**						description:	
description: The type can be specified by machine data. DOUBLE is the default setting $TC_DPC1[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC1[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_DPC2[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC2[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC2[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC3[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC3[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC3[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC4[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC4[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC4[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC5[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC5[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC5[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC6[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC6[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC6[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC7[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC7[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC7[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC8[32000,32000]**							description:		
description:										
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC8[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC8[d]										
description of field limits:										
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC9[32000,32000]**							description:		
description:										
The type can be specified by machine data. DOUBLE is the default setting $TC_DPC9[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC9[d]										
description of field limits:										
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPC10[32000,32000]**								description:	
description: The type can be specified by machine data. DOUBLE is the default setting $TC_DPC10[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPC10[d]										
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS1[32000,32000]**								description:	
description: The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS1[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS1[d]										
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS2[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS2[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS2[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS3[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS3[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS3[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS4[32000,32000]**								descriptio n:	
description: The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS4[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS4[d]										
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS5[32000,32000]**								descriptio n:	
description: The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS5[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS5[d]										
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS6[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS6[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS6[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS7[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS7[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS7[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS8[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS8[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS8[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS9[32000,32000]**							description:	
description:									
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS9[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS9[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_DPCS10[32000,32000]**						description:	
description:								
The type can be specified by machine data. DOUBLE is the default setting $TC_DPCS10[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCS10[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP13[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_SCP13[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP13[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP14[32000,32000]**						description:	
description: Offset for $TC_DP4: $TC_SCP14[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP14[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP15[32000,32000]**						description:	
description: Offset for $TC_DP5: $TC_SCP15[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP15[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP16[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_SCP16[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP16[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP17[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_SCP17[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP17[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP18[32000,32000]**						description:	
description: Offset for $TC_DP8: $TC_SCP18[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP18[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP19[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_SCP19[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP19[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP20[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_SCP20[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP20[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP21[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_SCP21[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP21[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP23[32000,32000]**						description:	
description: Offset for $TC_DP3: $TC_SCP23[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP23[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP24[32000,32000]**						description:	
description: Offset for $TC_DP4: $TC_SCP24[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP24[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP25[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_SCP25[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP25[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP26[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_SCP26[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP26[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP27[32000,32000]**						description:	
description: Offset for $TC_DP7: $TC_SCP27[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP27[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP28[32000,32000]**						description:	
description: $TC_SCP28[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP28[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP29[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_SCP29[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP29[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP30[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_SCP30[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP30[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP31[32000,32000]**							description:	
description:									
Offset for $TC_DP11: $TC_SCP31[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP31[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_SCP33[32000,32000]**							description:	
description:									
Offset for $TC_DP3: $TC_SCP33[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP33[d]									
description of field limits:									
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_SCP34[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_SCP34[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP34[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP35[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_SCP35[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP35[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP36[32000,32000]**						description:	
description: Offset for $TC_DP6: $TC_SCP36[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP36[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_SCP37[32000,32000]**						description:	
description: Offset for $TC_DP7: $TC_SCP37[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP37[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_SCP38[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_SCP38[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP38[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP39[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_SCP39[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP39[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP40[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_SCP40[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP40[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP41[32000,32000]**						description:	
description: Offset for $TC_DP11: $TC_SCP41[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP41[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP43[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_SCP43[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP43[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP44[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_SCP44[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP44[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP45[32000,32000]**						description:	
description: Offset for $TC_DP5: $TC_SCP45[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP45[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP46[32000,32000]**						description:	
description: Offset for $TC_DP6: $TC_SCP46[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP46[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP47[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_SCP47[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP47[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP48[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_SCP48[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP48[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP49[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_SCP49[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP49[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP50[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_SCP50[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP50[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP51[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_SCP51[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP51[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP53[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_SCP53[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP53[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP54[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_SCP54[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP54[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP55[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_SCP55[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP55[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP56[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_SCP56[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP56[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP57[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_SCP57[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP57[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP58[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_SCP58[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP58[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP59[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_SCP59[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP59[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP60[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_SCP60[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP60[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP61[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_SCP61[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP61[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP63[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_SCP63[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP63[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP64[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_SCP64[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP64[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP65[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_SCP65[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP65[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP66[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_SCP66[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP66[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP67[32000,32000]**						description:	
description: Offset for $TC_DP7: $TC_SCP67[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP67[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP68[32000,32000]**						description:	
description: Offset for $TC_DP8: $TC_SCP68[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP68[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP69[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_SCP69[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP69[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP70[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_SCP70[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP70[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_SCP71[32000,32000]**						description:	
description: Offset for $TC_DP11: $TC_SCP71[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP71[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP13[32000,32000]**						description:	
description: Offset for $TC_DP3: $TC_ECP13[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP13[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP14[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP14[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP14[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP15[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP15[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP15[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP16[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP16[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP16[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP17[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_ECP17[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP17[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP18[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_ECP18[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP18[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP19[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_ECP19[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP19[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP20[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_ECP20[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP20[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP21[32000,32000]**						description:	
description: Offset for $TC_DP11: $TC_ECP21[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP21[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP23[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_ECP23[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP23[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP24[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP24[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP24[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP25[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP25[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP25[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP26[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP26[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP26[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP27[32000,32000]**						description:	
description: Offset for $TC_DP7: $TC_ECP27[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP27[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP28[32000,32000]**						description:	
description: $TC_ECP28[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP28[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP29[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_ECP29[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP29[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP30[32000,32000]**						description:	
description: Offset for $TC_DP10: $TC_ECP30[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP30[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP31[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_ECP31[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP31[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP33[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_ECP33[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP33[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP34[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP34[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP34[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP35[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP35[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP35[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP36[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP36[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP36[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP37[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_ECP37[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP37[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP38[32000,32000]**						description:	
description: Offset for $TC_DP8: $TC_ECP38[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP38[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP39[32000,32000]**						description:	
description: Offset for $TC_DP9: $TC_ECP39[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP39[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:					NCK version:	15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP40[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_ECP40[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP40[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP41[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_ECP41[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP41[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP43[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_ECP43[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP43[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP44[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP44[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP44[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP45[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP45[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP45[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP46[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP46[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP46[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP47[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_ECP47[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP47[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP48[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_ECP48[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP48[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP49[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_ECP49[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP49[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP50[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_ECP50[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP50[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP51[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_ECP51[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP51[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP53[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_ECP53[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP53[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP54[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP54[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP54[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP55[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP55[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP55[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP56[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP56[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP56[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP57[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_ECP57[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP57[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP58[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_ECP58[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP58[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP59[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_ECP59[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP59[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP60[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_ECP60[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP60[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP61[32000,32000]**						description:	
description:								
Offset for $TC_DP11: $TC_ECP61[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP61[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP63[32000,32000]**						description:	
description:								
Offset for $TC_DP3: $TC_ECP63[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP63[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP64[32000,32000]**						description:	
description:								
Offset for $TC_DP4: $TC_ECP64[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP64[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP65[32000,32000]**						description:	
description:								
Offset for $TC_DP5: $TC_ECP65[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP65[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP66[32000,32000]**						description:	
description:								
Offset for $TC_DP6: $TC_ECP66[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP66[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP67[32000,32000]**						description:	
description:								
Offset for $TC_DP7: $TC_ECP67[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP67[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP68[32000,32000]**						description:	
description:								
Offset for $TC_DP8: $TC_ECP68[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP68[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP69[32000,32000]**						description:	
description:								
Offset for $TC_DP9: $TC_ECP69[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP69[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP70[32000,32000]**						description:	
description:								
Offset for $TC_DP10: $TC_ECP70[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP70[d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ECP71[32000,32000]**						description:	
description: Offset for $TC_DP11: $TC_ECP71[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP71[d]								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		15.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.9 Tool management monitoring data

DOUBLE	**$TC_MOP1[32000,32000]**						description:	
description: $TC_MOP1[t,d] Prewarning limit for downtime								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_MOP2[32000,32000]**						description:	
description: $TC_MOP2[t,d] Residual tool life								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOP3[32000,32000]**						description:	
description: $TC_MOP3[t,d] Prewarning limit for workpiece count								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN	max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOP4[32000,32000]**						description:	
description: $TC_MOP4[t,d] Residual workpieces								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN	max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_MOP5[32000,32000]**						description:	
description: $TC_MOP5[t,d] Prewarning limit for wear								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_MOP6[32000,32000]**						description:	
description: $TC_MOP6[t,d] Residual wear								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_MOP11[32000,32000]**						description:	
description: $TC_MOP11[t,d] Specified tool life								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:		max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOP13[32000,32000]**						description:	
description: $TC_MOP13[t,d] Specified workpiece count								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_MOP15[32000,32000]**						description:	
description: $TC_MOP15[t,d] Specified wear								
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.10 OEM user monitoring data

INT	**$TC_MOPC1[32000,32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MOPC1[t,d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MOPC2[32000,32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MOPC2[t,d]									
description of field limits: t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MOPC3[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC3[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC4[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC4[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC5[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC5[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC6[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC6[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC7[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC7[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC8[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC8[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC9[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC9[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPC10[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPC10[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS1[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS1[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS2[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS2[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS3[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS3[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS4[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS4[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS5[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS5[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		18.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS6[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS6[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		18.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS7[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS7[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:		18.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS8[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS8[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS9[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS9[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MOPCS10[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MOPCS10[t,d]								
description of field limits:								
t: T number 1 - 32000 d: Cutting edge number / D number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.11 Tool-related data

STRING	**$TC_TP2[32000]**						description:	
description: $TC_TP2[t] Tool identifier								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP1[32000]**						description:	
description: $TC_TP1[t] Duplo number								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP3[32000]**						description:	
description: $TC_TP3[t] Size on left								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP4[32000]**						description:	
description: $TC_TP4[t] Size on right								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP5[32000]**						description:	
description: $TC_TP5[t] Size at top								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP6[32000]**						description:	
description: $TC_TP6[t] Size at bottom								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP7[32000]**						description:	
description: $TC_TP7[t] Magazine location type								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP8[32000]**						description:	
description: $TC_TP8[t] Status								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP9[32000]**						description:	
description: $TC_TP9[t] Type of tool monitoring								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP11[32000]**						description:	
description: $TC_TP11[t] Replacement-change strategy								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TP10[32000]**						description:	
description: $TC_TP10[t] Tool info								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC1[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC1[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC2[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC2[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC3[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC3[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC4[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC4[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC5[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC5[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC6[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC6[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC7[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC7[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC8[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC8[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC9[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC9[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPC10[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPC10[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS1[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS1[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS2[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS2[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS3[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS3[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS4[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS4[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS5[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS5[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS6[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS6[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS7[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS7[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS8[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS8[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS9[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS9[t]								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPCS10[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_TPCS10[t]									
description of field limits: t: T number 1 - 32000									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.12 Tool-related grinding data

INT	**$TC_TPG1[32000]**							description:	
description: $TC_TPG1[t] Spindle number									
description of field limits: t: T number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_TPG2[32000]**							description:	
description: $TC_TPG2[t] Chaining rule									
description of field limits: t: T number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$TC_TPG3[32000]**						description:	
description: $TC_TPG3[t] Minimum grinding wheel radius								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	mm	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPG4[32000]**						description:	
description: $TC_TPG4[t] Minimum grinding wheel width								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	mm	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPG5[32000]**						description:	
description: $TC_TPG5[t] Current grinding wheel width								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	mm	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPG6[32000]**						description:	
description: $TC_TPG6[t] Maximum speed								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPG7[32000]**						description:	
description: $TC_TPG7[t] Max. peripheral speed								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	m/sec	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_TPG8[32000]**						description:	
description: $TC_TPG8[t] Angle of inclined grinding wheel								
description of field limits: t: T number 1 - 32000								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X		
write:	X				X		X		7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_TPG9[32000]**							description:	
description: $TC_TPG9[t] Parameter no. f. radius calculation									
description of field limits: t: T number 1 - 32000									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.13 Magazine location data

BOOL	**$TC_MPP3[32000,32000]**							description:	
description: $TC_MPP3[n,m] Consider adjacent location On/Off									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPP1[32000,32000]**						description:		
description: $TC_MPP1[n,m] Location type									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPP2[32000,32000]**						description:		
description: $TC_MPP2[n,m] Location type									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	00.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPP6[32000,32000]**						description:		
description: $TC_MPP6[n,m] T no. of tool in this location									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPP4[32000,32000]**						description:	
description: $TC_MPP4[n,m] Location state								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPP5[32000,32000]**						description:	
description: $TC_MPP5[n,m] Buffer magazine: Location type index Real magazines:Wear group number								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPP7[32000,32000]**						description:	
description: $TC_MPP7[n,m] Adapter number of tool adapter in this location								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPP66[32000,32000]**						description:	
description: $TC_MPP66[n,m] T no. of tool stored in buffer for which the location defined by n,m is reserved. A write operation is meaningful only when a backup file is loaded to the NCK. The name assignment is based on $TC_MPP6 - T no. of tool stored in the magazine location.								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:		43.00.00		
unit:	-	min.:			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.14 Magazine location data for OEM users

INT	**$TC_MPPC1[32000,32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC1[n,m]								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC2[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPC2[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC3[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPC3[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC4[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPC4[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC5[32000,32000]**								descriptio n:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC5[n,m]										
description of field limits: n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPC6[32000,32000]**								descriptio n:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC6[n,m]										
description of field limits: n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPC7[32000,32000]**								descriptio n:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC7[n,m]										
description of field limits: n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPC8[32000,32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC8[n,m]								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC9[32000,32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC9[n,m]								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPC10[32000,32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPC10[n,m]								
description of field limits: n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPCS1[32000,32000]**								description:	
description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS1[n,m]										
description of field limits:										
n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS2[32000,32000]**								description:	
description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS2[n,m]										
description of field limits:										
n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS3[32000,32000]**								description:	
description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS3[n,m]										
description of field limits:										
n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS4[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPCS4[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPCS5[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPCS5[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPCS6[32000,32000]**						description:	
description:								
The type can be specified by machine data. INT is the default setting $TC_MPPCS6[n,m]								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPPCS7[32000,32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPCS7[n,m]									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	18.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS8[32000,32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPCS8[n,m]									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	18.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS9[32000,32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MPPCS9[n,m]									
description of field limits: n: Physical magazine number m: Physical location number									
axis identifier:					NCK version:	18.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MPPCS10[32000,32000]**								description:	
description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS10[n,m]										
description of field limits:										
n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		18.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MDP1[32000,32000]**								description:	
description:										
$TC_MDP1[n,m] Distance to tool change point betw. magazine n and location m of 1st internal magazine internal mag. 1 distance parameter										
description of field limits:										
n: Physical magazine number m: Physical location number										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MDP2[32000,32000]**						description:	
description:								
$TC_MDP2[n,m] Distance to tool change point betw. magazine n and location m of 2nd internal magazine internal mag. 2 distance parameter								
description of field limits:								
n: Physical magazine number m: Physical location number								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MLSR[32000,32000]**						description:	
description:								
$TC_MLSR[n,m]=0 Assignment of buffer location n to buffer location m m must identify a location of type 'Spindle'. n must identify a location which is not a 'Spindle' type location. In this way it is possible, for example, to define which grippers, spindles, etc. are assigned. The default parameter setting is 0. The write operation defines a relationship, the read operation checks whether a particular relationship exists. If it does not exist, the read operation generates an alarm. define links of grippers,... to spindles.								
description of field limits:								
n: Physical magazine location number of location type other than SPINDLE m: Physical magazine location number of location type SPINDLE								
axis identifier:				NCK version:		06.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MPTH[MD_SLMAXHIERARCHYNUMBER,MD_SLMAXHIERARCHYENTRIES]**							description:	
description: $TC_MPTH[n,m] Magazine location type hierarchy mag.location (place)types hierarchy parameter									
description of field limits: n: Hierarchy 0 - SLMAXHIERARCHYNUMBER-1 m: Location type 0 - SLMAXHIERARCHYENTRIES - 1									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.15 Magazine description data for tool management

STRING	**$TC_MAP2[32000]**							description:	
description: $TC_MAP2[n] Identifier of magazine									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:			max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:									
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP1[32000]**						description:	
description: $TC_MAP1[n] Type of magazine								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP3[32000]**						description:	
description: $TC_MAP3[n] Status of magazine								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP4[32000]**						description:	
description: $TC_MAP4[n] Chaining to next magazine								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP5[32000]**						description:	
description: $TC_MAP5[n] Chaining to previous magazine								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP6[32000]**						description:	
description: $TC_MAP6[n] Number of lines								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP7[32000]**						description:	
description: $TC_MAP7[n] Number of columns								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAP8[32000]**							description:	
description: $TC_MAP8[n] Current magazine position in relation to tool change position									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAP9[32000]**							description:	
description: $TC_MAP9[n] Current wear group number									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	15.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAP10[32000]**							description:	
description: $TC_MAP10[n] Current search strategies of magazine. - Tool search strategy - Empty location search strategy The NCK enters the value of $TC_MAMP2 per default.									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	20.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.16 Magazine description data for OEM user tool management

INT	**$TC_MAPC1[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC1[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC2[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC2[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC3[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC3[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC4[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC4[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPC5[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC5[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPC6[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC6[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:	06.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPC7[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC7[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC8[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC8[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC9[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC9[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPC10[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPC10[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS1[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS1[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS2[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS2[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS3[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS3[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS4[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS4[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS5[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS5[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS6[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS6[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS7[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS7[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS8[32000]**							description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS8[n]									
description of field limits: n: Magazine number 1 - ..									
axis identifier:					NCK version:		18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$TC_MAPCS9[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS9[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAPCS10[32000]**						description:	
description: The type can be specified by machine data. INT is the default setting $TC_MAPCS10[n]								
description of field limits: n: Magazine number 1 - ..								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.17 Magazine block parameters

STRING	**$TC_MAMP1[-1]**						description:	
description: $TC_MAMP1 Identifier of magazine block								
description of field limits: Scalar variable								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAMP2[-1]**						description:	
description: $TC_MAMP2 Type of tool search								
description of field limits: Scalar variable								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$TC_MAMP3[-1]**						description:	
description: $TC_MAMP3 Handling of tools in wear groups								
description of field limits: Scalar variable								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.18 Adapter data

