SIEMENS

SIMATIC

PCS 7
PCS 7 Faceplates

Programming and Operating Manual

09/2007
A5E00807901-02

Safety Guidelines

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠DANGER

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

⚠WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠CAUTION

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

CAUTION

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

NOTICE

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Prescribed Usage

Note the following:

⚠WARNING

This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

Trademarks

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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A5E00807901-02
℗ 09/2007

Table of contents

PCS 7 Faceplates

1

1.1 Faceplates

1.1.1 General Information on Faceplates

What is a Faceplate?

The faceplate is the graphical display of all the elements of a technological block in the automation system or of asset management components that perform operator control and monitoring functions. The faceplate is displayed in a separate window on the OS and can be called up by means of picture-selection buttons, the process-tag list or the block icon.

Requirements

- You must use a system, which has WinCC and the "Basis Process Control" and "Advanced Process Control" control system packages.
- You must use a graphics board with a resolution of 1280x1024 pixels. One screen can display up to 12 Faceplates with a size of 320 x 256 pixels in a matrix format consisting of 3 rows and 4 columns and without scroll bars. If you use a lower-resolution graphics board, you must display the scroll bars or reduce the number of blocks.

Advantages of the Faceplates

The Faceplates have the following advantages:

- Easy to learn
- Easy to configure, by means of a defined interface between the faceplate and the AS block
- Easy to handle, due to only a few handling instructions
- Clear representation of the process
- WinCC and Windows conformity

Display

The Faceplates have two different display formats:

- **Group display**: Visualization of AS values in different views, with element for selecting the loop display
- **Loop display**: Visualization of the elements of all views of the group display

Additional information

You will find more information about designing, configuring and testing a faceplate in the *PCS 7 Programming Guide for Blocks* Manual.

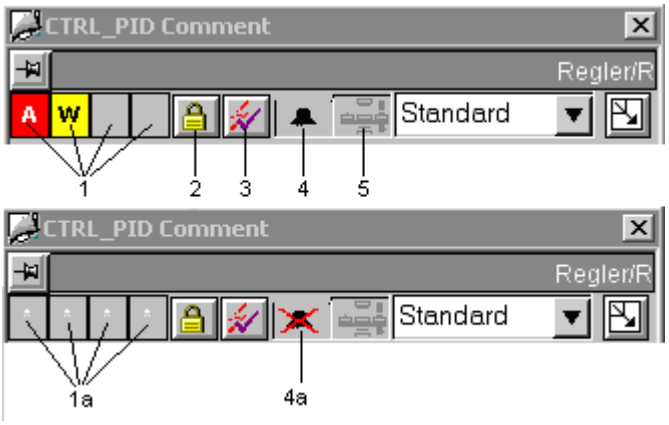
Note

The Faceplates shown here in the documentation may differ slightly from those that are configured in WinCC.

1.1.2 Overview objects

Toolbar Icons

Each faceplate has a toolbar containing the following icons:



Pinning the faceplate

In the left-hand corner above the overview row, there is an icon that can be used to "pin" a faceplate so that it remains during an area change. The key appears as follows:

- Not pinned  (once the faceplate has been called)
- Pinned  (once the button has been pressed)

The faceplate remains pinned until it is closed again. Pressing the key again has no effect.

Group display

The group display [1] shows the information that is transferred from ALARM_8P of the block instance to WinCC. The group display is linked to the "EventState" of the variable.

Lock/Unlock Messages

The "Lock/unlock messages" function is implemented in the overview with a key [2].

The group displays shows whether all the messages of a block instance are locked or unlocked. If a white * character [1a] appears in all 4 of the group-display fields, all messages are locked.

The button is only visible to operators assigned the permission level defined in the block symbol property "Processcontrolling_backup".

Acknowledge messages

With key [**3**], all messages of the block instance can be acknowledged.

The button is only visible to operators assigned the permission level defined in the block symbol property "Processcontrolling_backup".

Suppress Messages

Message suppression indicates whether the "Suppress process messages" function in the AS block is deactivated [**4**] or activated [**4a**] using the "MSG_LOCK" parameter. If message suppression is activated, all messages in this block instance are suppressed – except for process control messages.

Occupied Display

The occupied display [**5**] indicates whether the SIMATIC BATCH block instance is occupied ("OCCUPIED" parameter). Additional information is then displayed in the batch view.

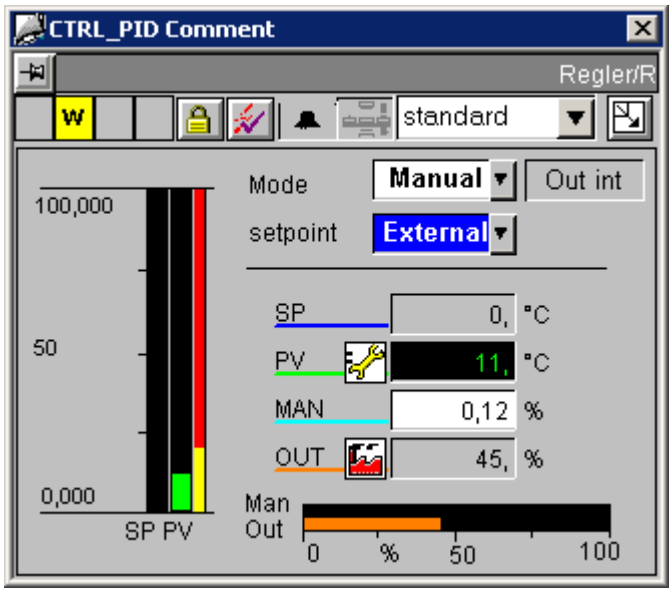
1.2 Faceplates: Technological Blocks

Technological Blocks

1.2.1 CTRL_PID (All Views)

Overview

1.2.1.1 CTRL_PID: Standard view



Analog displays and number formats

All analog display are implemented using the "AdvancedAnalogDisplay" object. The number format is defined at the "Format_InputValue" and "Format_OutputValue" properties of the block symbol.

Access control

This view has the following 2 "permission" objects for the input of setpoints and manipulated variables, since operator authorizations for these variables depend upon various factors:

- "Permission_Setpoint"
- "Permission_Manual"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_Setpoint"	"Q_SP_OP = TRUE"
"Permission_Manual"	"QLMNOP = TRUE"

Controlling the PID Tuner and optimization

The PID tuner is operated in the parameter view (Tuning On/Off).

When tuning is turned on in the parameter view, the standard view displays a combo box above the "Manual/Auto" operating-mode combo box. This combo box can also be used to turn off tuning again from the standard view. All other control functions of the controller are disabled when "Tuning On" is set.

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Manual_COMBOBOX	-->	Operator-control enable		
External_COMBOBOX	-->	Operator-control enable		
Permission_Setpoint	-->	Level_Source	-->	Level_Target
Permission_Manual	-->	Level_Source		
Permission_Setpoint	-->	**Target_Operator-ControlEnable**		
Setpoint_AnalogValue	-->	Operator-control enable		
Permission_Manual	-->	**Target_Operator-ControlEnable**		
Manual_AnalogValue	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
Setpoint_AnalogValue	-->	Format		
ProcessValue_AnalogValue	-->	Format		
Format	-->	**Format_OutputValue**		
Manual_AnalogValue	-->	Format		
Output_AnalogValue	-->	Format		

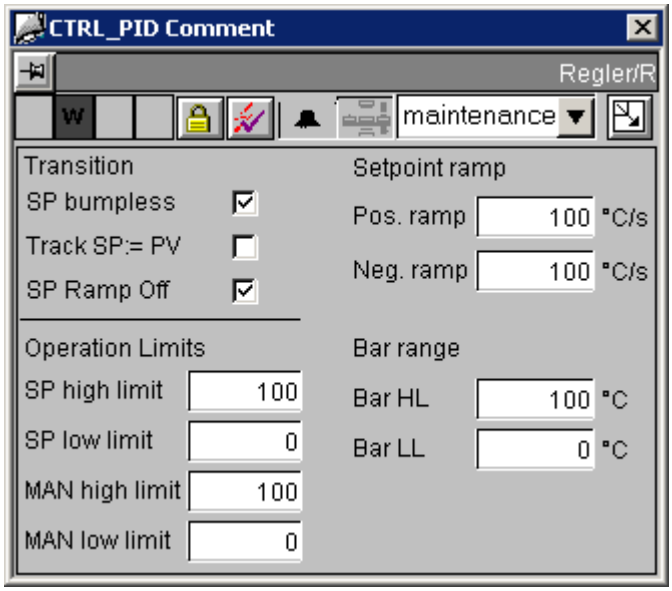
Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.1.2 CTRL_PID: Maintenance view



If a block of the type CPM is instantiated in the chart of the controller and this has the name of the controller block with the extension "_cpm", an additional button CPM is displayed with which the CPM faceplate can be called.

Control permissions

The "Permission_SP_Bumpless" object evaluates the WinCC permission levels and the "OPTI_EN = FALSE" parameter.

Sequence and positioning of direct connections to controllable objects

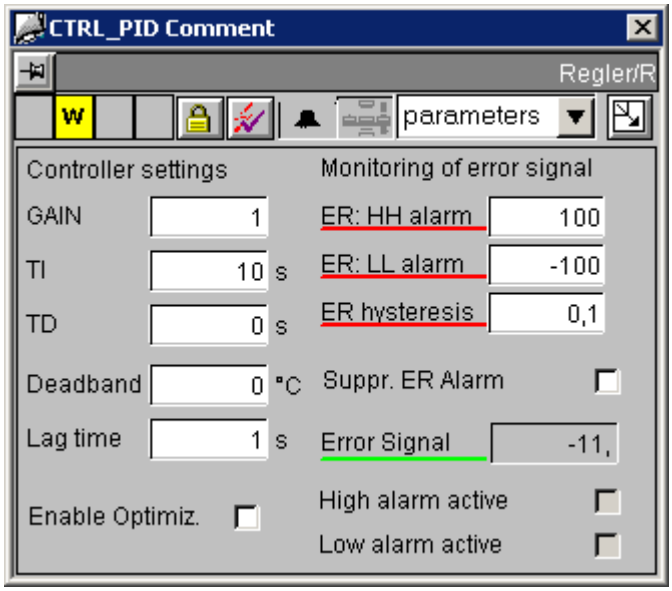
@Level6	-->	**Operator control enable**
Permission_SP_Bumpless	-->	Level_Source
Permission_SP_Bumpless	-->	**Target_Operator-ControlEnable**
Bumpless_CHECKBOX_L	-->	Operator control enable
SP_TRK_ON_CHECKBOX_L	-->	Operator control enable
SPRAMP_OFF_CHECKBOX_L	-->	Operator control enable
SPHighLimit_AnalogValue	-->	Operator control enable
SPLowLimit_AnalogValue	-->	Operator control enable
ManHighLimit_AnalogValue	-->	Operator control enable
ManLowLimit_AnalogValue	-->	Operator control enable
SPURLM_AnalogValue	-->	Operator control enable
SPDRLM_AnalogValue	-->	Operator control enable
MO_PVHR_AnalogValue	-->	Operator control enable
MO_PVLR_AnalogValue	-->	Operator control enable
Permission_SP_Bumpless	-->	**Target_BackColor**
SPHighLimit_AnalogValue	-->	BackColor_Value
SPLowLimit_AnalogValue	-->	BackColor_Value
ManHighLimit_AnalogValue	-->	BackColor_Value
ManLowLimit_AnalogValue	-->	BackColor_Value
SPURLM_AnalogValue	-->	BackColor_Value
SPDRLM_AnalogValue	-->	BackColor_Value
MO_PVHR_AnalogValue	-->	BackColor_Value
MO_PVLR_AnalogValue	-->	BackColor_Value

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.1.3 CTRL_PID: Parameter view



If a block of the type GAIN_SHD is instantiated in the chart of the controller and this has the name of the controller block with the extension "_gsc", an additional button GAIN_SHD is displayed with which the GAIN_SHD faceplate can be called.

Analog displays and number formats

The "ControlError_AnalogValue" process value is implemented using the "AdvancedAnalogDisplay" object. The number format is defined at the "Format_InputValue" property of the block icon.

All other analog displays are implemented by means of the conventional "Floating-point format" I/O field.

Control permissions

The "Permission_Gain“ object evaluates the WinCC permission levels and the "OPTI_EN = FALSE" parameter.

Sequence and positioning of direct connections to controllable objects

@Level6	-->	**Operator control enable**
Permission_Gain	-->	Level_Source
OPTI_EN_CHECKBOX_L	-->	Operator control enable
Permission_Gain	-->	**Target_Operator-ControlEnable**
Gain_AnalogValue	-->	Operator control enable
TN_AnalogValue	-->	Operator control enable
TV_AnalogValue	-->	Operator control enable
DEADB_W_AnalogValue	-->	Operator control enable
TM_LAG_AnalogValue	-->	Operator control enable
ERH_ALM_AnalogValue	-->	Operator control enable
ERL_ALM_AnalogValue	-->	Operator control enable
ER_HYS_AnalogValue3	-->	Operator control enable
M_SUP_ER_CHECKBOX_L	-->	Operator control enable
Permission_Gain	-->	**Target_BackColor**
Gain_AnalogValue	-->	BackColor_Value
TN_AnalogValue	-->	BackColor_Value
TV_AnalogValue	-->	BackColor_Value
DEADB_W_AnalogValue	-->	BackColor_Value
TM_LAG_AnalogValue	-->	BackColor_Value
ERH_ALM_AnalogValue	-->	BackColor_Value
ERL_ALM_AnalogValue	-->	BackColor_Value
ER_HYS_AnalogValue3	-->	BackColor_Value
Format	-->	**Format_InputValue**
ControlError_AnalogValue	-->	Format

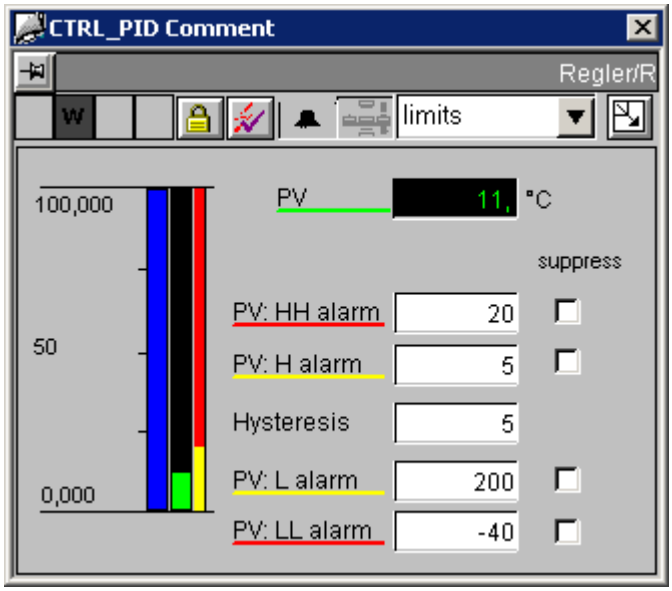
Additional information

You will find more information in:

Overview objects (Page 9)

1.2.1.4 CTRL_PID: Limits view

Setpoint Operation Limits



The setpoint bar graph in this view shows the setpoint input limits relative to bar graph limits.

Setpoint operation limits are set in the maintenance view.

Analog displays and number formats

The "ProcessValue_AnalogValue" process value is implemented using the "AdvancedAnalogDisplay" object. The number format is defined at the "Format_InputValue" property of the block symbol.

All other analog displays are implemented by means of the conventional "Floating-point format" I/O field.

Access control

The "Permission_AlarmHigh_AnalogValue“ permission object evaluates WinCC permission levels and the "OPTI_EN = FALSE“ parameter.

Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
Permission_AlarmHigh_AnalogValue	-->	Level_Source
Permission_AlarmHigh_AnalogValue	-->	**Target_Operator-ControlEnable**
AlarmHigh_AnalogValue	-->	Operator-control enable
WarningHigh_AnalogValue	-->	Operator-control enable
Hysteresis_AnalogValue	-->	Operator-control enable
WarningLow_AnalogValue	-->	Operator-control enable
AlarmLow_AnalogValue	-->	Operator-control enable
AlarmHigh_CHECKBOX_R	-->	Operator-control enable
WarningHigh_CHECKBOX_R	-->	Operator-control enable
WarningLow_CHECKBOX_R	-->	Operator-control enable
AlarmLow_CHECKBOX_R	-->	Operator-control enable
Permission_AlarmHigh_AnalogValue	-->	**Target_BackColor**
AlarmHigh_AnalogValue	-->	BackColor_Value
WarningHigh_AnalogValue	-->	BackColor_Value
Hysteresis_AnalogValue	-->	BackColor_Value
WarningLow_AnalogValue	-->	BackColor_Value
AlarmLow_AnalogValue	-->	BackColor_Value
Format	-->	**Format_InputValue**
ProcessValue_AnalogValue	-->	Format_InputValue

Additional information

You will find more information in:

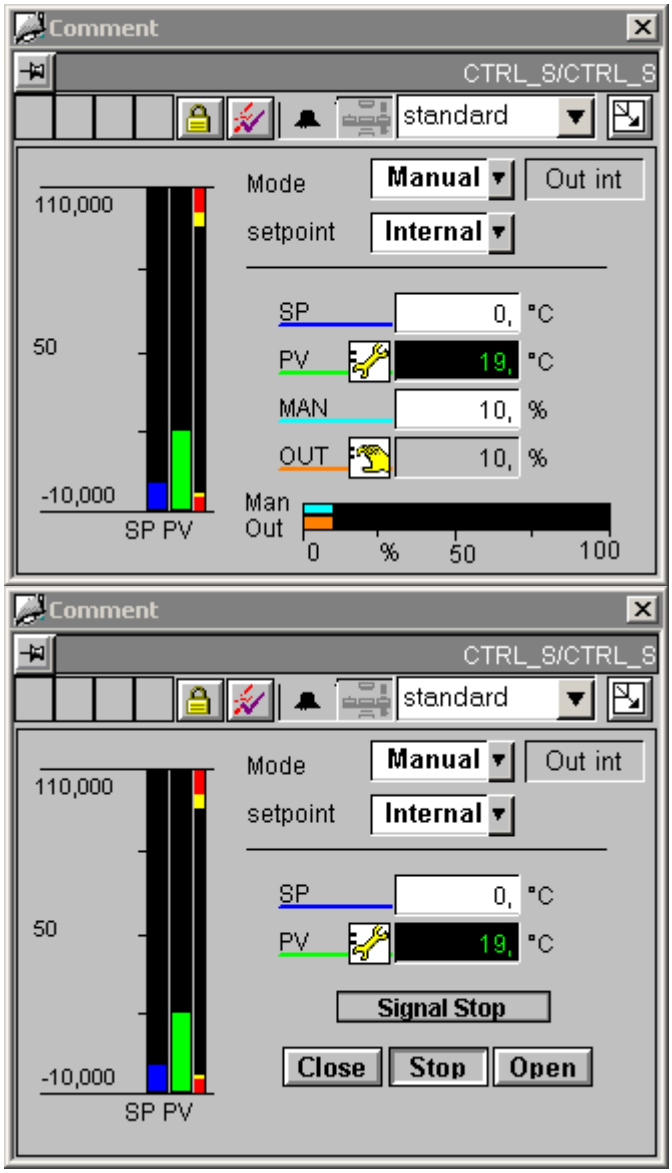
Overview objects (Page 9)

1.2.2 CTRL_S (All Views)

Overview

CTRL_S: Standard view (Page 22)
CTRL_S: Maintenance view (Page 24)
CTRL_S: Parameter view (Page 24)
CTRL_S: Limits view (Page 24)
CTRL_S: StandardS view (Page 25)
Global view: Message view (Page 76)
Global view: Batch view (Page 75)
Global view: Trend view (Page 77)

1.2.2.1 CTRL_S: Standard view



Key Display

In contrast to the **CTRL_PID** standard view, in the **CTRL_S** standard view the bar-range display and the manual and manipulated-variable analog values are displayed as specified in the LMNR_ON parameter. The keys for operating the LMNDN_OP and LMNUP_OP parameters are displayed when "LMNR_ON = FALSE".

The visibility of the LMNDN_OP_BinOp, LMNUP_OP_BinOp and LMN_OP_Stop_BinOp keys and the QLMNUP_QLMNDN status display is controlled by a script. This script is called when the "Other/Display" properties of the "Output_BarStandard_3" object change.

The visibility of these objects is also controlled via the X position of the geometry, since the "Visible" property is already used for internal object functions.

There is only one "Stop" key for LMNDN_OP and LMNUP_OP. A script determines to which of these two parameters the value "0" is written. If the "Display_Variable" property changes, these scripts are activated in the "LMNDN_OP_BinOp" and "LMNUP_OP_BinOp" objects.

Access control

This view has three permission objects:

- "Permission_Setpoint"
- "Permission_Manual"
- "Permission_LMNDN_OP"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_Setpoint"	"Q_SP_OP = TRUE"
"Permission_Manual"	"QLMNVOP = TRUE"
"Permission_LMNDN_OP"	"QLMNSOP = TRUE"

Controlling the PID Tuner and optimization

The PID tuner is operated in the parameter view (Tuning On/Off).

When tuning is turned on, the standard view displays a combo box above the “Manual/Auto” operating-mode combo box. This combo box can be used to turn off tuning again.

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Manual_COMBOBOX	-->	Operator-control enable		
External_COMBOBOX	-->	Operator-control enable		
Permission_Setpoint	-->	Level_Source	-->	Level_Target
Permission_Manual	-->	Level_Source	-->	Level_Target
Permission_LMNDN_OP	-->	Level_Source		
Permission_Setpoint	-->	**Target_Operator-ControlEnable**		
Setpoint_AnalogValue	-->	Operator-control enable		
Permission_Manual	-->	**Target_Operator-ControlEnable**		
Manual_AnalogValue	-->	Operator-control enable		
Permission_LMNDN_OP	-->	**Target_Operator-ControlEnable**		
LMN_OP_Stop_BinOp	-->	Operator-control enable		
LMNDN_OP_BinOp	-->	Operator-control enable		
LMNUP_OP_BinOp	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
Setpoint_AnalogValue	-->	Format		
ProcessValue_AnalogValue	-->	Format		
Format	-->	**Format_OutputValue**		
Manual_AnalogValue	-->	Format		
Output_AnalogValue	-->	Format		

Additional information

You will find more information in:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.2.2 CTRL_S: Maintenance view

See: CTRL_PID: Maintenance view (Page 15)

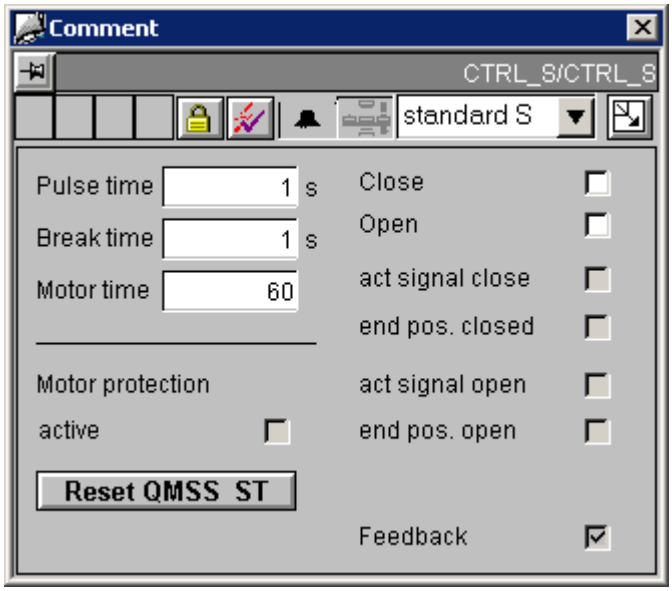
1.2.2.3 CTRL_S: Parameter view

See: CTRL_PID: Parameter view (Page 17)

1.2.2.4 CTRL_S: Limits view

See: CTRL_PID: Limits view (Page 19)

1.2.2.5 CTRL_S: StandardS View



Access control

This view has two permission objects:

- "Permission_LMNDN_OP"
- "Permission_PulseTime_AnalogValue"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_LMNDN_OP"	"QLMNSOP = TRUE"
"Permission_PulseTime_AnalogValue"	"OPTI_EN = FALSE"

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Permission_LMNDN_OP	-->	Level_Source	-->	Level_Target
@Level6	-->	**Operator-control enable**		
Permission_PulseTime_AnalogValue	-->	Level_Source		
Reset_ButtonBit	-->	Operator-control enable		
Permission_LMNDN_OP	-->	**Target_Operator-ControlEnable**		
LMNDN_OP_Checkbox	-->	Operator-control enable		
LMNUP_OP_Checkbox	-->	Operator-control enable		
Permission_PulseTime_AnalogValue	-->	**Target_Operator-ControlEnable**		
PulseTime_Analogvalue	-->	Operator-control enable		
BreakTime_Analogvalue	-->	Operator-control enable		
MTR_TM_AnalogValue	-->	Operator-control enable		
Permission_PulseTime_AnalogValue	-->	**Target_BackColor**		
PulseTime_Analogvalue	-->	BackColor_Value		
BreakTime_Analogvalue	-->	BackColor_Value		
MTR_TM_AnalogValue	-->	BackColor_Value		

Additional information

You will find more information in:

Overview objects (Page 9)

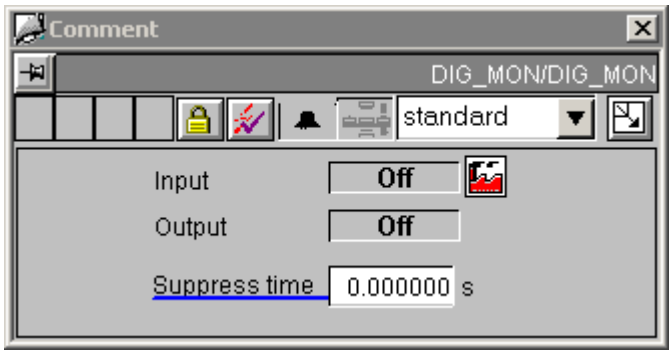
The Quality Code Display (Page 133)

1.2.3 DIG_MON (All Views)

Overview

DIG_MON: Standard view (Page 27)
Global view: Message view (Page 76)
Global view: Batch view (Page 75)

1.2.3.1 DIG_MON: Standard view



Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
SuppressTime_PCS7_AnalogValue	-->	Operator-control enable
@Level6	-->	**BackColor**
SuppressTime_PCS7_AnalogValue	-->	BackColor

Additional information

You will find more information on this subject in the following sections:

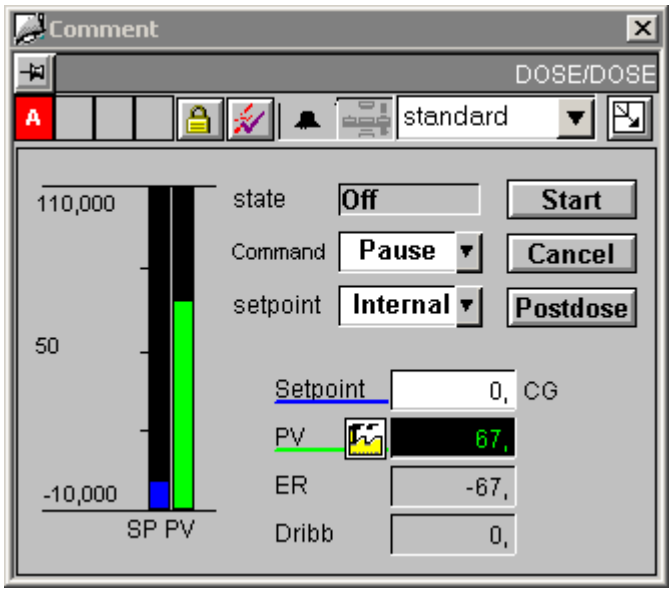
Overview objects (Page 9)
The Quality Code Display (Page 133)

1.2.4 DOSE (All Views)

Overview

DOSE: Standard view (Page 28)
DOSE: Maintenance view (Page 30)
DOSE: Parameter view (Page 31)
DOSE: Limits view (Page 32)
Global view: Message view (Page 76)
Global view: Batch view (Page 75)
Global view: Trend view (Page 77)

1.2.4.1 DOSE: Standard view



Setpoint Displays

The "Setpoint_AnalogValue" and "BarStandard_2" setpoint displays must display the "SP_OP" variable for "Internal Setpoint" and the "SP_EXT" variable for "External Setpoint". A script controls the variable link of these two objects using the "SetLink" command.

