

**SIEMENS**



# SIMATIC

S7-1500 / ET 200MP

Digital input module DI 16x24...125VUC HF (6ES7521-7EH00-0AB0)

Manual

Edition

11/2015

Answers for industry.

# SIEMENS

## SIMATIC

S7-1500/ET 200MP  
Digital input module DI  
16x24...125VUC HF (6ES7521-  
7EH00-0AB0)

Manual

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# Preface

## Purpose of the documentation

This manual supplements the system manual S7-1500/ET 200MP (<http://support.automation.siemens.com/WW/view/en/59191792>).

Functions that relate in general to the systems are described in these system manuals.

The information provided in this manual and in the system/function manuals supports you in commissioning the systems.

## Conventions

The term "CPU" is used in this manual both for the CPUs of the S7-1500 automation system, as well as for interface modules of the ET 200MP distributed I/O system.

Please also observe notes marked as follows:

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### Note

A note contains important information on the product described in the documentation, on the handling of the product or on the section of the documentation to which particular attention should be paid.

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To stay informed about product updates as they occur, sign up for a product-specific newsletter. You can find more information on the Internet (<http://support.automation.siemens.com>).



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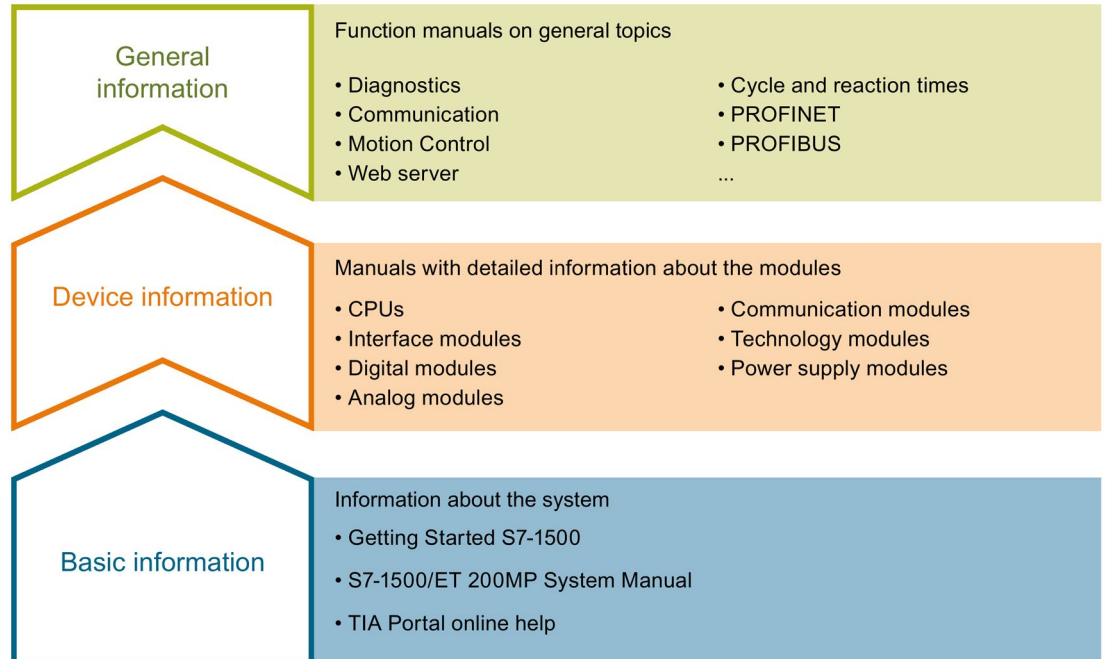
For legal reasons, we are obliged to publish the original text of the license conditions and copyright notices. Please read the information relating to this in the appendix.

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## Documentation guide

The documentation for the SIMATIC S7-1500 automation system and the SIMATIC ET 200MP distributed I/O system is arranged into three areas. This arrangement enables you to access the specific content you require.



### Basic information

The System Manual and Getting Started describe in detail the configuration, installation, wiring and commissioning of the SIMATIC S7-1500 and ET 200MP systems. The STEP 7 online help supports you in the configuration and programming.

### Device information

Product manuals contain a compact description of the module-specific information, such as properties, wiring diagrams, characteristics and technical specifications.

### General information

The function manuals contain detailed descriptions on general topics regarding the SIMATIC S7-1500 and ET 200MP systems, e.g. diagnostics, communication, Motion Control, Web server.

You can download the documentation free of charge from the Internet (<http://www.automation.siemens.com/mcms/industrial-automation-systems-simatic/en/manual-overview/tech-doc-controllers/Pages/Default.aspx>).