INT	**$TC_ADPTT[32000]**						description:	
description: $TC_ADPTT[a] Adapter transformation number								
description of field limits: a: Adapter number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ADPT1[32000]**						description:	
description: $TC_ADPT1[a] Adapter geometry: Length 1								
description of field limits: a: Adapter number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ADPT2[32000]**						description:	
description: $TC_ADPT2[a] Adapter geometry: Length 2								
description of field limits: a: Adapter number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$TC_ADPT3[32000]**						description:	
description: $TC_ADPT3[a] Adapter geometry: Length 3								
description of field limits: a: Adapter number 1 - 32000								
axis identifier:				NCK version:	15.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.19 Measuring system compensation values

DOUBLE	**$AA_ENC_COMP[n,m]**								description:	
description: $AA_ENC_COMP[n,m,a] Compensation values a: Machine axes										
description of field limits: n: Encoder no. 0-1 m: Point no. 0 - <MD value>										
axis identifier:	MACHAX					NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AA_ENC_COMP_STEP[n,31]**								description:	
description: $AA_ENC_COMP_STEP[n,a] Increment a: Machine axes										
description of field limits: n: Encoder no. 0-1 to be defined										
axis identifier:	MACHAX					NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AA_ENC_COMP_MIN[n,31]**						description:	
description: $AA_ENC_COMP_MIN[n,a] Start position of compensation a: Machine axes								
description of field limits: n: Encoder no. 0-1 to be defined								
axis identifier:	MACHAX			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_ENC_COMP_MAX[n,31]**						description:	
description: $AA_ENC_COMP_MAX[n,a] End position of compensation a: Machine axes								
description of field limits: n: Encoder no. 0-1 to be defined								
axis identifier:	MACHAX			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

BOOL	**$AA_ENC_COMP_IS_MODULO[n,31]**							description:	
description: $AA_ENC_COMP_IS_MODULO[n,a] Compensation is modulo a: Machine axes									
description of field limits: n: Encoder no. 0-1 to be defined									
axis identifier:	MACHAX					NCK version:	06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.20 Quadrant error compensation

DOUBLE	**$AA_QEC[n,m]**							description:	
description: $AA_QEC[n,m,a] Result of learning process a: Machine axes									
description of field limits: n: 0 m: No. of point: 0 - $MA_MM_QEC_MAX_POINTS									
axis identifier:	MACHAX					NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AA_QEC_COARSE_STEPS[n,31]**						description:	
description: $AA_QEC_COARSE_STEPS[n,a] Compensation values: Rough quantization of characteristic a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX				NCK version:	06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AA_QEC_FINE_STEPS[n,31]**						description:	
description: $AA_QEC_FINE_STEPS[n,a] Fine quantization of characteristic a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX				NCK version:	06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AA_QEC_ACCEL_1[n,31]**							description:	
description: $AA_QEC_ACCEL_1[n,a] Acceleration at 1st knee point according to definition [mm/s2 or inch/s2 or degree/s2] a: Machine axes									
description of field limits: n: 0 to be defined									
axis identifier:	MACHAX				NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_ACCEL_2[n,31]**							description:	
description: $AA_QEC_ACCEL_2[n,a] Acceleration at 2nd knee point according to definition [mm/s2 or inch/s2 or degree/s2] a: Machine axes									
description of field limits: n: 0 to be defined									
axis identifier:	MACHAX				NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_ACCEL_3[n,31]**						description:	
description: $AA_QEC_ACCEL_3[n,a] Acceleration at 3rd knee point according to definition [mm/s2 or inch/s2 or degree/s2] a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_MEAS_TIME_1[n,31]**						description:	
description: $AA_QEC_MEAS_TIME_1[n,a] Measuring time for range $AA_QEC_ACCEL_1 a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX			NCK version:	06.00.00			
unit:	s	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_MEAS_TIME_2[n,31]**						description:		
description: $AA_QEC_MEAS_TIME_2[n,a] Measuring time for range $AA_QEC_ACCEL_2 a: Machine axes									
description of field limits: n: 0 to be defined									
axis identifier:	MACHAX					NCK version:	06.00.00		
unit:	s	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AA_QEC_MEAS_TIME_3[n,31]**						description:		
description: $AA_QEC_MEAS_TIME_3[n,a] Measuring time for range $AA_QEC_ACCEL_3 a: Machine axes									
description of field limits: n: 0 to be defined									
axis identifier:	MACHAX					NCK version:	06.00.00		
unit:	s	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$AA_QEC_TIME_1[n,31]**						description:	
description: $AA_QEC_TIME_1[n,a] 1. Filtering time for feedforward element a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX			NCK version:		06.00.00		
unit:	s	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_TIME_2[n,31]**						description:	
description: $AA_QEC_TIME_2[n,a] 2. Filtering time for feedforward element a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX			NCK version:		06.00.00		
unit:	s	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_QEC_LEARNING_RATE[n,31]**						description:	
description: $AA_QEC_LEARNING_RATE[n,a] Learning rate for network a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX				NCK version:		06.00.00	
unit:	-	min.:				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

BOOL	**$AA_QEC_DIRECTIONAL[n,31]**						description:	
description: $AA_QEC_DIRECTIONAL[n,a] TRUE: Direction-dependent compensation FALSE: No direction-dependent compensation a: Machine axes								
description of field limits: n: 0 to be defined								
axis identifier:	MACHAX				NCK version:		06.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

1.1.21 Interpolatory compensation

DOUBLE	**$AN_CEC[n,m]**						description:	
description: $AN_CEC[n,m] Compensation value								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD) m: Number of interpolation point 0 - (maximum value can be set in MD)								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

AXIS	**$AN_CEC_INPUT_AXIS[n]**						description:	
description: $AN_CEC_INPUT_AXIS[n]: Name of axis whose setpoint is used as the compensation table input								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD)								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

AXIS	**$AN_CEC_OUTPUT_AXIS[n]**						description:	
description: $AN_CEC_OUTPUT_AXIS[n]: Name of axis to which the output of the compensation table is applied								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD)								
axis identifier:					NCK version:	06.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AN_CEC_STEP[n]**						description:	
description: $AN_CEC_STEP[n] Distance of offset values								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD)								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AN_CEC_MIN[n]**						description:	
description: AN_CEC_MIN[n] Start position of compensation table								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD)								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AN_CEC_MAX[n]**						description:	
description: AN_CEC_MAX[n] End position of compensation table								
description of field limits: n: Number of compensation table 0 - (maximum value can be set in MD)								
axis identifier:				NCK version:	06.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$AN_CEC_DIRECTION[n]**						description:		
description:									
$AN_CEC_DIRECTION[n] Activates direction-dependent action of compensation table									
description of field limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AN_CEC_MULT_BY_TABLE[n]**						description:		
description:									
$AN_CEC_MULT_BY_TABLE[n] Number of table whose output value is to be multiplied by the output value of the compensation table 0: Both travel directions of basic axis 1: Positive travel direction of basic axis -1: Negative travel direction of basic axis									
description of field limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	-1			max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

BOOL	**$AN_CEC_IS_MODULO[n]**						description:		
description:									
$AN_CEC_IS_MODULO[n] TRUE: Cyclical repetition of compensation table FALSE: No cyclical repetition of compensation table									
description of field limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
axis identifier:					NCK version:		06.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.22 NCK-specific protection areas

BOOL	**$SN_PA_ACTIV_IMMED[n]**							description:		
description: $SN_PA_ACTIV_IMMED[n] Protection zone immediately active after boot TRUE: The protection zone is activated immediately the control has booted and the axes have been referenced FALSE: The protection zone is not immediately active Note: This variable can only be written as a system variable and is not affected by the NC commands between NPROTDEF(..) and EXECUTE(n). Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI										
description of field limits: n: Number of protection zone										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

CHAR	**$SN_PA_T_W[n]**							description:		
description: $SN_PA_T_W[n] Protection zone specific to workpiece/tool 0: Workpiece-specific protection zone 3: Tool-specific protection zone Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI										
description of field limits: n: Number of protection zone										
axis identifier:						NCK version:		06.00.00		
unit:	-	min.:	0				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SN_PA_ORI[n]**							description:	
description: $SN_PA_ORI[n] Orientation of protection zone 0: Polygon definition in the plane from the 1st and 2nd geo axes (G17) 1: Polygon definition in the plane from the 3rd and 1st geo axes (G18) 2: Polygon definition in the plane from the 2nd and 3rd geo axes (G19) Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	2	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SN_PA_LIM_3DIM[n]**							description:	
description: $SN_PA_LIM_3DIM[n] Identifier for limitation of protection zone in the axis perpendicular to the polygon definition 0: No limitation 1: Limitation in the positive direction 2: Limitation in the negative direction 3: Limitation in both directions Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits: n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	3	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_PLUS_LIM[n]**								description:	
description: $SN_PA_PLUS_LIM[n] Positive limitation of protection zones in the axis perpendicular to the polygon definition Effective only if $SN_PA_LIM_3DIM[n]=1 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI										
description of field limits: n: Number of protection zone										
axis identifier:						NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_MINUS_LIM[n]**								description:	
description: $SN_PA_MINUS_LIM[n] Negative limitation of protection zone in minus direction in the axis perpendicular to the polygon definition Effective only if $SN_PA_LIM_3DIM[n]=2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI										
description of field limits: n: Number of protection zone										
axis identifier:						NCK version:		06.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SN_PA_CONT_NUM[n]**							description:	
description:									
$SN_PA_CONT_NUM[n] Number of valid contour elements Protection zones need at least 2 contour elements for a complete description. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits:									
n: Number of protection zone									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	10	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$SN_PA_CONT_TYP[n,m]**							description:	
description:									
$SN_PA_CONT_TYP[n,m] Type (G1, G2, G3) of contour element =0: Contour not defined =1: Straight =2: Circle element (clockwise) =3: Circle element (counterclockwise) The end point is determined by $SN_PA_CONT_ORD or $SN_PA_CONT_ABS. With contour types G2 and G3, $SN_PA_CENT_ORD or $SN_PA_CENT_ABS determines the center point of the circle element. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits:									
n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	-	min.:	0				max.:	3	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_CONT_ORD[n,m]**						description:	
description: $SN_PA_CONT_ORD[n,m] End point of contour element (ordinate) See also description of $SN_PA_CONT_TYP Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI								
description of field limits: n: Number of protection zone m: Number of the contour element								
axis identifier:					NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_CONT_ABS[n,m]**						description:	
description: $SN_PA_CONT_ABS[n,m] End point of contour element (abscissa) See also description of $SN_PA_CONT_TYP Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI								
description of field limits: n: Number of protection zone m: Number of the contour element								
axis identifier:					NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_CENT_ORD[n,m]**							description:	
description:									
$SN_PA_CENT_ORD[n,m] Center point of contour element (ordinate) Relevant only if $SN_PA_CONT_TYP[n,m] = 2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits:									
n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$SN_PA_CENT_ABS[n,m]**							description:	
description:									
$SN_PA_CENT_ABS[n,m] Center point of contour element (abscissa) Relevant only if $SN_PA_CONT_TYP[n,m] = 2 or = 3. Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
description of field limits:									
n: Number of protection zone m: Number of the contour element									
axis identifier:						NCK version:		06.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.23 Cycle parameterization

DOUBLE	**$C_A**						description:	
description: $C_A Value of programmed address A in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_B**						description:	
description: $C_B Value of programmed address B in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_C**						description:	
description: $C_C Value of programmed address C in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_D**						description:	
description: $C_D Value of programmed address D in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_E**						description:	
description: $C_E Value of programmed address E in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_F**						description:	
description: $C_F Value of programmed address F in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_G**						description:	
description: $C_G Value of programmed address G in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_H**						description:	
description: $C_H Value of programmed address H in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_I[10]**						description:	
description: $C_I[] Value of programmed address I in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_J[10]**						description:	
description: $C_J[] Value of programmed address J in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_K[10]**						description:	
description: $C_K[] Value of programmed address K in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_L**						description:	
description: $C_L Value of programmed address L in ISO2/3 mode for cycle parameterization								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_M**						description:	
description: $C_M Value of programmed address M in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_N**						description:	
description: $C_N Value of programmed address N in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_O**						description:	
description: $C_O Value of programmed address O in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_P**						description:	
description: $C_P Value of programmed address P in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_Q**						description:	
description: $C_Q Value of programmed address Q in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_R**						description:	
description: $C_R Value of programmed address R in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_S**						description:	
description: $C_S Value of programmed address S in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_T**						description:	
description: $C_T Value of programmed address T for cycle parameterization (ISO2/3 mode) and T function substitution (ISO2/3 and standard modes)								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_U**						description:	
description: $C_U Value of programmed address U in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_V**						description:	
description: $C_V Value of programmed address V in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_W**						description:	
description: $C_W Value of programmed address W in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_X**						description:	
description: $C_X Value of programmed address X in ISO2/3 mode for cycle parameterization								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_Y**							description:	
description: $C_Y Value of programmed address Y in ISO2/3 mode for cycle parameterization									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_Z**							description:	
description: $C_Z Value of programmed address Z in ISO2/3 mode for cycle parameterization									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_DL**							description:	
description: Value of programmed address DL (additive tool offset) in the case of a subprogram call by M/T function substitution									
axis identifier:					NCK version:		43.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$C_PI**						description:	
description: Program number of interrupt routine programmed with M96 Pxx in ISO2/3 mode								
axis identifier:				NCK version:	52.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$C_TS[-1]**						description:	
description: $C_TS String of the tool identifier programmed under address T for T function substitution (with active tool monitoring only)								
description of field limits: The tool name appears once only in the block.								
axis identifier:				NCK version:	18.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_A_PROG**						description:	
description: $C_A_PROG Address A is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:	17.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_B_PROG**						description:	
description: $C_B_PROG Address B is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_C_PROG**						description:	
description: $C_C_PROG Address C is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_D_PROG**							description:	
description: $C_D_PROG Address D is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_E_PROG**							description:	
description: $C_E_PROG Address E is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_F_PROG**						description:	
description: $C_F_PROG Address F is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_G_PROG**						description:	
description: $C_G_PROG G function for cycle call is programmed in this block 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_H_PROG**							description:	
description: $C_H_PROG Address H is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_I_PROG**							description:	
description: $C_I_PROG Address I is programmed in a block with cycle macro call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_J_PROG**							description:	
description: $C_J_PROG Address J is programmed in a block with cycle macro call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_K_PROG**							description:	
description: $C_K_PROG Address K is programmed in a block with cycle macro call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_L_PROG**							description:	
description: $C_L_PROG Address L is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_M_PROG**							description:	
description: $C_M_PROG Address M is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_N_PROG**							description:	
description: $C_N_PROG Address N is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_O_PROG**							description:	
description: $C_O_PROG Address O is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_P_PROG**							description:	
description: $C_P_PROG Address P is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_Q_PROG**							description:	
description: $C_Q_PROG Address Q is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_R_PROG**						description:	
description: $C_R_PROG Address R is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_S_PROG**						description:	
description: $C_S_PROG Address S is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_T_PROG**						description:	
description: $C_T_PROG Address T is programmed in a block with cycle call or T function substitution 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_U_PROG**						description:	
description: $C_U_PROG Address U is programmed in the current block 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_V_PROG**						description:	
description: $C_V_PROG Address V is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_W_PROG**						description:	
description: $C_W_PROG Address W is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:		17.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_X_PROG**							description:	
description: $C_X_PROG Address X is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_Y_PROG**							description:	
description: $C_Y_PROG Address Y is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.									
axis identifier:					NCK version:		17.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_Z_PROG**						description:	
description: $C_Z_PROG Address Z is programmed in a block with cycle call 0 = Not programmed 1 = Programmed 3 = Programmed incrementally Bit 0 is set if the address is programmed absolutely or incrementally. Bit 1 is set in addition if the address is programmed incrementally.								
axis identifier:				NCK version:	17.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_PI_PROG**						description:	
description: 0 = Not programmed 1 = M96 Pxx interrupt routine programmed								
axis identifier:				NCK version:	52.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_G60_PROG**						description:	
description: 0 = not programmed 1 = G60 is programmed in the cycle call block								
axis identifier:				NCK version:	67.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_DL_PROG**						description:	
description:								
Interrogation as to whether address DL (additive tool offset) has been programmed for a subprogram call per M/T function substitution. 0 = Not programmed 1 = An additive tool offset has been programmed under address DL.								
axis identifier:					NCK version:	43.00.00		
unit:	-	min.:				max.:		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_TS_PROG**						description:	
description:								
Interrogation as to whether a tool identifier has been programmed under address T for a subprogram call per T function substitution. (with active tool monitoring only) 0 = Not programmed 1 = Programmed								
axis identifier:					NCK version:	18.00.00		
unit:	-	min.:				max.:	1	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_ALL_PROG**						description:	
description:								
$C_ALL_PROG Bit pattern of all programmed addresses in a block with cycle call Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address programmed Bit = 0 -> Address not programmed								
axis identifier:					NCK version:	17.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_INC_PROG**						description:	
description: $C_INC_PROG Bit pattern of all incrementally programmed addresses in a block with cycle call Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address incrementally programmed Bit = 0 -> Address absolutely programmed								
axis identifier:					NCK version:	18.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_TYP_PROG**						description:	
description: $C_TYP_PROG Bit pattern of all addresses programmed with value INT or REAL Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address programmed with real value Bit = 0 -> Address programmed with int value								
axis identifier:					NCK version:	51.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_I_NUM**						description:	
description: $C_I_NUM The number of "I" addresses programmed in the block is stored in $C_I_NUM. This value is always 1 for cycle programming if bit 0 is set in $C_I_PROG. In the case of macro programming with G65/G66, this variable contains the number of "I" addresses programmed in the block (max. 10).								
axis identifier:					NCK version:	18.00.00		
unit:	-	min.:				max.:	10	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_J_NUM**						description:	
description: $C_J_NUM The number of "J" addresses programmed in the block is stored in $C_J_NUM. This value is always 1 for cycle programming if bit 0 is set in $C_J_PROG. In the case of macro programming with G65/G66, this variable contains the number of "J" addresses programmed in the block (max. 10).								
axis identifier:					NCK version:		18.00.00	
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_K_NUM**						description:	
description: $C_K_NUM The number of "K" addresses programmed in the block is stored in $C_K_NUM. This value is always 1 for cycle programming if bit 0 is set in $C_K_PROG. In the case of macro programming with G65/G66, this variable contains the number of "K" addresses programmed in the block (max. 10).								
axis identifier:					NCK version:		18.00.00	
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_I_ORDER[10]**						description:	
description: $C_I_ORDER[] Number of I J K block in which I has been programmed Up to 10 entries with address I can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:					NCK version:	49.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_J_ORDER[10]**						description:	
description: $C_J_ORDER[] Number of IJK block in which J has been programmed. Up to 10 entries with address J can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:					NCK version:	49.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_K_ORDER[10]**						description:	
description: $C_K_ORDER[] Number of IJK block in which K has been programmed. Up to 10 entries with address K can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.								
description of field limits: Up to 10 entries with address K can be made in the block for macro programming								
axis identifier:					NCK version:	49.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_ME**						description:	
description: $C_ME Address extension for address M for subprogram call per M function								
axis identifier:					NCK version:	42.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