This script is called when the "Display_Variable1" property of the "External_COMBOBOX" object is changed.

Access control

This view has four permission objects:

- "Permission_Setpoint"
- "Permission_Start"
- "Permission_Cancel"
- "Permission_Post_Dose"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_Setpoint"	"Q_SP_OP = TRUE"
"Permission_Start"	"QSTRT_OP = TRUE"
"Permission_Cancel"	"QCN_OP = TRUE"
"Permission_Post_Dose"	"QPD_OP = TRUE"

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Pause_COMBOBOX	-->	Operator-control enable		
External_COMBOBOX	-->	Operator-control enable		
Permission_Setpoint	-->	Level_Source	-->	Level_Target
Permission_Start	-->	Level_Source	-->	Level_Target
Permission_Cancel	-->	Level_Source	-->	Level_Target
Permission_Post_Dose	-->	Level_Source		
Permission_Setpoint	-->	**Target_Operator-ControlEnable**		
Setpoint_AnalogValue	-->	Operator-control enable		
Permission_Start	-->	**Target_Operator-ControlEnable**		
Start_ButtonBit	-->	Operator-control enable		
Permission_Cancel	-->	**Target_Operator-ControlEnable**		
Cancel_ButtonBit	-->	Operator-control enable		
Permission_Post_Dose	-->	**Target_Operator-ControlEnable**		
Post_Dose_ButtonBit	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
Setpoint_AnalogValue	-->	Format		
ProcessValue_AnalogValue	-->	Format		

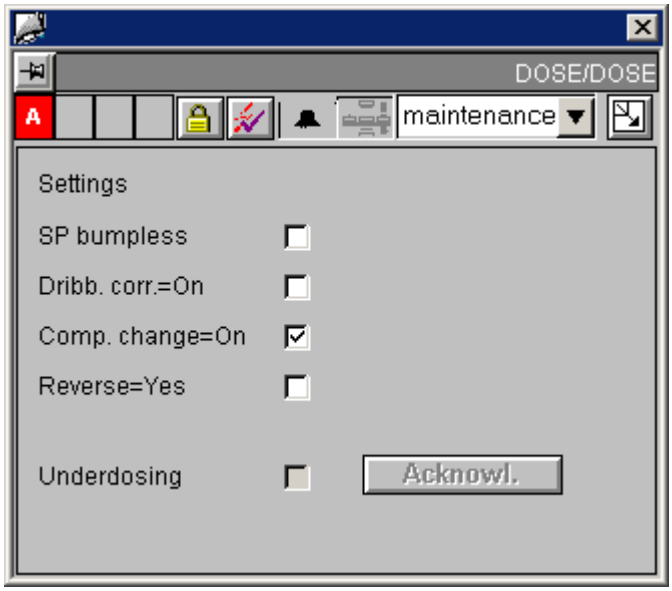
Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.4.2 DOSE: Maintenance view



Access control

As well as the WinCC authorization levels, the "Permission_ACK_TOL_OP" permission object also evaluates the "QTOL_N = TRUE" and "QAK_OP= TRUE" parameters.

Sequence and positioning of direct connections to control objects

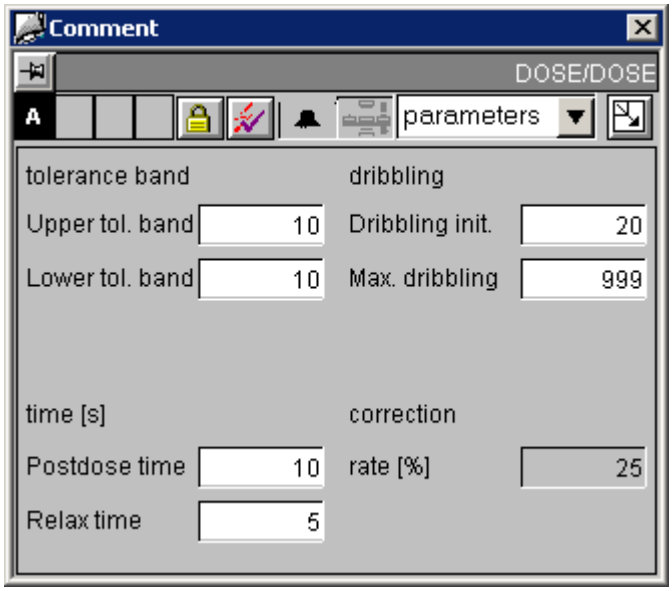
@Level6	-->	**Operator-control enable**
SPBUMPON_CHECKBOX_L	-->	Operator-control enable
DRIB_COR_CHECKBOX_L	-->	Operator-control enable
COMP_CHG_CHECKBOX_L2	-->	Operator-control enable
REVERSE_CHECKBOX_L	-->	Operator-control enable
Permission_ACK_TOL_OP	-->	**Level_Source**
Permission_ACK_TOL_OP	-->	**Target_Operator-ControlEnable**
ACK_TOL_OP_ButtonBit	-->	Operator-control enable

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.4.3 DOSE: Parameter view



Sequence and positioning of direct connections to control objects

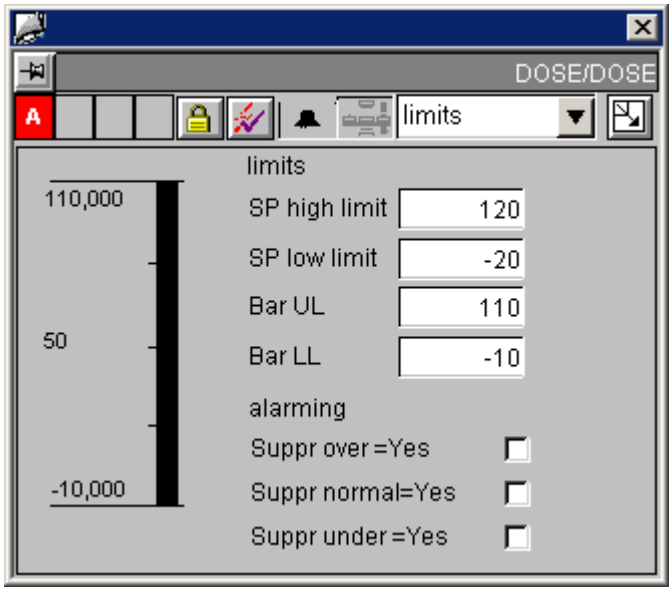
@Level6	-->	**Operator-control enable**
TOL_P_PCS7_AnalogValue	-->	Operator-control enable
TOL_N_PCS7_AnalogValue	-->	Operator-control enable
PDOS_TME_PCS7_AnalogValue	-->	Operator-control enable
RELAXTME_PCS7_AnalogValue	-->	Operator-control enable
DRIBB_PCS7_AnalogValue	-->	Operator-control enable
DRIBBMAX_PCS7_AnalogValue	-->	Operator-control enable
@Level6	-->	**BackColor**
TOL_P_PCS7_AnalogValue	-->	BackColor_Value
TOL_N_PCS7_AnalogValue	-->	BackColor_Value
PDOS_TME_PCS7_AnalogValue	-->	BackColor_Value
RELAXTME_PCS7_AnalogValue	-->	BackColor_Value
DRIBB_PCS7_AnalogValue	-->	BackColor_Value
DRIBBMAX_PCS7_AnalogValue	-->	BackColor_Value

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.4.4 DOSE: Limits view



Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
SP_HLM_PCS7_AnalogValue	-->	Operator-control enable
SP_LLM_PCS7_AnalogValue	-->	Operator-control enable
MO_PVHR_PCS7_AnalogValue	-->	Operator-control enable
MO_PVLR_PCS7_AnalogValue	-->	Operator-control enable
M_SUP_2_UEBERDOS_CHECKBOX_L	-->	Operator-control enable
M_SUP_1_Dos_ok_CHECKBOX_L	-->	Operator-control enable
M_SUP_3_UNterdosCHECKBOX_L	-->	Operator-control enable
@Level6	-->	**BackColor**
SP_HLM_PCS7_AnalogValue	-->	BackColor_Value
SP_LLM_PCS7_AnalogValue	-->	BackColor_Value
MO_PVHR_PCS7_AnalogValue	-->	BackColor_Value
MO_PVLR_PCS7_AnalogValue	-->	BackColor_Value

Additional information

You will find more information in:

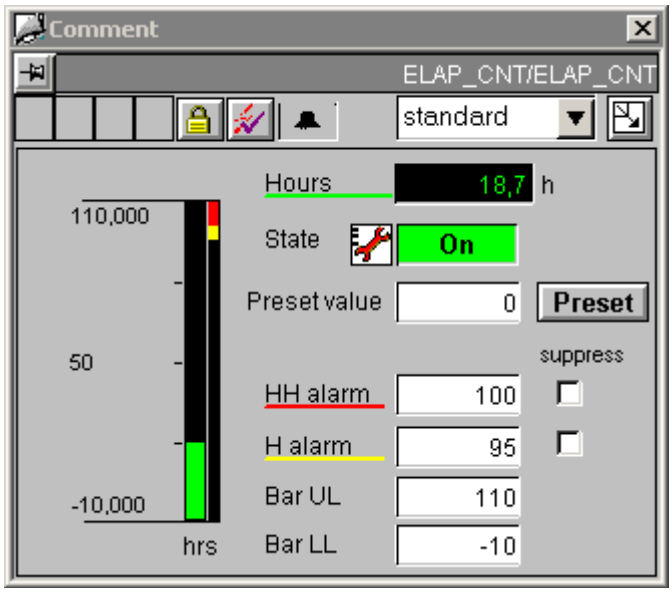
Overview objects (Page 9)

1.2.5 ELAP_CNT (All Views)

Overview

ELAP_CNT: Standard view (Page 33)
Global view: Message view (Page 76)

1.2.5.1 ELAP_CNT: Standard view



Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
HOURS_OP_AnalogValue	-->	Operator-control enable
TRACK_OP_ButtonBit	-->	Operator-control enable
@Level5	-->	**BackColor**
HOURS_OP_AnalogValue	-->	BackColor_Value
@Level6	-->	**Operator-control enable**
AlarmHigh_AnalogValue	-->	Operator-control enable
WarningHigh_AnalogValue	-->	Operator-control enable
MO_HOUHR_PCS7_AnalogValue	-->	Operator-control enable
MO_HOULR_PCS7_AnalogValue	-->	Operator-control enable
AlarmHigh_CHECKBOX_R	-->	Operator-control enable
WarningHigh_CHECKBOX_R	-->	Operator-control enable
@Level6	-->	**BackColor**
AlarmHigh_AnalogValue	-->	BackColor_Value
WarningHigh_AnalogValue	-->	BackColor_Value
MO_HOUHR_PCS7_AnalogValue	-->	BackColor_Value
MO_HOULR_PCS7_AnalogValue	-->	BackColor_Value
Format	-->	**Format_InputValue**
HOURS_AnalogValue	-->	Format

Additional information

You will find more information on this subject in the following sections:

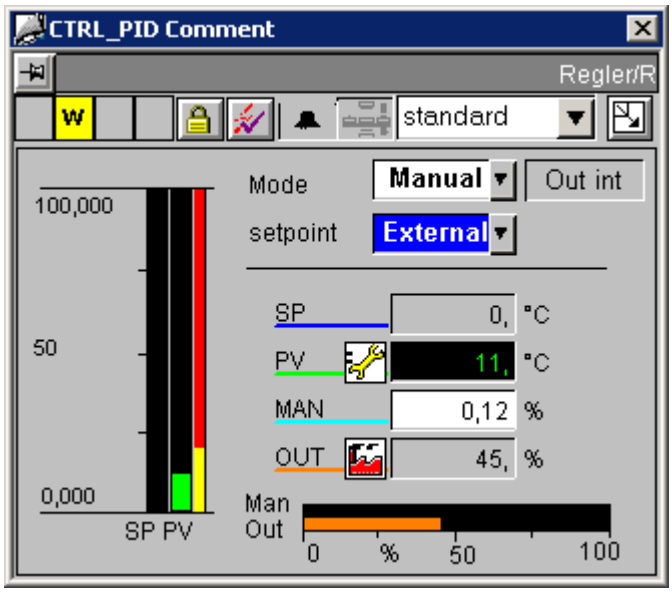
Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.6 FMCS_PID (All Views)

Overview

1.2.6.1 FMCS_PID: Standard view



This FMCS_PID standard view looks identical to the CTRL_PID standard view (Page 13).

Analog displays and number formats

All analog display are implemented using the "AdvancedAnalogDisplay" object. The value format is set via the “Format_InputValue” and “Format_OutputValue” block-icon properties.

Access control

This view has three permission objects:

- "Permission_Manual_COMBOBOX"
- "Permission_Setpoint"
- "Permission_Manual"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_Manual_COMBOBOX"	• "QMODF = FALSE"
"Permission_Setpoint"	• "Q_SP_OP = TRUE" • "QMODF = FALSE"
"Permission_Manual"	• "QLMNOP = TRUE" • "QMODF = FALSE"

Sequence and positioning of direct connections to control objects

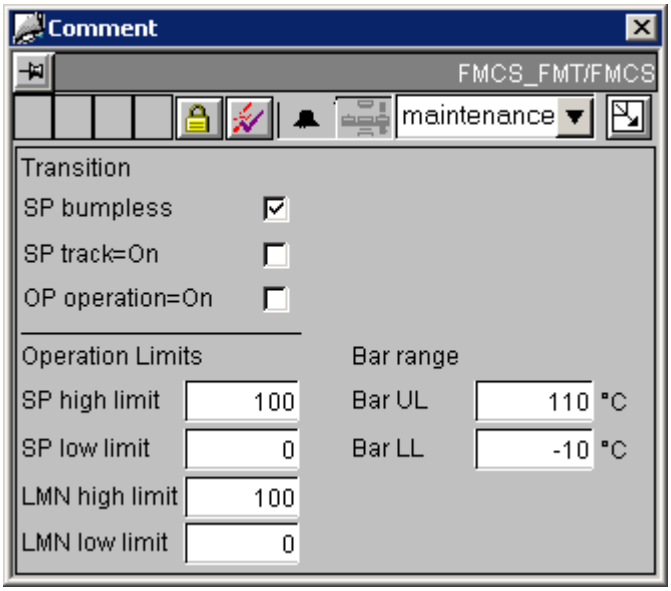
@Level5	-->	**Operator-control enable**		
Permission_Manual_COMBOBOX	-->	Level_Source	-->	Level_Target
Permission_Setpoint	-->	Level_Source	-->	Level_Target
Permission_Manual	-->	Level_Source		
Permission_Manual_COMBOBOX	-->	**Target_Operator-ControlEnable**		
Manual_COMBOBOX	-->	Operator-control enable		
External_COMBOBOX	-->	Operator-control enable		
Permission_Setpoint	-->	**Target_Operator-ControlEnable**		
Setpoint_AnalogValue	-->	Operator-control enable		
Permission_Manual	-->	**Target_Operator-ControlEnable**		
Manual_AnalogValue	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
Setpoint_AnalogValue	-->	Format		
ProcessValue_AnalogValue	-->	Format		
Format	-->	**Format_OutputValue**		
Manual_AnalogValue	-->	Format		
Output_AnalogValue	-->	Format		

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)
The Quality Code Display (Page 133)

1.2.6.2 FMCS_PID: Maintenance view



If a block of the type CPM is instantiated in the chart of the controller and this has the name of the controller block with the extension "_cpm", an additional button CPM is displayed with which the CPM faceplate can be called.

Control permissions

As well as the WinCC authorization levels, the "Permission_all" permission object also evaluates the "QMODF = FALSE" parameter.

Sequence and positioning of direct connections to controllable objects

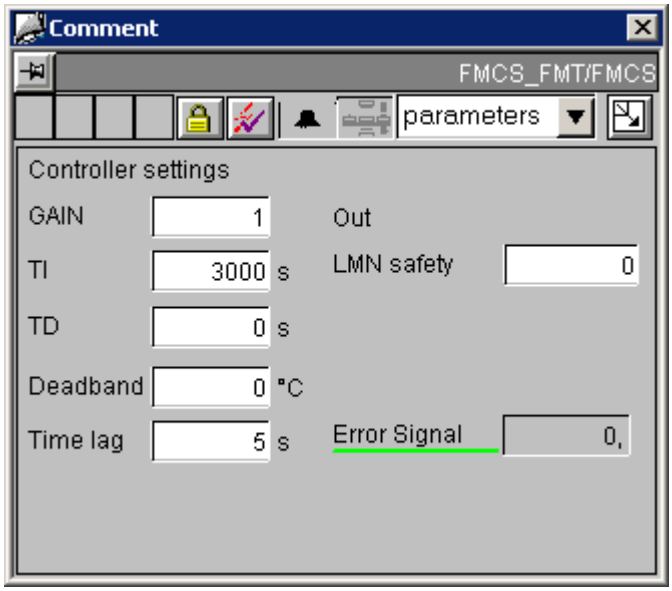
@Level6	-->	**Operator control enable**
Permission_all	-->	Level_Source
Permission_all	-->	**Target_Operator-ControlEnable**
Bumpless_CHECKBOX_L	-->	Operator control enable
SP_TRK_ON_CHECKBOX_L	-->	Operator control enable
Oper_OP_CHECKBOX	-->	Operator control enable
SPHighLimit_AnalogValue	-->	Operator control enable
SPLowLimit_AnalogValue	-->	Operator control enable
ManHighLimit_AnalogValue	-->	Operator control enable
ManLowLimit_AnalogValue	-->	Operator control enable
MO_PVHR_AnalogValue	-->	Operator control enable
MO_PVLR_AnalogValue	-->	Operator control enable
Permission_all	-->	**Target_BackColor**
SPHighLimit_AnalogValue	-->	BackgroundColor_Value
SPLowLimit_AnalogValue	-->	BackgroundColor_Value
ManHighLimit_AnalogValue	-->	BackgroundColor_Value
ManLowLimit_AnalogValue	-->	BackgroundColor_Value
MO_PVHR_AnalogValue	-->	BackgroundColor_Value
MO_PVLR_AnalogValue	-->	BackgroundColor_Value

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.6.3 FMCS_PID: Parameter view



If a block of the type GAIN_SHD is instantiated in the chart of the controller and this has the name of the controller block with the extension "_gsc", an additional button GAIN_SHD is displayed with which the GAIN_SHD faceplate can be called.

Analog displays and number formats

The "ControlError_AnalogValue" process value is implemented using the "AdvancedAnalogDisplay" object. The number format is defined at the "Format_InputValue" property of the block icon.

All other analog displays are implemented by means of the conventional "Floating-point format" I/O field.

Control permissions

As well as the WinCC authorization levels, the "Permission_all" permission object also evaluates the "QMODF = FALSE" parameter.

Sequence and positioning of direct connections to controllable objects

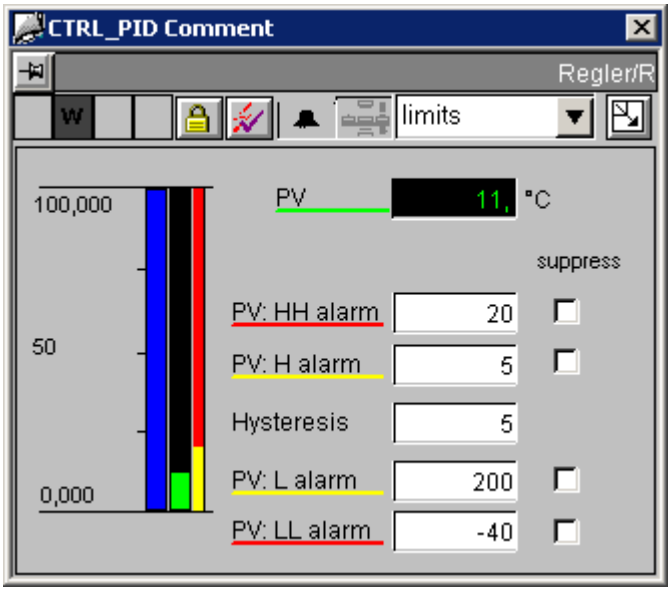
@Level6	-->	**Operator control enable**		
Permission_all	-->	Level_Source	-->	Level_Target
OPTI_EN_CHECKBOX_L	-->	Operator control enable		
Permission_all	-->	**Target_Operator-ControlEnable**		
Gain_AnalogValue	-->	Operator control enable		
TN_AnalogValue	-->	Operator control enable		
TV_AnalogValue	-->	Operator control enable		
DEADB_W_AnalogValue	-->	Operator control enable		
TM_LAG_AnalogValue	-->	Operator control enable		
LMN_SAVE_PCS7_AnalogValue2	-->	Operator control enable		
Permission_all	-->	**Target_BackColor**		
Gain_AnalogValue	-->	BackgroundColor_Value		
TN_AnalogValue	-->	BackgroundColor_Value		
TV_AnalogValue	-->	BackgroundColor_Value		
DEADB_W_AnalogValue	-->	BackgroundColor_Value		
TM_LAG_AnalogValue	-->	BackgroundColor_Value		
LMN_SAVE_PCS7_AnalogValue2	-->	BackgroundColor_Value		
Format	-->	**Format_InputValue**		
ErrorSignal_AnalogValue	-->	Format		

Additional information

You will find more information in:

Overview objects (Page 9)

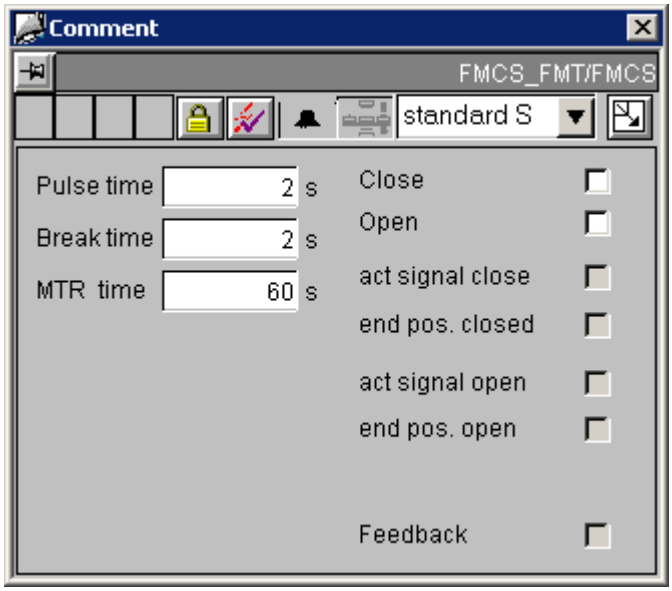
1.2.6.4 FMCS_PID: Limits view



This FMCS_PID limits view and the CTRL_PID limits view (Page 19) are almost identical.