Changes and supplements to the manuals are documented in a Product Information.

You can download the product information free of charge from the Internet (<https://support.industry.siemens.com/cs/us/en/view/68052815>).

### Manual Collection S7-1500/ET 200MP

The Manual Collection contains the complete documentation on the SIMATIC S7-1500 automation system and the ET 200MP distributed I/O system gathered together in one file.

You can find the Manual Collection on the Internet (<http://support.automation.siemens.com/WW/view/en/86140384>).

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You can export the manual as PDF file or in a format that can be edited later.

You can find "mySupport" - Documentation on the Internet (<http://support.industry.siemens.com/My/ww/en/documentation>).

## "mySupport" - CAx data

In the CAx data area in "mySupport", you can access the current product data for your CAx or CAe system.

You configure your own download package with a few clicks.

In doing so you can select:

- Product images, 2D dimension drawings, 3D models, internal circuit diagrams, EPLAN macro files
- Manuals, characteristics, operating manuals, certificates
- Product master data

You can find "mySupport" - CAx data on the Internet (<http://support.industry.siemens.com/my/ww/en/CAxOnline>).

## Application examples

The application examples support you with various tools and examples for solving your automation tasks. Solutions are shown in interplay with multiple components in the system - separated from the focus on individual products.

You will find the application examples on the Internet (<https://support.industry.siemens.com/sc/ww/en/sc/2054>).

## TIA Selection Tool

With the TIA Selection Tool, you can select, configure and order devices for Totally Integrated Automation (TIA).

This tool is the successor of the SIMATIC Selection Tool and combines the known configurators for automation technology into one tool.

With the TIA Selection Tool, you can generate a complete order list from your product selection or product configuration.

You can find the TIA Selection Tool on the Internet (<http://w3.siemens.com/mcms/topics/en/simatic/tia-selection-tool>).

## Product overview

### 2.1 Properties

Part number:

6ES7521-7EH00-0AB0

View of the module

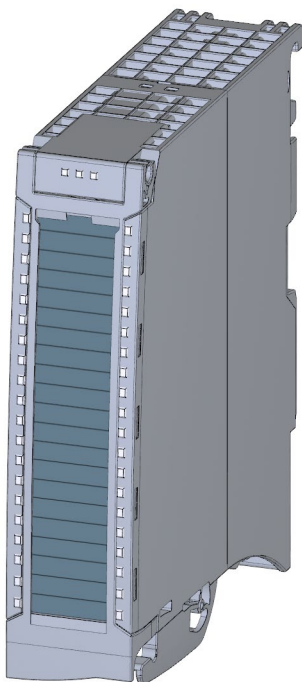


Figure 2-1 View of the module DI 16x24...125VUC HF

### Properties

The module has the following technical properties:

- 16 digital inputs; electrically isolated in groups of 1
- Rated input voltage 24 V UC to 125 V UC
- Configurable diagnostics (per channel)
- Configurable hardware interrupt (per channel)
- Programmable input delay (only with DC)
- Suitable for switches and 2-/3-/4-wire proximity switches

The module supports the following functions:

Table 2- 1 Version dependencies of the module functions

Function	Firmware version of the module	Configuration software	
		STEP 7 (TIA Portal) as of V13 SP1 with HSP 0142	GSD file in STEP 7 (TIA Portal) as of V12 or STEP 7 as of V5.5 SP3
Firmware update	V1.0.0 or higher	X	--- / X
Identification data I&M0 to I&M3	V1.0.0 or higher	X	X
Parameter assignment in RUN	V1.0.0 or higher	X	X
Module internal shared input (MSI)	V1.0.0 or higher	X (PROFINET IO only)	X (PROFINET IO only)
Configurable submodules / sub-modules for Shared Device	V1.0.0 or higher	X (PROFINET IO only)	X (PROFINET IO only)

You can configure the module with STEP 7 (TIA Portal) and with a GSD file.

## Accessories

The following accessories are supplied with the module and can also be ordered separately as spare parts:

- Labeling strips
- U connector
- Universal front cover

## Other components

The following component must be ordered separately:

Front connectors, including potential jumpers and cable ties

You can find additional information on accessories in the system manual S7-1500/ET 200MP (<http://support.automation.siemens.com/WW/view/en/59191792>).

# Wiring

## 3.1 Wiring and block diagram

This section contains the block diagram of the module and outlines various connection options.

You can find information on wiring the front connector, establishing a cable shield, etc. in the system manual S7-1500/ET 200MP (<http://support.automation.siemens.com/WW/view/en/59191792>).