INT	**$C_TE**						description:	
description: $C_TE Address extension for address T for subprogram call per M function								
axis identifier:					NCK version:	42.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:	X				X				7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$C_MACPAR[33]**							description:	
description: $MAC_PAR[n] Macro variable in Iso2/3 mode programmed in the original program with #<number>									
description of field limits: The maximum number of ISO macroparameters is 33									
axis identifier:					NCK version:		47.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:	X					X				7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.24 System data

DOUBLE	**$AN_SETUP_TIME**							description:	
description: The $AN_SETUP_TIME timer counts the time elapsed since the control last booted with default values (in minutes). The timer is automatically reset each time the control boots with default data. Use in NC program: IF $AN_SETUP_TIME> 60000 GOTOF MARK01									
axis identifier:					NCK version:		19.00.00		
unit:	s	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Current value				No restrictions				

DOUBLE	**$AN_POWERON_TIME**							description:	
description:									
The $AN_POWERON_TIME timer counts the time elapsed since the control last booted (in minutes). The timer is automatically reset each time the control boots. Use in NC program: IF $AN_POWERON_TIME == 480 GOTOF MARK02									
axis identifier:					NCK version:		19.00.00		
unit:	s	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Current value				No restrictions				

DOUBLE	**$AN_NCK_VERSION**							description:	
description:									
NCK version NCK version: only the integer places in the floating-point number are evaluated, the decimal places can contain identifiers for intermediate versions used by the development department. The integer places contain the official software version identifier of the NCK: For example, the value for NCK version 20.00.00 is variable 200000.0 compare OPI N/Y nckVersion									
axis identifier:					NCK version:		18.02.00		
unit:	-	min.:				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Independent				No restrictions				

BOOL	**$AN_IPO_LOAD_LIMIT**							description:	
description:									
Variable $AN_IPO_LOAD_LIMIT returns TRUE when the interpolator load limit is reached. Machine data $MN_IPO_MAX_LOAD is used to specify the gross interpolator operating time (in % of the interpolation cycle) at which variable $AN_IPO_LOAD_LIMIT is set to TRUE. If the value falls below the limit again, the variable is reset to FALSE.									
axis identifier:					NCK version:		54.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X		X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AN_IPO_ACT_LOAD**						description:	
description:								
$AN_IPO_ACT_LOAD supplies the current interpolator runtime including the runtime of the synchronized actions in all channels.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_IPO_MAX_LOAD**						description:	
description:								
$AN_IPO_MAX_LOAD supplies the longest interpolator runtime of one interpolation cycle (including the runtime of the synchronized actions).								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_IPO_MIN_LOAD**						description:	
description:								
$AN_IPO_MIN_LOAD supplies the shortest interpolator runtime including the runtime of the synchronized actions per interpolation cycle in all channels.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_IPO_LOAD_PERCENT**						description:	
description:								
$AN_IPO_LOAD_PERCENT supplies the current interpolator load percentage across all channels. Is calculated from the ratio of the interpolator runtime across all channels in the last interpolation cycle to the interpolation cycle.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SYNC_ACT_LOAD**						description:	
description:								
$AN_SYNC_ACT_LOAD supplies the current runtime for synchronized actions of the last interpolation cycle across all channels.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SYNC_MAX_LOAD**						description:	
description:								
$AN_SYNC_MAX_LOAD supplies the longest runtime for synchronized actions of one interpolation cycle across all channels.								
axis identifier:					NCK version:	54.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SYNC_TO_IPO**						description:	
description:								
$AN_SYNC_TO_IPO supplies the percentage proportion of the synchronized action runtime measured against the overall interpolation runtime of the last interpolation cycle across all channels.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SERVO_ACT_LOAD**						description:	
description:								
$AN_SERVO_ACT_LOAD supplies the current runtime of the position controller.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SERVO_MAX_LOAD**						description:	
description:								
$AN_SERVO_MAX_LOAD supplies the longest runtime of the position controller.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_SERVO_MIN_LOAD**						description:	
description:								
$AN_SERVO_MIN_LOAD supplies the shortest runtime of the position controller.								
axis identifier:				NCK version:	54.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X		X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AN_REBOOT_DELAY_TIME**						description:	
description:								
A value higher than zero indicates that the NCK has received the "NCK Reset" signal from the HMI and displays the time period (in seconds) programmed on the NCK for rebooting (Power Off followed by Power ON). The user can thus identify a reboot operation in a synchronized action and prepare his application accordingly. $AN_REBOOT_DELAY_TIME is 0.0 provided that no "NCK Reset" has been received. Example: A synchronized action reacts to the variable and switches the axes to "Safe standstill" in a Safety Integrated application. Comments: - See also: $MN_REBOOT_DELAY_TIME - The "NCK Reset" is implemented on the OPI by means of PI "_N_IBN_SS".								
axis identifier:				NCK version:	56.00.00			
unit:	s	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
	X	Independent			No restrictions				

DOUBLE	**$AN_TIMER[n]**							description:	
description:									
$AN_TIMER[n] Timer unit in seconds The time is counted in multiples of an interpolation cycle. The timers are started by $AN_TIMER[n]=<start value>. The timers are stopped by $AN_TIMER[n]=-1. When a timer is stopped, the last current time value is stored.									
description of field limits:									
The dimension is defined in MD $MN_MM_NUM_AN_TIMER.									
axis identifier:					NCK version:		56.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_PROBE[2]**							description:	
description:									
$A_PROBE[1]: Status of first probe $A_PROBE[2]: Status of second probe 0 => not deflected 1 => deflected									
description of field limits:									
n: Number of probe									
axis identifier:					NCK version:		13.00.00		
unit:	-	min.:	0			max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AN_PERSDIAG[4,6]**								description:	
description: Diagnostics data for data persistence (frequency, time required); e.g. CompactFlash card The time values indicate how long it took from the viewpoint of the NC software to achieve data persistence The following values can be read: Index1Meaning 0Always sums on all sub-functions 1Sub-function 'Passive file system' 2Sub-function 'Active file system' 3Sub-function 'Machine data' Index2Meaning 0Number of all persistence operations 1Number of failed persistence operations (system deficiency) 2Summed up time of all persistence operations in seconds 3Minimum time required for a persistence operation in seconds 4Average time (averaged across all persistence operations) in seconds 5Maximum time required for a persistence operation in seconds Application in NC program: IF $AN_PERSDIAG[0, 1] > 0 GOTOF check card										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		62.00.00		
unit:	s	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				No restrictions				

INT	**$AN_VMODEL_STATUS**								description:	
description: TO DO!										
axis identifier:						NCK version:		62.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	3
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSB_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**					description:				
description: The field variable $A_DPSB_IN[n,m] is used to read a data byte (8 bits) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is shown as signed. The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	-128				max.:	127		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPB_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**					description:				
description: The field variable $A_DPB_IN[n,m] is used to read a data byte (8 bits) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is shown as unsigned. The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	0				max.:	255		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_IN_VALID**						description:	
description:								
The variable $A_DP_IN_VALID is used to read all valid input data areas of the PROFIBUS IO. The value is coded as a bit field. The assignment of the bits corresponds to the indices of the input data areas. The input data area is invalid if the input data area could not be logged on during power on or the communication with the PROFIBUS has been interrupted during normal operation. The status of an input data area can be queried with the variable $A_DP_IN_STATE[n].								
axis identifier:				NCK version:		65.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$A_DP_IN_STATE[MD_MAXNUM_DPIO_RANGE_IN]**						description:	
description:								
The variable $A_DP_IN_STATE[n] is used to read the status of the input data area. n:= Index for the input data area The following states can be read: 0: Data area has not been configured 1: Data area could not be activated yet 2: Data area is available 3: Data area is currently not available Whether an input data area is available can be queried with the variable $A_DP_IN_VALID.								
description of field limits:								
to be defined								
axis identifier:				NCK version:		65.00.00		
unit:	-	min.:	0		max.:	3		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$A_DP_OUT_STATE[MD_MAXNUM_DPIO_RANGE_OUT]**								description:	
description:										
The variable $A_DP_OUT_STATE[n] is used to read the status of the output data area. n:= Index for the output data area The following states can be read: 0: Data area has not been configured 1: Data area could not be activated yet 2: Data area is available 3: Data area is currently not available Whether a data area is available can be queried with the variable $A_DP_OUT_VALID.										
description of field limits:										
to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	0				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_OUT_VALID**								description:	
description:										
The variable $A_DP_OUT_VALID_IN is used to read all valid output data areas of the PROFIBUS IO. The value is coded as a bit field. The assignment of the bits corresponds to the indices of the output data areas. The output data area is invalid if the output data area could not be logged on during power up or the communication with the PROFIBUS has been interrupted during normal operation. The status of an output data area can be queried with the variable $A_DP_OUT_STATE[n].										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_IN_CONF**							description:		
description:										
The variable $A_DP_IN_CONF is used to read all configured input data areas of the PROFIBUS IO. The value is coded as a bit field. The assignment of the bits corresponds to the indices of the input data areas. A configured input data area is present if a logical starting address has been entered in an input data area via machine data $MN_DPIO_LOGIC_ADDRESS_IN. The status of an input data area can be queried with the variable $A_DP_IN_STATE[n].										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_OUT_CONF**							description:		
description:										
The variable $A_DP_OUT_CONF is used to read all configured output data areas of the PROFIBUS IO. The value is coded as a bit field. The assignment of the bits corresponds to the indices of the output data areas. A configured data area is present if a logical starting address has been entered in an output data area via machine data $MN_DPIO_LOGIC_ADDRESS_OUT. The status of an output data area can be queried with the variable $A_DP_OUT_STATE[n].										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_IN_LENGTH[MD_MAXNUM_DPIO_RANGE_IN]**							description:		
description:										
The variable $A_DP_IN_LENGTH[n] is used to read the length of the input data area. n:= Index for the input data area Whether an input data area is available can be queried with the variables $A_DP_IN_VALID and $A_DP_IN_STATE[n].										
description of field limits:										
to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DP_OUT_LENGTH[MD_MAXNUM_DPIO_RANGE_OUT]**							description:	
description: The variable $A_DP_OUT_LENGTH[n] is used to read the length of the output data area. n:= Index for the output data area Whether an output data area is available can be queried with the variables $A_DP_OUT_VALID and $A_DP_OUT_STATE[n].									
description of field limits: to be defined									
axis identifier:					NCK version:		65.00.00		
unit:	-	min.:	0			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPW_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**							description:	
description: The field variable $A_DPW_IN[n,m] is used to read a data word (16 bits) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is shown as unsigned. The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.									
description of field limits: to be defined to be defined									
axis identifier:					NCK version:		65.00.00		
unit:	-	min.:	0			max.:	65535		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

DOUBLE	**$A_DPR_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**					description:	

description:

The field variable $A_DPR_OUT[n,m] is used to write output data (32 bits REAL) to PROFIBUS IO.
n:= Index for the output data area
m:= Byte Index for the data
The value is compressed to 4 bytes IEEE (real).
The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured.
Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.

description of field limits:

to be defined
to be defined

axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPB_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**					description:	

description:

The field variable $A_DPB_OUT[n,m] is used to write a data byte (8 bits) to PROFIBUS IO.
n:= Index for the output data area
m:= Byte Index for the data
The value is shown as unsigned.
The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured.
Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.

description of field limits:

to be defined
to be defined

axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	0				max.:	255		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPW_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**					description:				
description:										
The field variable $A_DPW_OUT[n,m] is used to write a data word (16 bits) to PROFIBUS IO. n:= Index for the output data area m:= Byte Index for the data The value is shown as unsigned. The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured. Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.										
description of field limits:										
to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	0				max.:	65535		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

DOUBLE	**$A_DPR_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**					description:				
description:										
The field variable $A_DPR_IN[n,m] is used to read input data (32 bits REAL) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is expanded to 8 bytes IEEE (double). The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0.0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.										
description of field limits:										
to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSW_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**					description:				
description: The field variable $A_DPSW_IN[n,m] is used to read a data word (16 bits) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is shown as signed. The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:	65.00.00			
unit:	-	min.:	-32768				max.:	32767		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSD_IN[MD_MAXNUM_DPIO_RANGE_IN,MD_MAXNUM_DPIO_BYTES_RANGE_IN]**					description:				
description: The field variable $A_DPSD_IN[n,m] is used to read a data double word (32 bits) from PROFIBUS IO. n:= Index for the input data area m:= Byte Index for the data The value is shown as signed. The data area to be read can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case, the old value or initial value 0 is always read. Whether a data area is valid can be queried with the variables $A_DP_IN_STATE[n] or $A_DP_IN_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:	65.00.00			
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSB_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**					description:				
description: The field variable $A_DPSB_IN[n,m] is used to write a data byte (8 bits) to PROFIBUS IO. n:= Index for the output data area m:= Byte Index for the data The value is shown as signed. The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured. Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	-128				max.:	127		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSW_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**					description:				
description: The field variable $A_DPSW_IN[n,m] is used to write a data word (16 bits) to PROFIBUS IO. n:= Index for the output data area m:= Byte Index for the data The value is shown as signed. The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured. Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	-32768				max.:	32767		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$A_DPSD_OUT[MD_MAXNUM_DPIO_RANGE_OUT,MD_MAXNUM_DPIO_BYTES_RANGE_OUT]**							description:		
description: The field variable $A_DPSD_OUT[n,m] is used to write a data double word (32 bits) to PROFIBUS IO. n:= Index for the output data area m:= Byte Index for the data The value is shown as signed. The data area to be written can become invalid during power up or even during operation as connected devices may not yet have been detected or are already no longer connected to the PROFIBUS. In this case the transfer of the value cannot be ensured. Whether a data area is valid can be queried with the variables $A_DP_OUT_STATE[n] or $A_DP_OUT_VALID.										
description of field limits: to be defined to be defined										
axis identifier:						NCK version:		65.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
	X	Not classified				Not classified				

1.1.25 Axial system variables

DOUBLE	**$P_EP[31]**						description:	
description: $P_EP[X] System variable $P_EP supplies the current WCS setpoint position in the interpreter. The numerical value is not necessarily identical to the value programmed in the part program. The two values differ in the following situations: - with incremental programming - when the WCS is changed by a frame or tool selection If an ASUB is started after a block search with calculation, the positions in the interpreter are synchronized with this operation. $P_EP then supplies the actual standstill positions of the axes in the Asub. The collected search position can be interrogated via system variable $AC_RETPOINT.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	06.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_EPM[31]**						description:	
description: Axial variable $P_EPM[ax] determines the current programmed MCS target position in the preprocessor for the specified axis (see also $P_EP).								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	20.09.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_APR[31]**						description:	
description: $P_APR[X] Position of axis in workpiece coordinate system at starting point of approach movement on smooth approach to the contour								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_AEP[31]**						description:	
description: $P_AEP[X] Approach point: First contour point in workpiece coordinate system on smooth approach to contour								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_POLF[31]**						description:	
description: $P_POLF[X] supplies the programmed retraction position of the axis X: Axis								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	51.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$P_POLF_VALID[31]**						description:	
description: $P_POLF_VALID[X] Supplies the status of $P_POLF[X] X: Axis Return values: 0: No retraction programmed 1: Retraction programmed Position programmed 2: Retraction programmed as distance								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	51.00.00			
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_IW[31]**						description:	
description: Axial variable $AA_IW[ax] determines the current setpoint in the workpiece coordinate system (WCS) for the specified axis. The setpoint is equivalent to the interpolator output value for the current interpolation cycle. The WCS value contains no axial offset components (DRF, AA_OFF, ext. work offset, etc.).								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_REPOS_DELAY[31]**						description:	
description: $AA_REPOS_DELAY[X] TRUE: Repos suppression is currently active for this axis. FALSE: otherwise								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	51.00.00		
unit:	-	min.:	TRUE			max.:	FALSE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not for lead link axes				

DOUBLE	**$AA_IEN[31]**							description:	
description: Axial variable $AA_IEN[ax] determines the current setpoint in the settable zero coordinate system (SZS) for the specified axis. See also $AA_IW[ax]. The SZS value contains no axial offset components (DRF, AA_OFF, ext. work offset, etc.).									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_IBN[31]**							description:	
description: Axial variable $AA_IBN[ax] determines the current setpoint in the basic zero coordinate system (BZS) for the specified axis. See also $AA_IW[ax]. The BZS value contains no axial offset components (DRF, $AA_OFF, ext. work offset, etc.).									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_IB[31]**						description:	
description:								
Axial variable $AA_IB[ax] determines the current setpoint in the basic coordinate system (BCS) for the specified axis. See also $AA_IW[ax]. The BCS value contains no axial offset components (DRF, $AA_OFF, ext. work offset, etc.).								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_ENC_AMPL[n,31]**						description:	
description:								
$AA_ENC_AMPL[n,ax] supplies the gain factor of the closed-loop amplitude control for diagnostics and monitoring purposes. The standard encoder voltage is 1V = 100%, the gain can fluctuate between 0.5V and 1.3V schwanken. The meaning of the indices are as follows: n: Encoder number ax: Machine axes								
description of field limits:								
n: Encoder number to be defined								
axis identifier:	GEOAX CHANAX MACHAX			NCK version:	51.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X		X	
write:									
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$AA_IM[31]**							description:	
description: Axial variable $AA_IM[ax] determines the current setpoint in the machine coordinate system (MCS) for the specified axis. See also $AA_IW[ax]. The MCS value contains all axial offset components (DRF, $AA_OFF, ext. work offset, etc.).									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Program sensitive				Not classified				