The only difference is that here, "QMODF = FALSE" is also queried for the authorization objects.

1.2.6.5 FMCS_PID: StandardS View



Access control

This view has two permission objects:

- "Permission_LMNDN_OP"
- "Permission_PulseTime_AnalogValue"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_LMNDN_OP"	• "QLMNSOP = TRUE" • "QMODF = FALSE"
"Permission_Pulse_TM"	• "QMODF = FALSE"

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Permission_LMNDN_OP	-->	Level_Source		
@Level6	-->	**Operator-control enable**		
Permission_Pulse_TM	-->	Level_Source	-->	Level_Target
Permission_LMNDN_OP	-->	**Target_Operator-ControlEnable**		
LMNDN_OP_Checkbox	-->	Operator-control enable		
LMNUP_OP_Checkbox	-->	Operator-control enable		
Permission_Pulse_TM	-->	**Target_Operator-ControlEnable**		
PulseTime_Analogvalue	-->	Operator-control enable		
BreakTime_Analogvalue	-->	Operator-control enable		
MTR_TM_AnalogValue	-->	Operator-control enable		
Permission_Pulse_TM	-->	**Target_BackColor**		
PulseTime_Analogvalue	-->	BackColor_Value		
BreakTime_Analogvalue	-->	BackColor_Value		
MTR_TM_AnalogValue	-->	BackColor_Value		

Additional information

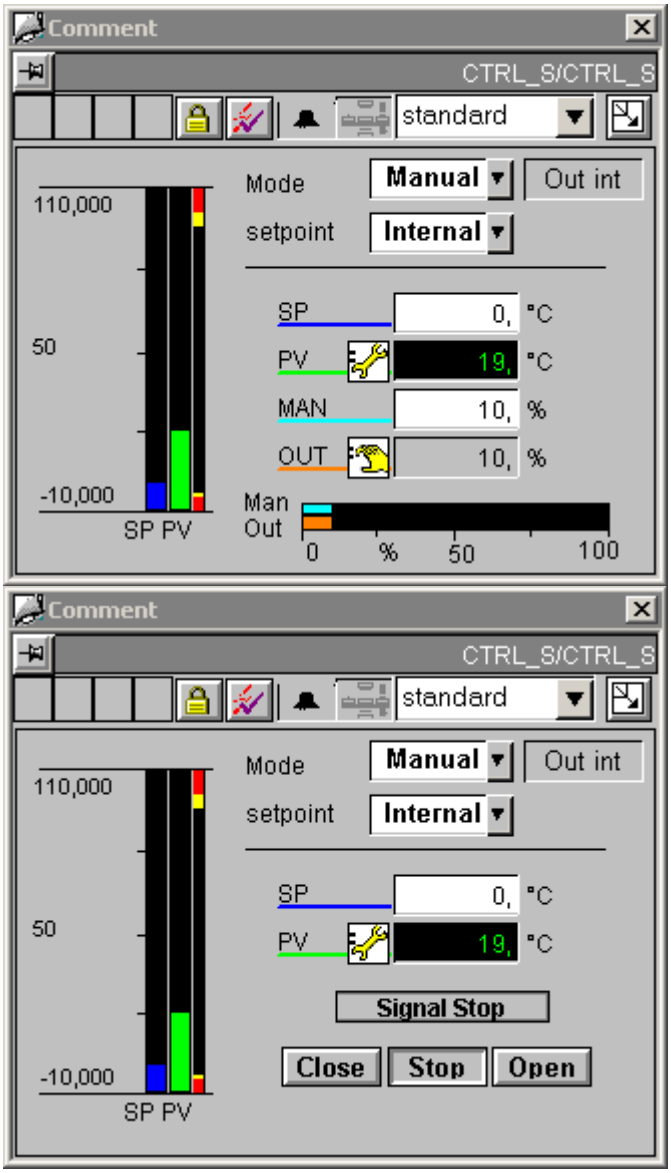
You will find more information in:

Overview objects (Page 9)

1.2.7 FMT_PID (All Views)

Overview

1.2.7.1 FMT_PID: Standard view



This FMT_PID standard view looks almost identical to the CTRL_S standard view (Page 22).

In contrast to the CTRL_S standard view, in the FMT_PID standard view the bar-range display and the manual and manipulated-variable analog values are displayed as specified in the LMNR_ON and QSTEPCON parameters.

Display of Bar Range, Analog Values and Keys

When "LMNR_ON = FALSE" and "QSTEPCON = TRUE", keys for operating the LMNDN_OP and LMNUP_OP parameters are shown.

The visibility of the LMNDN_OP_BinOp, LMNUP_OP_BinOp and LMN_OP_Stop_BinOp keys and the QLMNUP_QLMNDN status display is controlled by a script. This script is called when the "Links/QSTEPCON" and "Links/QLMNR_ON" properties of the "VISIBLE_Analog_Output" object are changed.

The visibility of these objects is also controlled via the X position of the geometry, since the "Visible" property is already used for internal object functions.

There is only one "Stop" key for LMNDN_OP and LMNUP_OP. A script determines to which of these two parameters the value "0" is written. If the "Display_Variable" property changes, these scripts are activated in the "LMNDN_OP_BinOp" and "LMNUP_OP_BinOp" objects.

Access control

This view has four permission objects:

- "Permission_Manual_COMBOBOX"
- "Permission_Setpoint"
- "Permission_Manual"
- "Permission_LMNDN_OP"

In addition to the WinCC user rights, the permission objects evaluate the parameters listed below:

Permission object	Parameters
"Permission_Manual_COMBOBOX"	• "QMODF = FALSE"
"Permission_Setpoint"	• "Q_SP_OP = TRUE" • "QMODF = FALSE"
"Permission_Manual"	• "QLMNVOP = TRUE" • "QMODF = FALSE"
"Permission_LMNDN_OP"	• "QLMNSOP = TRUE" • "QMODF = FALSE"

Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**		
Permission_Manual_COMBOBOX	-->	Level_Source	-->	Level_Target
Permission_Setpoint	-->	Level_Source	-->	Level_Target
Permission_Manual	-->	Level_Source	-->	Level_Target
Permission_LMNDN_OP	-->	Level_Source		
Permission_Manual_COMBOBOX	-->	**Target_Operator-ControlEnable**		
Manual_COMBOBOX	-->	Operator-control enable		
External_COMBOBOX	-->	Operator-control enable		
Permission_Setpoint	-->	**Target_Operator-ControlEnable**		
Setpoint_AnalogValue	-->	Operator-control enable		
Permission_Manual	-->	**Target_Operator-ControlEnable**		
Manual_AnalogValue	-->	Operator-control enable		
Permission_LMNDN_OP	-->	**Operator-control enable**		
LMN_OP_Stop_BinOp	-->	Operator-control enable		
LMNDN_OP_BinOp	-->	Operator-control enable		
LMNUP_OP_BinOp	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
Setpoint_AnalogValue	-->	Format		
ProcessValue_AnalogValue	-->	Format		
Format	-->	**Format_OutputValue**		
Manual_AnalogValue	-->	Format		
Output_AnalogValue	-->	Format		

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.7.2 FMT_PID: Maintenance view

See: FMCS_PID: Maintenance view (Page 38)

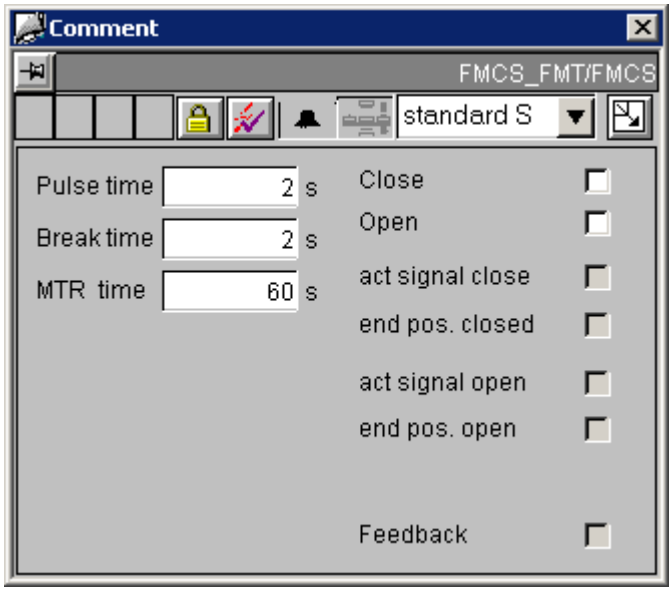
1.2.7.3 FMT_PID: Parameter view

See: FMCS_PID: Parameter view (Page 40)

1.2.7.4 FMT_PID: Limits view

See: FMCS_PID: Limits view (Page 42)

1.2.7.5 FMT_PID: StandardS View



The FMT_PID standardS view looks almost identical to the FMCS_PID standardS view (Page 43).

Differences to FMCS_PID

The FMT_PID standardS view differs from the FMCS_PID standardS view in terms of authorization and display:

- As well as the WinCC authorization levels, the "Permission_LMNDN_OP" permission object also evaluates the "QLMNSOP = TRUE" and "QMODF = FALSE" parameters.
- The standardS view is only displayed if "QSTEPCON = TRUE". Otherwise, all elements in this view are invisible.

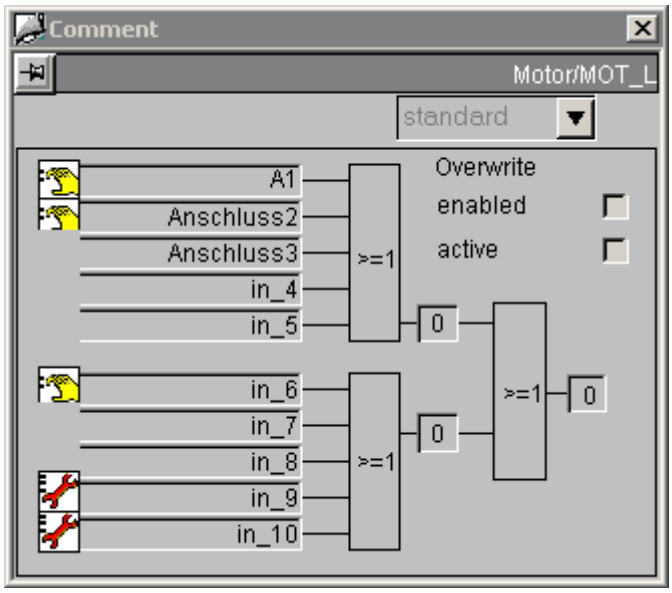
Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.8 INTERLOK: Standard view



Sequence and positioning of direct connections to control objects

@Level6	-->	**Authorization**
overwrite_active_CHECKBOX_L2	-->	Authorization

The "I1_1" to "I2_5" inputs always show the "log 1" text (string_1).

The basic state of inputs is:

- The "log 0" status is displayed with black characters on a gray background.
- The "log 1" status is displayed with white characters on a red background.

If the input is inverted with NEG1_1, the display colors are also inverted.

The same goes for NEGRES_1 = 1. Here, the colors of all five inputs of the first logic element are inverted. In this way, the inputs marked by a red background indicate summing output “Q” with reference to the error state.

In order to avoid misinterpretations in such situations, it is recommended that the NEGRES_1 and NEGRES_2 inputs are not used.

Furthermore, it is advisable to use logic OR operations, since this is the only method to ensure the colors are correct and that inputs with red text will lead to an interlock.

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

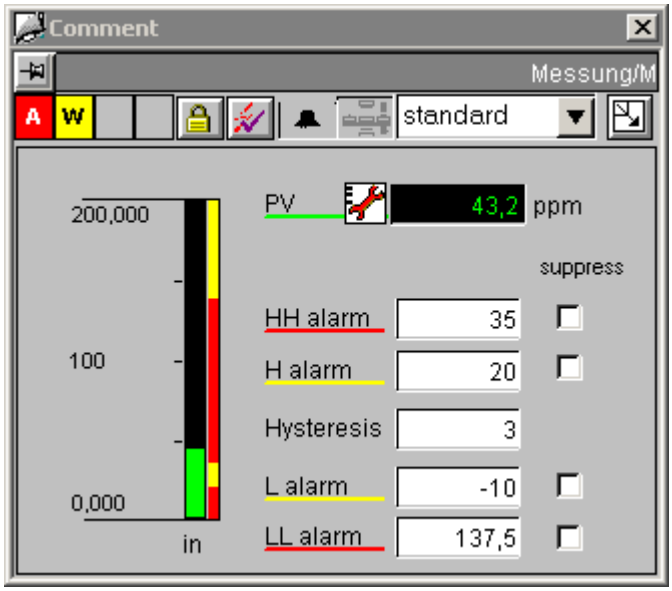
The Quality Code Display (Page 133)

1.2.9 MEAS_MON (All Views)

Overview

MEAS_MON: Standard view (Page 51)
MEAS_MON: Limits view (Page 53)
Global view: Message view (Page 76)
Global view: Batch view (Page 75)
Global view: Trend view (Page 77)

1.2.9.1 MEAS_MON: Standard view



Analog displays and number formats

The “PV_AnalogValue” process value is set via the “AdvancedAnalogDisplay”. The number format is defined at the "Format_InputValue" property of the block symbol.

The other analog displays are implemented by means of the conventional "Floating-point format" I/O field.

Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
AlarmHigh_AnalogValue	-->	Operator-control enable
WarningHigh_AnalogValue	-->	Operator-control enable
Hysteresis_AnalogValue	-->	Operator-control enable
WarningLow_AnalogValue	-->	Operator-control enable
WarningHigh_AnalogValue	-->	Operator-control enable
AlarmHigh_CHECKBOX_R	-->	Operator-control enable
WarningHigh_CHECKBOX_R	-->	Operator-control enable
WarningLow_CHECKBOX_R	-->	Operator-control enable
AlarmLow_CHECKBOX_R	-->	Operator-control enable
@Level6	-->	**BackColor**
AlarmHigh_AnalogValue	-->	BackColor
WarningHigh_AnalogValue	-->	BackColor
Hysteresis_AnalogValue	-->	BackColor
WarningLow_AnalogValue	-->	BackColor
WarningHigh_AnalogValue	-->	BackColor
Format	-->	**Format_InputValue**
PV_AnalogValue	-->	Format

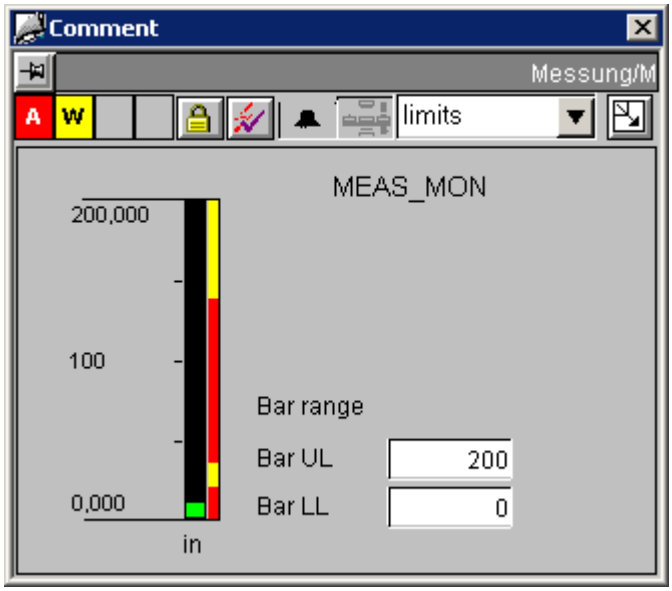
Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.9.2 MEAS_MON: Limits view



Analog Displays

Both analog displays are implemented by means of the conventional "Floating-point format" I/O field.

Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
MO_PVHR_AnalogValue	-->	Operator-control enable
MO_PVLR_AnalogValue	-->	Operator-control enable
@Level6	-->	**BackColor**
MO_PVHR_AnalogValue	-->	BackColor
MO_PVLR_AnalogValue	-->	BackColor

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.10 MOT_REV (All Views)

Overview

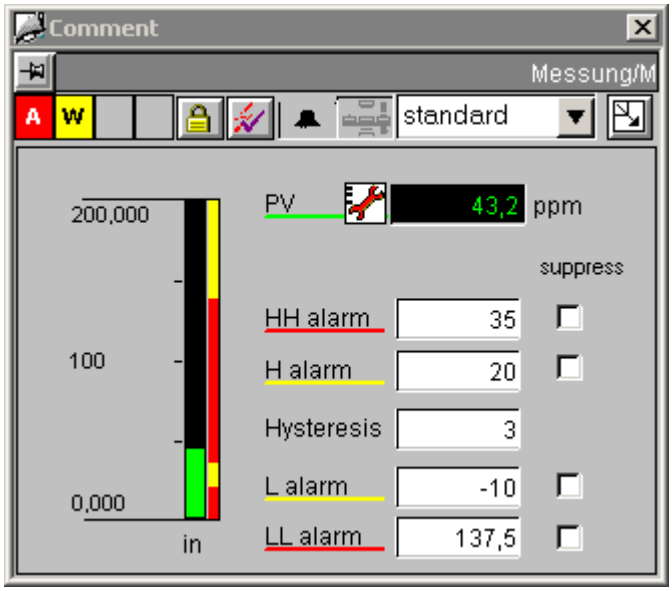
MOT_REV: Standard view (Page 54)

MOT_REV: Maintenance view (Page 55)

Global view: Message view (Page 76)

Global view: Batch view (Page 75)

1.2.10.1 MOT_REV: Standard view



Sequence and positioning of direct connections to control objects

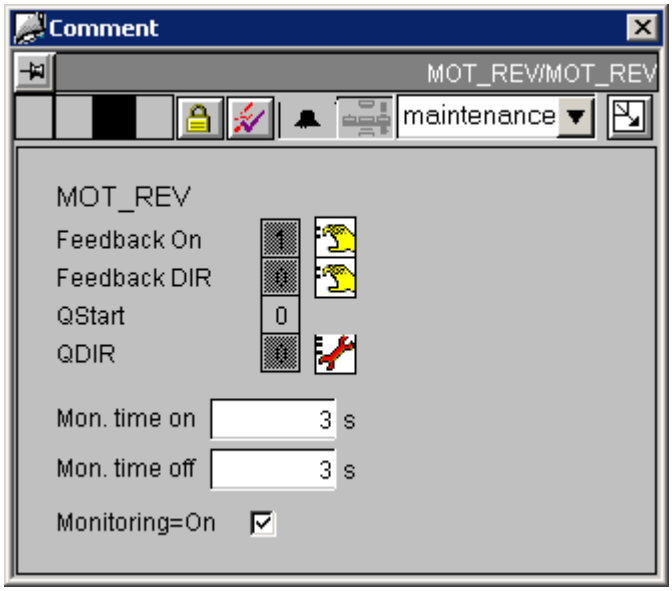
@Level5	-->	Operator-control enable
Auto_Manual_COMBOBOX	-->	Operator-control enable
Open_Close_Stop_3COMBOBOX	-->	Operator-control enable
Reset_ButtonBit	-->	Operator-control enable

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.10.2 MOT_REV: Maintenance view



Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
TIME_ON_AnalogValue	-->	Operator-control enable
TIME_OFF_AnalogValue	-->	Operator-control enable
Monitoring_ON_CHECKBOX_L1	-->	Operator-control enable
@Level6	-->	**BackColor**
TIME_MON_PCS7_AnalogValue	-->	BackColor

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.11 MOT_SPED (All Views)

Overview

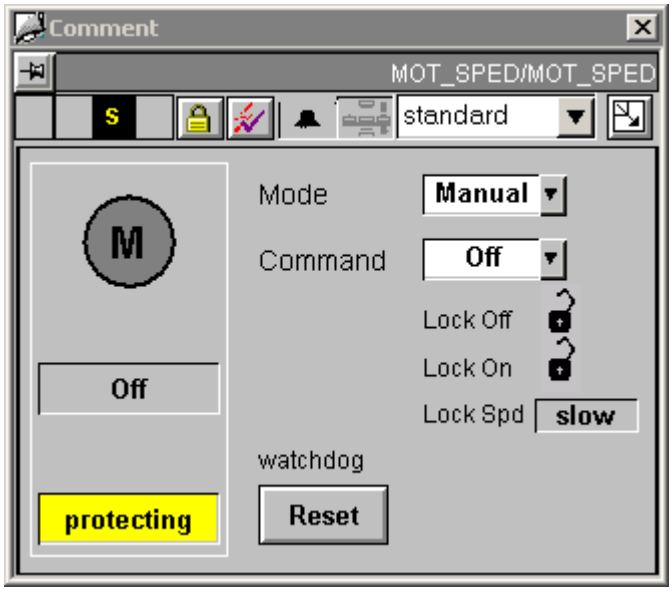
MOT_SPED: Standard view (Page 56)

MOT_SPED: Maintenance view (Page 57)

Global view: Message view (Page 76)

Global view: Batch view (Page 75)

1.2.11.1 MOT_SPED: Standard view



Sequence and positioning of direct connections to control objects

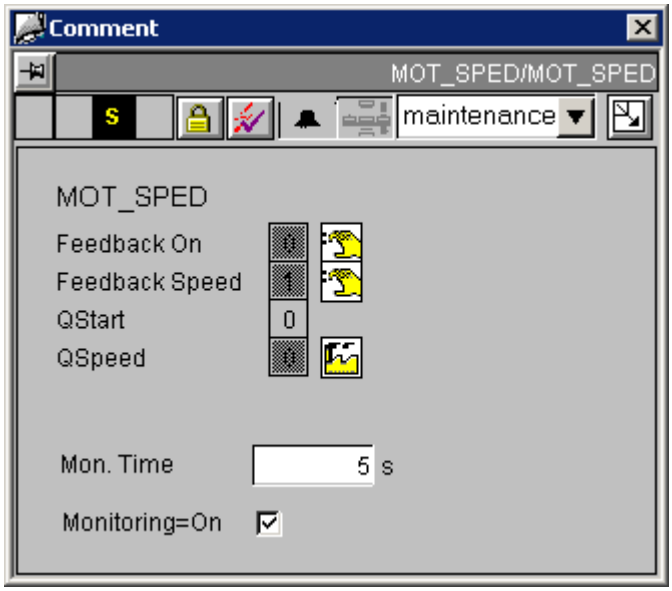
@Level5	-->	Operator-control enable
Auto_Manual_COMBOBOX	-->	Operator-control enable
Open_Close_Stop_3COMBOBOX	-->	Operator-control enable
Reset_ButtonBit	-->	Operator-control enable

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.11.2 MOT_SPED: Maintenance view



Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
TIME_MON_PCS7_AnalogValue	-->	Operator-control enable
Monitoring_ON_CHECKBOX_L1	-->	Operator-control enable
@Level6	-->	**BackColor**
TIME_OFF_PCS7_AnalogValue	-->	BackColor

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.12 MOTOR (All Views)

Overview

1.2.12.1 MOTOR: Standard view

Sequence and positioning of direct connections to control objects

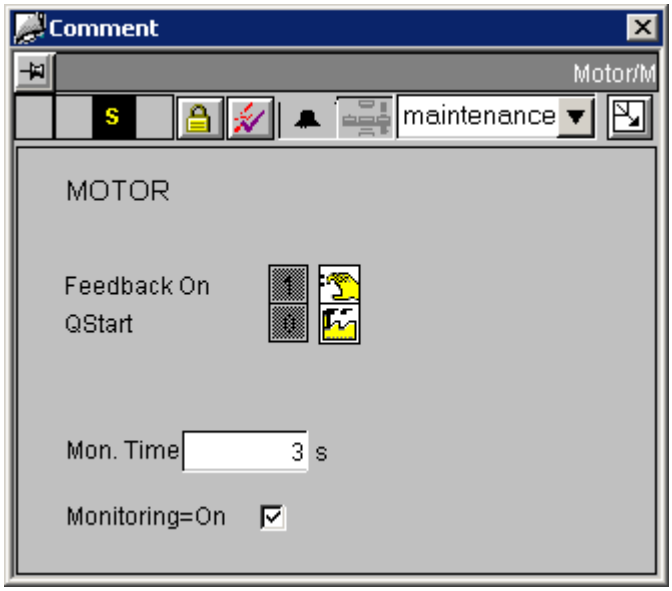
@Level5	-->	**Operator-control enable**		
Permission_Manual_BinOp0	-->	Level_Source	-->	Level_Target
Permission_Automatic_BinOp1	-->	Level_Source	-->	Level_Target
Permission_Off_BinOp2	-->	Level_Source	-->	Level_Target
Permission_On_BinOp1	-->	Level_Source	-->	Level_Target
Reset_ButtonBit	-->	Operator-control enable		
Permission_Manual_BinOp0	-->	**Target_Operator-ControlEnable**		
Manual_BinOp0	-->	Operator-control enable		
Permission_Automatic_BinOp1	-->	**Target_Operator-ControlEnable**		
Automatic_BinOp1	-->	Operator-control enable		
Permission_Off_BinOp2	-->	**Format_InputValue**		
Off_BinOp2	-->	Format		
Permission_On_BinOp1	-->	**Format_OutputValue**		
On_BinOp1	-->	Format		
As well as the WinCC authorization levels, the permission objects also evaluate the following AS-block parameters:				
Permission_Manual_BinOp0	-->	"QMANOP = TRUE"		
Permission_ Automatic _BinOp1	-->	"QAUTOP = TRUE"		
Permission_Off_BinOp2	-->	"QOFF_OP = TRUE"		
Permission_On_BinOp1	-->	"QON_OP = TRUE"		

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.12.2 MOTOR: Maintenance view



Sequence and positioning of direct connections to control objects

@Level6	-->	Operator-control enable
Monitoring_ON_CHECKBOX_L1	-->	Operator-control enable
Monitoring_PCS7_AnalogValue	-->	Operator-control enable

Additional information

You will find more information on this subject in the following sections:

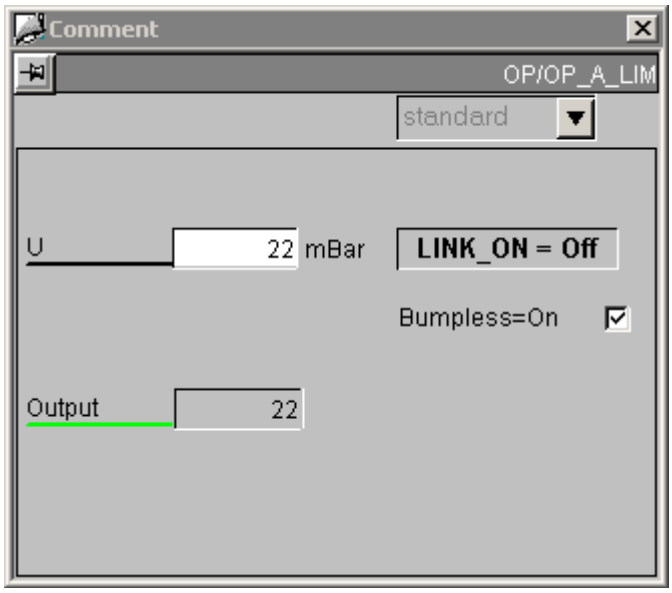
Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.13 OP_A: Standard view

See: OP_A_LIM: Standard view (Page 61).