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**Note**

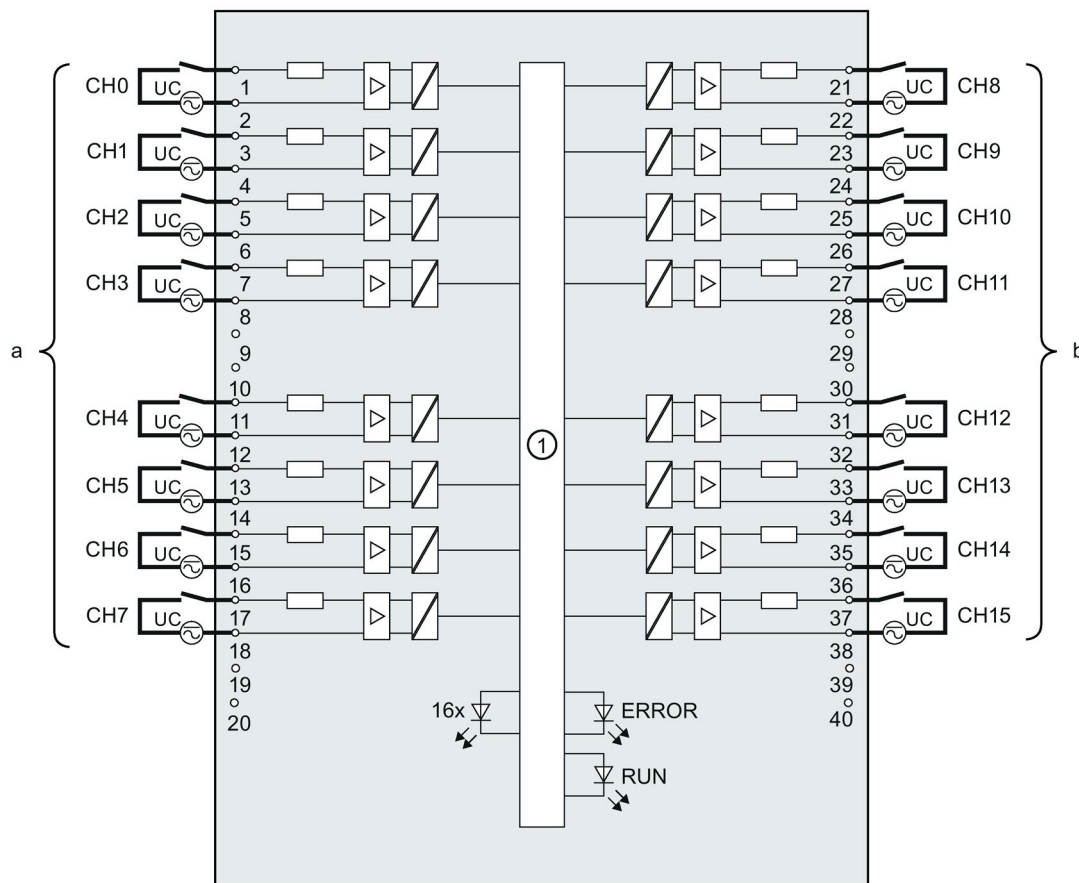
Do not insert the potential jumpers included with the front connector!

---



### Block diagram and terminal assignment

The figure below shows you how to connect the module and the assignment of the channels to the addresses (input byte a and input byte b).

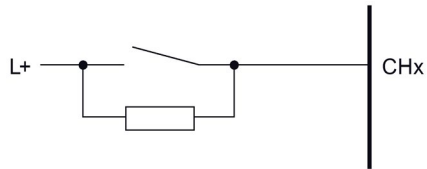


- ① Backplane bus interface
- CHx Channel or channel status LED (green/red)
- RUN Status display LED (green)
- ERROR Error display LED (red)

Figure 3-1 Block diagram and terminal assignment

### Resistor circuitry of the encoders

To detect a wire break, it is necessary that enough quiescent current is flowing even when the encoder contacts are open. Connect a resistor to the encoder contacts for this reason, see figure below.



Rated input voltage:	Resistance:
24 VUC	16 kΩ ... 21 kΩ with 1.0 W
48 VUC	37 kΩ ... 53 kΩ with 0.5 W
125 VUC	101 kΩ ... 156 kΩ with 0.25 W

Figure 3-2 Resistor circuitry of the encoders

## Parameters/address space

### 4.1 Parameters

#### DI 16x24...125VUC HF parameters

When you assign the module parameters in STEP 7, you use various parameters to specify the module properties. The following table lists the configurable parameters. The effective range of the configurable parameters depends on the type of configuration. The following configurations are possible:

- Central operation with a S7-1500 CPU
- Distributed operation on PROFINET IO in an ET 200MP system
- Distributed operation on PROFIBUS DP in an ET 200MP system

For parameter assignment in the user program, the parameters are transferred to the module using the WRREC instruction (parameter assignment in RUN) and data records; see chapter Parameter assignment and structure of the parameter data records (Page 32).