INT	**$AA_ACT_INDEX_AX_POS_NO[31]**							description:	
description: $AA_ACT_INDEX_AX_POS_NO[X] 0: Not an indexing axis, no indexing position is thus available. > 0: Number of last reached or last crossed indexing position									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00			
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_PROG_INDEX_AX_POS_NO[31]**						description:	
description: $AA_PROG_INDEX_AX_POS_NO[X] 0: Not an indexing axis, no indexing position is thus available or the indexing axis is not currently approaching an indexing position > 0: Number of programmed indexing position								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_ENC_ACTIVE[31]**						description:	
description: Axial variable $AA_ENC_ACTIVE[ax] determines whether the active measuring system is operating below the encoder limit frequency.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_ENC1_ACTIVE[31]**						description:		
description: Axial variable $AA_ENC1_ACTIVE[ax] determines whether the first measuring system is operating below the encoder limit frequency.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X		X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_ENC2_ACTIVE[31]**						description:		
description: Axial variable $AA_ENC2_ACTIVE[ax] determines whether the second measuring system is operating below the encoder limit frequency.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X		X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_IM[31]**							description:	
description:									
Axial variable $VA_IM[ax] determines the encoder actual value (measured by active measuring system) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation). When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$VA_IM1[31]**							description:	
description:									
Axial variable $VA_IM1[ax] determines the encoder actual value (measured by encoder 1) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation). When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$VA_IM2[31]**								description:	
description: Axial variable $VA_IM2[ax] determines the encoder actual value (measured by encoder 2) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation). When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.										
description of field limits: to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$VA_LAG_ERROR[31]**								description:	
description: Variable $VA_LAG_ERROR[X] supplies the contour-related following error, i.e. position setpoint after fine interpolator actual position value.										
description of field limits: to be defined										
axis identifier:	CHANAX MACHAX					NCK version:		53.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MW[31]**						description:	
description: $AA_MW[X] Probe measured value in workpiece coordinate system								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_MM[31]**						description:	
description: $AA_MM[X] Probe measured value in machine coordinate system								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_MW1[31]**						description:	
description: $AA_MW1[X] Measurement result axial measurement Trigger event 1 in WCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MW2[31]**						description:	
description: $AA_MW2[X] Measurement result axial measurement Trigger event 2 in WCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MW3[31]**						description:	
description: $AA_MW3[X] Measurement result axial measurement Trigger event 3 in WCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_MW4[31]**						description:	
description: $AA_MW4[X] Measurement result axial measurement Trigger event 4 in WCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_MM1[31]**						description:	
description: $AA_MM1[X] Measurement result axial measurement Trigger event 1 in MCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AA_MM2[31]**						description:	
description: $AA_MM2[X] Measurement result axial measurement Trigger event 2 in MCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7

attributes:	global	block search	link	
		Not classified	Not classified	

DOUBLE	**$AA_MM3[31]**						description:	
description: $AA_MM3[X] Measurement result axial measurement Trigger event 3 in MCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MM4[31]**						description:	
description: $AA_MM4[X] Measurement result axial measurement Trigger event 4 in MCS								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AA_MEAACT[31]**						description:	
description: $AA_MEAACT[X] Value is TRUE when axial measurement is active for X Corresponds to PLC interface signal DB31...DBX62.3								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X		X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_DRF[31]**						description:	
description: Axial variable $AC_DRF[ax] determines the axial override value caused by the handwheel (DRF offset).								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AC_PRESET[31]**							description:	
description: Axial variable $AC_PRESET[ax] determines the last defined PRESET value.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:								X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_ETRANS[31]**							description:	
description: Axial variable $AA_ETRANS[ax] is used to enter an external work offset which can be activated by the PLC. After activation by the PLC, the offset value is traversed as an axial override in the next block. If Bit 1 is set in $MC_MM_SYSTEM_FRAME_MASK, an active movement is stopped immediately, on activation by the PLC, the preprocessor is reorganized, and the system frame is initialized with the axis value of $AA_ETRANS[ax] and is activated. The offset is traversed before resuming the interrupted movement. The external work offset has an absolute effect on the translation of the current system frame. Multiple activation is thus not additive; only the coarse component of the translation (not the fine offset) is overwritten with the value from $AA_ETRANS[ax].								
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MEAS_P1_VALID[31]**							description:	
description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_P1_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P1_COORD is used to select the coordinate system. Application: $AA_MEAS_P1_VALID[ax] = 0 ; 1st measuring point of axis is invalid $AA_MEAS_P1_VALID[ax] = 1 ; Determining 1st measuring point of axis The unlatched measuring point is stored in $AA_MEAS_POINT1[ax].									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	-	min.:					max.:	1	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MEAS_P2_VALID[31]**							description:	
description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_P2_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P2_COORD is used to select the coordinate system. Application: $AA_MEAS_P2_VALID[ax] = 0 ; 2nd measuring point of axis is invalid $AA_MEAS_P2_VALID[ax] = 1 ; Determining 2nd measuring point of axis The unlatched measuring point is stored in $AA_MEAS_POINT2[ax].									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	-	min.:					max.:	1	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MEAS_P3_VALID[31]**							description:	
description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_P3_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P3_COORD is used to select the coordinate system. Application: $AA_MEAS_P3_VALID[ax] = 0 ; 3rd measuring point of axis is invalid $AA_MEAS_P3_VALID[ax] = 1 ; Determining 3rd measuring point of axis The unlatched measuring point is stored in $AA_MEAS_POINT3[ax].									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	-	min.:					max.:	1	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MEAS_P4_VALID[31]**							description:	
description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_P4_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P4_COORD is used to select the coordinate system. Application: $AA_MEAS_P4_VALID[ax] = 0 ; 4th measuring point of axis is invalid $AA_MEAS_P4_VALID[ax] = 1 ; Determining 4th measuring point of axis The unlatched measuring point is stored in $AA_MEAS_POINT4[ax].									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	-	min.:					max.:	1	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_POINT1[31]**							description:	
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_POINT1[ax] is used to write the 1st measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[0], $AA_MEAS_P1_VALID[ax]. Application: $AA_MEAS_POINT1[x] = $AA_IW[x] $AA_MEAS_POINT1[y] = $AA_IW[y] $AA_MEAS_POINT1[z] = $AA_IW[z]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_POINT2[31]**							description:	
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_POINT2[ax] is used to write the 2nd measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[1], $AA_MEAS_P2_VALID[ax]. Application: $AA_MEAS_POINT2[x] = $AA_IW[x] $AA_MEAS_POINT2[y] = $AA_IW[y] $AA_MEAS_POINT2[z] = $AA_IW[z]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_POINT3[31]**							description:	
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_POINT3[ax] is used to write the 3rd measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[2], $AA_MEAS_P3_VALID[ax]. Application: $AA_MEAS_POINT3[x] = $AA_IW[x] $AA_MEAS_POINT3[y] = $AA_IW[y] $AA_MEAS_POINT3[z] = $AA_IW[z]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_POINT4[31]**							description:	
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_POINT4[ax] is used to write the 4th measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[3], $AA_MEAS_P4_VALID[ax]. Application: $AA_MEAS_POINT4[x] = $AA_IW[x] $AA_MEAS_POINT4[y] = $AA_IW[y] $AA_MEAS_POINT4[z] = $AA_IW[z]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		43.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MEAS_SP_VALID[31]**						description:		
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_SP_VALID[ax] is used to set the defined setpoint of an axis to valid or invalid. Application: $AA_MEAS_SP_VALID[ax] = 0 ; Position setpoint of axis is invalid $AA_MEAS_SP_VALID[ax] = 1 ; Position setpoint of axis is valid The position setpoint is stored in $AA_MEAS_SETPOINT[ax]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		43.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_SETPOINT[31]**						description:		
description: Variable for workpiece and tool measurement. Axial variable $AA_MEAS_SETPOINT[ax] is used to define a position setpoint for an axis. This position setpoint is considered when calculating the workpiece position or the tool length. Application: $AA_MEAS_SETPOINT[x] = 0.0 $AA_MEAS_SETPOINT[y] = 0.0 $AA_MEAS_SETPOINT[z] = 0.0									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		43.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_MEAS_SETANGLE[31]**							description:	
description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_SETANGLE[ax] is used to define an angle setpoint for an axis. This angle setpoint is considered when calculating the workpiece position or the tool length. Application: $AA_MEAS_SETANGLE[x] = 0.0 $AA_MEAS_SETANGLE[y] = 0.0 $AA_MEAS_SETANGLE[z] = 0.0									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		48.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X		
write:	X					X		X		7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_OFF[31]**							description:	
description:									
Axial variable $AA_OFF[ax] is used to overlay a movement for the programmed axis. The behavior of the overlaid movement can be configured with $MA_AA_OFF_MODE.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		06.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:		DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:		X					X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_OFF_LIMIT[31]**							description:	
description:									
Axial variable $AA_OFF_LIMIT[ax] is used to interrogate a limit value for the axis offset $AA_OFF[ax]. The following values are possible: 0:Limit value not reached 1:Limit value reached in positive axis direction -1:Limit value reached in negative axis direction									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	-	min.:	-1			max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_OFF_VAL[31]**							description:	
description:									
Axial variable $AA_OFF_VAL[ax] determines the integrated value of the overlaid movement for an axis. An overlaid movement can be canceled again by means of the negative value of this variable. e.g. $AA_OFF[axis] = -$AA_OFF_VAL[axis]									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		20.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AC_RETPOINT[31]**							description:	
description: $AC_RETPOINT[X] $AC_RETPOINT[] supplies the WCS position of an axis at which an ASUB has been started. The axis can then be repositioned at this point in the Asub. If an Asub is started immediately after a block search with calculation, $AC_RETPOINT then supplies the collected search position. For a modulo axis $AC_RETPOINT[] supplies the position as modulo converted. System variable $AC_RPVALID[] can be used to check whether $AC_RETPOINT[] is supplying a valid repositioning point within the current program context (see documentation for $AC_RPVALID[]). Note about application in synchronized actions: The points generated by REPOS are supplied while the REPOS approach blocks are being processed. The current parameter settings for the REPOS operation (approach to interruption point, block start point, etc.) defined by G codes RMI, RMB, RME, RMN or VDI signal are also taken into account.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		06.00.00	
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_TOFF[31]**								descriptio n:	
description: Variable $AA_TOFF[geo axis] is used to overlay a movement in the corresponding tool direction. The behavior of the overlaid movement can be configured with $MC_TOFF_MODE. Activation in the part program is performed using the TOFFON instruction. The TOFFOF instruction can be used to reset the offset values. The velocity for the offset can be defined with MD 21194 TOFF_VELO; the acceleration can be defined with MD21196 TOFF_ACCEL. The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.										
description of field limits: to be defined										
axis identifier:	GEOAX					NCK version:		50.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_TOFF_VAL[31]**								descriptio n:	
description: Variable $AA_TOFF_VAL[geo axis] determines the integrated value of the overlaid movement in the corresponding tool direction. The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.										
description of field limits: to be defined										
axis identifier:	GEOAX					NCK version:		50.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_TOFF_LIMIT[31]**							description:	
description:									
Axial variable $AA_TOFF_LIMIT[ax] is used to interrogate a limit value for the offset in the tool direction (TCS) via $AA_TOFF[geo axis]. The following values are possible: 0: Limit value not reached 1: Limit value reached in positive axis direction -1: Limit value reached in negative axis direction The limit values can be defined with SD 42970 TOFF_LIMIT. The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.									
description of field limits:									
to be defined									
axis identifier:	GEOAX					NCK version:		50.00.00	
unit:	-	min.:	-1				max.:	1	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_TOFF_PREP_DIFF[31]**							description:	
description:									
Variable $AA_TOFF_PREP_DIFF[geo axis] determines the difference value of the overlaid movement in the corresponding tool direction between the main run and preprocessing run. The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.									
description of field limits:									
to be defined									
axis identifier:	GEOAX					NCK version:		50.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_SOFTENDP[31]**						description:	
description: $AA_SOFTENDP[X] Current software limit position, positive direction								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_SOFTENDN[31]**						description:	
description: $AA_SOFTENDN[X] Software limit position, negative direction								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_DTBW[31]**						description:	
description: Axial variable $AA_DTBW[ax] determines the axial distance from the start of the block in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_DTBB[31]**						description:	
description: Axial variable $AA_DTBB[ax] determines the axial distance from the start of the block in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_DTEW[31]**							description:	
description:									
Axial variable $AA_DTEW[ax] determines the axial distance to the end of the block in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_DTEB[31]**							description:	
description:									
Axial variable $AA_DTEB[ax] determines the axial distance to the end of the block in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X	X				X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_DTEPW[31]**						description:	
description: Axial variable $AA_DTEPW[ax] determines the axial distance to go for the infeed reciprocation in the workpiece coordinate system.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_DTEPB[31]**						description:	
description: Axial variable $AA_DTEPB[ax] determines the axial distance to go for the infeed reciprocation in the basic coordinate system.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_OSCILL_REVERSE_POS1[31]**						description:	
description: $AA_OSCILL_REVERSE_POS1[X] Supplies current reversal position 1 for reciprocation. In synchronized actions, the value of setting data $SA_OSCILL_REVERSE_POS1 is evaluated online. The variable can be accessed only from synchronized actions.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_OSCILL_REVERSE_POS2[31]**						description:	
description: $AA_OSCILL_REVERSE_POS2[X] Supplies current reversal position 2 for reciprocation. In synchronized actions, the value of setting data $SA_OSCILL_REVERSE_POS2 is evaluated online. The variable can be accessed only from synchronized actions.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX				NCK version:	06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_DELT[31]**						description:	
description: $AA_DELT[X] Stored axial distance to go in workpiece coordinate system after axial delete distance to go by a motion-synchronous action.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_FA[31]**						description:	
description: $P_FA[X] Last programmed axial feedrate								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_OVR[31]**							description:	
description: $AA_OVR[<axis>] Axial override for motion-synchronous actions. Multiplicative override component, applied in addition to operator override, programmed override and transformational override. The value is limited to max. 200%. If a value of < 0.0 is entered, it is assumed to be 0 and alarm 14756 is output. $AA_OVR[<axis>] must be rewritten in every Ipo cycle or else a value of 100% is applied. Variable $AA_OVR[<spindle>] alters the spindle override. The variable can be accessed only from motion-synchronous actions.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		06.00.00	
unit:	-	min.:					max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:		X					X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_PLC_OVR[31]**							description:	
description: $AA_PLC_OVR[ax] supplies the axial override defined by the PLC.									
description of field limits: to be defined									
axis identifier:	CHANAX					NCK version:		54.00.00	
unit:	-	min.:					max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_TOTAL_OVR[31]**						description:	
description: $AA_TOTAL_OVR[ax] supplies the overall axial override (PLC_OVR*NC_OVR).								
description of field limits: to be defined								
axis identifier:	CHANAX				NCK version:	54.00.00		
unit:	-	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_VC[31]**						description:	
description: $AA_VC[X] Additive axial feedrate override for motion-synchronous actions. The override value must be rewritten in every Ipo cycle or else a value of 0 is applied. A setting of 0 makes the override inoperative and is not applied to the override value. The total feedrate cannot be made negative by an override value. An upper limit is applied to ensure that the maximum axis velocities and acceleration rates cannot be exceeded. The calculation of other feed components is not affected by $AA_VC. The override values defined by machine data: $MN_OVR_FACTOR_LIMIT_BIN, $MN_OVR_FACTOR_FEEDRATE[30], $MN_OVR_FACTOR_AX_SPEED[30] and $MN_OVR_FACTOR_SPIND_SPEED cannot be exceeded. The additive feedrate override is limited such that the resultant feedrate does not exceed the maximum override value of the programmed feedrate. The variable can be accessed only from synchronized actions.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:		X				X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_VACTB[31]**						description:	
description: Axial variable $AA_VACTB[ax] determines the axis velocity in the basic coordinate system.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_VACTW[31]**						description:	
description: Axial variable $AA_VACTW[ax] determines the axis velocity in the workpiece coordinate system.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_VACTM[31]**						description:	
description: Axial variable $AA_VACTM[ax] determines the axis velocity on the setpoint side in the machine coordinate system. The variable also returns valid values for replacement and PLC axes.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_VACTM[31]**						description:	
description: Axial variable $VA_VACTM[ax] determines the axis velocity actual value in the machine coordinate system. The variable supplies an undefined value if the encoder limit frequency is exceeded. When a spindle/axis disable is active, this variable returns the current velocity setpoint. If it is preferred to return the actual velocity in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	13.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_LOAD[31]**							description:	
description: $AA_LOAD[X] Drive load in % Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:	-100			max.:	100		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Current value			Not classified				

DOUBLE	**$VA_LOAD[31]**							description:	
description: $VA_LOAD[X] Drive load in % Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		17.00.00		
unit:	-	min.:	-100			max.:	100		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X		
write:									
attributes:	global	block search			link				
		Current value			Not classified				

DOUBLE	**$AA_TORQUE[31]**							description:	
description: $AA_TORQUE[X] Drive torque setpoint in Nm or actual force in N (for 611D HLA only) Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$VA_TORQUE[31]**							description:	
description: $VA_TORQUE[X] Drive torque setpoint in Nm or actual force in N (for 611D HLA only) Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X			
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$AA_POWER[31]**							description:	
description: $AA_POWER[x] Drive active power in W Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$VA_POWER[31]**							description:	
description: $VA_POWER[x] Drive active power in W Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$AA_CURR[31]**						description:	
description: $AA_CURR[X] Actual current of axis or spindle in A Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	06.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Current value			Not classified				

DOUBLE	**$VA_CURR[31]**						description:	
description: $VA_CURR[X] Actual current of axis or spindle in A Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X		
write:									
attributes:	global	block search			link				
		Current value			Not classified				