1.2.14 OP_A_LIM: Standard view



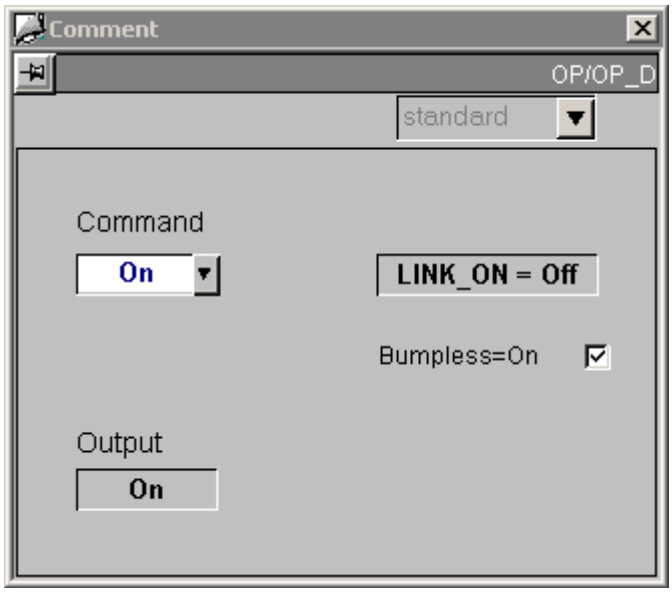
Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
Permission Setpoint	-->	LevelSource
Permission Setpoint	-->	**Target_Operator-ControlEnable**
Setpoint_PCS7_AnalogValue	-->	Operator-control enable
@Level6	-->	**Operator-control enable**
BumplessOn_CHECKBOX_L	-->	Operator-control enable

1.2.15 OP_A_RJC: Standard view

See: OP_A_LIM: Standard view (Page 61).

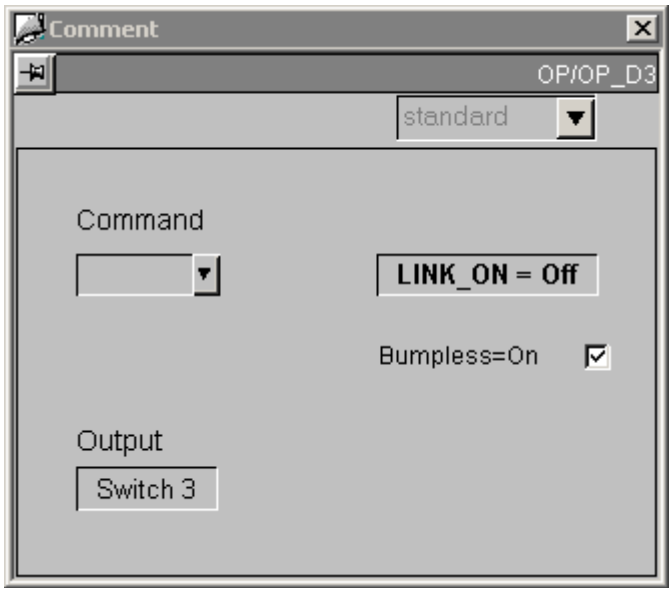
1.2.16 OP_D: Standard view



Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
I0_PCS7_COMBOBOX	-->	Operator-control enable
@Level5	-->	**BackColor**
I0_PCS7_COMBOBOX	-->	BackColor Text1
I0_PCS7_COMBOBOX	-->	BackColor Text2
@Level6	-->	**Operator-control enable**
BumplessOn_CHECKBOX_L	-->	Operator-control enable

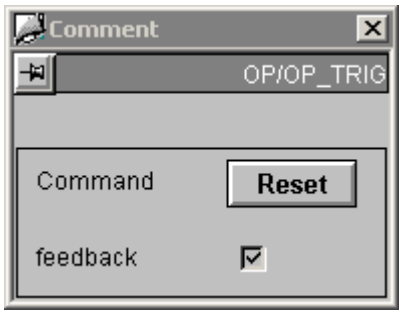
1.2.17 OP_D3: Standard view



Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
Command_PCS7_3COMBOBOX	-->	Operator-control enable
@Level5	-->	**BackColor**
Command_PCS7_3COMBOBOX	-->	BackColor Text1
Command_PCS7_3COMBOBOX	-->	BackColor Text2
Command_PCS7_3COMBOBOX	-->	BackColor Text3
@Level6	-->	**Operator-control enable**
BumplessOn_CHECKBOX_L	-->	Operator-control enable

1.2.18 OP_TRIG: Standard view



The key labeled "Reset" writes a logical 1 to the "I0" parameter of the OP_TRIG block.

The "Reset" text is read from the "s7_shortcut" attribute of the parameter and can be adapted to specific instances.

If the "Feedback" check box is checked, the "SIGNAL" parameter of the OP_TRIG block is read.

The "Feedback" text is configured in the faceplate and is thus type-specific.

Access control

As well as the WinCC authorization levels, the "Permission_Reset" permission object also evaluates the "QOP_EN = TRUE" parameter.

Sequence and positioning of direct connections to control objects

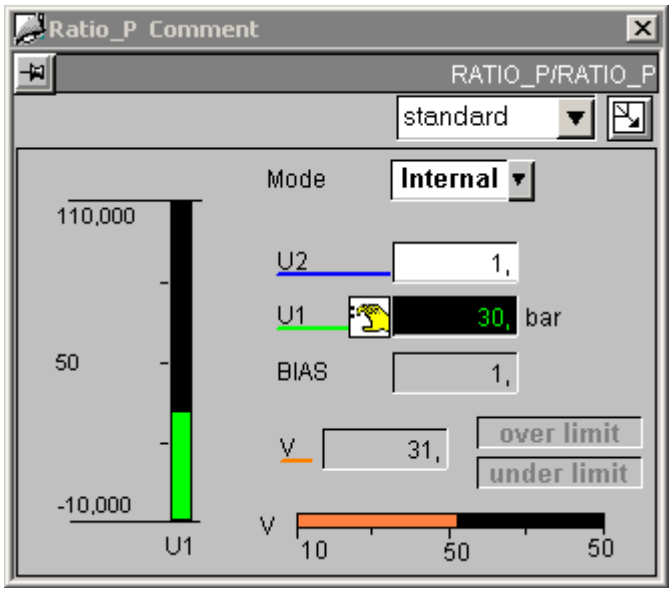
@Level5	-->	**Operator-control enable**
Permission_Reset	-->	Level_Source
Permission_Reset	-->	**Target_Operator-ControlEnable**
BumplessOn_CHECKBOX_L1	-->	Operator-control enable

1.2.19 RATIO_P (All Views)

Overview

RATIO_P: Standard view (Page 65)
RATIO_P: Limits view (Page 67)

1.2.19.1 RATIO_P: Standard view



Sequence and positioning of direct connections to control objects

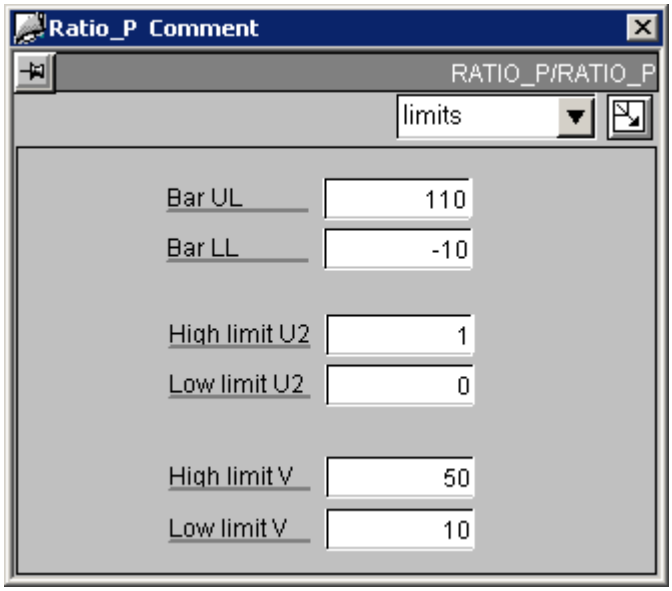
@Level5	-->	**Operator-control enable**		
Permission_ExternalComboBox	-->	Level_Source	-->	Level_Target
Permission_U2	-->	Level_Source		
Permission_ExternalComboBox	-->	**Target_Operator-ControlEnable**		
External_COMBOBOX	-->	Operator-control enable		
Permission_U2	-->	**Target_Operator-ControlEnable**		
U2_AnalogValue	-->	Operator-control enable		
Format	-->	**Format_InputValue**		
U2_AnalogValue	-->	Format		
Format	-->	**Format_OutputValue**		
V_AnalogValue	-->	Format		
Format	-->	**Format_xx**		
BIAS_AnalogValue	-->	Format		

Additional information

You will find more information in:

The Quality Code Display (Page 133)

1.2.19.2 RATIO_P: Limits view



Sequence and positioning of direct connections to control objects

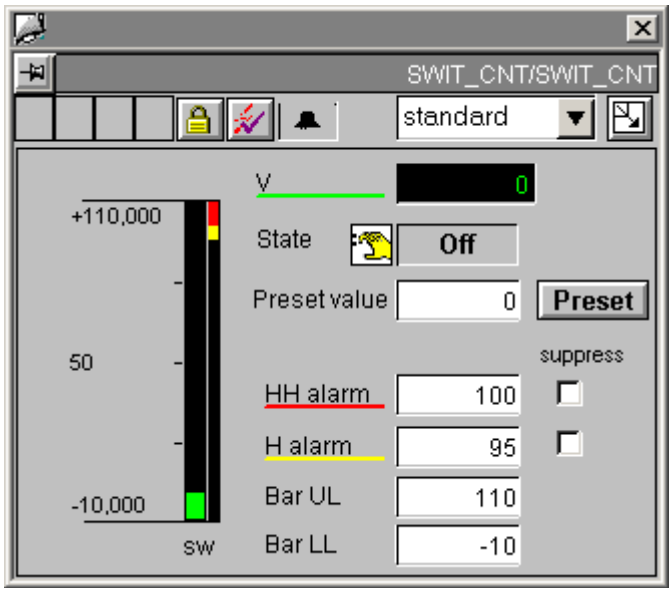
@Level6	-->	**Operator-control enable**
MO_U1HR_AnalogValue	-->	Operator-control enable
MO_U1LR_AnalogValue	-->	Operator-control enable
U2_HL_AnalogValue1	-->	Operator-control enable
U2_LL_AnalogValue2	-->	Operator-control enable
V_HL_AnalogValue3	-->	Operator-control enable
V_LL_AnalogValue4	-->	Operator-control enable
@Level6	-->	**BackColor**
MO_U1HR_AnalogValue	-->	BackColor_Value
MO_U1LR_AnalogValue	-->	BackColor_Value
U2_HL_AnalogValue1	-->	BackColor_Value
U2_LL_AnalogValue2	-->	BackColor_Value
V_HL_AnalogValue3	-->	BackColor_Value
V_LL_AnalogValue4	-->	BackColor_Value

1.2.20 SWIT_CNT (All Views)

Overview

SWIT_CNT: Standard view (Page 68)
Global view: Message view (Page 76)

1.2.20.1 SWIT_CNT: Standard view



Sequence and positioning of direct connections to control objects

@Level5	-->	**Operator-control enable**
VTRACK_OP_AnalogValue	-->	Operator-control enable
TRACK_OP_ButtonBit	-->	Operator-control enable
@Level5	-->	**BackColor**
VTRACK_OP_AnalogValue	-->	BackColor_Value
@Level6	-->	**Operator-control enable**
AlarmHigh_AnalogValue	-->	Operator-control enable
WarningHigh_AnalogValue	-->	Operator-control enable
MO_HOUHR_PCS7_AnalogValue	-->	Operator-control enable
MO_HOULR_PCS7_AnalogValue	-->	Operator-control enable
AlarmHigh_CHECKBOX_R	-->	Operator-control enable
WarningHigh_CHECKBOX_R	-->	Operator-control enable
@Level6	-->	**BackColor**
AlarmHigh_AnalogValue	-->	BackColor_Value
WarningHigh_AnalogValue	-->	BackColor_Value
MO_HOUHR_PCS7_AnalogValue	-->	BackColor_Value
MO_HOULR_PCS7_AnalogValue	-->	BackColor_Value

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

The Quality Code Display (Page 133)

1.2.21 VAL_MOT (All Views)

Overview

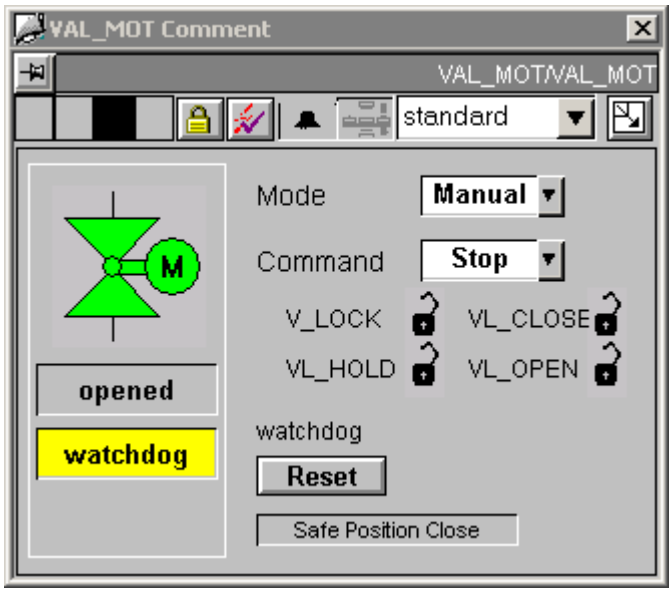
VAL_MOT: Standard view (Page 70)

VAL_MOT: Maintenance view (Page 71)

Global view: Message view (Page 76)

Global view: Batch view (Page 75)

1.2.21.1 VAL_MOT: Standard view



Sequence and positioning of direct connections to control objects

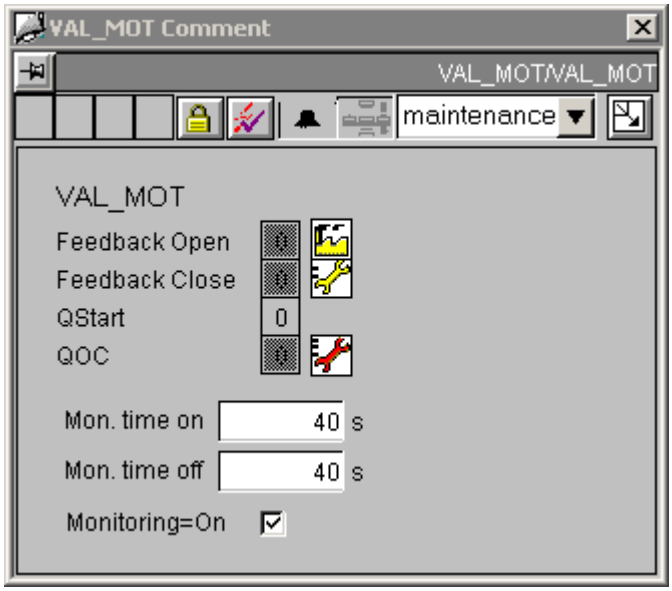
@Level5	-->	Operator-control enable
Auto_Manual_COMBOBOX	-->	Operator-control enable
Open_Close_Stop_3COMBOBOX	-->	Operator-control enable
Reset_ButtonBit	-->	Operator-control enable

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.21.2 VAL_MOT: Maintenance view



Sequence and positioning of direct connections to control objects

@Level6	-->	**Operator-control enable**
Time_ON_AnalogValue	-->	Operator-control enable
TIME_OFF_PCS7_AnalogValue	-->	Operator-control enable
@Level6	-->	**BackColor**
Time_ON_AnalogValue	-->	BackColor
TIME_OFF_PCS7_AnalogValue	-->	BackColor
Monitoring_ON_CHECKBOX_L1	-->	BackColor

Additional information

You will find more information on this subject in the following sections:

Overview objects (Page 9)

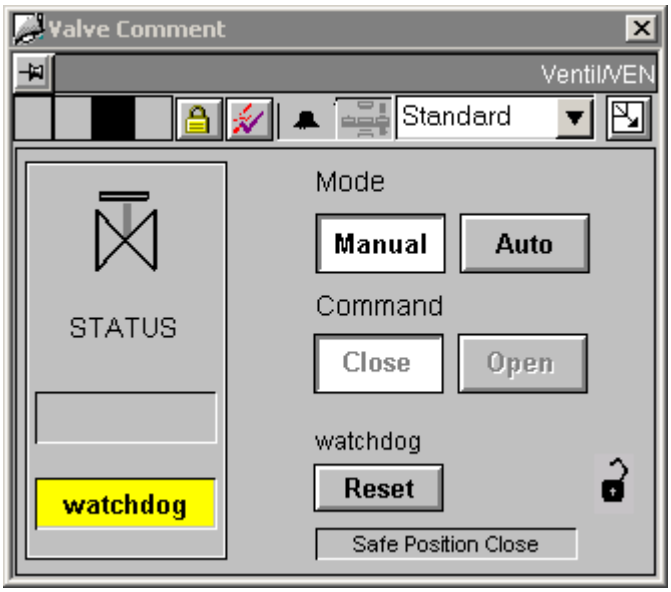
The Quality Code Display (Page 133)

1.2.22 VALVE (All Views)

Overview

VALVE: Standard view (Page 72)
VALVE: Maintenance view (Page 74)
Global view: Message view (Page 76)
Global view: Batch view (Page 75)

1.2.22.1 VALVE: Standard view



The two interlock icons adjacent to "Close" and "Open" belong to the "Lock to Close" and "Lock to Open" interlocks. They are set to invisible by default, since the "Lock to Safe Position" interlock icon at the bottom right is used primarily.

The icons can always be switched to visible for all instances of the type VALVE.

Sequence and positioning of direct connections to control objects

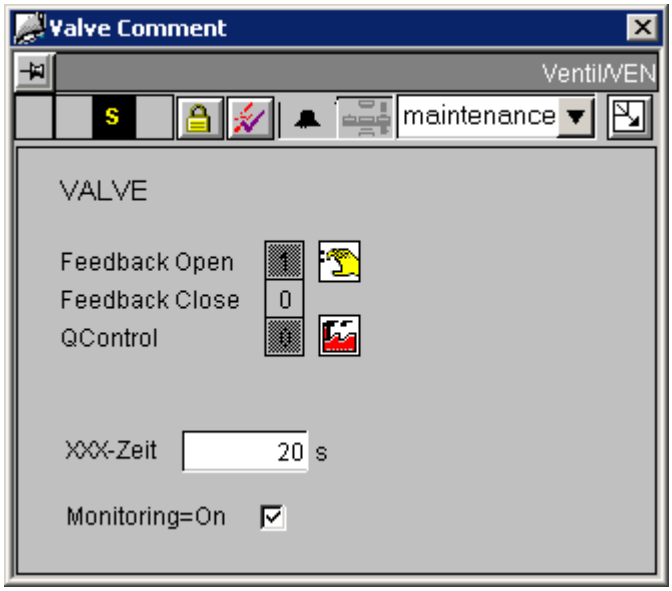
@Level5	-->	**Operator-control enable**		
Permission_Manual_BinOp0	-->	Level_Source	-->	Level_Target
Permission_Automatic_BinOp1	-->	Level_Source	-->	Level_Target
Permission_Off_BinOp2	-->	Level_Source	-->	Level_Target
Permission_On_BinOp1	-->	Level_Source	-->	Level_Target
Reset_ButtonBit	-->	Operator-control enable		
Permission_Manual_BinOp0	-->	**Target_Operator-ControlEnable**		
Manual_BinOp0	-->	Operator-control enable		
Permission_Automatic_BinOp1	-->	**Target_Operator-ControlEnable**		
Automatic_BinOp1	-->	Operator-control enable		
Permission_Close_BinOp2	-->	**Target_Operator-ControlEnable**		
Close_BinOp2	-->	Operator-control enable		
Permission_Open_BinOp1	-->	**Target_Operator-ControlEnable**		
Open_BinOp1	-->	Operator-control enable		
As well as the WinCC authorization levels, the permission objects also evaluate the following AS-block parameters:				
Permission_Manual_BinOp0	-->	"QMANOP = TRUE"		
Permission_Automatic_BinOp1	-->	"QAUTOP = TRUE"		
Permission_Off_BinOp2	-->	"QOFF_OP = TRUE"		
Permission_On_BinOp1	-->	"QON_OP = TRUE"		

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.22.2 VALVE: Maintenance view



Sequence and positioning of direct connections to control objects

@Level6	-->	Operator-control enable
Monitoring_ON_CHECKBOX_L1	-->	Operator-control enable
Monitoring_PCS7_AnalogValue	-->	Operator-control enable

Additional information

You will find more information on this subject in the following sections:

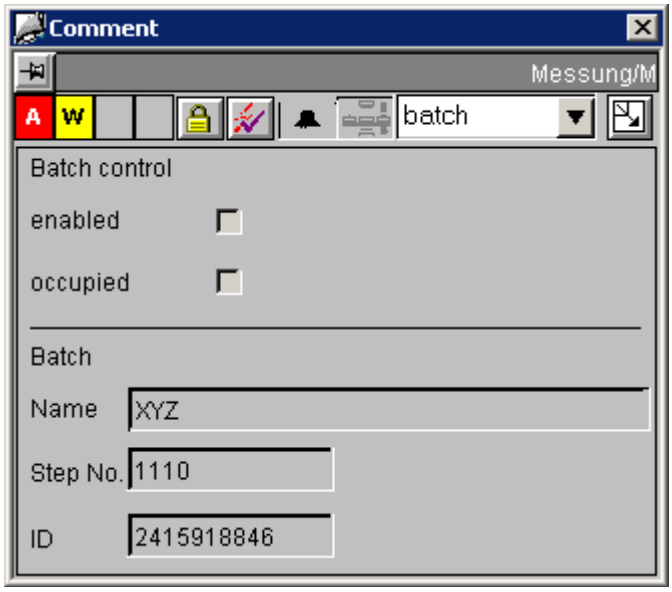
Overview objects (Page 9)
The Quality Code Display (Page 133)