Table 4- 1 Configurable parameters and their defaults

Parameter	Range of values	Default setting	Parameter reassignment in RUN	Range of effectiveness with configuration software, e.g. STEP 7	
				Integrated in the hardware catalog as of STEP 7, V13 SP1 or GSD file PROFINET IO	GSD file PROFIBUS DP
<b>Diagnostics</b>					
• Wire break	Yes/No	No	Yes	Channel	Channel group (CH0 to CH7, CH8 to CH15)
<b>Input delay</b>	0.05 ms, 0.1 ms, 0.4 ms, 1.6 ms, 3.2 ms, 12.8 ms, 20 ms	<ul style="list-style-type: none"> <li>• 20 ms</li> <li>• Fixed 20 ms for AC</li> </ul>	Yes	Channel	Channel group (CH0 to CH7, CH8 to CH15)
<b>Hardware interrupt</b>					
• Rising edge	Yes/No	No	Yes	Channel	Channel
• Falling edge	Yes/No	No	Yes	Channel	Channel
• Rising and falling edge	Yes/No	No	Yes	Channel	Channel

---

**Note**

**Input delay for AS input voltages**

If you are operating channels of the module with an AC input voltage, you must set the input delay for these channels at 20 ms.

If you set a different input delay, the input signal might be incorrectly altered and the wrong value read.

---

## 4.2 Declaration of parameters

### Wire break

Enabling diagnostics if the line to the encoder is interrupted.

### Input delay

This parameter can be used to suppress signal disruptions. Changes to the signal are only detected if they are constantly pending longer than the set input delay time.

### Hardware interrupt

Specifies whether or not a hardware interrupt is disabled or with which of the following events a hardware interrupt is generated.

- Rising edge
- Falling edge
- Rising and falling edge

## 4.3 Address space

The module can be configured differently in STEP 7; see following table. Depending on the configuration, additional/different addresses are assigned in the process image of the inputs.

The letters "a" and "b" are printed on the module. "IB a" for example, stands for module start address input byte a.

### Configuration options of DI 16x24...125VUC HF

You can configure the module with STEP 7 (TIA Portal) or with a GSD file.

When you configure the module by means of the GSD file, the configurations are available under different abbreviations/module names.

The following configurations are possible:

Table 4- 2 Configuration options

Configuration	Short designation/ module name in the GSD file	Configuration software, e.g., with STEP 7 (TIA Portal)	
		Integrated in the hardware catalog as of STEP 7 (TIA Portal) V13 SP1 with HSP 0142	GSD file in STEP 7 (TIA Portal) V12 or higher or STEP 7 V5.5 SP3 or higher
1 x 16-channel without value status	DI 16x24...125VUC HF	X	X
1 x 16-channel with value sta- tus	DI 16x24...125VUC HF QI	X	X
2 x 8-channel without value status	DI 16x24...125VUC HF S	X (PROFINET IO only)	X (PROFINET IO only)
2 x 8-channel with value status	DI 16x24...125VUC HF S QI	X (PROFINET IO only)	X (PROFINET IO only)
1 x 16-channel with value sta- tus for module-internal shared input with up to 4 submodules	DI 16x24...125VUC HF MSI	X (PROFINET IO only)	X (PROFINET IO only)

### Value status (Quality Information, QI)

The value status is always activated for the following module names:

- DI 16x24...125VUC HF QI,
- DI 16x24...125VUC HF S QI
- DI 16x24...125VUC HF MSI

An additional bit is assigned to each channel for the value status. The value status bit indicates if the read in digital value is valid. (0 = value is incorrect).

### Address space for configuration as 16-channel DI 16x24...125VUC HF QI

The following figure shows the assignment of the address space for the configuration as a 16-channel module with value status. You can freely assign the start address for the module. The addresses of the channels are derived from the start address.