DOUBLE	**$VA_DIST_TORQUE[31]**							description:	
description: $VA_DIST_TORQUE[X] Normalized disturbing torque (disturbing torque/max. motor torque) = output signal of disturbance monitor on drive - only available on Profibus with Telegram 203									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		45.00.00		
unit:	-	min.:	-100			max.:	100		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$VA_VALVELIFT[31]**							description:	
description: $VA_VALVELIFT[X] Actual valve lift in mm (for 611D hydraulic module only)									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		17.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

DOUBLE	**$VA_PRESSURE_A[31]**						description:	
description: $VA_PRESSURE_A[X] Pressure at A end of cylinder in bar (for 611D hydraulic module only)								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	17.00.00		
unit:	-	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Current value			Not classified				

DOUBLE	**$VA_PRESSURE_B[31]**						description:	
description: $VA_PRESSURE_B[X] Pressure at B end of cylinder in bar (for 611D hydraulic module only)								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	17.00.00		
unit:	-	min.:			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X		X	
write:									
attributes:	global	block search			link				
		Current value			Not classified				

INT	**$VA_DP_ACT_TEL[20,31]**							description:	
description: $VA_DP_ACT_TEL[b,a] b: Word index (16-bit access) in Profibus telegram a: Machine axes Actual value telegram contents - only available for Profibus. For details, please see telegram configuration in PROFIdrive or drive documentation									
description of field limits: b: Word index in Profibus actual value telegram to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		50.00.00		
unit:	-	min.:				max.:	65535		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_STAT[31]**							description:	
description: The axial variable $AA_STAT[<axis>] determines the axis status. The status "Exact stop fine" is derived from the servo status. See also $AA_INPOS_STAT[<axis>]. The following values are possible: 0: No axis status available 1: Traversing movement pending 2: Axis has reached IPO end 3: Axis in position (exact stop coarse) 4: Axis in position (exact stop fine) Note: With a position default setting for an axis / spindle, the variable can still indicate the statuses 'Exact stop coarse / fine' during block change although the axis / spindle is starting to traverse. Remedy: Also query $AC_TIMEC.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:	0			max.:	4		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_SNGLAX_STAT[31]**							description:	
description: $AA_SNGLAX_STAT[X] Axis status: 0: Axis is not a single axis 1: Single axis in Reset 2: Single axis has ended 3: Single axis is interrupted 4: Single axis is active 5: Single axis alarm is active									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		48.00.00		
unit:	-	min.:				max.:	4		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_REF[31]**							description:	
description: $AA_REF[X] Axis status: 0: Axis is not homed 1: Axis is homed									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$AA_TYP[31]**						description:		
description: $AA_TYP[<axis>] Axis type: 0: Axis in another channel 1: Program axis of own channel 2: Neutral axis 3: PLC axis 4: Oscillating axis 5: Neutral axis which is currently executing a JOG or homing motion 6: Following axis coupled via master value 7: Coupled motion following axis 8: Command axis 9: CompileCycles axis 10: Coupled slave axis (master-slave function) 11: Program axis which is currently executing a JOG or homing motion									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	13.00.00		
unit:	-	min.:	0			max.:	11		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_MASL_STAT[31]**						description:		
description: The current status of a master-slave coupling. Val. 0: Axis is not a slave axis or no coupling is active. Value> 0: Coupling is active, the relevant machine axis number of the master axis is supplied. $AA_MASL_STAT[X]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	42.00.00		
unit:	-	min.:				max.:	Machine axis		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_SEARCH_MASLC[31]**						description:	
description: $P_SEARCH_MASLC[axis identifier] The current status of a master-slave coupling has been changed during a block search.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	43.00.00			
unit:	-	min.:		max.:	1			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$P_SEARCH_MASLD[31]**						description:	
description: $P_SEARCH_MASLD[axis identifier] Positional offset between master and slave axes calculated during block search as coupling was closed.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	43.00.00			
unit:	Linear / angular position	min.:	DBL_MIN	max.:	DBL_MAX			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_FXS[31]**							description:	
description: $AA_FXS[X] Status desired state "Travel to fixed stop" 0: Axis not at limit stop 1: Fixed stop has been successfully approached 2: Approach to fixed stop has failed 3: Selection of travel to fixed stop active 4: Fixed stop has been detected 5: Deselection of travel to fixed stop active									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	-	min.:				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				Not classified				

INT	**$VA_FXS[31]**							description:	
description: $VA_FXS[X] Status actual state "Travel to fixed stop" 0: Axis not at limit stop 1: Fixed stop has been successfully approached 2: Approach to fixed stop has failed 3: Selection of travel to fixed stop active 4: Fixed stop has been detected 5: Deselection of travel to fixed stop active									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		44.00.00		
unit:	-	min.:				max.:	5		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

INT	**$VA_FXS_INFO[31]**							description:	
description: $VA_FXS_INFO[X] Additional information with "Travel to fixed stop" if $VA_FXS[]=2 0: No additional information available 1: No approach movement programmed 2: Programmed end position reached, motion completed 3: Abort by NC RESET (key reset) 4: Axis has exited fixed stop window 5: Torque reduction rejected by drive 6: PLC has cancelled enables									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	45.00.00		
unit:	-	min.:				max.:	6		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_TORQUE_AT_LIMIT[31]**							description:	
description: $VA_TORQUE_AT_LIMIT[X] "Torque limit reached" status 0: Torque limit not yet reached 1: Torque limit reached In digital 611D systems, the drive returns a status signal indicating whether the programmed torque limit has been reached.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	20.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_FOC[31]**							description:	
description:									
$AA_FOC[X] Status desired state "ForceControl" 0: ForceControl not active 1: ForceControl active modally 2: ForceControl active non-modally									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		20.00.00		
unit:	-	min.:				max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_FOC[31]**							description:	
description:									
$VA_FOC[X] Status actual state "ForceControl" 0: ForceControl not active 1: ForceControl active modally 2: ForceControl active non-modally									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		44.00.00		
unit:	-	min.:				max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_COUP_ACT[31]**						description:	

description:
$AA_COUP_ACT[C]
C: following axis C or S2: following spindle 2
It is possible to determine whether an axis / spindle is being used by a coupling. The coupling type is returned when the coupling is active. The system variable must be read out for the following axis / spindle.
Values:
0: Axis / spindle is not coupled with a leading spindle / leading axis
1,2,3: Axis is tangentially tracked (TANG)
4: Synchronous spindle coupling (COUP)
8: Axis is in coupled-motion (TRAIL)
16: Following axis in master value coupling (LEAD)
32: Following axis for electronic gear (ELG)
64: Axis is active in a gantry grouping
128,256,384: Axis is tangentially tracked (TANG with optimization)
512: Following axis of the generic coupling (CP)
If the axis / spindle is a following axis / spindle in several couplings, the sum is returned as the value.

description of field limits:
to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		06.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

DOUBLE	**$AA_EG_SYNFA[31]**						description:	

description:
$AA_EG_SYNFA[a]
a: Following axis
Synchronous position of following axis

description of field limits:
to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		16.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

STRING	**$P_EG_BC[31]**						description:	
description: $P_EG_BC[a] Block change criterion for EGONSYN, EGON, WAITC.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX SPINDLE			NCK version:	16.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_EG_NUM_LA[31]**						description:	
description: $AA_EG_NUM_LA[a] a: Following axis Number of leading axes specified with EGDEF								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_EG_SYNCDIFF[31]**						description:	
description: $VA_EG_SYNCDIFF[a] a: Following axis Synchronism deviation								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		16.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_EG_SYNCDIFF_S[31]**						description:	
description: $VA_EG_SYNCDIFF_S[a] a: Following axis Signed synchronism deviation								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		50.00.00		
unit:	Linear / angular position	min.:	-DBL_MAX		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$AA_EG_AX[31,31]**							description:	
description: $AA_EG_AX[n,a] n: Index for leading axis a: Following axis Identifier for the nth leading axis									
description of field limits: n: Index for leading axis (nth leading axis) to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		18.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_LEAD_SP[31]**							description:	
description: $AA_LEAD_SP[LW] Simulated master value position									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_LEAD_SV[31]**						description:	
description: $AA_LEAD_SV[LW] Simulated master value velocity								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		13.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_LEAD_P_TURN[31]**							description:	
description: $AA_LEAD_P_TURN[LW] Current master value positional component lost as a result of modulo reduction. The actual master value position (used internally by the control) is $AA_LEAD_P[LW] + $AA_LEAD_P_TURN[LW] If LW is a modulo axis, $AA_LEAD_P_TURN is an integral multiple of $MA_MODULO_RANGE. If LW is not a modulo axis, $AA_LEAD_P_TURN is always 0. Example_1: $MA_MODULO_RANGE[LW]=360 $AA_LEAD_P[LW] =290 $AA_LEAD_P_TURN[LW] =720 The actual master value position (used internally by the control) is 1010. Example_2: $MA_MODULO_RANGE[LW]=360 $AA_LEAD_P[LW] =290 $AA_LEAD_P_TURN[LW] =-360 The actual master value position (used internally by the control) is -70.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		13.00.00	
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_LEAD_P[31]**							description:	
description: $AA_LEAD_P[LW] Current master value position (modulo-reduced) If LW is a modulo axis, the following always applies: 0 <= $AA_LEAD_P[LW] <= $MA_MODULO_RANGE[LW]									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_LEAD_V[31]**							description:	
description: $AA_LEAD_V[LW] Current master value velocity									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	Linear / angular speed	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_SYNC[31]**							description:	
description: $AA_SYNC[FA] Coupling status of following axis with master value coupling 0 => No synchronism 1 => Coarse synchronism 2 => Fine synchronism 3 => Coarse and fine synchronism									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		13.00.00		
unit:	-	min.:				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_IN_SYNC[31]**							description:	
description: $AA_IN_SYNC[FA] Synchronization status of following axis with master value coupling and ELG 1 => Synchronization in progress, i.e. following axis is being synchronized with leading axis									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		48.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$P_COUP_OFFS[31]**						description:	
description: $P_COUP_OFFS[S2] S2: spindle 2 or C: axis C Programmed position offset from synchronous spindle (following spindle) to leading spindle								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		46.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_COUP_OFFS[31]**						description:	
description: $AA_COUP_OFFS[S2] S2: spindle 2 or C: axis C Position offset from synchronous spindle (following spindle) to leading spindle on setpoint side								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_COUP_OFFS[31]**						description:	
description: $VA_COUP_OFFS[S2] S2: spindle 2 or C: axis C Position offset from synchronous spindle (following spindle) to leading spindle on actual value side								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	06.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_SCTRACE[31]**						description:	
description: $AA_SCTRACE[X] = 1 Write: Activate IPO trigger for servo trace 0: No action !0: Activate trigger Read: Always 0 because trigger cannot be read back								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	13.00.00			
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$VA_DPE[31]**						description:	
description: $VA_DPE[X1] Status of power enable for a machine axis								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	16.00.00			
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_ACC[31]**						description:	
description: $AA_ACC Current acceleration value of axis with single-axis interpolation. $AA_ACC = $MA_MAX_AX_ACCEL * progr. acceleration override.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	16.00.00			
unit:	Linear / angular acceleration	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_ACC_PERCENT[31]**						description:	
description: Variable $AA_ACC_PERCENT supplies the current acceleration value of the axis for single-axis interpolation in percent.								
description of field limits: to be defined								
axis identifier:				NCK version:	53.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_ACCLIMA[31]**						description:	
description: $PA_ACCLIMA Acceleration override set with ACCLIMA in preprocessing run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	50.00.00			
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_VELOLIMA[31]**						description:	
description: $PA_VELOLIMA Velocity override set with VELOLIMA in preprocessing run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	50.00.00		
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_JERKLIMA[31]**						description:	
description: $PA_JERKLIMA Jerk override set with JERKLIMA in preprocessing run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	50.00.00		
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_ACCLIMA[31]**						description:	
description: $AA_ACCLIMA Acceleration override set with ACCLIMA in main run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		50.00.00		
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_VELOLIMA[31]**						description:	
description: $AA_VELOLIMA Velocity override set with VELOLIMA in main run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		50.00.00		
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_JERKLIMA[31]**						description:	
description: $AA_JERKLIMA Jerk override set with JERKLIMA in main run								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		50.00.00		
unit:	-	min.:	1		max.:	200		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_MOTEND[31]**						description:	
description: $AA_MOTEND Current end of motion criterion with single-axis interpolation 1 = End of motion with exact stop FINE 2 = End of motion with exact stop COARSE 3 = End of motion at end of interpolation 4 = Block change in braking ramp of axis motion 5 = Block change in braking ramp of axis motion with tolerance window for setpoint 6 = Block change in braking ramp of axis motion with tolerance window for actual value								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		16.00.00		
unit:	-	min.:	1		max.:	6		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_SCPAR[31]**						description:	
description: $AA_SCPAR Current setpoint parameter set								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	16.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_ESR_STAT[31]**						description:	
description: $AA_ESR_STAT[X] Status of "Extended stop and retract", bit-coded: BIT0: Generator mode is activated BIT1: Retraction is activated BIT2: Extended stop is activated BIT3: DC-link undervoltage BIT4: Generator minimum speed								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	16.00.00			
unit:	-	min.:			max.:	15		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_ESR_ENABLE[31]**						description:		
description: $AA_ESR_ENABLE[X] = 1 Enabling of "Extended stop and retract"									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		16.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_ESR_TRIGGER[31]**						description:		
description: $AA_ESR_TRIGGER[X] = 1 Activation of "NC-controlled ESR" for PLC-controlled axis (= single axis) X: PLC-controlled axis									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		48.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X				X	X	X	
write:		X				X		X	7
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_POLFA[31]**							description:	
description: $AA_POLFA[X] X: PLC-controlled axis (= single axis) Supplies the programmed retraction position of the PLC-controlled axis									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		51.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_POLFA_VALID[31]**							description:	
description: $AA_POLFA_VALID[X] Supplies the current status of $AA_POLFA[X] X: PLC-controlled axis (= single axis) Return values: 0: Retraction not programmed 1: Retraction programmed as position 2: Retraction programmed as distance									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		51.00.00		
unit:	-	min.:				max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_ALARM_STAT[31]**						description:	
description: $AA_ALARM_STAT (Selected) alarm reactions for synchronous actions (SYNFCT)								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		48.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AN_AXCTSWA[31]**						description:	
description: Is axis container rotation active ? Example: EVERY $AN_AXCTSWA[n] == TRUE DO M99 Read: TRUE: An axis container rotation is currently being executed on the axis container with axis container name n FALSE: Axis container rotation is not active.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		16.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AN_AXCTAS[31]**							description:	
description:									
Axis container current rotation: The number of slots by which the axis container is currently being rotated is specified for the axis container with axis container name n. The value ranges from 0 to the maximum number of occupied slots in the axis container -1.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		16.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$AC_AXCTSWA[31]**							description:	
description:									
Enables the axis container rotation in the channel. TRUE: The channel has enabled rotation for the axis container with axis container name n and this rotation is not yet finished. FALSE: The axis container rotation is finished.									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		16.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_POSCTRL_MODE[31]**							description:	
description: $VA_POSCTRL_MODE[X] Position controller mode: 0 = Closed-loop position control 1 = Closed-loop speed control 2 = Stop 3 = Park 4 = Follow-up									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		55.00.00		
unit:	-	min.:	0			max.:	4		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Current value				Not classified				

BOOL	**$VA_SCE[31]**							description:	
description: $VA_SCE[X] Status of speed controller enable									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		55.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_TRAVEL_DIST[31]**						description:	
description: Total traversing distance of axis in MCS in mm or degrees. The total traversing distance of the axis since the SRAM contents were last erased is added.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		56.00.00		
unit:	Linear / angular position	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_TRAVEL_TIME[31]**						description:	
description: Total traversing time of axis in MCS in seconds. The total traversing time of the axis since the SRAM contents were last erased is added.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		56.00.00		
unit:	s	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_TRAVEL_COUNT[31]**						description:	
description: Number of traversing operations of axis in MCS. The total number of traversing operations since the SRAM contents were last erased is stored.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		56.00.00		
unit:	-	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_TRAVEL_DIST_HS[31]**						description:	
description: Total traversing distance of axis in MCS in mm or degrees at high velocity, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		56.00.00		
unit:	Linear / angular position	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_TRAVEL_TIME_HS[31]**						description:	
description: Total traversing time of axis in seconds at high velocity in MCS, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	56.00.00		
unit:	s	min.:	0.0			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Program sensitive				Not classified				

DOUBLE	**$AA_TRAVEL_COUNT_HS[31]**						description:	
description: Number of traversing operations of axis in MCS at high velocity, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	56.00.00		
unit:	-	min.:	0.0			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Program sensitive				Not classified				

DOUBLE	**$AA_JERK_TOT[31]**						description:	
description: Total axial jerk in m/s^3. The total jerk applied to the axis is added up and stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	56.00.00			
unit:	Linear / angular jerk	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_JERK_TIME[31]**						description:	
description: Total traversing time of axis in seconds in MCS with jerk. The total time period for which the axis traverses with jerk is added up and stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	56.00.00			
unit:	s	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

DOUBLE	**$AA_JERK_COUNT[31]**						description:	
description: Number of traversing operations executed by axis in MCS with jerk. This value is stored in the SRAM.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		56.00.00		
unit:	-	min.:	0.0		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Program sensitive			Not classified				