1.2.23 Global Views

Overview

Global view: Message view (Page 76)
Global view: Batch view (Page 75)
Global view: Trend view (Page 77)

1.2.24 Global View: Batch view



Faceplates containing the batch view

The following Faceplates contain a batch view:

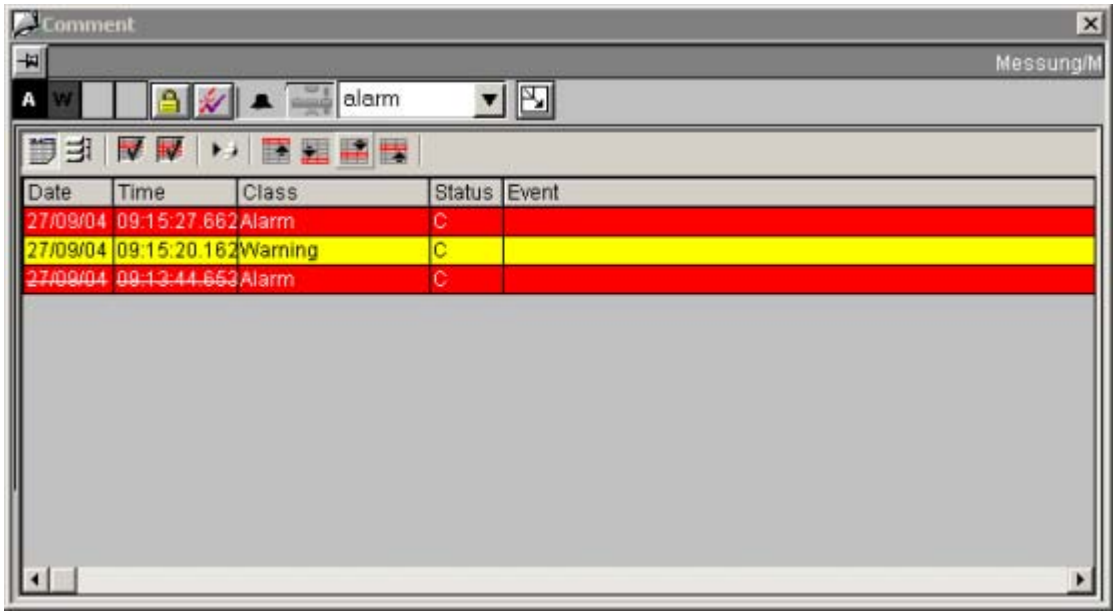
- CTRL_PID
- CTRL_S
- FMCS_PID
- FMT_PID
- DIG_MON
- DOSE
- MEAS_MON
- MOT_REV
- MOT_SPED
- MOTOR
- VAL_MOT
- VALVE

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.25 Global View: Message View



Faceplates Containing Message View

The following Faceplates contain a message view:

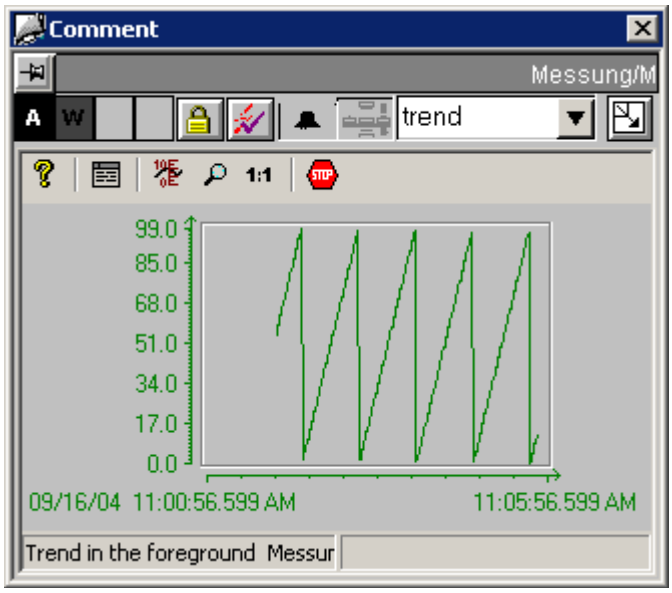
- CTRL_PID
- CTRL_S
- ELAP_CNT
- FMCS_PID
- FMT_PID
- DIG_MON
- DOSE
- MEAS_MON
- MOT_REV
- MOT_SPED
- MOTOR
- SWIT_CNT
- VAL_MOT
- VALVE

Additional information

You will find more information in:

Overview objects (Page 9)

1.2.26 Global View: Trend view



Faceplates Containing Trend View

The following Faceplates contain a trend view:

- CTRL_PID
- CTRL_S
- FMCS_PID
- FMT_PID
- DOSE
- MEAS_MON

Note

You can find more information about configuring trend variables in the manual Guide for Creating Blocks in the section "Configuring Trend View".

Additional information

You will find more information in:

Overview objects (Page 9)

1.3 Faceplates: Asset Management

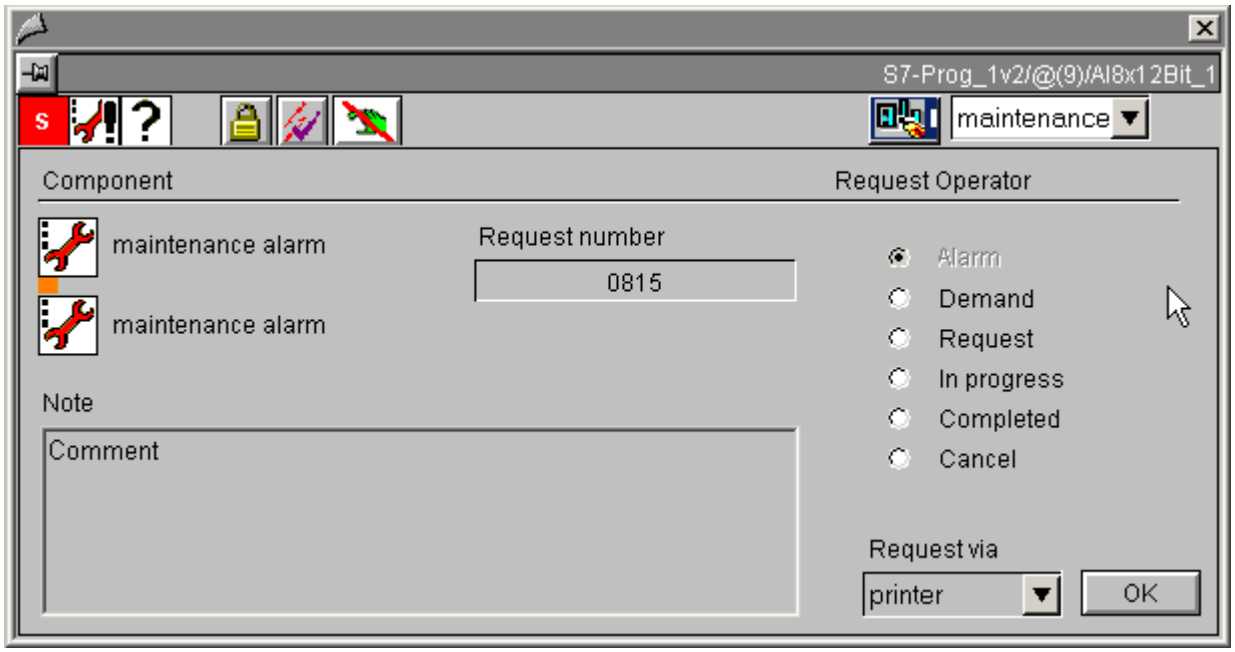
Overview

1.3.1 Global Representations and Views of Asset Faceplates

Introduction

The following representations and views appear in all asset Faceplates.

Icons for diagnostics and maintenance



Icons in the faceplate	Meaning	Icons
S	**Group display with a maintenance alarm** Indicates the group request status that represents the component in the hierarchical group display.	**Possible group display statuses** S Maintenance alarm F Maintenance request M Maintenance required Good
	Maintenance status display with a maintenance alarm Indicates the current total status of the component. It is formed from the sum of the individual statuses of a redundant component and the response/action of the operator. If the operator has not made any settings, the 8 icons listed under "Before operator action" can be displayed in the status display. If the operator performs a status change, the 3 icons listed under "After operator action" can be displayed in the status display. The operator changes the maintenance status in the faceplate "Maintenance" view.	**Before operator action:** Maintenance alarm Maintenance request Maintenance required Component good Local operation At least one process value is being simulated Out of service Component passivated Untested/unknown Configuration changed **After operator action:** State change to Maintenance alarm State change to Maintenance required State change to Maintenance request

Icons in the faceplate	Meaning	Icons
	**Status display with icon** Question mark = status unclear or not yet clear. Indicates the current processing status of the component. 1. Normal status (no diagnostics pending) --> no icon. 2. Pending diagnostics with no operator response --> no icon. 3. Action triggered by operator as confirmation/reclassification/job --> "?" icon; no activity on the component. 4. Action as in progress --> "In progress" icon	 Repairing component (in progress)
	**Component status display** If 2 icons are displayed under "Component", these indicate the component itself and its redundant component. If the components are not redundant, only one icon with text appears under "Component". The icons listed under "Component" indicate the original status of the component, as reported by the AS.	**Possible statuses in the status display**  Maintenance alarm  Maintenance request  Maintenance required  Component good  Local operation/local Overwrite  At least one process value is being simulated  Out of service  Component passivated  Untested/unknown  Configuration changed

Note

If the maintenance status is "Untested/unknown", all the other dynamic displays in the asset-management Faceplates are not relevant for this instance.

Overview

The following keys are added to the overview of asset Faceplates, which always looks the same:

- The key for calling HW Config is added to **@PG_ASSETAS_Overview**:

  The icon only appears if STEP 7 is also installed on the computer on which the faceplate was opened.

- The keys for calling PDM and HW Config are added to **@PG_ASSETPDM_Overview**:

  These keys only appear if PDM and STEP 7 are also installed on the computer, on which the faceplate was opened.

- The key for depassivation is added to **@PG_ASSETAS_Overview**:

  The icon only appears if STEP 7 is also installed on the computer on which the faceplate was opened.

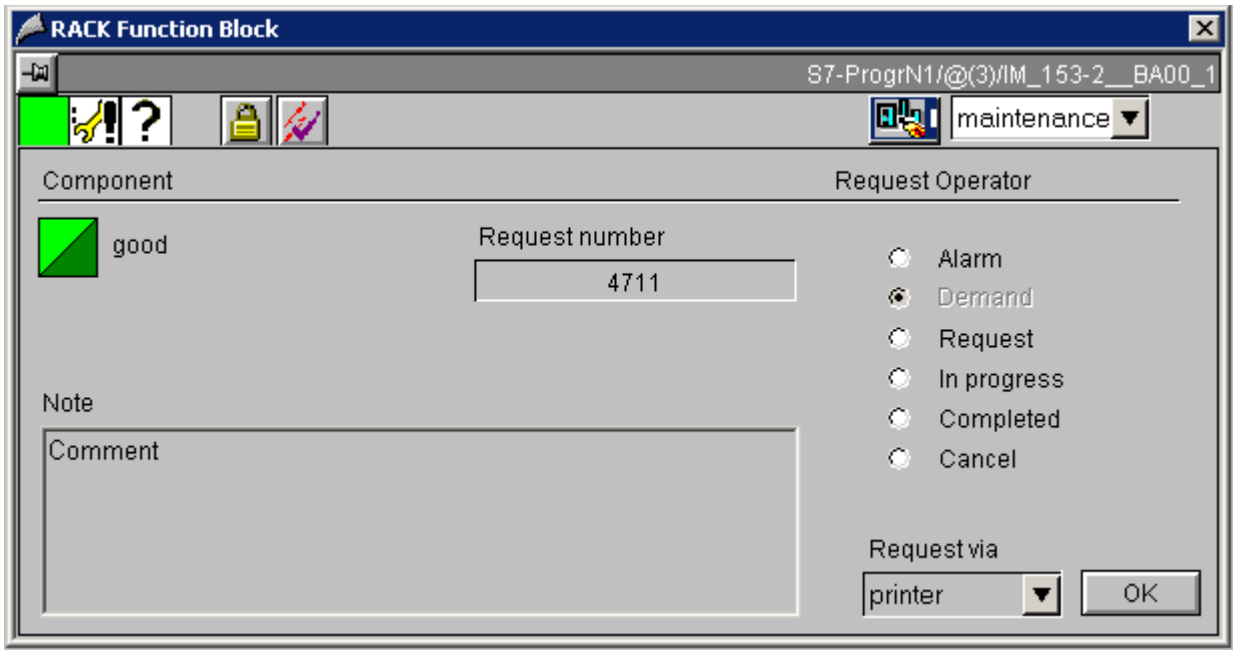
Additional information

You will find more information in:

Overview objects (Page 9)

1.3.2 Maintenance View [Asset]

Layout



The maintenance view of an asset faceplate has the following display and operator control elements:

- **Request number**: The job number assigned for the maintenance job is displayed here.
- **Request operator**: The maintenance requests from the different components are defined here. The maintenance operator determines the status that is set for maintenance. The following statuses are available:
  - Alarm
  - Demand
  - Request
  - In progress
  - Completed
  - Cancel

  If one of the listed radio buttons is clicked, a dialog box opens, in which a comment and a job number can be entered. The request status icon then changes.

- **Note**: The comments entered for the maintenance job are displayed here.
- **Request via**: (At present, only "Printer" is supported) Printout of a report for the selected faceplate

Note

A second print job may not be initiated until the previous job is complete.

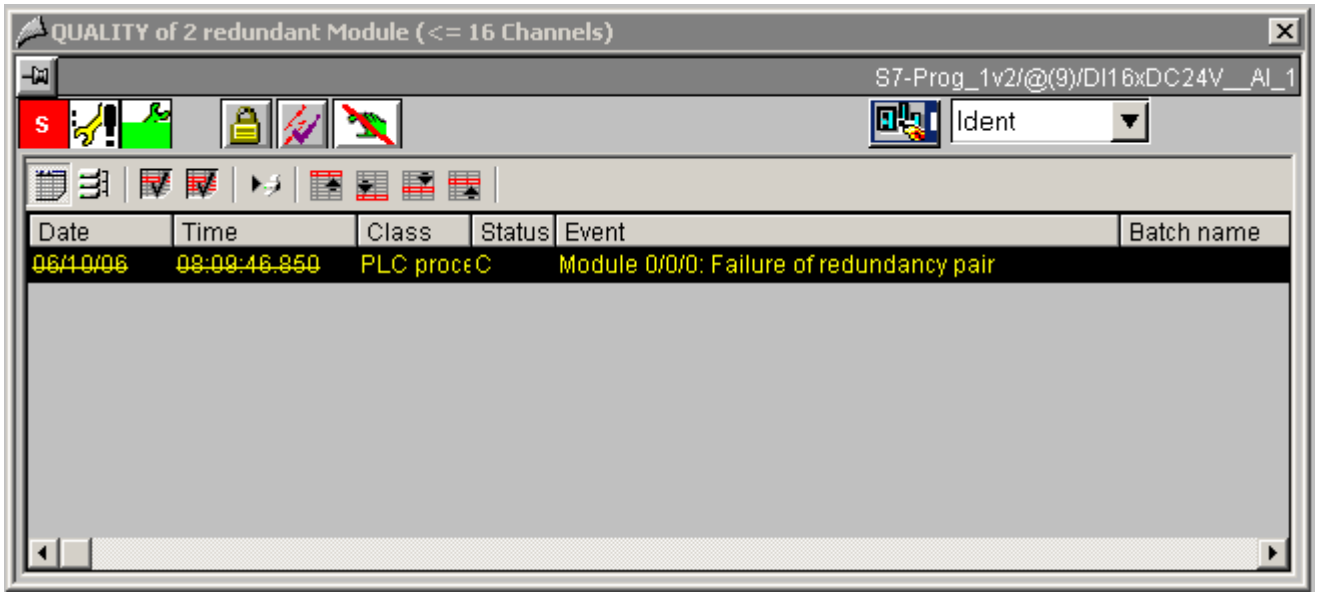
Additional information

You will find more information in:

Global Representations and Views of Asset Faceplates (Page 79)

1.3.3 Message View [Asset]

Layout



Differences to the global message view:

Current pending messages are displayed, regardless of their acknowledgment status.

In addition to the "tagname" filter, only messages relating to "Diagnostics" are displayed.

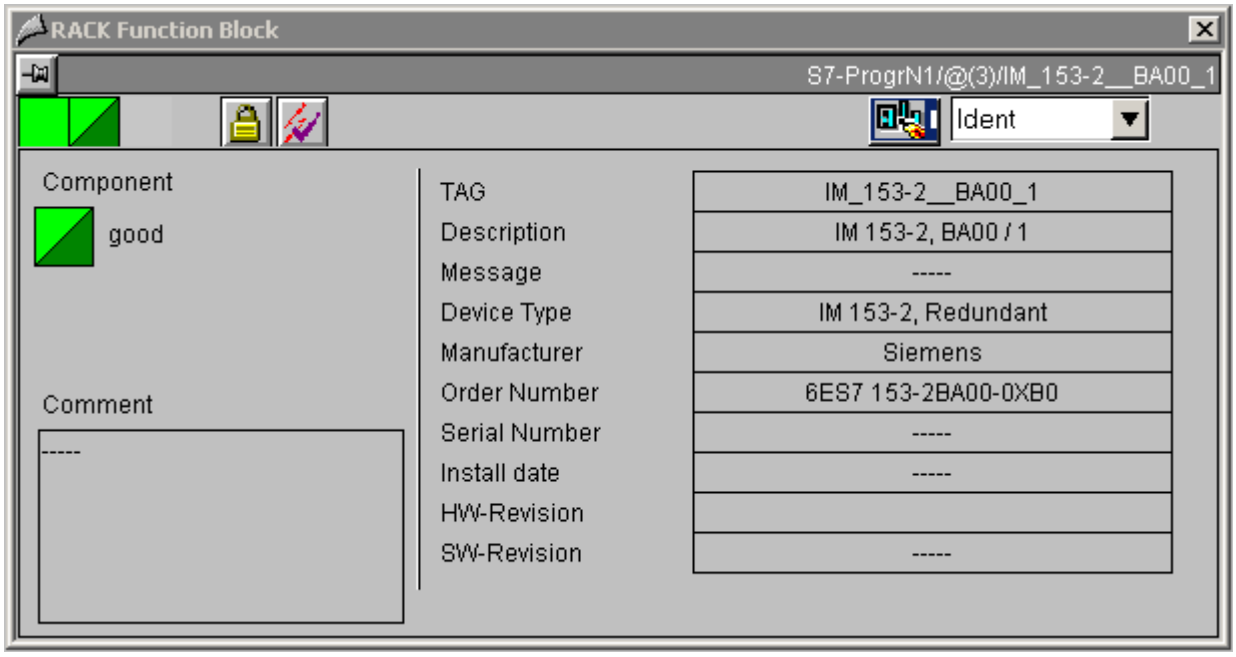
Additional information

You will find more information in:

Global Representations and Views of Asset Faceplates (Page 79)

1.3.4 Ident View [Asset]

@PG_ASSETAS_Ident



The layout of the Ident page is the same for all Faceplates; only the dynamic sampling of the ident data is different.

Exception: For devices containing a Web server, a button is available to call a viewer that displays the HTML pages on the devices.

This button is displayed in the overview row of the faceplate if

- the device was configured for SNMP
- the property "Web-compliant" is stored in the block icon.

This button is used in the OSM faceplate. The button is also displayed when the network components are unreachable for certain reasons.

Note that with the MS Windows 2003 Server operating system, the IP addresses of the network components to be reached must be included in the "Trusted sites" security settings.

AS faceplate

On the AS faceplate, the ident data are read out of the properties of the calling block icon. The information is determined from the HW Config data when the block icons are created/updated.

Ident Data	Property in block icon	Origin
TAG	"tag"	CFC "block name"
Description	"HWComment"	HW Config "Designation"/"Name"
Notification	- - -	Not available
Device type	"HWType"	HW Config "Type"
Manufacturer	"HWVendor"	Not accessible
Order number	"HWOrderNo"	HW Config "Order number"
Serial number	- - -	Not available
Install date	- - -	Not available
HW revision	- - -	Not available
SW revision	"HWSWVersion"	Not accessible
Comment	"HWComment"	HW Config "Comment"
"Not accessible" means that the user cannot make an entry or modification here.		

PC faceplate

No identification data is currently displayed in the PC faceplate.

IPC faceplate

For IPC Faceplates, the identification data of the variables is read from the data manager. These variables are created using the "Export variables for WinCC" function in the OPC server properties or with the "Create/update diagnostic screens" function followed by compiling the OS.

Ident Data	Variable / property in the block icon	Origin
TAG	"sysName"	Windows computer name
Description	"sysLocation"	DiagMonitor
Notification	"&ipAddress()"	Windows IP address
Device type	"ProductName"	DiagMonitor
Manufacturer	"Manufacturer"	DiagMonitor
Order number	---	Not available
Serial number	"SerialNumber"	DiagMonitor
Install date	---	Not available
HW revision	"HwVersion"	DiagMonitor
SW revision	"SwVersion"	DiagMonitor
Comment	"&comment"	Object properties PC station "Comment"

OSM faceplate

For OSM Faceplates, the Ident data of the variables are read from the data manager. These variables are created using the "Export variables for WinCC" function in the OPC server properties or with the "Create/update diagnostic screens" function followed by compiling the OS.

Ident Data	Variable / property in the block icon	Origin
TAG	"sysName"	WBM *) "System Name"
Description	"sysLocation"	WBM *) "System Location"
Notification	"&ipAddress()"	HW Config/OPC server "IP address"
Device type	"sysDescr"	WBM "Device Type"
Manufacturer	- - -	Not available
Order number	- - - / "snInfoOrderNr" **)	Not available / WBM "Order Number"
Serial number	- - - / "snInfoSerialNr" **)	Not available / WBM "MAC Address"
Install date	- - -	Not available
HW revision	- - - / "snHWVersion" **)	Not available / WBM "Hardware"
SW revision	- - - / "snSWVersion" **)	Not available / WBM "Firmware"
Comment	HWComment"	HW Config/OPC server "Comment"
*) WBM = Web based management (Web interface of the network object)		
**) If the SNMP "MIB-II" profile is used, this data is not available		

PDM faceplate

On the PDM faceplate, the ident data is read out and displayed in XML format via of a COM interface to PDM. The data is stored under the following labels:

Ident Data	Label / property in the block icon	Origin
TAG	"Device.App.Ident.TAG"	EDD PDM "TAG"
Description	"Device.App.Ident.Description"	EDD PDM "Descriptor"
Notification	"Device.App.Ident.Message"	EDD PDM "Message"
Device type	"Device.Type.Ident.Type"	EDD PDM "Product designation"
Manufacturer	"Device.Type.Ident.Manufacturer"	EDD PDM "Manufacturer"
Order number	"Device.Type.Ident.OrderNumber"	EDD PDM "Device order number"
Serial number	"Device.Ident.SerialNumber"	EDD PDM "Device serial number"
Install date	"Device.App.Ident.InstallDate"	EDD PDM "Install date"
HW revision	"Device.Type.Ident.HwRevision"	EDD PDM "Hardware revision"
SW revision	"Device.Type.Ident.SwRevision"	EDD PDM "Software revision"
Comment	"Device.Type.Ident.Comment"	HW Config "Comment"

ASSETMON faceplate

On the ASSETMON faceplate, the ident data is read out and displayed in XML format via of a COM interface to PDM. The data is stored under the following labels:

Ident Data	Label / variable	Origin
TAG	"Device.App.Ident.TAG"	EDD PDM "TAG"
Description	"Device.App.Ident.Description"	EDD PDM "Descriptor"
Notification	"Device.App.Ident.Message"	EDD PDM "Install location"
Device type	"Device.Type.Ident.Type"	Not available
Manufacturer	"Device.Type.Ident.Manufacturer"	EDD PDM "Manufacturer"
Order number	"Device.Type.Ident.OrderNumber"	EDD PDM "Device order number"
Serial number	"Device.Ident.SerialNumber"	EDD PDM "Serial number"
Install date	"Device.App.Ident.InstallDate"	EDD PDM "Install date"
HW revision	"Device.Type.Ident.HwRevision"	EDD PDM "Hardware revision"
SW revision	"Device.Type.Ident.SwRevision"	EDD PDM "Software revision"
Comment	"&comment"	CFC "Block comment"

Additional information

You will find more information in:

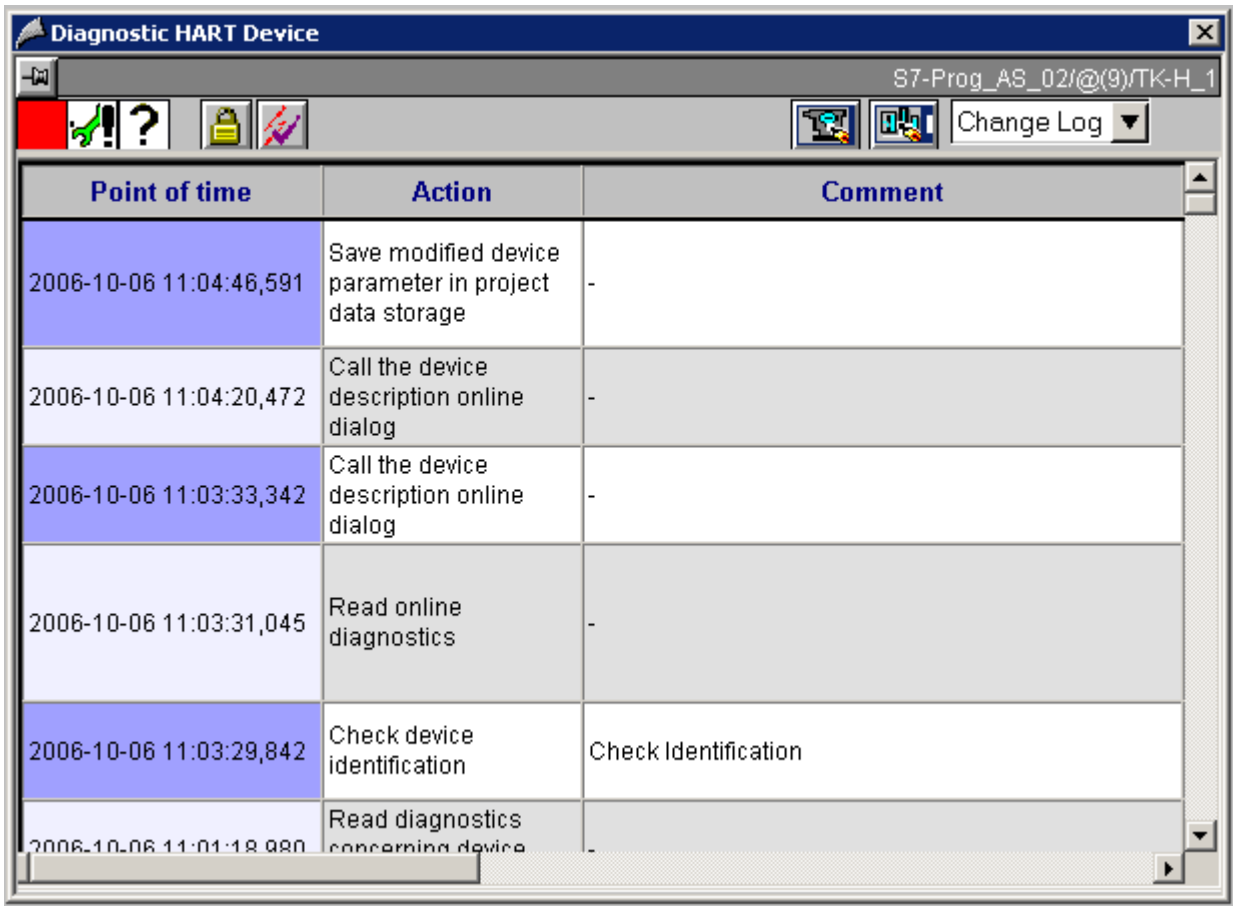
Global representations and views of asset Faceplates (Page 79)

1.3.5 Individual Views of the PDM Faceplate [Asset]

@PG_ASSETPDM_CHANGELOG

Data are read out in XML format via a COM interface to PDM and displayed as a table in a web browser control.