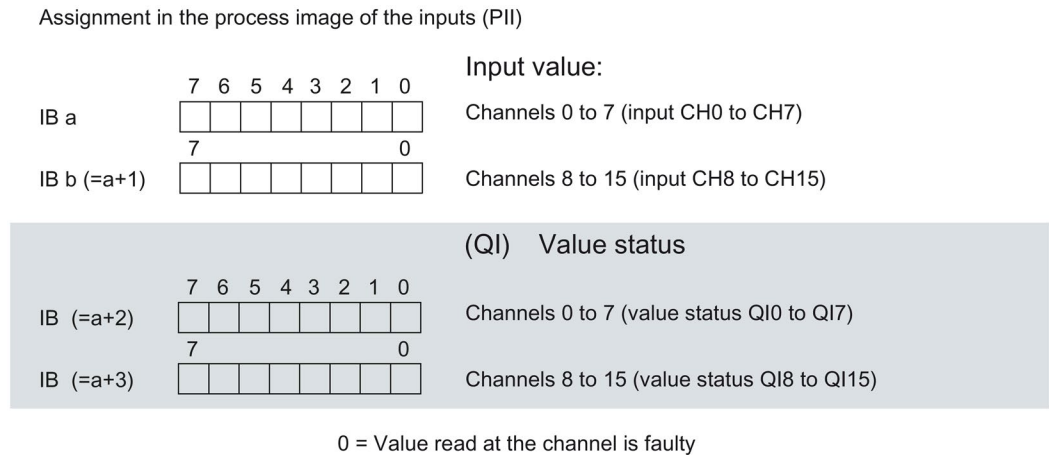


Figure 4-1 Address space for configuration as 16-channel DI 16x24...125VUC HF QI with value status

### Address space for configuration as 2 x 8-channel DI 16x24...125VUC HF S QI

For the configuration as a 2 x 8-channel module, the channels of the module are divided into multiple submodules. The submodules can be assigned to different IO controllers when the module is used in a shared device.

The number of usable submodules is dependent on the interface module used. Observe the information in the manual for the particular interface module.

Contrary to the 1 x 16-channel module configuration, each of the two submodules has a freely assignable start address.

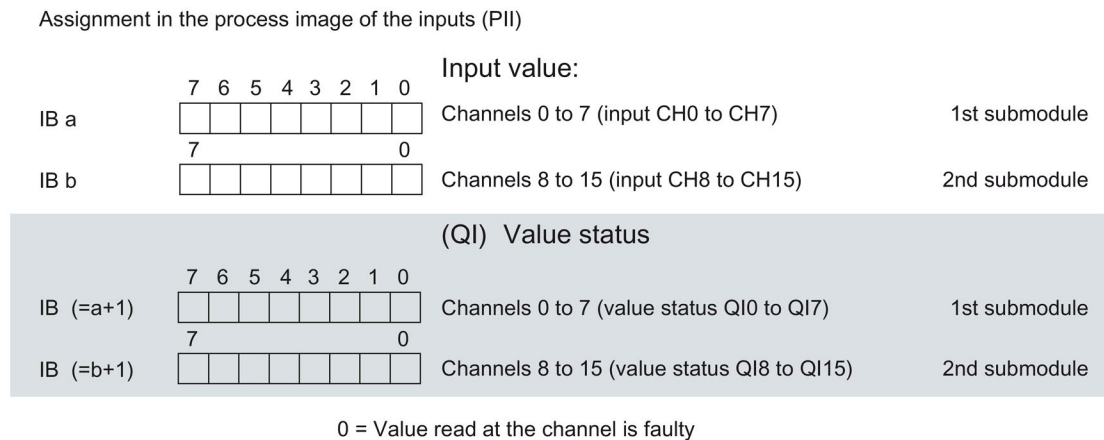


Figure 4-2 Address space for configuration as 2 x 8-channel DI 16x24...125VUC HF S QI

## Address space for configuration as 1 x 16-channel DI 16x24...125VUC HF MSI

The channels 0 to 15 of the module are copied in up to four submodules with configuration 1 x 16-channel module (Module-internal shared input, MSI). Channels 0 to 15 are then available with identical input values in different submodules. These submodules can be assigned to up to four IO controllers when the module is used in a shared device. Each IO controller has read access to the same channels.

The number of IO controllers depends on the interface module being used. Please observe the information in the manual for the particular interface module.