BOOL	**$AC_RPVALID[31]**						description:	
description: $AC_RPVALID[X] $AC_RPVALID[axis identifier] returns TRUE if a valid Repos position, which can be interrogated with $AC_RETPOINT[axis identifier], is available for this axis. Valid Repos positions are generally available while system and user Asubs are being processed. However, this is not the case in the following situations: - The Asub activates a modified radius when tool radius compensation is active. $AC_RPVALID then returns FALSE for geometry axes while the Asub is running. The newly calculated Repos positions only become available with the approach blocks generated by the REPOS command. - The end position of the axis was last specified by the main run (FC18, synchronized actions, reciprocation, transfer from another channel after axis replacement).							
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		51.06.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$VA_SYNCDIFF[31]**							description:		
description: $VA_SYNCDIFF[FA] FA: Following axis/following spindle Deviation in synchronism between actual values for LEAD, TRAIL, ELG and COUP. The deviation in synchronism between actual values is the deviation in distance between the servo actual position of the following axis/following spindle and a point calculated (according to the coupling rule) from the servo actual position of the leading axis/leading spindle. $VA_SYNCDIFF[FA] = $VA_IM[FA] - K($VA_IM[LA]) K: Coupling rule LA: Leading axis/leading spindle										
description of field limits: to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		56.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_SYNCDIFF[31]**							description:	
description: $AA_SYNCDIFF[FA] FA: Following axis/following spindle Deviation in synchronism between setpoints for LEAD, TRAIL, ELG and COUP. The deviation in synchronism between setpoints is the deviation in distance between the setpoint position of the following axis/following spindle and a point calculated (according to the coupling rule) from the setpoint position of the leading axis/leading spindle. $AA_SYNCDIFF[FA] = $AA_IM[FA] - K($AA_IM[LA]) K: Coupling rule LA: Leading axis/leading spindle									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		56.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_SYNCDIFF_STAT[31]**							description:	
description: VA_SYNCDIFF_STAT[FA] FA: Following axis/following spindle Status of synchronism deviation between actual values: -4: Reserved -3: No valid value in $VA_SYNCDIFF, tangential control (not TANG(... "P")) -2: No valid value in $VA_SYNCDIFF, master value coupling and simulated MV -1: No valid value in $VA_SYNCDIFF 0: No valid value in $VA_SYNCDIFF, coupling not active 1: Valid value in $VA_SYNCDIFF									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		56.00.00		
unit:	-	min.:	-4			max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_SYNCDIFF_STAT[31]**							description:	
description: $AA_SYNCDIFF_STAT[FA] FA: Following axis/following spindle Status of synchronism deviation between setpoints: -4: No valid value in $AA_SYNCDIFF, coupled motion from part program -3: Reserved -2: Reserved -1: No valid value in $AA_SYNCDIFF 0: No valid value in $AA_SYNCDIFF, coupling not active 1: Valid value in $AA_SYNCDIFF									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		56.00.00		
unit:	-	min.:	-4			max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_OSCILL_BREAK_POS1[31]**							description:	
description: $AA_OSCILL_BREAK_POS1[<axis>] The current approach to reversal position 1 is finished at this position or the last approach to reversal position 1 was finished at this position (reversal position 2 currently being approached). $AA_OSCILL_BREAK_POS1[<axis>] is not equal to $AA_OSCILL_REVERSE_POS1[<axis>] if the reciprocation motion was interrupted by an external signal (PLC). The variable can be accessed only from synchronized actions.									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		57.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_OSCILL_BREAK_POS2[31]**						description:	
description: $AA_OSCILL_BREAK_POS2[<axis>] The current approach to reversal position 2 is finished at this position or the last approach to reversal position 2 was finished at this position (reversal position 1 currently being approached). $AA_OSCILL_BREAK_POS2[<axis>] is not equal to $AA_OSCILL_REVERSE_POS2[<axis>] if the reciprocation motion was interrupted by an external signal (PLC). The variable can be accessed only from synchronized actions.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX					NCK version:	57.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_BCS_OFFSET[31]**						description:	
description: Axial variable $AA_BCS_OFFSET[ax] is used to determine the total axis offsets for an axis. The total consists of the handwheel (DRF) offset, the overlaid movement ($AA_OFF[ax]) and the external work offset. This offset is included in the BCS. The MCS is displaced in relation to the BCS according to the offset.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	58.00.00	
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_CHANNO[31]**						description:	
description:								
This variable returns the number of the channel in which the axis is being interpolated. If value 0 is output, the axis could not be assigned to a channel.								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		59.00.00		
unit:	-	min.:	0		max.:	10		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_IW_CORR[31]**						description:	
description:								
The axial variable $AA_IW_CORR[ax] determines the actual setpoint value of the workpiece coordinate system (WCS) for the respective axis. The setpoint value corresponds to the initial value of the interpolator for the actual interpolation cycle. As opposed to $AA_IW, this value contains the axial overlay shares (DRF, AA_OFF, external WO, retraction etc.).								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		59.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_IEN_CORR[31]**						description:	
description:								
The axial variable $AA_IEN_CORR[ax] calculates the actual interpolator position of the adjustable coordinate system (ACS) for the specified axis. See also $AA_IW_CORR[ax]. The ACS-Value contains any axial overlay rate (DRF, AA_OFF, external Frame, etc.).								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		59.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_IBN_CORR[31]**						description:	
description:								
The axial variable $AA_IBN_CORR[ax] calculates the actual interpolator position of the foot coordinate system (FCS) for the specified axis. See also $AA_IW_CORR[ax]. The FCS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		59.00.00	
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_IB_CORR[31]**						description:	
description:								
The axial variable $AA_IB_CORR[ax] calculates the actual interpolator position of the base coordinate system (BCS) for the specified axis. See also $AA_IW_CORR[ax]. The BCS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	59.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_TYPE[31]**						description:	
description:								
$AA_TYPE[<axis>] Axis type: 0: Type is not ascertainable 1: NC-Program axis 2: Neutral axis 3: PLC axis 4: Oscillating axis 5: Neutral axis which is currently executing a JOG or homing motion 6: Following axis coupled via master value 7: Coupled motion following axis 8: Command axis 9: CompileCycles axis 10: Coupled slave axis (master-slave function) 11: Program axis which is currently executing a JOG or homing motion								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	59.00.00		
unit:	-	min.:	0			max.:	11	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

DOUBLE	**$AA_DTSW[31]**						description:	
description: Axial variable $AA_DTSW[ax] determines the axial distance (with algebraic sign) from the start of motion in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	59.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_DTSB[31]**						description:	
description: Axial variable $AA_DTSB[ax] determines the axial distance (with algebraic sign) from the start of motion in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	59.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:		X	X			X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_COUP_CORR[31]**		description:	

description:

$AA_COUP_CORR[Sn]
with spindle Sn (n: spindle number), example S2: spindle 2 or C: axis C
The variable serves to execute the functionality "Correcting deviation of synchronism" and provides the compensation value for the position offset of the synchronized spindle coupling.
For the duration (MD 30455 MISC_FUNCTION_MASK, bit 7) of the activation of the VDI interface signal DB31..,DBX31.6 'Correct synchronism' for the following spindle with active coupling, the actual values of this spindle are compared with the setpoint values. The difference is the compensation value which can be read with system variable $AA_COUP_CORR.
If the compensation value is known, this value can be written directly into the system variable, too. The VDI interface signal DB31..,DBX31.6 must not be activated in this case!
In the coupling module, the variable $AA_COUP_CORR is considered and results in a correction of the setpoint values.
The compensation value is deleted when switching on the synchronized spindle coupling for the relevant following spindle with COUPON(..) or COUPONC(..) as well as in the case of NC RESET, reference point approach or zero mark synchronization. The system variable returns the value 'zero'.
Depending on the application, the compensation value can also be deleted at an earlier point in time by describing the the variables with the value '0'.

description of field limits:

to be defined

axis identifier:	CHANAX MACHAX SPINDLE					NCK version:		60.00.00		
unit:	Linear / angular position	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$AA_AXCHANGE_TYP[31]**						description:		
description: $AA_AXCHANGE_TYP[<axis>] Type of axis with regard to axis replacement 0: Axis assigned to NC program 1: Axis assigned to PLC, or active as command or reciprocating axis 2: Other channel has right to interpolate 3: Neutral axis 4: Neutral axis controlled by PLC 5: Other channel has right to interpolate, axis requested for NC program 6: Other channel has right to interpolate, axis requested as neutral axis 7: Axis is PLC axis or active as command or reciprocating axis, axis requested for NC program 8: Axis is PLC axis or active as command or reciprocating axis, axis requested as neutral axis. 9: Firmly assigned PLC axis, in neutral axis status 10: Firmly assigned PLC axis, controlled by the PLC, in neutral axis status									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	61.00.00		
unit:	-	min.:	0			max.:	10		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_AXCHANGE_STAT[31]**						description:		
description: $AA_AXCHANGE_STAT[<Axis>] Axis status regarding axis interchange: 0: Axis can be interchanged 1: Axis is assigned to the channel, but can become the PLC, command or reciprocating axis 2: Axis cannot be interchanged									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	61.00.00		
unit:	-	min.:	0			max.:	2		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:		X					X		X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_INPOS_STAT[31]**			description:	

description:

The variable $AA_INPOS_STAT[<axis>] returns the status with regard to a programmed axis position. In the case of indexing axes the indexing position is being used. In the case of spindles, $AA_INPOS_STAT refers to the spindle position of SPOS/SPOSA/M19. In open-loop speed control mode M3/M4/M5/SPCOF and after M70, the value 0 is always read.
$AA_INPOS_STAT always refers to the programmed position. When end positions change during interpolation (delete distance-to-go, NC Stop, REPOS), the programmed position cannot be reached. At zero speed, the variable then gives the value 0.
Axis positions can be programmed through the part program, synchonized actions, FC18 or as indexing positions.
The variable gives the following values:
0: No status available (axis / spindle outside the programmed position)
1: Awaiting traversing movement
2: Position reached via setpoint
3: Position reached via 'Exact stop coarse'
4: Position reached via 'Exact stop fine'
Note 1: The status referring to the programmed position is independent of the operating mode (AUTOMATIC, JOG, MDI, ...)
Note 2: If other additional position shares (e.g. following axis couplings, corrections, compensations etc.) are switched in, then the programmed position is no longer identical with the machine axis position. During the period of additional traversings, exact stop signals are deleted, and the status can be reduced down to value 1.
Note 3: When approaching a position in small exact stop limits, the status can drop again for a short time in relation to the dynamics of an axis / spindle due to overshooting.
Note 4: Function-dependent, the signals 'Spindle in position' and 'Indexing axis in position' are output on the axial VDI interface.

description of field limits:

to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		61.00.00		
unit:	-	min.:	0				max.:	4		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$VA_ENC_ZERO_MON_ERR_CNT[n,31]**							description:		
description: Incremental and distance-encoded measuring systems: $VA_ENC_ZERO_MON_ERR_CNT[n,ax] contains the current number of detected zero mark errors. Absolute measuring systems ($MA_ENC_TYPE=4): $VA_ENC_ZERO_MON_ERR_CNT[n,ax] contains the current number of deviations in 1/2 coarse bars between the software cyclical coupled-motion position value in the position controller clock cycle based on the incremental information of the encoder and a position value newly formed directly from the absolute and incremental information of the encoder. $VA_ENC_ZERO_MON_ERR_CNT[n,ax] is initialized to 0 during Power ON. Reset does not cause a reset. The indices mean: n: Number of encoder ax: Machine axis (See also $MA_ENC_ZERO_MONITORING and alarm 25020)										
description of field limits: n:Encoder number to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		64.00.00		
unit:	-	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_ABSOLUTE_ENC_ERR_CNT[n,31]**							description:		
description: This counter is incremented if any new errors have been recognized during transmission of absolute values. This can be used to observe the tranmission of absolute values. $VA_ABSOLUTE_ENC_ERR_CNT[n,ax] is initialized to 0 during Power ON. RESET does not cause a reset. The indices mean: n: Number of encoder ax: Machine axis										
description of field limits: n:Encoder number to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		64.00.00		
unit:	-	min.:	0				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_ABSOLUTE_ENC_STATE[n,31]**							description:	
description: The axial variable $VA_ABSOLUTE_ENC_STATE[n,ax] determines the last incurred error status of the absolute encoder interface. The indices mean: n: Number of encoder ax: Machine axis Details: Bit 0 Interface active Bit 1 Error during parity check Bit 2 Error bit Alarm Bit 3 Error bit CRC error Bit 4 Start bit for EnDat transmission missing (see also Description of Functions 'Measuring System Monitoring'									
description of field limits: n:Encoder number to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		64.00.00	
unit:	-	min.:	0				max.:	31	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$P_DIAM_STAT[31]**						description:	
description: The system variable $P_DIAM_STAT[AX] returns the programmed status of the diameter programming in the channel. The programmed status of the diameter programming is bit-coded: BIT0 = 0: Diameter programming not active BIT0 = 1: Diameter programming active Note : The following bits only have a meaning that can be evaluated if BIT0 = 1: BIT1 = 0: Channel-specific diameter programming active BIT1 = 1: Axis-specific diameter programming active BIT2 = 0: Absolute and incremental dimensions in the diameter BIT2 = 1: Absolute dimension in the diameter, incremental dimension in the radius BIT3 = 0: DIAMCYCOF not active BIT3 = 1: DIAMCYCOF active								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	65.00.00	
unit:	-	min.:	0			max.:	15	

	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_DIAM_STAT[31]**						description:		
description:									
The system variable $AA_DIAM_STAT[AX] returns the active main run status of the diameter programming in the channel. The active status of the diameter programming is bit-coded: BIT0 = 0: Diameter programming not active BIT0 = 1: Diameter programming active Note : The following bits only have a meaning that can be evaluated if BIT0 = 1: BIT1 = 0: Channel-specific diameter programming active BIT1 = 1: Axis-specific diameter programming active BIT2 = 0: Absolute and incremental dimensions in the diameter BIT2 = 1: Absolute dimension in the diameter, incremental dimension in the radius BIT3 = 0: DIAMCYCOF not active BIT3 = 1: DIAMCYCOF active									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		65.00.00	
unit:	-	min.:	0				max.:	15	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X		
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$P_SCC_STAT[31]**						description:		
description:									
The system variable $P_SCC_STAT[AX] returns the preprocessing status of the G96/G961/G962 assignment in the channel, this has been configured or programmed by SCC[AX] . The status of the G96/G961/G962 assignment is bit-coded: BIT0 = 0: Axis is not assigned to G96/G961/G962 BIT0 = 1: Axis is assigned to G96/G961/G962									
description of field limits:									
to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		65.00.00	
unit:	-	min.:	0				max.:	15	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$AA_SCC_STAT[31]**						description:	
description:								
The system variable $AA_SCC_STAT[AX] returns the main run status of the G96/G961/G962 assignment in the channel, this has been configured or programmed by SCC[AX]. The status of the G96/G961/G962 assignment is bit-coded: BIT0 = 0: Axis is not assigned to G96/G961/G962 BIT0 = 1: Axis is assigned to G96/G961/G962								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		65.00.00	
unit:	-	min.:	0			max.:	15	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X		
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPNACTFA[31]**						description:	
description:								
Still to be defined								
description of field limits:								
to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		65.00.00	
unit:	-	min.:	0			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPFCMDPT[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPFCMDVT[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPFREQV[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPNDEFLA[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPNACTLA[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPFACCT[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular acceleration	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPFRS[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPFMSON[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPFMON[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPFMOF[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPMRESET[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		65.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPMSTART[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		65.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPMSTARTPRT[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		65.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPSETTYPE[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPBC[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPFACT[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

AXIS	**$AA_CPDEFLA[31,n]**							description:	
description: Still to be defined									
description of field limits: Index of the requested leading axis Index of the requested leading axis									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	65.00.00			
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

AXIS	**$AA_CPACTLA[31,n]**							description:	
description: Still to be defined									
description of field limits: Index of the requested active leading axis Index of the requested active leading axis									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	65.00.00			
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

AXIS	**$AA_CPACTFA[31,n]**								description:	
description: Still to be defined										
description of field limits: Index of the requested following axis Index of the requested following axis										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		65.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$PA_CPFACT[31]**								description:	
description: $PA_CPFACT[AX1] It is possible to determine whether an axis / spindle AX1 is being used by a coupling. The coupling type is returned when the coupling is active. The system variable must be read out for the following axis / spindle. Bit0, Bit1 tangential following active, TANG Bit2 = 1 ('H04') Synchronous spindle active, COUP Bit3 = 1 ('H08') Coupled motion active, TRAIL Bit4 = 1 ('H10') Master value coupling active, LEAD Bit5 = 1 ('H20') Electronic gear active, EG Bit6 = 1 ('H40') Gantry grouping active, GANTRY Bit7, Bit8 Tangential following active, TANG (with optimization) Bit9 = 1 ('H200') Generic coupling active, CP										
description of field limits: to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		65.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$PA_CPFPOSSTAT[31]**						description:	

description:
$PA_CPFPOSSTAT[AX1]

The validity of the synchronized position (Bit0) and the stop position (Bit1) can be read for an axis / spindle AX1 if the coupling is active.

Bit0 = 1 ('H01') Synchronized position is valid
Bit1 = 1 ('H02') Stop position is valid

description of field limits:
to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	65.00.00			
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

STRING	**$PA_CPSETTYPE[31]**						description:	

description:
Still to be defined

description of field limits:
to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:	65.00.00			
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X				
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$PA_CPNACTFA[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_CPNDEFLA[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_CPNACTLA[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:	0		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPFRS[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPFMSON[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPFMON[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPFMOF[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPMRESET[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPMSTART[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:		66.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPBC[31]**						description:	
description: Still to be defined								
description of field limits: to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$PA_CPDEFLA[31,n]**						description:	
description: Still to be defined								
description of field limits: to be defined Index of the requested leading axis								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$PA_CPACTLA[31,n]**						description:	
description: Still to be defined								
description of field limits: to be defined Index of the requested active leading axis								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:		max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

AXIS	**$PA_CPACTFA[31,n]**						description:	
description: Still to be defined								
description of field limits: to be defined Index of the requested following axis								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:		max.:				
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$AA_DEPAXO[31]**		description:	

description:

The variable $AA_DEPAXO[AX] returns an axis code for the stated axis AX, which contains all machine axes with a mechanical dependence on the stated axis.

A dependency is produced by:
Active coupling modules, the following axis is dependent on the leading axis
Active transformations, output axes of the transformation are dependent
on the input axes of the transformation
Closed gantry groupings, the slave axes are dependent
on the master axis

The given axis itself is also returned in the axis code

The axis code indicates how the machine data $MC_AXCONF_MACHAX_USED refers not directly to the machine axes but to the logical NCK machine axis image ($MN_AXCONF_LOGIC_MACHAX_TAB).