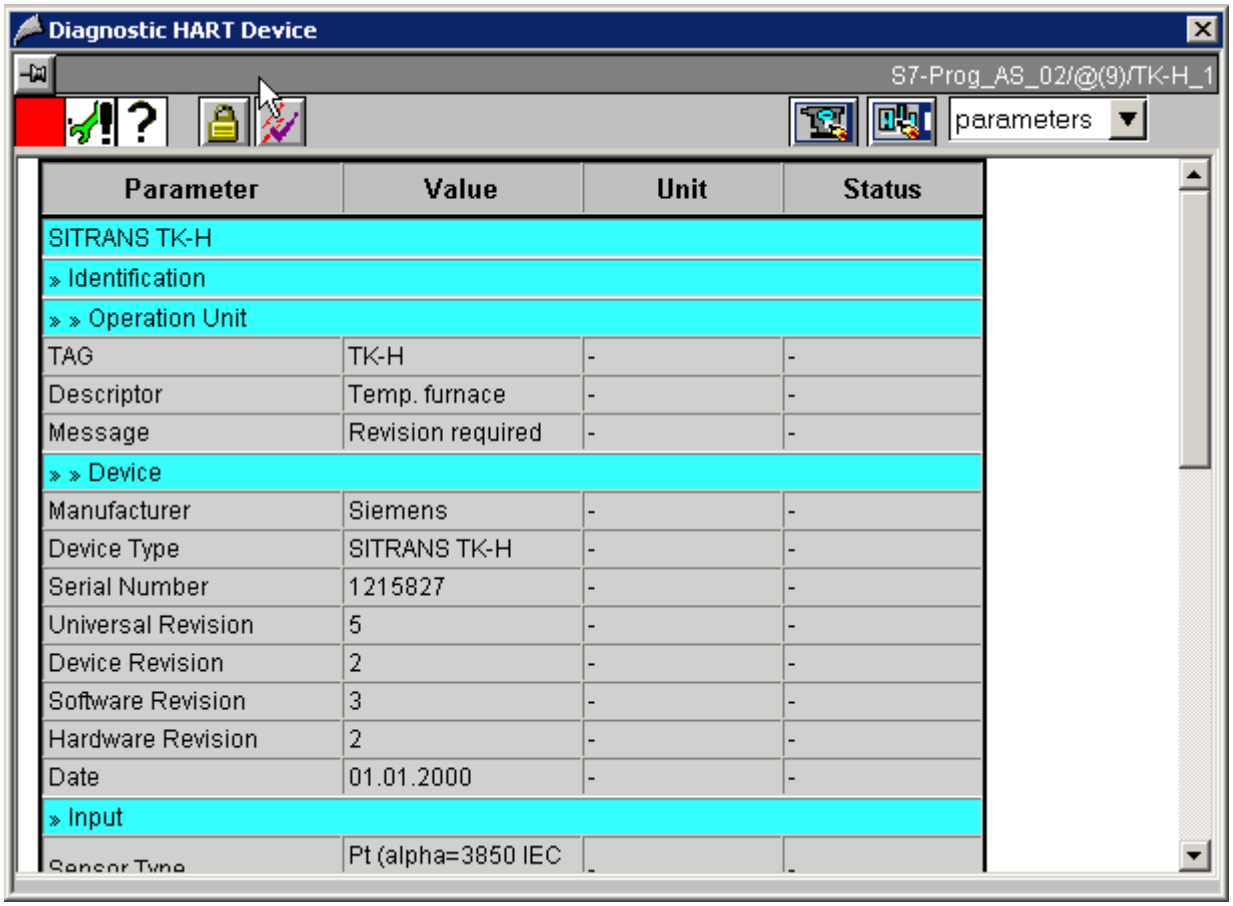
The PDM change log for the current instance is displayed.



@PG_ASSETPDM_Parameters

Data are read out in XML format via a COM interface to PDM and displayed as a table in a web browser control.

The device parameters saved in PDM for the current instance are displayed.



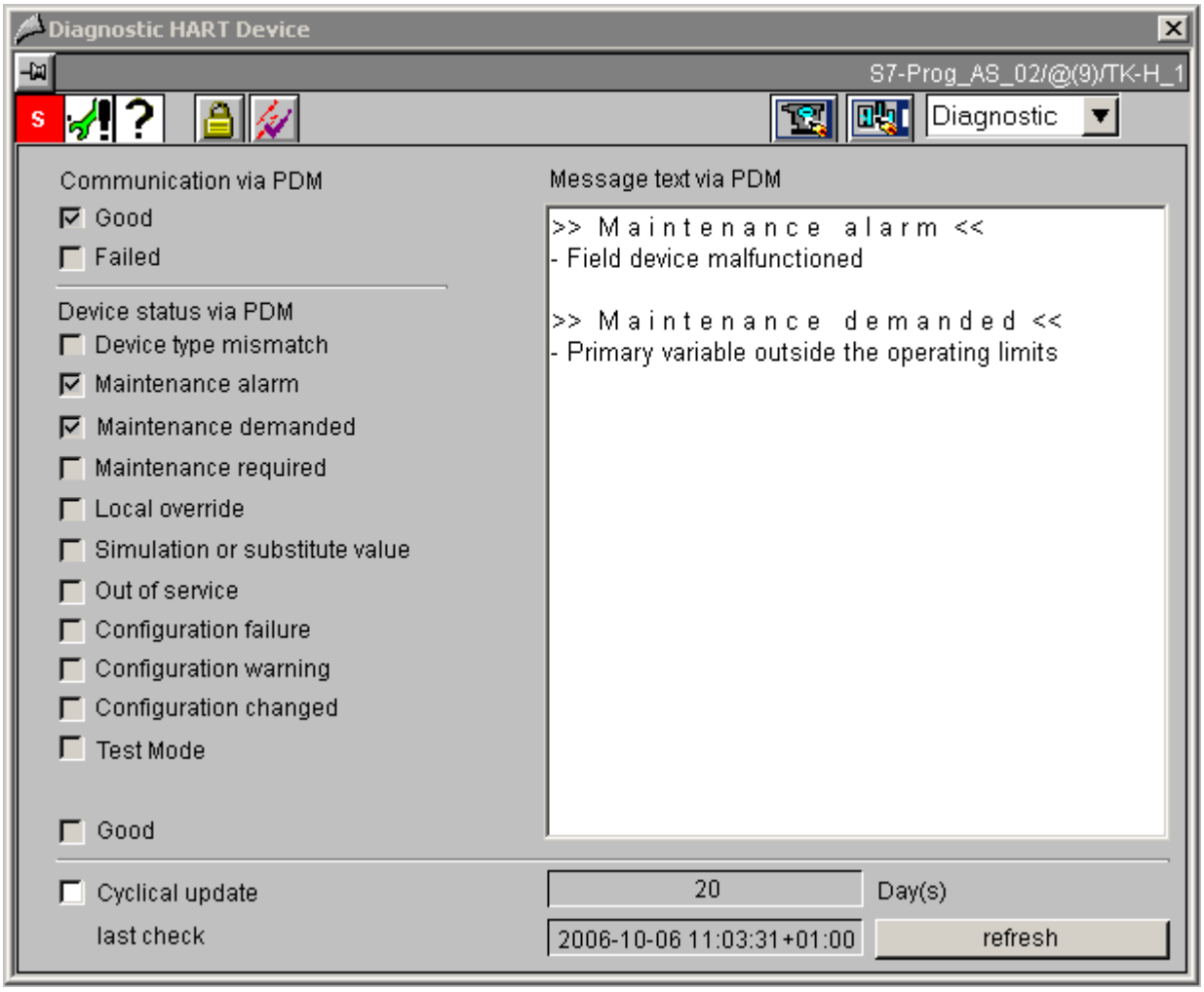
Parameter	Value	Unit	Status
SITRANS TK-H			
» Identification			
» » Operation Unit			
TAG	TK-H	-	-
Descriptor	Temp. furnace	-	-
Message	Revision required	-	-
» » Device			
Manufacturer	Siemens	-	-
Device Type	SITRANS TK-H	-	-
Serial Number	1215827	-	-
Universal Revision	5	-	-
Device Revision	2	-	-
Software Revision	3	-	-
Hardware Revision	2	-	-
Date	01.01.2000	-	-
» Input			
Sensor Type	Pt (alpha=3850 IEC	-	-

@PG_ASSETPDM_Diagnosis

Data are read out and displayed in XML format by means of a COM interface to PDM.

The diagnostic data saved in PDM for the current instance are displayed.

Current diagnostic data can be read out of the device to the PDM and displayed using the "Refresh" key. The date field adjacent to "Last check" shows the date and time of the last check.



Additional information

You will find more information in:

Global Representations and Views of Asset Faceplates (Page 79)

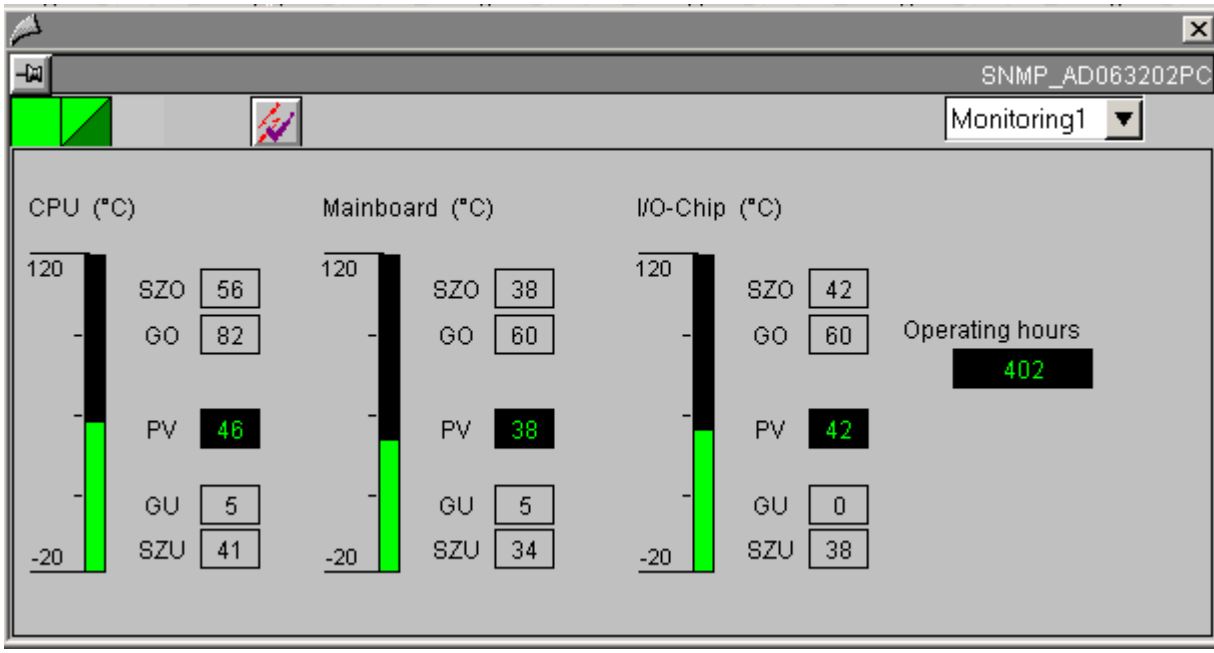
1.3.6 Individual Views of the IPC Faceplate [Asset]

Views

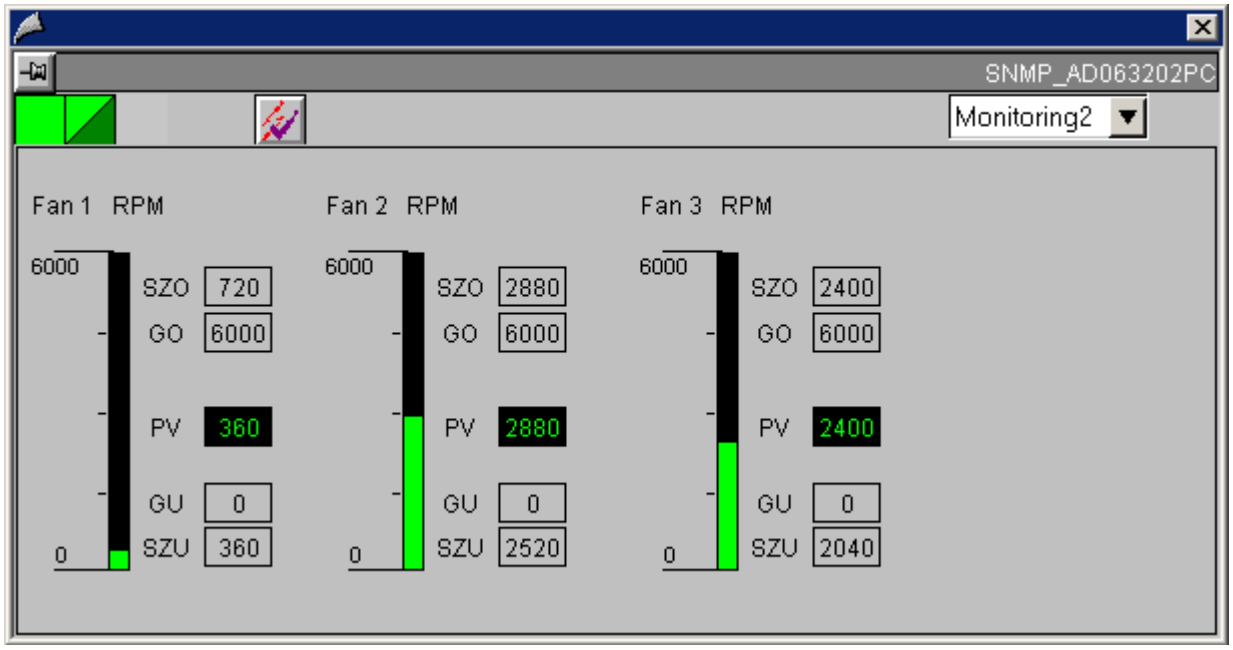
With the IPC faceplate, the data of the views "Monitoring1", "Monitoring2", "Monitoring3" of variables is read from the data manager.

These variables are created using the "Export variables for WinCC" function in the OPC server properties.

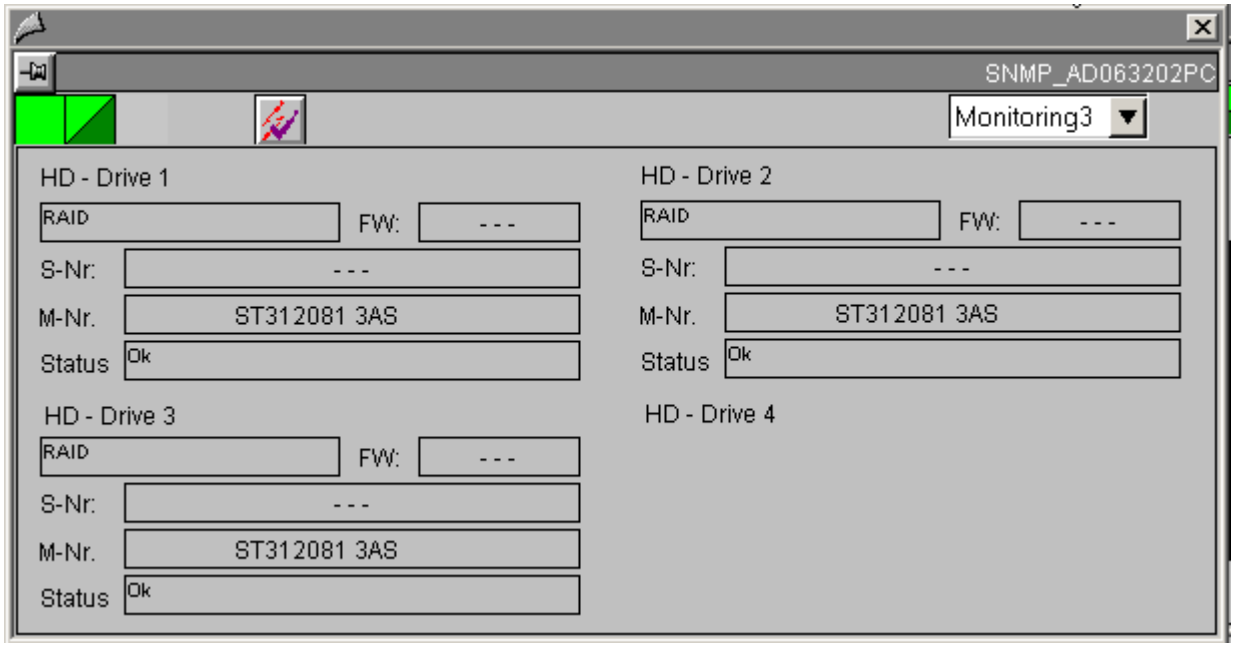
@PG_ASSETIPC_Monitoring1



@PG_ASSETIPC_Monitoring2



@PG_ASSETIPC_Monitoring3



Additional information

You will find more information in:

Global Representations and Views of Asset Faceplates (Page 79)

1.3.7 Views of the OB_BEGIN Faceplate [Asset]

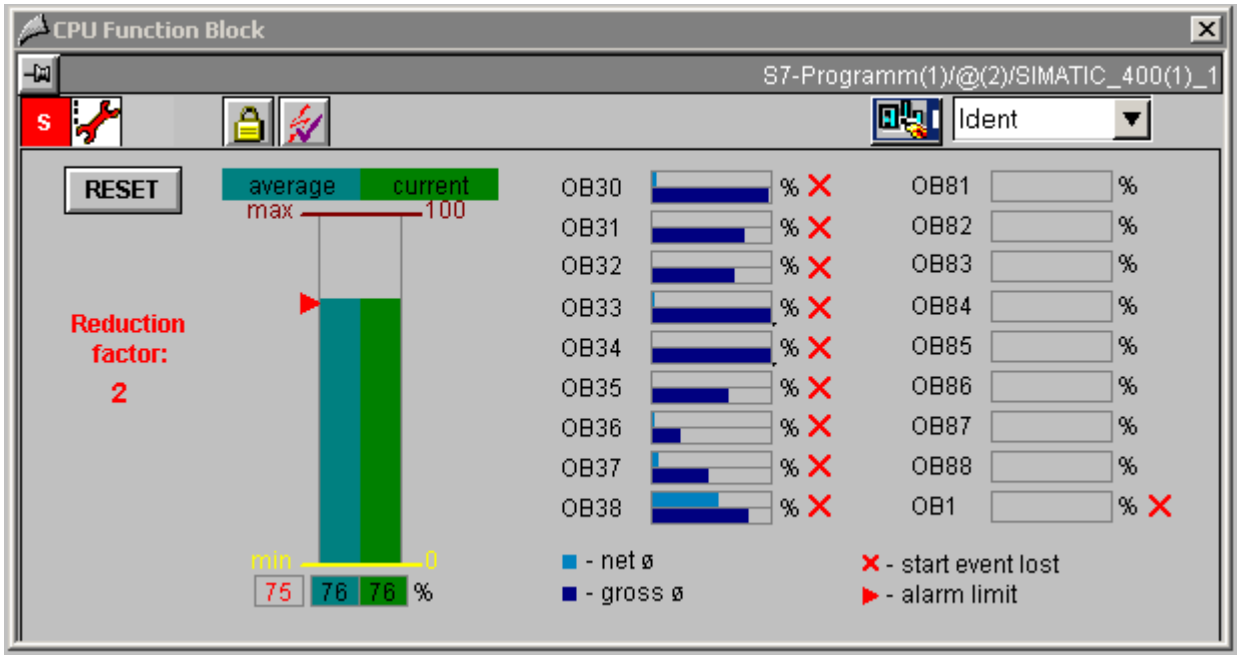
Views

The faceplate has 7 views:

- Maintenance view (Page 83)
- Message View (Page 85)
- Ident View (Page 86)
- Performance View (Overview)
- OB3x View (Detailed View)
- OB8x/OB1 View (Detailed View)
- Parameter view

Performance View

The overall situation of the CPU are graphically displayed in the overview.



The overall situation of the CPU is displayed in the form of a bar display. It contains the total runtime with the following values:

Display	Meaning	Parameters
Actual value	Mean value of all net runtimes in % OB3x/ OB8x + OB1	TOTALCUR
Average value	Mean value of the current value in %	TOTALPER
Max. value	Formed from the net runtimes in % of all the OB3x / OB8x + OB1 net runtimes from the last cycle	TOTALMAX
Min. value	Formed from the net runtimes in % of all the OB3x / OB8x + OB1 net runtimes from the last cycle	TOTALMIN

All the values in the bar diagram are specified in %, relative to the set maximum cycle monitoring time. Its numeric magnitude is displayed under the bar.

The following are also graphically displayed:

- The mean value, gross value and the net values of all OB3x, relative to the respective OB cycle time,
- The net values of OB8x and the OB1, both relative to the set maximum cycle monitoring time.