### Value status (Quality Information, QI)

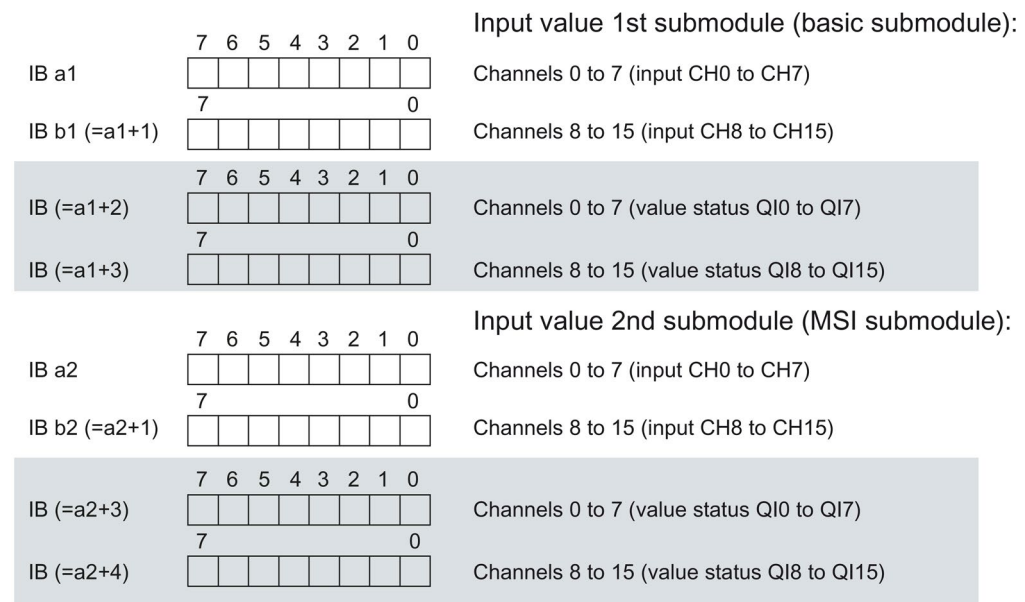
The meaning of the value status depends on the submodule on which it occurs.

For the first submodule (=basic submodule), the value status 0 indicates that the value is incorrect.

For 2nd to 4th submodule (=MSI submodule), the value status 0 indicates that the value is incorrect or the basic submodule has not yet been configured (not ready).

The following figure shows the assignment of the address space with submodules 1 and 2 and the value status.

Assignment in the process image of the inputs (PII) for 1st and 2nd submodule



0 = Value read at the channel is faulty

Figure 4-3 Address space for configuration as 1 x 16-channel DI 16x24...125VUC HF MSI

4.3 Address space

The following figure shows the assignment of the address space with submodules 3 and 4 and the value status.

Assignment in the process image of the inputs (PII) for 3rd and 4th submodule

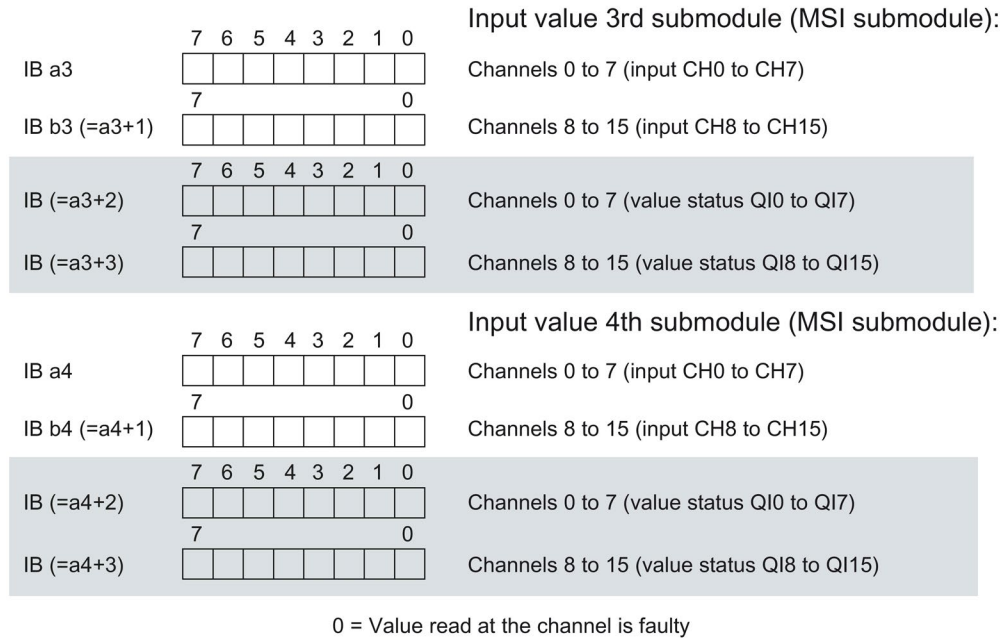


Figure 4-4 Address space for configuration as 1 x 16-channel DI 16x24...125VUC HF MSI

Reference

You will find information on the module-internal shared input/shared output (MSI/MSO) function in the function manual PROFINET with STEP 7 V13 (<https://support.industry.siemens.com/cs/ww/en/view/49948856>) in the section Module-internal shared input/shared output (MSI/MSO).