Bit 0 = 0There is no dependence on the logical machine axis AX1
Bit 0 = 1 There is a dependence on the logical machine axis AX1
Bit 1 = 0There is no dependence on the logical machine axis AX2
Bit 1 = 1 There is a dependence on the logical machine axis AX2
and so on.

description of field limits:

to be defined

axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		67.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

INT	**$AA_EG_TYPE[31,31]**							description:	
description: $AA_EG_TYPE[a,b] a: Following axis b: Leading axis Type of coupling for leading axis b -1: no coupling defined 0: Actual value coupling 1: Setpoint value coupling									
description of field limits: to be defined to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		18.00.00		
unit:	-	min.:				max.:	1		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_EG_NUMERA[31,31]**							description:	
description: $AA_EG_NUMERA[a,b] a: Following axis b: Leading axis Numerator of coupling factor for leading axis b									
description of field limits: to be defined to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		18.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_EG_DENOM[31,31]**						description:	
description: $AA_EG_DENOM[a,b] a: Following axis b: Leading axis Denominator of coupling factor for leading axis b								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	18.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$AA_EG_SYN[31,31]**						description:	
description: $AA_EG_SYN[a,b] a: Following axis b: Leading axis Synchronous position of leading axis b								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:	18.00.00		
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$AA_EG_ACTIVE[31,31]**							description:	
description: $AA_EG_ACTIVE[a,b] a: Following axis b: Leading axis Coupling for leading axis b is active, i.e. switched on									
description of field limits: to be defined to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		18.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$AA_CPLCMDP[31,31]**							description:	
description: Still to be defined									
description of field limits: to be defined to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		65.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
	X	Not classified				Not classified				

DOUBLE	**$AA_CPLCMDV[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular speed	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPLTYPE[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	0		max.:	512		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPLACC[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular acceleration	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPLSTATE[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPLNUM[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

DOUBLE	**$AA_CPLDEN[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$AA_CPLCTID[31,31]**						description:	
description: Still to be defined								
description of field limits: to be defined to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

STRING	**$AA_CPLSETVAL[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	65.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
	X	Not classified			Not classified				

INT	**$PA_CPLTYPE[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:	0		max.:	512		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPLSTATE[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$PA_CPLNUM[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

DOUBLE	**$PA_CPLDEN[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	Linear / angular position	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$PA_CPLCTID[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

STRING	**$PA_CPLSETVAL[31,31]**						description:	
description: Still to be defined								
description of field limits: axis name to be defined								
axis identifier:	GEOAX CHANAX MACHAX SPINDLE			NCK version:	66.00.00			
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X				
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

1.1.26 Safety Integrated

INT	**$A_STOPESI**						description:	
description: $A_STOPESI Current Safety Integrated Stop E for any axis: Val. 0: No Stop E Value not 0: For one of the axes, a Stop E is currently active								
axis identifier:				NCK version:		48.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

BOOL	**$A_INSE[SF_MAXNUM_DIG_EXT_INBITS]**						description:	
description: $A_INSE[n] n = bit number (1...64) External NCK SPL input signal NCK SPL interface for SPL control signal I/O interface logic								
description of field limits: n: Number of input 1 - ...								
axis identifier:				NCK version:		10.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X	X		X	X	X	X	
write:									
attributes:	global	block search			link				
		Not classified			Not classified				

INT	**$A_INSED[SF_MAXNUM_DIG_EXT_INWORDS]**							description:	
description: $A_INSED[n] n = doubleword number (1,2) External NCK SPL input signals (32-bit) NCK SPL interface for SPL control signal I/O interface logic									
description of field limits: n: Number of input word 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_INSEP[SF_MAXNUM_DIG_EXT_INBITS]**							description:	
description: $A_INSEP[n] n = bit number (1...64) Image of an external PLC SPL input signal PLC SPL interface for SPL control signal I/O interface logic Readable only during the SPL start-up phase									
description of field limits: n: Number of input 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_INSEPD[SF_MAXNUM_DIG_EXT_INWORDS]**								description:	
description: $A_INSEPD[n] n = doubleword number (1,2) Image of external PLC SPL input signals (32-bit) PLC SPL interface for SPL control signal I/O interface logic Readable only during the SPL start-up phase										
description of field limits: n: Number of input word 0 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_OUTSE[SF_MAXNUM_DIG_EXT_OUTBITS]**								description:	
description: $A_OUTSE[n] n = bit number (1...64) External NCK SPL output signal NCK SPL interface for SPL status signal I/O interface logic Can be written only from SPL (SAFE.SPF program)										
description of field limits: n: Number of output 1 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_OUTSED[SF_MAXNUM_DIG_EXT_OUTWORDS]**								description:	
description: $A_OUTSED[n] n = doubleword number (1,2) External NCK SPL output signals (32-bit) NCK SPL interface for SPL status signal I/O interface logic Can be written only from SPL (SAFE.SPF program)										
description of field limits: n: Number of output word 1 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_OUTSEP[SF_MAXNUM_DIG_EXT_OUTBITS]**								description:	
description: $A_OUTSEP[n] n = bit number (1...64) Image of an external PLC SPL output signal PLC SPL interface for SPL status signal I/O interface logic Readable only during the SPL start-up phase										
description of field limits: n: Number of output 1 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_OUTSEPD[SF_MAXNUM_DIG_EXT_OUTWORDS]**							description:	
description: $A_OUTSEPD[n] n = doubleword number (1,2) Image of external PLC SPL output signals (32-bit) PLC SPL interface for SPL status signal I/O interface logic Readable only during the SPL start-up phase									
description of field limits: n: Number of output word 0 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_INSI[SF_MAXNUM_DIG_INT_INBITS]**							description:	
description: $A_INSI[n] n = bit number (1...64) Internal NCK SPL input signal Interface to the status signals of the axial NCK monitoring channels									
description of field limits: n: Number of input 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_INSID[SF_MAXNUM_DIG_INT_INWORDS]**							description:	
description: $A_INSID[n] n = doubleword number (1,2) Internal NCK SPL input signals (32-bit) Interface to the status signals of the axial NCK monitoring channels									
description of field limits: n: Number of input word 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_INSIP[SF_MAXNUM_DIG_INT_INBITS]**							description:	
description: $A_INSIP[n] n = bit number (1...64) Image of an internal PLC SPL input signal Interface to the status signals of the axial 611D monitoring channels Readable only during the SPL start-up phase									
description of field limits: n: Number of input 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_INSIPD[SF_MAXNUM_DIG_INT_INWORDS]**							description:	
description: $A_INSIPD[n] n = doubleword number (1,2) Image of internal PLC SPL input signals (32-bit) Interface to the status signals of the axial 611D monitoring channels Readable only during the SPL start-up phase									
description of field limits: n: Number of input word 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_OUTSI[SF_MAXNUM_DIG_INT_OUTBITS]**							description:	
description: $A_OUTSI[n] n = bit number (1...64) Internal NCK SPL output signal Interface to the control signals of the axial NCK monitoring channels Can be written only from SPL (SAFE.SPF program)									
description of field limits: n: Number of output 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_OUTSID[SF_MAXNUM_DIG_INT_OUTWORDS]**							description:	
description: $A_OUTSID[n] n = doubleword number (1,2) Internal NCK SPL output signals (32-bit) Interface to the control signals of the axial NCK monitoring channels Can be written only from SPL (SAFE.SPF program)									
description of field limits: n: Number of output word 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_OUTSIP[SF_MAXNUM_DIG_INT_OUTBITS]**							description:	
description: $A_OUTSIP[n] n = bit number (1...64) Image of an internal PLC SPL output signal Interface to the control signals of the 611D monitoring channels Readable only during the SPL start-up phase									
description of field limits: n: Number of output 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_OUTSIPD[SF_MAXNUM_DIG_INT_OUTWORDS]**							description:	
description: $A_OUTSIPD[n] n = doubleword number (1,2) Image of internal PLC SPL output signals (32-bit) Interface to the control signals of the 611D monitoring channels Readable only during the SPL start-up phase									
description of field limits: n: Number of output word 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	INT_MIN			max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_MARKERSI[SF_MAXNUM_MARKER]**							description:	
description: $A_MARKERSI[n] n = bit number (1...64) NCK SPL flags Can be written only from SPL (SAFE.SPF program)									
description of field limits: n: Number of flag 1 - ...									
axis identifier:					NCK version:		10.00.00		
unit:	-	min.:	FALSE			max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_MARKERSID[SF_MAXNUM_MARKER_WORDS]**								description:	
description: $A_MARKERSID[n] n = doubleword number (1,2) NCK SPL flag word (32-bit) Can be written only from SPL (SAFE.SPF program)										
description of field limits: n: Number of flag word 1 - ...										
axis identifier:						NCK version:		13.09.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_MARKERSIP[SF_MAXNUM_MARKER]**								description:	
description: $A_MARKERSIP[n] n = bit number (1...64) Image of a PLC SPL flag Readable only during the SPL start-up phase										
description of field limits: n: Number of flag 1 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_MARKERSIPD[SF_MAXNUM_MARKER_WORDS]**								description:	
description: $A_MARKERSIPD[n] n = doubleword number (1,2) Image of a PLC SPL flag word (32-bit) Readable only during the SPL start-up phase										
description of field limits: n: Number of flag word 1 - ...										
axis identifier:						NCK version:		13.09.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$A_TIMERSI[SF_MAXNUM_TIMER]**								description:	
description: $A_TIMERSI[n] n=timer number (1...16) SPL timers Unit in seconds The time is counted internally in multiples of the interpolation cycle. Incrementation of the time variable is started by value assignment $A_TIMERSI[n]=<start value> Incrementation of a time variable is stopped through assignment of a negative value $A_TIMERSI[n]=-1 The current timer count can be read while the time variable is running or stopped. When the time variable is stopped by assigning -1, the last count value remains stored in the variable and can continue to be read. The timers are not stopped by a channel/mode group reset.										
description of field limits: n: Number of timer 1 - ...										
axis identifier:						NCK version:		10.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_STATSID**							description:	
description: $A_STATSID Status of data cross-check between NCK and PLC (SPL DCC) if the value does not equal zero, an error has occurred in the SPL DCC. Meaning Bit 0 ... 27: DCC error in input/output signals or flags Bit 28:DCC error "SPL protection status" ($MN_PREVENT_SYNACT_LOCK status not equal to DB18.DBX36.0) Bit 29:Time error during communication between NCK and PLC (all ext. NCK SPL outputs are set to zero in 5 sec. and the PLC switches to Stop) Bit 30: Stop signaled from PLC to NCK									
axis identifier:						NCK version:		13.03.00	
unit:	-	min.:	INT_MIN				max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_CMDSI[SF_MAXNUM_CMD_MARKER]**							description:	
description: $A_CMDSI[n] n = bit number (1..0.16) Control word for data cross-check between NCK and PLC (SPL DCC). n = 1: Increase time for signal change monitoring to 10 s. Can be written only from SPL (SAFE.SPF program)									
description of field limits: n: Number of control signal for SPL data cross-check									
axis identifier:						NCK version:		13.03.00	
unit:	-	min.:	FALSE				max.:	TRUE	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_LEVELSID**									
									description:	
description: $A_LEVELSID Displays the fill level for signal change monitoring during data cross-check between NCK and PLC SPL (SPL DCC). Specifies the number of signals currently tagged for cross-checking. The value is already zero if an SPL signal has different levels on the NCK and PLC but the allowed discrepancy time for the signals (2 sec) has not yet expired.										
axis identifier:						NCK version:		13.03.00		
unit:	-	min.:	INT_MIN				max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$A_XFAULTSI**									
									description:	
description: $A_XFAULTSI Information on Stop F for a Safety axis: Bit 0 = 1:An actual value error has been detected by the data cross-check between NCK and 611D for any Safety axis. Bit 1 = 1:Any error on any axis has been detected by the data cross-check between NCK and 611D and the waiting time before triggering of Stop B on that axis is running or has expired ($MA_SAFE_STOP_SWITCH_TIME_F).										
axis identifier:						NCK version:		45.00.00		
unit:	-	min.:	0				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_PLCSIIN[SF_MAXNUM_PLCIN_MARKER]**								description:	
description: $A_PLCSIIN[n] n = bit number (1..0.32) Single-channel signals from PLC SPL (DB18) to NCK SPL. Application: $A_MARKERSI[1] = $A_PLCSIIN[1] ; Signal from PLC-SPL										
description of field limits: n: Number of signal 1 - ... from PLC to NCK										
axis identifier:						NCK version:		45.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

BOOL	**$A_PLCSIOUT[SF_MAXNUM_PLCOUT_MARKER]**								description:	
description: $A_PLCSIOUT[n] n = bit number (1..0.32) Single-channel signals from NCK SPL to PLC SPL (DB18). Application: $A_PLCSIOUT[1] = $A_MARKERSI[1] ; Signal to PLC-SPL Can be written only from SPL (SAFE.SPF program)										
description of field limits: n: Number of signal 1 - ... from NCK to PLC										
axis identifier:						NCK version:		45.00.00		
unit:	-	min.:	FALSE				max.:	TRUE		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
attributes:	global	block search				link				
		Not classified				Not classified				

DOUBLE	**$VA_IS[31]**							description:	
description: $VA_IS[X] X = axis identifier Safe actual position for NCK monitoring channel									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX SPINDLE				NCK version:		06.00.00		
unit:	Linear / angular position	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_STOPSI[31]**							description:	
description: $VA_STOPSI[X] X = axis identifier Current Safety Integrated Stop for the relevant axis Value Meaning -1No Stop 0Stop A 1Stop B 2Stop C 3Stop D 4Stop E 5Stop F 10Test Stop NC 11Test ext. pulse suppression									
description of field limits: to be defined									
axis identifier:	GEOAX CHANAX MACHAX				NCK version:		48.00.00		
unit:	-	min.:				max.:	7		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X	X			X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

INT	**$VA_XFAULTSI[31]**								description:	
description: $VA_XFAULTSI[X] X = axis identifier Information about Safety Integrated Stop F for this axis: Bit 0 set:An actual value error has been detected by the data cross-check between NCK and 611D. Bit 1 set:Any error has been detected by the data cross-check between NCK and 611D and the waiting time before triggering of Stop B ($MA_SAFE_STOP_SWITCH_TIME_F) is running or has expired.										
description of field limits: to be defined										
axis identifier:	GEOAX CHANAX MACHAX SPINDLE					NCK version:		45.00.00		
unit:	-	min.:	0				max.:	3		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:										
attributes:	global	block search				link				
		Not classified				Not classified				

1.1.27 User-specific system variables

DOUBLE	**SYG_RM[n]**								description:	
description: SYG_RM[n] Synact Real parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Real is defined in machine data										
axis identifier:						NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_IM[n]**						description:	
description: SYG_IM[n] Synact Integer parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:					NCK version:		57.00.00	
unit:	-	min.:	INT_MIN			max.:	INT_MAX	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_BM[n]**						description:	
description: SYG_BM[n] Synact Boolean parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:					NCK version:		57.00.00	
unit:	-	min.:	FALSE			max.:	TRUE	
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_AM[n]**								description:	
description: SYG_AM[n] Synact axis parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_CM[n]**								description:	
description: SYG_CM[n] Synact char parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_SM[n]**							description:	
description: SYG_SM[n] Synact parameter string in GUD2 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD string is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_RU[n]**							description:	
description: SYG_RU[n] Synact Real parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_IU[n]**						description:	
description: SYG_IU[n] Synact Integer parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_BU[n]**						description:	
description: SYG_BU[n] Synact Boolean parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_AU[n]**								description:	
description:										
SYG_AU[n] Synact Axis parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits:										
The maximum number of SynactGUD Real is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_CU[n]**								description:	
description:										
SYG_CU[n] Synact char parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits:										
The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_SU[n]**						description:		
description: SYG_SU[n] Synact parameter string in UGUD block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_R4[n]**						description:		
description: SYG_R4[n] Synact Real parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_I4[n]**						description:	
description: SYG_I4[n] Synact Integer parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:					NCK version:	57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B4[n]**						description:	
description: SYG_B4[n] Synact Boolean parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:					NCK version:	57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A4[n]**								description:	
description: SYG_A4[n] Synact Real parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C4[n]**								description:	
description: SYG_C4[n] Synact Char parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S4[n]**						description:	
description: SYG_S4[n] Synact parameter string in GUD4 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD String is defined in machine data								
axis identifier:					NCK version:	61.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

DOUBLE	**SYG_R5[n]**						description:	
description: SYG_R5[n] Synact Real parameters in GUD5 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Real is defined in machine data								
axis identifier:					NCK version:	57.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**SYG_I5[n]**						description:	
description: SYG_I5[n] Synact Integer parameters in GUD5 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B5[n]**						description:	
description: SYG_B5[n] Synact Boolean parameters in GUD5 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A5[n]**								description:	
description: SYG_A5[n] Synact Axis parameters in GUD5 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C5[n]**								description:	
description: SYG_C5[n] Synact Char parameters in GUD5 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S5[n]**						description:		
description: SYG_S5[n] Synact parameter string in GUD5 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least five GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_R6[n]**						description:		
description: SYG_R6[n] Synact Real parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_I6[n]**						description:	
description: SYG_I6[n] Synact Integer parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B6[n]**						description:	
description: SYG_B6[n] Synact Boolean parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A6[n]**								description:	
description: SYG_A6[n] Synact Axis parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C6[n]**								description:	
description: SYG_C6[n] Synact Char parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S6[n]**						description:	
description: SYG_S6[n] Synact parameter string in GUD6 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD String is defined in machine data								
axis identifier:					NCK version:	61.00.00		
unit:	-	min.:			max.:			
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

DOUBLE	**SYG_R7[n]**						description:	
description: SYG_R7[n] Synact Real parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Real is defined in machine data								
axis identifier:					NCK version:	57.00.00		
unit:	-	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

INT	**SYG_I7[n]**						description:	
description: SYG_I7[n] Synact Integer parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B7[n]**						description:	
description: SYG_B7[n] Synact Boolean parameters in GUD7 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A7[n]**							description:	
description: SYG_A7[n] Synact Axis parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Axis is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C7[n]**							description:	
description: SYG_C7[n] Synact Char parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Char is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S7[n]**						description:		
description: SYG_S7[n] Synact parameter string in GUD6 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_R8[n]**						description:		
description: SYG_R8[n] Synact Real parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_I8[n]**						description:	
description: SYG_I8[n] Synact Integer parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B8[n]**						description:	
description: SYG_B8[n] Synact Boolean parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A8[n]**								description:	
description: SYG_A8[n] Synact Axis parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C8[n]**								description:	
description: SYG_C8[n] Synact Char parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S8[n]**							description:	
description: SYG_S8[n] Synact parameter string in GUD8 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_R9[n]**							description:	
description: SYG_R9[n] Synact Real parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_I9[n]**						description:	
description: SYG_I9[n] Synact Integer parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_B9[n]**						description:	
description: SYG_B9[n] Synact Boolean parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits: The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_A9[n]**								description:	
description:										
SYG_A9[n] Synact Axis parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits:										
The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_C9[n]**								description:	
description:										
SYG_C9[n] Synact Char parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits:										
The maximum number of SynactGUD Char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_S9[n]**							description:	
description: SYG_S9[n] Synact parameter string in GUD9 block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