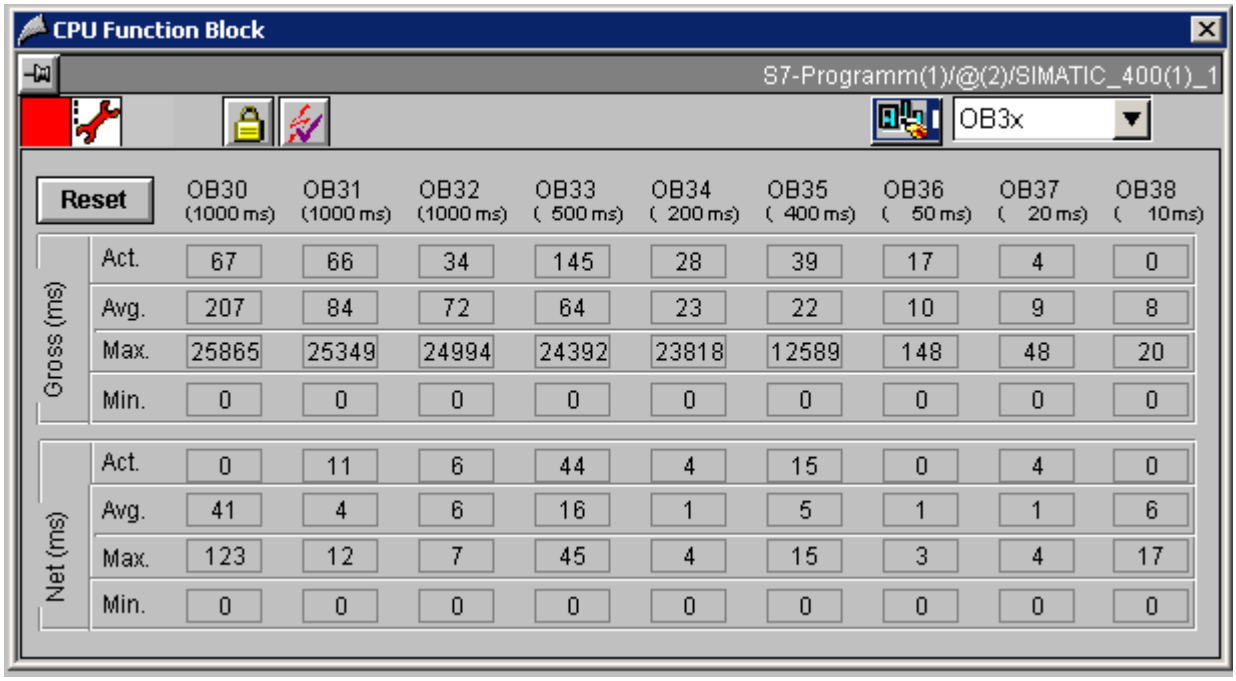
Because the actual value display of the respective last cycle would cause a widely fluctuating reduction ratio display in the screen refreshing cycle, all of the displays of the overall situation are mean values.

The graphic display of the OB3x times is expanded by an indicator that signals buffered and lost start events.

Display of the reduction ratio

The reduction ratio factor shows the reduction ratio of all cyclic OBs of the user program.

OB3x view

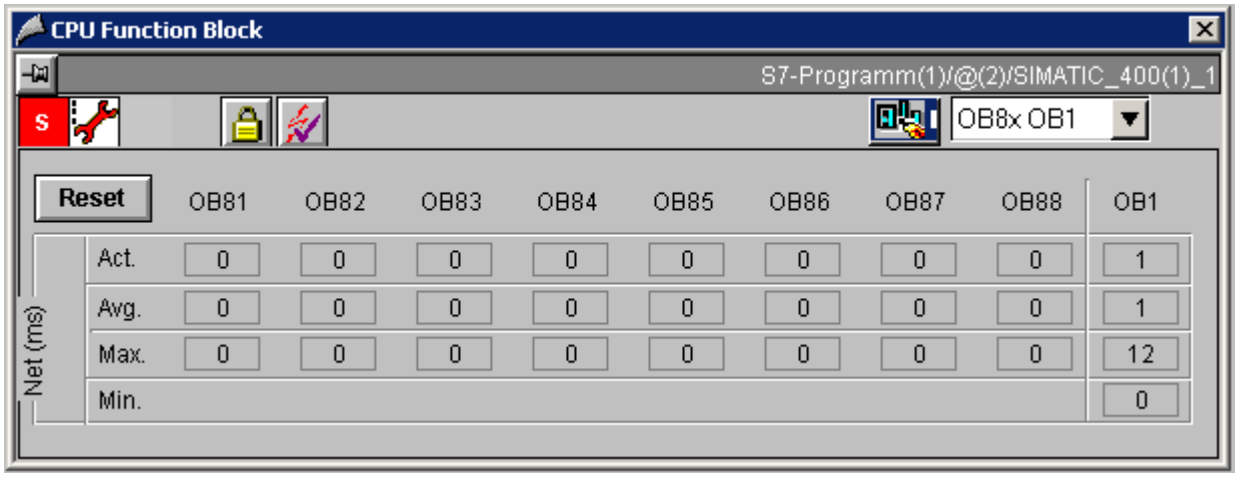


In the detailed view for "OB3x", the following four absolute values are displayed for all OB3x for net and gross runtime:

Display	Meaning
Actual value	Runtime of the last cycle
Average value	Value formed from the actual values over a number of "Sample" cycles
Max. value	Value formed from the actual value since the last reset
Min. value	Value formed from the actual value since the last reset

If a cyclic OB is not assigned by the user, then no values for this are displayed.

OB8x/OB1 view

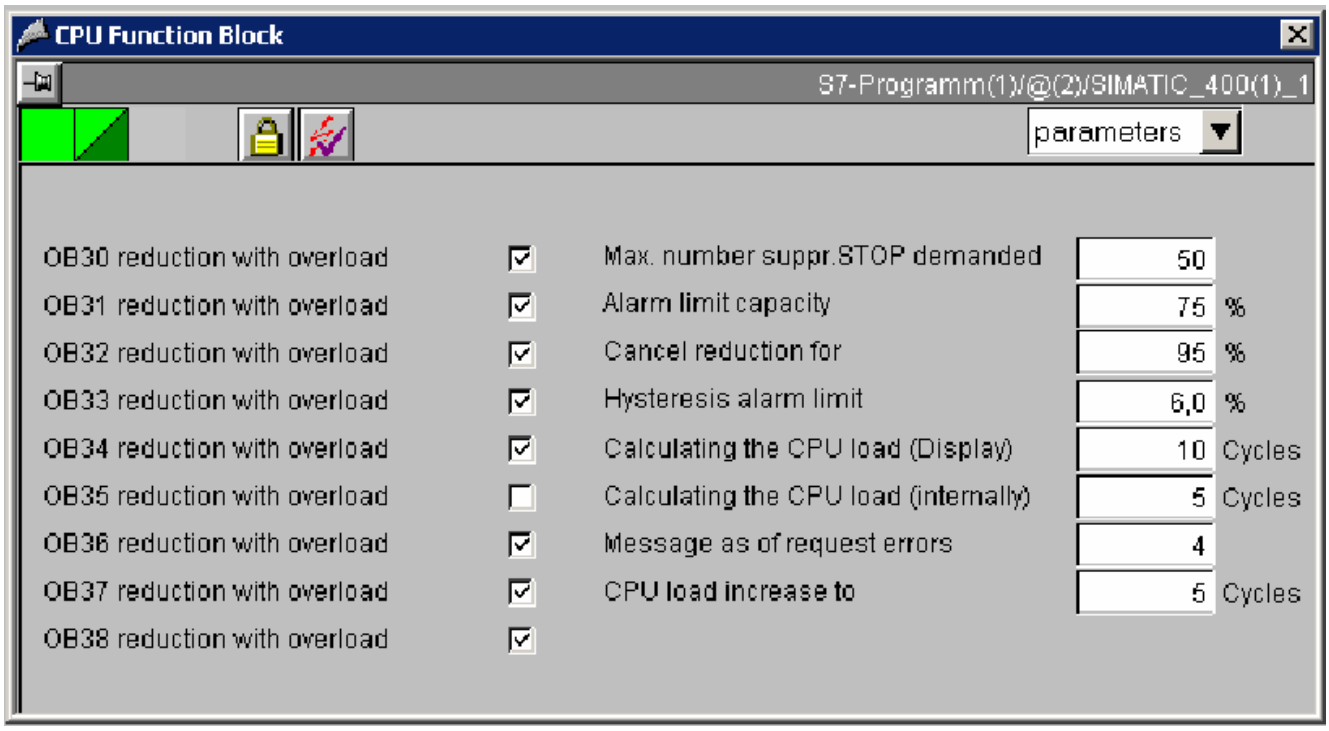


In the detailed view for "OB8x OB1", the four absolute values for the net runtime are displayed for all of OB8x and for OB1:

Display	Meaning
Actual value	Runtime of the last cycle
Average value	Value formed from the actual values over a number of "Sample" cycles
Max. value	Value formed from the actual value since the last reset
Min. value	Value formed from the actual value since the last reset

Note: The values displayed in this view are net values; the values displayed in HW Config are gross values.

Parameter view



In this view, you can select the OBs on the left to which a reduction ratio will apply if there is overload.

On the right-hand side, you enter the parameter values that apply when avoiding the CPU changing to STOP and keeping the AS operable.

If SFC 78 is not supported on the AS, some information will not be displayed in the view. This involves the following:

- Alarm limit capacity
- Cancel reduction for
- Hysteresis alarm limit
- Calculation of CPU load (display)
- Calculation of CPU load (internal)

Additional information

You will find more information in:

Global representations and views of asset Faceplates (Page 79)

1.3.8 Views of the ASSETMON Faceplate [Asset]

Views

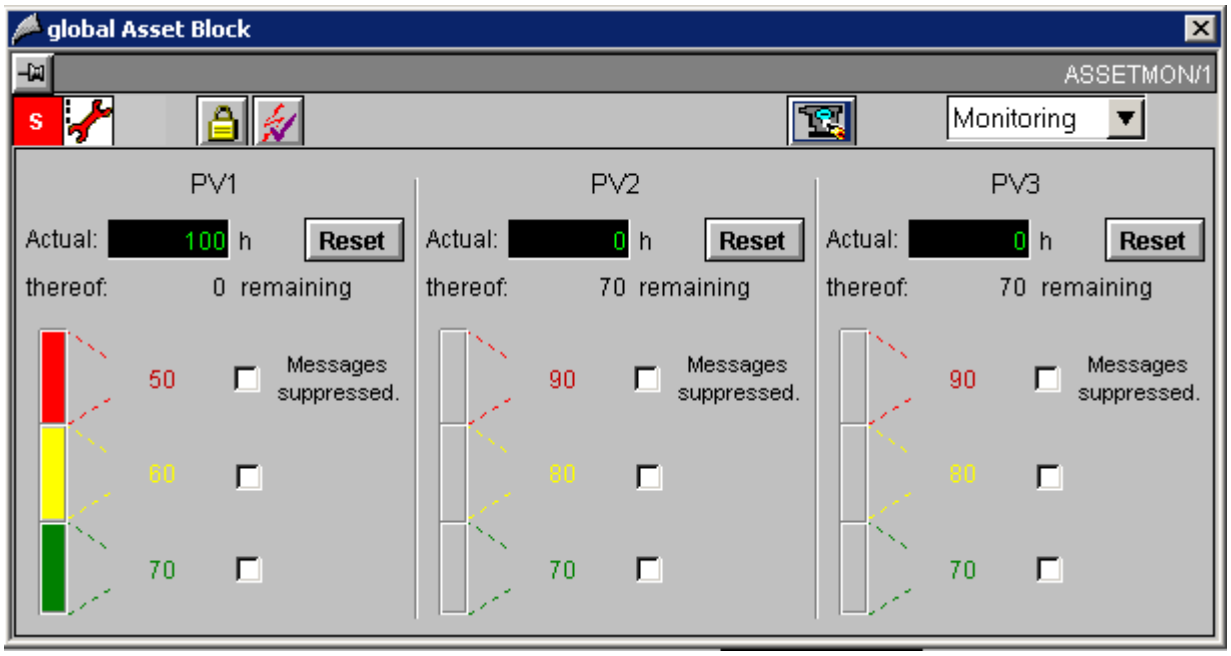
The faceplate has five views:

- Monitoring view
- Diagnostic View
- Ident View
- Maintenance view
- Message View

Monitoring view

In this view, up to three process values are displayed. The texts for this are read from the EDD.

If there are no texts for the process value, the monitoring view is not active (grayed out).

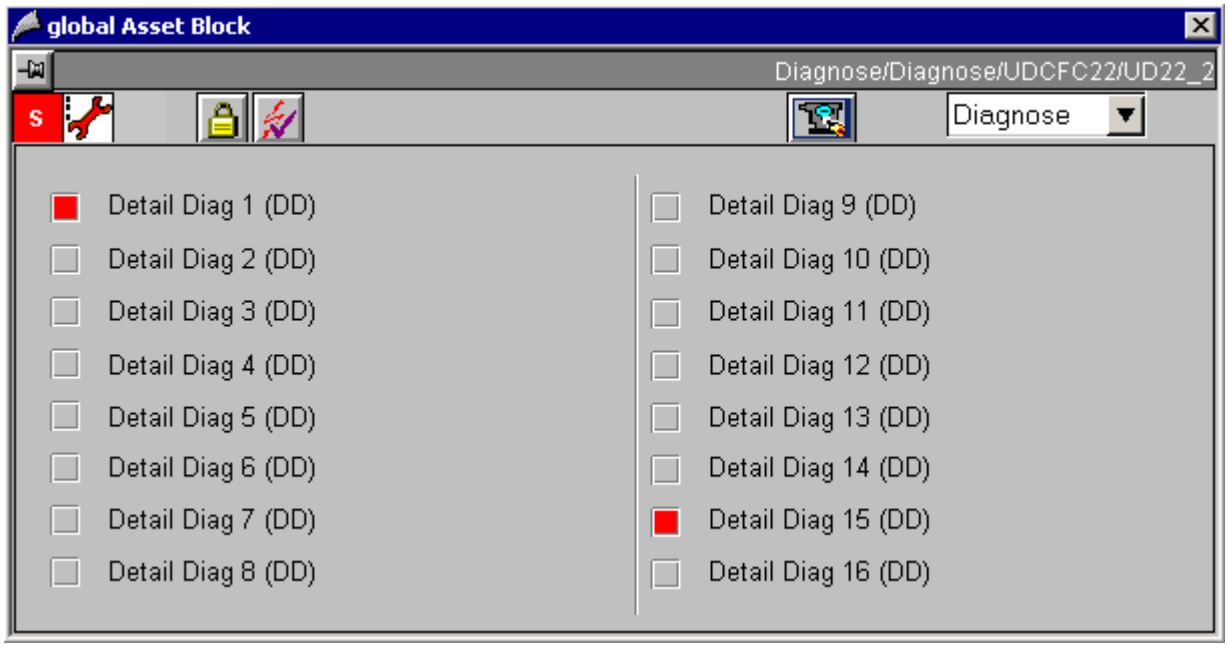


The actual value is displayed in the upper display. In the box under it, the difference between the actual value and the next limit value is displayed.

The limit value display is displayed in the GOOD status in the form of a gray bar. If a limit is reached, a color frame appears at the corresponding position. The bar does not represent an analog value but rather the status. Using the Options box next to the limit display, you can suppress the message (by checking the box).

Diagnostic View

In the diagnostic view, the texts for 16 detailed diagnoses are displayed. The texts correspond to the entries assigned in the EDD in PDM.



In the diagnostic view, the text of the detailed diagnosis is identified by a status display and is therefore relevant if the block input DIAGx = 1 is set.

Ident View

See Ident View [Asset] (Page 86)

Maintenance view

See Maintenance View [Asset] (Page 83)

Message View

See Message View [Asset] (Page 85)

Additional information

You will find more information in:

Global representations and views of asset Faceplates (Page 79)

Block icons

2

2.1 General Properties of Block Icons

Basic properties

The following properties of all "@@PCS7Typicals" picture block icons should never be modified:

- Geometry/Width
- Geometry/Height
- Other/OP_enabled
- Other/Password
- Other/Display
- General/Servername
- Styles/Group-relevant (only for blocks with Alarm_8P messages)

Properties which exist in all block symbols:

Properties	Element and property in user object	Object	Description
Other/Processcontrolling _backup	POP.Permission	I/O box	Instance-spec. Authorization Default = 5
Other/ HigherProcesscontrolling _backup	HIPOP.Permission	I/O box	Instance-spec. Authorization Default = 6
General/tag	NameOfTag.OutputValue	I/O box	Text displayed in the icon
General/type	Type.OutputValue	I/O box	Reference for the generation of symbols from the TH and for wizards
General/tagname	Tagname.OutputValue	I/O box	Actual variable name that is passed to the variable prefixes of the picture windows
General/Servername	Servername.OutputValue	I/O box	Block / faceplate type
General/Version	Version.OutputValue	I/O box	Version number
Styles/View_Tag	NameOfTag.Display Rectangle17.Display (if it exists)	Rectangle I/O box	Can be used to hide the variable name
MouseClick left	PCS7_OpenGroupDisplay _V6(lpszPictureName, lpszObjectName)		Calls the faceplate

Properties of block icons that are not overwritten when the plant hierarchy is updated:

Properties that exist in all block icons:

- HigherProcesscontrolling_backup
- Processcontrolling_backup
- View_Tag

Properties that do not exist in all block icons:

- ReturnPath
- StandardTrend
- Format_InputValue
- Format_OutputValue
- Format_xx

Additional information

You will find more information on this subject in the following sections:

Position of Faceplates (Page 106)

Highlighting the Block Icon for "Loop in Alarm" and "Select Picture via Process Tag" (Page 107)

2.2 Position of Faceplates

Specifying the Position

The position of the faceplate can be specified when the block icon is opened.

Each block icon possesses three properties for this purpose:

- **DefaultPos**. If this property is set to TRUE, the faceplate call behaves as before; this is also the default setting. If this property is set to FALSE, the faceplate is called at the position specified with the properties "leftPos/topPos".
- **LeftPos** = Horizontal position at which the upper left point of the faceplate is situated.
- **TopPos** = Vertical position at which the upper left point of the faceplate is situated.

2.3 Highlighting the Block Icon for "Loop in Alarm" and "Select Picture via Process Tag"

Setting Highlighting

The functions “Loop in alarm” and “Select picture via process tag” enable the program to jump to the corresponding process picture of the process tag.

The associated block icon of the process tag is highlighted using the "HighlightBlockIcon" function. The "tagname" variable is highlighted in cyan blue.

The block icon has two properties for this purpose:

- **HighLightBlockIcon** – Set by the functions "Loop in alarm" and "Select picture via process tag"; highlights the "tagname" variable in cyan blue.
- **HighLightBlockIconBackColor** – Color for highlighting The default setting is "cyan".

2.4 Block icons: Template pictures

2.4.1 @@PCS7Typicals.pdl and @Template.pdl template pictures

Using templates

- The @@PCS7Typicals.pdl picture is used for automatic creation of block icons from the PH.
- The @Template.pdl picture is primarily used as template for manual configuration of block icons in the WinCC pictures.

The block icons in these two pictures only differ in terms of their "type" property. The property may not be modified in the "@@PCS7Typicals.pdl" picture (naming convention, for example, @MEAS_MON/1), as it is used as reference to objects that are generated and deleted via the PH during compilation.

This property may be changed in @Template.pdl.

@@PCS7Typicals.pdl

The block icons for all OS-relevant CFC blocks can be created in a picture fin the charts of the hierarchy folder and, depending on the configuration, for the subfolders if the picture meets the following requirements:

- It is available in the plant hierarchy (PH)
- The "Derive block icons from PH" option is set

Options for creating the block icons:

- Select the "Create/Modify Block Icons " command in the PH
- Enable the corresponding check box in the wizard when executing the "Compile OS" function.

The following applies:

A copy of a block icon with "type" property string "@CTRL_PID/1" from the @@PCS7Typicals.pdl picture is created in this picture for a CFC block instance assigned the symbolic type name CTRL_PID.

If you want to edit the "@@PCS7Typicals.pdl" picture, copy it to a file named "@PCS7Typicals.pdl" and then edit this copy. The "@PCS7Typicals.pdl" picture is automatically derived from the PH if it exists in the project.

Note

All block icons in the picture that also exist in "@@PCS7Typicals.pdl" and have not been derived from the PH will be deleted during automatic generation. When manually configuring and editing the pictures, you should use the picture template "@Template.pdl" for the block icons, as this template has a different default setting for the "type" property.

V6 or higher supports the configuration of this reference in a CFC block instance, and there is no mandatory naming convention for the "type" property. In addition, you can generate several different block icons for one block type in the ES.

Example:

The symbolic name "XXX" is entered at a CTRL_PID instance. A reference is created in the @@PCS7Typicals.pdl picture to a block icon that contains the string "@CTRL_PID/XXX" in its "type" property.

@Template.pdl

You can change the "type" property in @Template.pdl.

Always assign the property a name other than the name already being used for the block icons in @@PCS7Typicals. The program may otherwise delete the block icons copied from this template from the pictures that were generated based on the PH.

You should first create a copy of the "@Template.pdl" picture and assign it a different name, and then edit this copy in order to modify the existing icons. The OS Project Editor (previously Split Screen Wizard) will otherwise reset the picture.

Updating picture objects

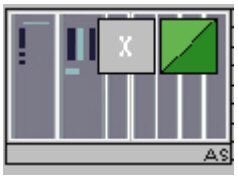
The @@PCS7Typicals.pdl and @Template.pdl pictures can be used to run the "Update picture object" wizard.

The "type" property is once again used as reference to determine the objects to be replaced.

2.4.2 Display for avoiding stop without asset management

"OB_BEGIN" block icon

If your system does not have ASSET diagnostics, a separate block icon is provided to on the OS display avoidance of stop in the template @Template.pdl. The block icon is stored in the "Diagnostics" section under the name "OB_BEGIN".



Configuration

You configure the OB_BEGIN block icon for each AS. You then interconnect each block icon with the corresponding OB_BEGIN structure variable.

To achieve all the required interconnections to the block icon, it is best to use the PCS 7 WinCC Wizard for interconnecting Faceplates to process tags. In the tag dialog "List of all structure variables", you can select the relevant OB_BEGIN instance.

Note on the "OB_BEGIN" faceplate

In the OB_BEGIN faceplate for the OB_BEGIN and CPU_RT blocks without asset management, the message view, the performance view and the detailed views (OB3x and OB8x/OB1) are displayed if SFC78 is supported on the AS. If SFC78 is not supported, only the message view of the faceplate is displayed.

The identification view and parameter view are not shown.

2.5 Block Icons: Technological Blocks

2.5.1 Block Icons: Technological Blocks

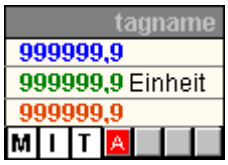
Overview

The properties for the following block icons are described below.

You can find notes about configuring in the *PCS 7 Programming Guide for Blocks* Manual.

2.5.2 Block icon: CTRL_PID

Properties

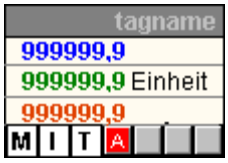


You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 110/Height = 77		
General/ UnitPV	UnitPV.Text	Stat.Text	Display: PV unit
General/ Unit_MAN_OP	Unit_MAN_OP.Text	Stat.Text	Display: Unit MAN_OP
Links/ CollectValue	GroupDisplay.CollectValue	GroupDisplay	
Links/ SetpointValue	SetpointValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Setpoint
Links/ ProcessValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Links/ OutputValue	OutputValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Manipulated variable
Links/ LMN_SEL	Tracking_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Manipulated variable correction
Links/ Mode_MAN_AUT	Manual_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Manual/Auto
Links/ Mode_INT_EXT	External_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: External/Internal
Styles/ ReturnPath	TrendFunktionen2 .Output value	I/O box	
Styles/ StandardTrend	TrendFunktionen2 .CharacterSetSize	I/O box	
Styles/ Format_InputValue	ProcessValue_AdvancedAnalog Display.Format SetpointValue_AdvancedAnalog Display.Format	AdvancedAnalogDis. AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format_Output Value	OutputValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.3 Block icon: CTRL_S

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 110/Height = 77		
General/UnitPV	Unit.Text/.PV_IN#unit	Stat.Text	Display: PV unit
General/Unit_MAN_OP	Unit.Text/.MAN_OP#unit	Stat.Text	Display: Manipulated variable unit
Links/CollectValue	GroupDisplay.CollectValue/ .EventState	Group display	
Links/SetpointValue	SetpointValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Setpoint
Links/ProcessValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Links/OutputValue	OutputValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Manipulated variable
Links/Mode_MAN_AUT	Manual_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Manual/Auto
Links/Mode_INT_EXT	External_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: External/Internal
Links /LMN_SEL	Tracking_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Manipulated variable correction
Links /QLMNR_ON	OutputValue_AdvancedAnalog Display.Display Unit_MAN_OP.Display	AdvancedAnalogDis. Stat.Text	See below for description
Links /QLMNUP	LMNUP_StatusDisplay	Stat.Text	Display: QLMNUP
Links /QLMNDN	LMNDN_StatusDisplay	Stat.Text	Display: QLMNDN
Styles/ReturnPath	TrendFunktionen2 .Output value	I/O box	
Styles/Standard Trend	TrendFunktionen2 .CharacterSetSize	I/O box	

Properties	Element and property in user object	Object	Description
Styles/Format_InputValue	ProcessValue_AdvancedAnalog Display.Format SetpointValue_AdvancedAnalog Display.Format	AdvancedAnalogDis. AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format_OutputValue	OutputValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

The CTRL_S block icon differs from that of CTRL PID as follows: If position feedback (LMNR_ON = 0) is not available, the program displays the binary control signals QLMNUP and QLMNDN instead of the manipulated variable.

The visibility of these texts is also controlled by scripts. The scripts are called when changes are made to the QLMNUP and QLMNDN properties.