## Interrupts/diagnostic alarms

### 5.1 Status and error displays

#### LED displays

The following figure shows the LED displays (status and error displays) of module.

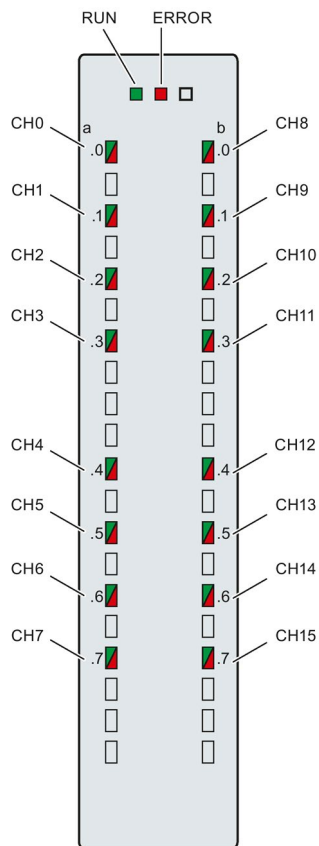












Figure 5-1 LED displays of the module DI 16x24...125VUC HF

### Meaning of the LED displays

The tables below explain the meaning of the status and error displays.




#### LED RUN/ERROR

Table 5- 1 RUN/ERROR status and error displays

LED		Meaning	Remedy
RUN	ERROR		
 Off	 Off	Voltage missing or too low at backplane bus.	<ul style="list-style-type: none"> <li>Switch on the CPU and/or the system power supply modules.</li> <li>Verify that the U connectors are inserted.</li> <li>Check to see if too many modules are inserted.</li> </ul>
 Flashes	 Off	The module starts and flashes until the valid parameter assignment is set.	---
 On	 Off	Module is ready.	
 On	 Flashes	Indicates module errors (at least one error at one channel, e.g., wire break).	Evaluate the diagnostics data and eliminate the error (e.g., wire break).
 Flashes	 Flashes	Hardware defective.	Replace the module.

#### LED CHx

Table 5- 2 CHx status display

LED CHx	Meaning	Remedy
 Off	0 = Status of the input signal.	---
 On	1 = Status of the input signal.	---
 On	Diagnostics: Wire break or hardware interrupt lost	Check the wiring. When using simple switches, disable diagnostics or connect a resistor to the encoder contacts.

## 5.2 Interrupts

Digital input module DI 16x24...125VUC HF supports diagnostic and hardware interrupts.

For detailed information on the error event, refer to the diagnostic interrupt, hardware interrupt organization block with the "RALRM" instruction (read additional interrupt information) and to the STEP 7 online help.

### Diagnostics interrupt

The module generates a diagnostic interrupt at the following events:

- Wire break
- Parameter assignment error
- Hardware interrupt lost

### Hardware interrupt

The module generates a hardware interrupt at the following events:

- Rising edge
- Falling edge
- Rising and falling edge

The module channel that triggered the hardware interrupt is entered in the start information of the organization block. The following figure shows the assignment to the bits of double word 8 in local data.

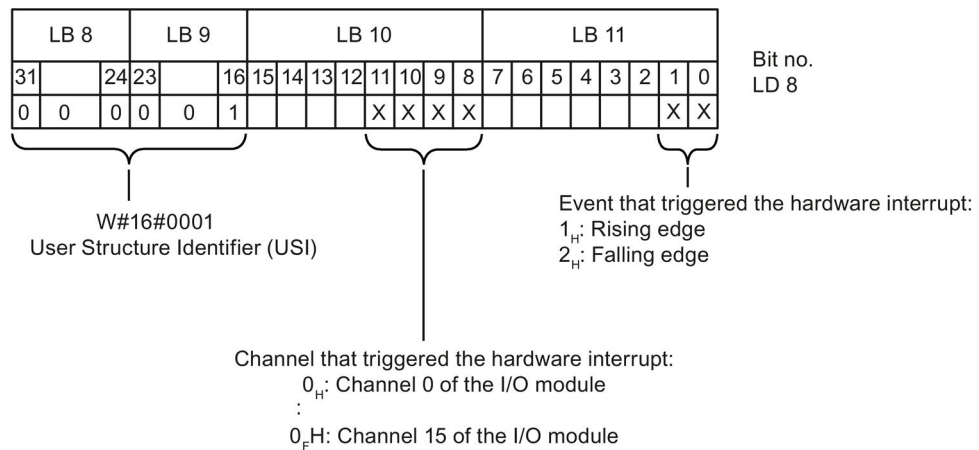


Figure 5-2 Start information of the organization block

**Structure of the additional interrupt information**

Table 5- 3 Structure of USI = W#16#0001

Data block name	Contents	Comment	Bytes
<b>USI</b> (User Structure Identifier)	W#16#0001	Additional interrupt info for hardware interrupts of the I/O module	2
The channel that triggered the hardware interrupt follows.			
<b>Channel</b>	B#16#00 to B#16#0F	Number of the event-triggering channel (channel 0 to channel 15 of the module)	1
It follows the error event that triggered the hardware interrupt.			
<b>Event</b>	B#16#01	Rising edge	1
	B#16#02	Falling edge	