DOUBLE	**SYG_RS[n]**							description:	
description: SYG_RS[n] Synchronization Real parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD Real is defined in machine data									
axis identifier:					NCK version:		57.00.00		
unit:	-	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

INT	**SYG_IS[n]**						description:	
description:								
SYG_IS[n] Synact Integer parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits:								
The maximum number of SynactGUD Integers is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	INT_MIN		max.:	INT_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

BOOL	**SYG_BS[n]**						description:	
description:								
SYG_BS[n] Synact Boolean parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.								
description of field limits:								
The maximum number of SynactGUD Boolean parameters is defined in machine data								
axis identifier:				NCK version:		57.00.00		
unit:	-	min.:	FALSE		max.:	TRUE		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
attributes:	global	block search			link				
		Program sensitive			No restrictions				

AXIS	**SYG_AS[n]**								description:	
description: SYG_AS[n] Synchronization axis parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD Axis is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

CHAR	**SYG_CS[n]**								description:	
description: SYG_CS[n] Synchronization Char parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.										
description of field limits: The maximum number of SynactGUD char is defined in machine data										
axis identifier:						NCK version:		61.00.00		
unit:	-	min.:					max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

STRING	**SYG_SS[n]**							description:	
description: SYG_SS[n] Synchronized action parameter string in SGUD block. The maximum string length has been limited to 31 characters. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.									
description of field limits: The maximum number of SynactGUD String is defined in machine data									
axis identifier:					NCK version:		61.00.00		
unit:	-	min.:				max.:			
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
attributes:	global	block search				link				
		Program sensitive				No restrictions				

1.1.28 Kinematic chain

STRING	**$NK_CHAIN_NAME[n]**							description:	
description: $NK_CHAIN_NAME[n] Name of the nth kinematic chain. The maximum possible number of kinematic chains is set by MD $MN_MM_MAXNUM_KIN_CHAINS.									
description of field limits: The maximum number of kinematic chains is set in MD $MN_MM_MAXNUM_KIN_CHAINS.									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	-			max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NK_1ST_ELEM[n]**							description:		
description: $NK_1ST_ELEM[n] Name of first chain link of a kinematic chain										
description of field limits: The maximum number of kinematic chains is set in MD $MN_MM_MAXNUM_KIN_CHAINS.										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NK_NAME[n]**							description:		
description: $NK_NAME[n] Name of the nth element of a kinematic chain. The maximum possible number of chain elements is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEMENTS.										
description of field limits: The maximum number of elements of kinematic										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NK_NEXT[n]**							description:		
description: $NK_NEXT[n] Name of next chain element. An empty string "" means the end of the chain.										
description of field limits: The maximum number of elements of kinematic										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NK_NEXTP[n]**							description:		
description:										
$NK_NAMEP[n]										
Name of a further next chain element. This is needed for chain branches which occur in the case of parallel kinematic sequences. An empty string "" means that no further chain element exists.										
description of field limits:										
The maximum number of elements of kinematic										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$NK_INDEX[n,MAXNUM_KIN_CHAIN_TOOL_INDICES]**							description:		
description:										
$NK_INDEX[n, i]										
This component is evaluated only if $NK_NAME[n] contains a reserved name.										
If $NK_NAME[n] contains a name in the form __TOOLXX or _MAGXX, $NK_INDEX[n, 0] refers to the number of the channel in which the tool or magazine is defined.										
If $NK_NAME[n] contains a name in the form __TOOLXX, $NK_INDEX[n, 1] indicates the number of the spindle which contains the tool.										
description of field limits:										
The maximum number of elements of kinematic										
Index number (0 <= i <= 1)										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$NK_OFF_DIR[n,3]**							description:	
description:									
$NK_OFF[n, i] Describes the 3 components of the offset vector of a constant chain link or the direction of the axis of a variable chain link. If the vector describes a direction, the value of the vector must not equal 0. Otherwise not relevant.									
description of field limits:									
The maximum number of elements of kinematic Index of the 3 components (0 <= i <= 2).									
axis identifier:						NCK version:		58.00.00	
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NK_AXIS[n]**							description:	
description:									
$NK_AXIS[n] Name of machine axis or frame If the content of this element is not identical with the name of the machine axis (no difference made between small and capital letters), then the string designates a frame describing the change of this chain link compared to the previous link. In this case, the software using this kinematic chain must provide the frame data for this element. If $NK_AXIS[n] contains the zero string, the entire data block describes a constant chain link.									
description of field limits:									
The maximum number of elements of kinematic									
axis identifier:						NCK version:		58.00.00	
unit:	-	min.:	-				max.:	-	
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$NK_A_OFF[n]**							description:	
description: $NK_A_OFF[n] Is relevant only if the chain link describes an axis. In this case, this element indicates the position of the axis in the zero point. In the case of linear axes, this value is redundant as it can also be replaced by a changed offset of the previous link.									
description of field limits: The maximum number of elements of kinematic									
axis identifier:					NCK version:		58.00.00		
unit:	mm	min.:	DBL_MIN			max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

1.1.29 Protection area elements

STRING	**$NP_PROT_NAME[n]**							description:	
description: $NP_PROT_NAME[n] Name of protection area n.									
description of field limits: The maximum number of protection areas is defined by MD									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	-			max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_CHAIN_NAME[n]**							description:		
description: $NP_CHAIN_NAME[n] The point in a kinematic chain to which the current protection area has been assigned, is defined by the two variables $NP_CHAIN_NAME and $NP_CHAIN_ELEM. If only $NP_CHAIN_NAME is indicated, the protection area is assigned to the beginning of the indicated chain.										
description of field limits: The maximum number of protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_CHAIN_ELEM[n]**							description:		
description: $NP_CHAIN_ELEM[n] See description of $NP_CHAIN_NAME[n]										
description of field limits: The maximum number of protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_1ST_PROT[n]**							description:		
description: $NP_1ST_PROT Name of first element of a protection area										
description of field limits: The maximum number of protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

INT	**$NP_BIT_NO[n]**							description:		
description: $NP_BIT_NO 64 bits are defined in the PLC interface through which protection areas can be activated once they have been preactivated with the command PROTA(1(,.,.,.)). The entry indicates which bit has been assigned to this protection area. The default value is -1, i.e. no interface bit has been assigned to this protection area.										
description of field limits: The maximum number of protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-1				max.:	63		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

CHAR	**$NP_INIT_STAT[n]**							description:		
description:										
$NP_INIT_STAT Activation status of the protection area at first selection without indication of an activation status. This status is activated for defined protection areas also during runup of the control. The permitted values are: Activated ('A' or 'a'), Inactivated ('I' or 'i'), Preactivated ('P' or 'p'). Default value is 'I'.										
description of field limits:										
The maximum number of protection areas is defined by MD										
axis identifier:						NCK version:		64.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_NAME[n]**							description:		
description:										
$NP_NAME Name of protection zone element.										
description of field limits:										
The maximum number of elements in protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_NEXT[n]**						description:	
description: $NP_NEXT[n] Name of next protection zone element.								
description of field limits: The maximum number of elements in protection areas is defined by MD								
axis identifier:				NCK version:		58.00.00		
unit:	-	min.:	-		max.:	-		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$NP_ADD[n]**						description:	
description: $NP_ADD[n] Name of protection element to be added to the current protection zone.								
description of field limits: The maximum number of elements in protection areas is defined by MD								
axis identifier:				NCK version:		58.00.00		
unit:	-	min.:	-		max.:	-		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$NP_TYPE[n]**							description:		
description: $NP_TYPE[n] Type of elementary body. The following elementary bodies are possible: 1. BOX (L, W, H): Axis-parallel cuboid, symmetrical to zero point with dimensions L in the X direction, W in the Y direction and H in the Z direction, i.e. the corners of the cuboid lie at n (+/-L/2, +/-W/2, +/-H/2). 2. SPHERE (R): Sphere in zero point with radius R. 3. CYLINDER (H, R): Cylinder with radius R and height H, longitudinal axis parallel to Z axis. The center point of the cylinder lies in the zero point, i.e. the two limiting circular areas are parallel to the X-Y plane and lie at +/-H/2.									
description of field limits: The maximum number of elements in protection areas is defined by MD										
axis identifier:						NCK version:		58.00.00		
unit:	-	min.:	-				max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$NP_PARA[n,MAXNUM_3D_PROT_PARA_COUNT]**							description:		
description: $NP_PARA[n, i] Parameters for describing the type of an elementary body. A maximum of 5 parameters are required for the types of elementary body described under $NP_TYP.										
description of field limits: The maximum number of elements in protection areas is defined by MD The maximum number of parameters is 3.										
axis identifier:						NCK version:		58.00.00		
unit:	mm	min.:	DBL_MIN				max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

DOUBLE	**$NP_OFF[n,3]**						description:	
description:								
$NP_OFF[n, i] Component i (0<=i<=2) of the offset vector of protection zone element n.								
description of field limits:								
The maximum number of elements in protection areas is defined by MD The 2nd index i designates the coordinate axis (0 <= i <= 2).								
axis identifier:				NCK version:	58.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$NP_DIR[n,3]**						description:	
description:								
$NP_DIR[n, i] Components of the rotary axis for a coordinate rotation in								
description of field limits:								
The maximum number of elements in protection areas is defined by MD The 2nd index i designates the vector component (0 <= i <= 2).								
axis identifier:				NCK version:	58.00.00			
unit:	deg.	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

DOUBLE	**$NP_ANG[n]**						description:	
description:								
$NP_ANG[n] Angle (in degrees) of a coordinate rotation in protection area element n								
description of field limits:								
The maximum number of elements in protection areas is defined by MD								
axis identifier:				NCK version:	58.00.00			
unit:	mm	min.:	DBL_MIN		max.:	DBL_MAX		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$NP_GROUP_NAME[n]**							description:	
description: $NP_GROUP_NAME[n] Name of protection area group n									
description of field limits: The maximum number of protection areas groups is defined by MD									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	-			max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_ADD_GROUP[n]**							description:	
description: $NP_ADD_GROUP[n] Name of additive protection area group n									
description of field limits: The maximum number of protection areas groups is defined by MD									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	-			max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_MEMBER_1[n]**							description:	
description: $NP_MEMBER_1[n] 1st protection area of protection area group									
description of field limits: The maximum number of protection areas groups is defined by MD									
axis identifier:					NCK version:		58.00.00		
unit:	-	min.:	-			max.:	-		
	run-in	main run	runin stp	Mrun syn		PP	SA	OPI	OEM	access rights
read:	X					X		X	X	
write:	X					X		X	X	7
attributes:	global	block search				link				
		Not classified				No restrictions				

STRING	**$NP_MEMBER_2[n]**						description:	
description: $NP_MEMBER_2[n] 2nd protection area of protection area group								
description of field limits: The maximum number of protection areas groups is defined by MD								
axis identifier:				NCK version:	58.00.00			
unit:	-	min.:	-		max.:	-		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$NP_MEMBER_3[n]**						description:	
description: $NP_MEMBER_3[n] 3rd protection area of protection area group								
description of field limits: The maximum number of protection areas groups is defined by MD								
axis identifier:				NCK version:	58.00.00			
unit:	-	min.:	-		max.:	-		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

STRING	**$NP_MEMBER_4[n]**						description:	
description: $NP_MEMBER_4[n] 4th protection area of protection area group								
description of field limits: The maximum number of protection areas groups is defined by MD								
axis identifier:				NCK version:	58.00.00			
unit:	-	min.:	-		max.:	-		
	run-in	main run	runin stp	Mrun syn	PP	SA	OPI	OEM	access rights
read:	X				X		X	X	
write:	X				X		X	X	7
attributes:	global	block search			link				
		Not classified			No restrictions				

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Siemens AG A&D MC MS1 P.O. Box 3180 D-91050 Erlangen Federal Republic of Germany Fax +49 (0) 9131 98 - 63315 (Documentation) email: mailto:docu.motioncontrol@siemens.com	Suggestions Corrections for Publication/Manual SINUMERIK, System variables User documentation
From Name: Company/Department Address :_____ _____ Telephone : _____ / _____ Telefax : _____ / _____ email : _____	Parameter Manual Order No.: 6FC5397-6AP10-1BA0 11/2006 Edition Should you come across any printing errors when reading this publication, please notify us on this sheet. Suggestions for improvements are also welcome.

Suggestions and/or corrections

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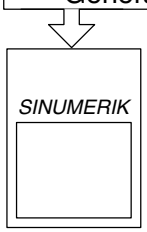
General Documentation



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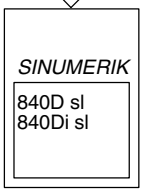

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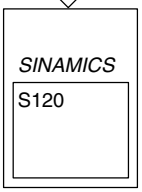

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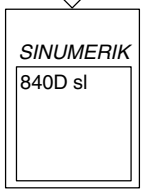

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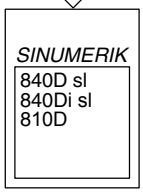

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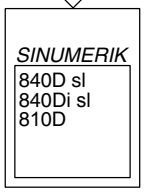

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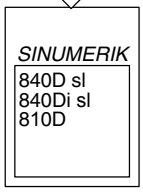

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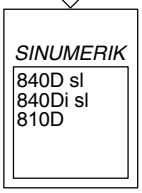

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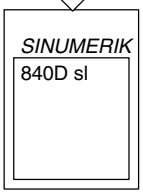

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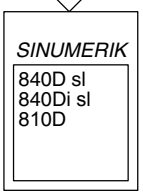

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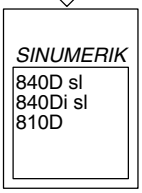

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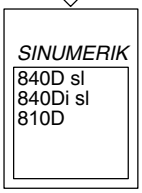

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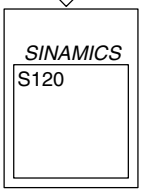

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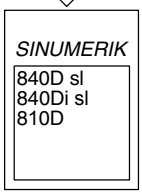

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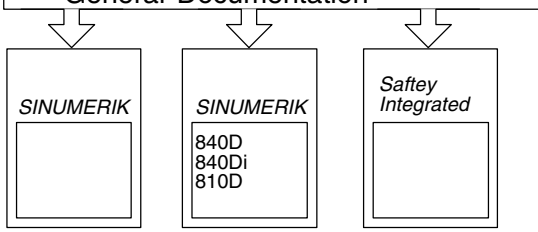

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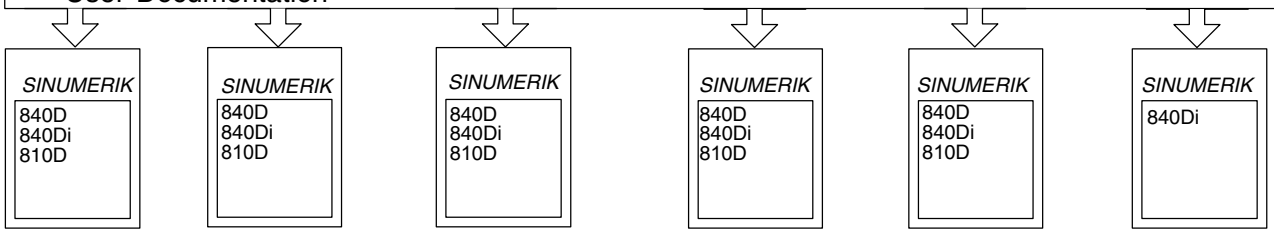

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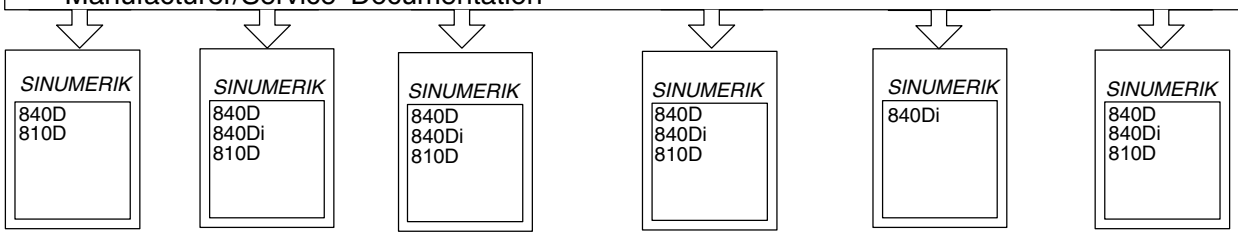

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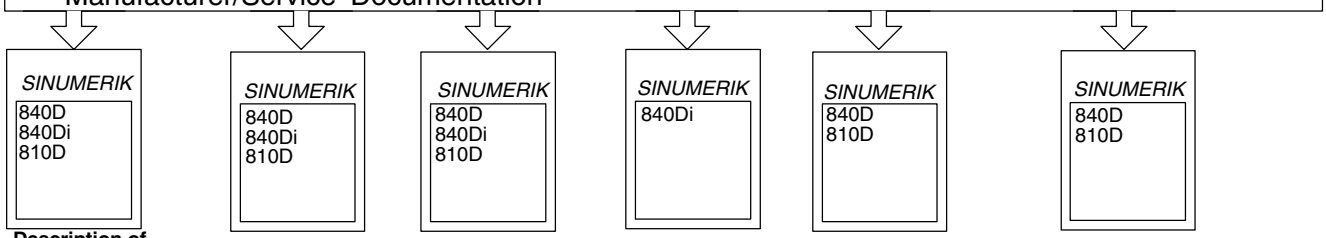

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– NC Data Transfer
– Tool Data Communication

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