Note: The "OutputValue_AdvancedAnalogDisplay" and "Unit_MAN_OP" objects must always be brought to the foreground in the user object, in order to ensure proper functioning of the visualization control.

2.5.4 Block icon: DIG_MON

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 40		
Links/Status	StatusDisplay1.Actual Status	StatusDisplay	.Q
Links/CollectValue	GroupDisplay3.CollectValue	Group display	.EventState

2.5.5 Block icon: DOSE

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 110/Height = 63		
General/UnitPV	UnitPV.Text	Stat.Text	Display: PV unit
Links/CollectValue	GroupDisplay.CollectValue	Group display	.EventState
Links/ProcessValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis .	Display: Process Value
Links/SetpointValue	SetpointValue_AdvancedAnalog Display.Value	AdvancedAnalogDis .	Display: Setpoint
Links/SetpointExternal	External_AdvancedStatus Display.Status SetpointExternValue_ AdvancedAnalogDisplay .Display	AdvancedStatusDis. AdvancedAnalogDis .	.QSPEXTON See below for description
Links/ValueSetpoint Extern	SetpointExternValue_ AdvancedAnalogDisplay.Value	AdvancedAnalogDis .	Displayed with .QSPEXTON using setpoint
Styles/ReturnPath	TrendFunktionen2 .Output value	I/O box	
Styles/StandardTrend	TrendFunktionen2 .CharacterSetSize	I/O box	
Styles/Format_Input Value	ProcessValue_AdvancedAnalog Display.Format SetpointValue_AdvancedAnalog Display.Format	AdvancedAnalogDis . AdvancedAnalogDis .	Formats the process value and setpoint numbers
Styles/Format_Output Value	OutputValue_AdvancedAnalog Display.Format	AdvancedAnalogDis .	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

The DOSE block does not contain a parameter which represents the effective setpoint. The program outputs the setpoint display for this reason, depending on the QSPEXTON status.

QSPEXTON = 0 --> "SetpointValue_AdvancedAnalogDisplay" is displayed.

QSPEXTON = 1 --> "SetpointExternValue_AdvancedAnalogDisplay" is displayed.

2.5.6 Block icon: ELAP_CNT

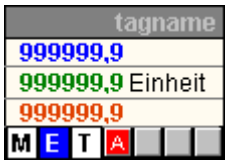
Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 97/Height = 45		
General/Unit	Unit.Text	Stat.Text	
Links/CollectValue	GroupDisplay.CollectValue	Group display	.EventState
Links/Output_Value	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	.HOURS Display max. 7 digits
Styles/Format_Input Value	ProcessValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format_Output Value	Format_OutputValue .OutputValue	I/O box	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.7 Block icon: FMCS_PID

Properties

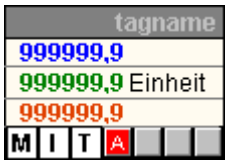


You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 110/Height = 77		
General/UnitPV	Unit.Text/.PV#unit	Stat.Text	
General/Unit_MAN _OP	Unit.Text/.LMN#unit	Stat.Text	
Links/CollectValue	GroupDisplay.CollectValue/ .EventState	Group display	
Links/SetpointValue	SetpointValue_Advanced AnalogDisplay.Value/.SP	AdvancedAnalogDis.	Display: Setpoint
Links/ProcessValue	ProcessValue_AnalogDisplay Advanced.Value/.PV	AdvancedAnalogDis.	Display: Process Value
Links/OutputValue	OutputValue_ Advanced AnalogDisplay.Value/.LMN	AdvancedAnalogDis.	Display: Manipulated variable
Links/Tracking	Tracking_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Tracking LMN
Links/Mode_MAN _AUT	Manual_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: Manual/Auto
Links/Mode_INT _EXT	External_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: External/Internal
Styles/ReturnPath	TrendFunktionen2 .Output value	I/O box	
Styles/Standard Trend	TrendFunktionen2 .CharacterSetSize	I/O box	
Styles/Format _InputValue	ProcessValue_AdvancedAnal og Display.Format SetpointValue_AdvancedAnal og Display.Format	AdvancedAnalogDis. AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format _OutputValue	OutputValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.8 Block icon: FMT_PID

Properties



You will find more information about properties in:
"Block Icon: FMCS_PID (Page 118)".

2.5.9 Block icon: INTERLOK

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 108/Height = 20		
Links/Link	Lock.ActualStatus	AddDispl.	Lock symbol

2.5.10 Block icon: MEAS_MON

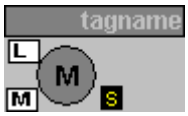
Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 97/Height = 45		
General/Unit	Unit.Text	Stat.Text	
Links/CollectValue	GroupDisplay.CollectValue	Group display	
Links/OutputValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Styles/ReturnPath	TrendFunktionen2 .Output value	I/O box	
Styles/StandardTrend	TrendFunktionen2 .CharacterSetSize	I/O box	
Styles/ Format_InputValue	ProcessValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/ Format_OutputValue	Format_OutputValue .OutputValue	I/O box	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.11 Block icon: MOT_REV

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 53		
Links/CollectValue	GroupDisplay_withASD1 .CollectValue	AdvancedStatusDis.	
Links/QMAN_AUT	Mode.Status1	AdvancedStatusDis.	Display: Auto/Manual
Links/LOCK	Interlock.Status1	AdvancedStatusDis.	Display: Lock
Links/QRUN	Motor_Status1.Status1	AdvancedStatusDis.	Display: Motor
Links/QSTOP	Motor_Status1.Status2	AdvancedStatusDis.	Display: Motor
Links/QDIR	Motor_Status1.Status3	AdvancedStatusDis.	Display: Motor

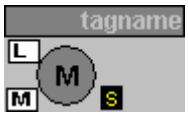
A left-click calls the MOT_REV faceplate. A right-click calls the INTERLOK faceplate.

The name of the INTERLOK block is stored as a script transfer parameter.

The default block name is "ILOCK". The INTERLOK block and MOT_REV must be placed into the same CFC chart.

2.5.12 Block icon: MOT_SPED

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 53		
Links/CollectValue	GroupDisplay_withASD1 .CollectValue	AdvancedStatusDis.	
Links/QMAN_AUT	Mode.Status1	AdvancedStatusDis.	Display: Auto/Manual
Links/LOCK	Interlock.Status1	AdvancedStatusDis.	Display: Lock
Links/QRUN	Motor_Status.Status1	AdvancedStatusDis.	Display: Motor
Links/QSTOP	Motor_Status.Status2	AdvancedStatusDis.	Display: Motor
Links/QSPEED	Motor_Status.Status3	AdvancedStatusDis.	Display: Motor
Links/QSTOPING	Motor_Status.Status4	AdvancedStatusDis.	Display: Motor

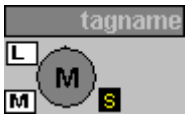
A left-click calls the MOT_SPED faceplate. A right-click calls the INTERLOK faceplate.

The name of the INTERLOK block is stored as a script transfer parameter.

The default block name is "ILOCK". The INTERLOK block and MOT_SPED must be placed into the same CFC chart.

2.5.13 Block icon: MOTOR

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 54		
Links/CollectValue	GroupDisplay_withASD .CollectValue	AdvancedStatusDis.	
Links/QMAN_AUT	Mode.Status1	AdvancedStatusDis.	Display: Auto/Manual
Links/LOCK	Interlock.Status1	AdvancedStatusDis.	Display: Lock
Links/QRUN	Motor_Status.Status1	AdvancedStatusDis.	Display: Motor
Links/QSTOP	Motor_Status.Status2	AdvancedStatusDis.	Display: Motor

A left-click calls the MOTOR faceplate. A right-click calls the INTERLOK faceplate.

The name of the INTERLOK block is stored as a script transfer parameter.

The default block name is "ILOCK". The INTERLOK block and the MOTOR block must be placed in the same CFC chart.

2.5.14 Block icon: OP_A

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 97/Height = 32		
General/Unit	Unit.Text	Stat.Text	
Links/OutputValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Styles/Format_Input Value	ProcessValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format_Output Value	Format_OutputValue .OutputValue	I/O box	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.15 Block icon: OP_A_LIM

Properties

Properties and display as Block Icon: OP_A (Page 124).

2.5.16 Block icon: OP_A_RJC

Properties

Properties and display as Block Icon: OP_A (Page 124).

2.5.17 Block icon: OP_D

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 45		
Links/Status	StatusDisplay.ActualStatus	StatusDisplay	.Q0

2.5.18 Block icon: OP_D3

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 45		
Links/Output1	StatusDisplay1.Display	StatusDisplay	.Q1
Links/Output2	StatusDisplay 2.Display	StatusDisplay.	.Q2
Links/Output3	StatusDisplay 3.Display	StatusDisplay.	.Q3

2.5.19 Block icon: OP_TRIG

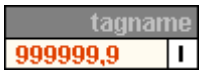
Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 40		
Links/Status	StatusDisplay.ActualStatus	StatusDisplay	.SIGNAL

2.5.20 Block icon: RATIO_P

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 97/Height = 32		
General/Unit	Unit.Text	Stat.Text	Display: Unit
Links/OutputValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Links/Mode_INT_EXT	External_AdvancedStatus Display.Status	AdvancedStatusDis.	Display: External/Internal
Styles/Format _InputValue	ProcessValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format _OutputValue	Format_OutputValue .OutputValue	I/O box	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

2.5.21 Block icon: SWIT_CNT

Properties

You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 97/Height = 45		
General/Unit	Unit.Text	Stat.Text	.V#UNIT
Links/CollectValue	GroupDisplay.CollectValue	Group display	.EventState
Links/OutputValue	ProcessValue_AdvancedAnalog Display.Value	AdvancedAnalogDis.	Display: Process Value
Styles/Format _InputValue	ProcessValue_AdvancedAnalog Display.Format	AdvancedAnalogDis.	Formats the process value and setpoint numbers
Styles/Format _OutputValue	Format_OutputValue .OutputValue	I/O box	Formats the manipulated variable numbers
Styles/Format_xx	Format_xx.OutputValue	I/O box	Further format

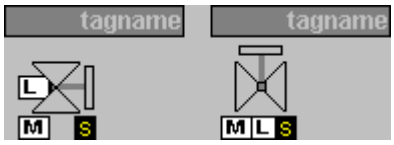
2.5.22 Block icon: VAL_MOT

Properties

Properties and display as Block Icon: VALVE (Page 128)

2.5.23 Block icon: VALVE

Properties



You will find more information in:
"General Properties of Block Icons (Page 103)".

Properties	Element and property in user object	Object	Description
Geometry	Width = 90/Height = 67		
Links/CollectValue	GroupDisplay_withASD .CollectValue	AdvancedStatusDis.	
Links/QMAN_AUT	Mode.Status1	AdvancedStatusDis.	Display: Auto/Manual
Links/V_LOCK	Interlock.Status1	AdvancedStatusDis.	Display: Lock
Links/QOPENED	Valve_Status.Status1	AdvancedStatusDis.	Display: Valve
Links/QCLOSED	Valve_Status.Status2	AdvancedStatusDis.	Display: Valve
Links/QOPENING	Valve_Status.Status3	AdvancedStatusDis.	Display: Valve
Links/QCLOSING	Valve_Status.Status4	AdvancedStatusDis.	Display: Valve

A left-click calls the VALVE faceplate. A right-click calls the INTERLOK faceplate.

The name of the INTERLOK block is stored as a script transfer parameter.

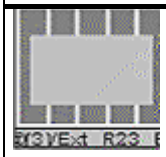
The default block name is "ILOCK". The INTERLOK block and the VALVE block must be placed in the same CFC chart.

2.6 Block Icons: Asset Management

2.6.1 Block Icons: Asset Management

Block Icons Supported by the System

The block icons for asset management supported by the system are contained in the "@@maintenancetypicals.pdl" picture. This file is located under ..\SIEMENS\WinCC\options\pdl\faceplatedesigner_v6" and is copied from the installation directory to the project directory under ..\wincproj\<os-name>\GraCS when a PCS 7 project is generated or when the OS project editor is run.

Icons in the Block Icon	Meaning	Local Operation
	**Diagnostic block icon** with the self-diagnosis icon (top right) and the group display with the status of the lower-level hierarchy (bottom right)	

Icons in the Block Icon	Meaning	Local Operation
	**"Self-diagnosis (maintenance state)" icon of the component** Depending on the maintenance state, the icons shown in the right-hand column can be displayed within the component. This only applies to non-redundant components. Regardless of which icon is displayed, the icon is used to open the faceplate of the component. The table shown under "Status Display for Redundant Components [Asset] (Page 138)" is applicable for redundant components.	 Maintenance alarm  Maintenance demanded  Maintenance required  Component good  Local operation  At least one process value is being simulated  Out of service  Component passivated  Untested/unknown  Maintenance in progress  Maintenance job requested, alarm priority  Maintenance job requested, request priority  Maintenance job requested, requirement priority
	**Group display for same-level components** The small square (group display) at the bottom right indicates the following: An alarm has not yet been acknowledged. The alarm can also have already left. Alarms remain flashing until they are acknowledged. If the alarm is still pending, the icon stops flashing. If the alarm is no longer pending, the icon disappears.	**Icons in the group display**  S Maintenance alarm F Maintenance demanded M Maintenance required Good

Icons in the Block Icon	Meaning	Local Operation
	**Group display for lower-level hierarchy** A maintenance alarm, for example, is pending within the nested diagnostic pictures. Only the highest-priority class is displayed. Regardless of which icon is displayed in the group display, the left-hand icon is used to open the lower-level hierarchy.	**Icons in the group display**  S Maintenance alarm F Maintenance demanded M Maintenance required Good
	**DeviceIcon** If HW Config contains a bit map, a bit map displaying the device icon is displayed in the "DeviceIcon" property.	

Quality Code and Status Displays

3

3.1 The Quality Code Display

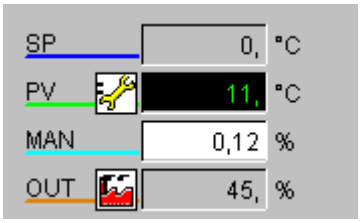
Properties of the quality code display

The quality code display is an expanded status display with seven alternatives.

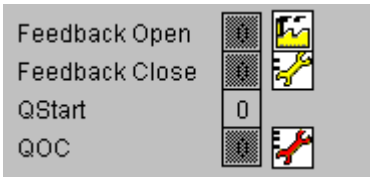
Priority	Quality code	Plain text	Symbol
1	0x44 0x48 0x60	Simulation	
2	0x00 0x14 0x18	Bad, device-specific	
3	0x28 *) 0x2B	Bad, due to process	
4	0x68	Uncertain, device-specific	
5	0x54 0x55 0x56 0x78	Uncertain, process-specific	
6	0xA4	Maintenance required	
7	0x80	Good	
	*) Code 0x08 is generated in the OS if communication with the AS is down.		

The plain text appears as short info when you position the mouse pointer over the quality code display.

The quality code is displayed before the display of the **analog values**.



With **binary values**, the quality code display appears in the maintenance view after the binary value displays in the Faceplates for valves and motors.



Additional information

The exhaustive Excel table "QC_MS" with the quality code of the PA devices and the application in Asset Management can be found in the LIB readme file.

3.2 Maintenance Status of MS

Layout of the maintenance status

The layout of the maintenance status MS (DWORD data type) is as follows:

Bit 0 to 7	Display of the MS
Bit 8 to 15	Display of the MS of the redundant partner
Bit 16	1 = Redundant partner available
Bit 17	0 = primary partner is master, 1 = redundant partner is master
Bit 18	PDM-MS worse than device status
Bit 19 to 21	Reserve
Bit 22	PDM has detected status change
Bit 23	Block takes part in the cyclical updating of PDM
Bit 24 to 27	OS operation
Bit 28 to 31	PDM-MS

The MS is copied 1:1 to the output O_MS.

Displayable Statuses

The maintenance status (MS) can display the following statuses, that are entered in Bit 0 to 7 or Bit 8 to 15 (for redundant partner):

Bit number								State	Symbol
7	6	5	4	3	2	1	0		
0	0	0	0	0	0	0	0	Good	
0	0	0	0	0	0	0	1	Passivated	
0	0	0	0	0	0	1	0	Out of service	
0	0	0	0	0	0	1	1	At least one PV simulated	
0	0	0	0	0	1	0	0	Local operation/function test	
0	0	0	0	0	1	0	1	Maintenance required	
0	0	0	0	0	1	1	0	Maintenance request	
0	0	0	0	0	1	1	1	Maintenance alarm	
0	0	0	0	1	0	0	0	Untested/unknown	
0	0	0	0	1	0	0	1	Configuration changed	

Note

If the maintenance status is "untested/unknown", all other dynamic displays in the Faceplates for Asset Management are not relevant to this instance.

Maintenance Status of the Messages

The maintenance status is updated in the driver blocks by a message. The driver blocks generate a message with the following message classes:

Message class	EventState bit	Symbol
AS control system message (S) = fault	25	S
AS control system message (F) = error	24	F
Preventive maintenance (M) = Maintenance	23	M
Status AS (SA)	18	

Redundancy

In case of redundancy, several combinations of the displays are possible. See:

Status display for redundant components [asset] (Page 138)

3.3 Status Display for Redundant Components [Asset]

Status display icons

Redundant component A and redundant component B form the status display (maintenance state) for redundant components. In the following table, the icons of the status display are listed that result from this rule (the bit numbers not listed in the table are always = 0).

Note

The status MS = 9, configuration changed, is for the redundant components and is therefore not listed here.

PV = process value

Bit number								State		
11	**10**	**9**	**8**	**3**	**2**	**1**	**0**	**Redundant component A**	**Redundant component B**	**Status display icon**
0	0	0	0	0	0	0	0	Good	Good	Good
0	0	0	1	0	0	0	0	Good	Passivated	Good
0	0	1	0	0	0	0	0	Good	Out of service	Maintenance request
0	0	1	1	0	0	0	0	Good	At least 1 PV simulated	Good
0	1	0	0	0	0	0	0	Good	Local operation/ function test	Good
0	1	0	1	0	0	0	0	Good	Maintenance required	Maintenance required
0	1	1	0	0	0	0	0	Good	Maintenance request	Maintenance request
0	1	1	1	0	0	0	0	Good	Maintenance alarm	Maintenance request
1	0	0	0	0	0	0	0	Good	Untested/ unknown	Good
0	0	0	0	0	0	0	1	Passivated	Good	Good
0	0	0	1	0	0	0	1	Passivated	Passivated	Passivated
0	0	1	0	0	0	0	1	Passivated	Out of service	Out of service
0	0	1	1	0	0	0	1	Passivated	At least 1 PV simulated	At least 1 PV simulated
0	1	0	0	0	0	0	1	Passivated	Local operation/ function test	Local operation/ function test

Bit number								State			
0	1	0	1	0	0	0	1	Passivated	Maintenance required	Maintenance required	
0	1	1	0	0	0	0	1	Passivated	Maintenance request	Maintenance request	
0	1	1	1	0	0	0	1	Passivated	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	0	0	1	Passivated	Untested/ unknown	Passivated	
0	0	0	0	0	0	1	0	Out of service	Good	Maintenance request	
0	0	0	1	0	0	1	0	Out of service	Passivated	Out of service	
0	0	1	0	0	0	1	0	Out of service	Out of service	Out of service	
0	0	1	1	0	0	1	0	Out of service	At least 1 PV simulated	At least 1 PV simulated	
0	1	0	0	0	0	1	0	Out of service	Local operation/ function test	Local operation/ function test	
0	1	0	1	0	0	1	0	Out of service	Maintenance required	Maintenance required	
0	1	1	0	0	0	1	0	Out of service	Maintenance request	Maintenance request	
0	1	1	1	0	0	1	0	Out of service	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	0	1	0	Out of service	Untested/ unknown	Out of service	
0	0	0	0	0	0	1	1	At least 1 PV simulated	Good	Good	
0	0	0	1	0	0	1	1	At least 1 PV simulated	Passivated	At least 1 PV simulated	
0	0	1	0	0	0	1	1	At least 1 PV simulated	Out of service	At least 1 PV simulated	
0	0	1	1	0	0	1	1	At least 1 PV simulated	At least 1 PV simulated	At least 1 PV simulated	
0	1	0	0	0	0	1	1	At least 1 PV simulated	Local operation/ function test	Local operation/ function test	
0	1	0	1	0	0	1	1	At least 1 PV simulated	Maintenance required	Maintenance required	
0	1	1	0	0	0	1	1	At least 1 PV simulated	Maintenance request	Maintenance request	
0	1	1	1	0	0	1	1	At least 1 PV simulated	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	0	1	1	At least 1 PV simulated	Untested/ unknown	At least 1 PV simulated	

Bit number								State			
0	0	0	0	0	1	0	0	Local operation/ function test	Good	Good	
0	0	0	1	0	1	0	0	Local operation/ function test	Passivated	Local operation/ function test	
0	0	1	0	0	1	0	0	Local operation/ function test	Out of service	Local operation/ function test	
0	0	1	1	0	1	0	0	Local operation/ function test	At least 1 PV simulated	Local operation/ function test	
0	1	0	0	0	1	0	0	Local operation/ function test	Local operation/ function test	Local operation/ function test	
0	1	0	1	0	1	0	0	Local operation/ function test	Maintenance required	Maintenance required	
0	1	1	0	0	1	0	0	Local operation/ function test	Maintenance request	Maintenance request	
0	1	1	1	0	1	0	0	Local operation/ function test	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	1	0	0	Local operation/ function test	Untested/ unknown	Local operation/ function test	
0	0	0	0	0	1	0	1	Maintenance required	Good	Maintenance required	
0	0	0	1	0	1	0	1	Maintenance required	Passivated	Maintenance required	
0	0	1	0	0	1	0	1	Maintenance required	Out of service	Maintenance required	
0	0	1	1	0	1	0	1	Maintenance required	At least 1 PV simulated	Maintenance required	
0	1	0	0	0	1	0	1	Maintenance required	Local operation/ function test	Maintenance required	
0	1	0	1	0	1	0	1	Maintenance required	Maintenance required	Maintenance required	
0	1	1	0	0	1	0	1	Maintenance required	Maintenance request	Maintenance request	
0	1	1	1	0	1	0	1	Maintenance required	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	1	0	1	Maintenance required	Untested/ unknown	Maintenance required	
0	0	0	0	0	1	1	0	Maintenance request	Good	Maintenance request	
0	0	0	1	0	1	1	0	Maintenance request	Passivated	Maintenance request	
0	0	1	0	0	1	1	0	Maintenance request	Out of service	Maintenance request	

Bit number								State			
0	0	1	1	0	1	1	0	Maintenance request	At least 1 PV simulated	Maintenance request	
0	1	0	0	0	1	1	0	Maintenance request	Local operation/ function test	Maintenance request	
0	1	0	1	0	1	1	0	Maintenance request	Maintenance required	Maintenance request	
0	1	1	0	0	1	1	0	Maintenance request	Maintenance request	Maintenance request	
0	1	1	1	0	1	1	0	Maintenance request	Maintenance request	Maintenance alarm	
1	0	0	0	0	1	1	0	Maintenance request	Untested/ unknown	Maintenance request	
0	0	0	0	0	1	1	1	Maintenance alarm	Good	Maintenance request	
0	0	0	1	0	1	1	1	Maintenance alarm	Passivated	Maintenance alarm	
0	0	1	0	0	1	1	1	Maintenance alarm	Out of service	Maintenance alarm	
0	0	1	1	0	1	1	1	Maintenance alarm	At least 1 PV simulated	Maintenance alarm	
0	1	0	0	0	1	1	1	Maintenance alarm	Local operation/ function test	Maintenance alarm	
0	1	0	1	0	1	1	1	Maintenance alarm	Maintenance required	Maintenance alarm	
0	1	1	0	0	1	1	1	Maintenance alarm	Maintenance request	Maintenance alarm	
0	1	1	1	0	1	1	1	Maintenance alarm	Maintenance alarm	Maintenance alarm	
1	0	0	0	0	1	1	1	Maintenance alarm	Untested/ unknown	Maintenance alarm	
1	0	0	0	1	0	0	0	Untested/ unknown	Untested/ unknown	Untested/ unknown	
0	0	0	0	1	0	0	0	Untested/ unknown	Good	Good	
0	0	0	1	1	0	0	0	Untested/ unknown	Passivated	Passivated	
0	0	1	0	1	0	0	0	Untested/ unknown	Out of service	Out of service	
0	0	1	1	1	0	0	0	Untested/ unknown	At least 1 PV simulated	At least 1 PV simulated	
0	1	0	0	1	0	0	0	Untested/ unknown	Local operation/ function test	Local operation/ function test	
0	1	0	1	1	0	0	0	Untested/ unknown	Maintenance required	Maintenance required	

Bit number								State			
0	1	1	0	1	0	0	0	Untested/ unknown	Maintenance request	Maintenance request	
0	1	1	1	1	0	0	0	Untested/ unknown	Maintenance alarm	Maintenance alarm	

Index

G

H

I

M

O

P

Q

R

S

V