**5.3 Diagnostics alarms**

**Diagnostics alarms**

A diagnostics alarm is generated and the ERROR LED flashes for each diagnostics event on the module. The diagnostics alarms can be read out in the diagnostics buffer of the CPU, for example. You can evaluate the error codes with the user program.

If the module is operated distributed with PROFIBUS DP in an ET 200MP system, you have the option to read out diagnostics data with the instruction RDREC or RD\_REC using data record 0 and 1. The structure of the data records is available on the Internet in the "Manual for interface module IM 155-5 DP ST (6ES7155-5BA00-0AB0)".

Table 5- 4 Diagnostics alarms, their meaning and corrective measures

Diagnostics alarm	Error code	Meaning	Corrective measures
Wire break	6H	Impedance of encoder circuit too high	Use a different encoder type or modify the wiring, for example, using cables with larger cross-section
		Wire break between the module and sensor	Connect the cable
		Channel not connected (open)	<ul style="list-style-type: none"> <li>• Disable diagnostics</li> <li>• Connect encoder contacts with resistor:                             <ul style="list-style-type: none"> <li>– 16 kΩ ... 21 kΩ with 1.0 W at 24 VUC</li> <li>– 37 kΩ ... 53 kΩ with 0.5 W at 48 VUC</li> <li>– 101 kΩ ... 156 kΩ with 0.25 W at 125 VUC</li> </ul> </li> </ul>

<b>Diagnostics alarm</b>	<b>Error code</b>	<b>Meaning</b>	<b>Corrective measures</b>
Parameter assignment error	10H	<ul style="list-style-type: none"><li>• The module cannot evaluate parameters for the channel</li><li>• Incorrect parameter assignment</li></ul>	Correct the parameter assignment
Hardware interrupt lost	16H	The module cannot trigger an interrupt because the previous interrupt was not acknowledged; possibly a configuration error	Change interrupt processing in the CPU and edit the module parameters if necessary (the error persists until the module is assigned new parameters).

# Technical specifications

## Technical specifications of the DI 16x24...125VUC HF

	6ES7521-7EH00-0AB0
<b>General information</b>	
Product type designation	DI 16x24 ... 125VUC HF
Hardware functional status	FS01
Firmware version	V1.0.0
<b>Product function</b>	
I&M data	Yes; I&M0 to I&M3
<b>Engineering with</b>	
STEP 7 TIA Portal can be configured/integrated as of version	V13 SP1 / -
STEP 7 can be configured/integrated as of version	V5.5 SP3 / -
PROFIBUS as of GSD version/GSD revision	V1.0 / V5.1
PROFINET as of GSD version/GSD revision	V2.3 / -
<b>Operating mode</b>	
DI	Yes
MSI	Yes
<b>Power</b>	
Power consumption from the backplane bus	1.2 W
<b>Digital inputs</b>	
Number of inputs	16
Digital inputs, configurable	Yes
Sinking/sourcing input	Yes; reading p
Input characteristic curve acc. to IEC 61131, type 3	Yes; with 24 V DC
<b>Input voltage</b>	
Type of input voltage	AC/DC
Rated value (DC)	24 V; 48 V, 125 V
Rated value (AC)	24 V; 48 V, 125 V (50 - 60 Hz)
for signal "0"	-5 ... +5 V
for signal "1"	+11 V DC to +146 V DC
<b>Input current</b>	
for signal "1", typ.	3 mA; with 24 V DC

	6ES7521-7EH00-0AB0
<b>Input delay (for rated value of input voltage)</b>	
For standard inputs	
• Configurable	Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms configurable for DC, 20 ms fixed for AC
• with "0" to "1", min.	0.05 ms
• with "0" to "1", max.	20 ms
• with "1" to "0", min.	0.05 ms
• with "1" to "0", max.	20 ms
For interrupt inputs	
• Configurable	Yes
<b>Cable length</b>	
shielded, max.	1000 m
unshielded, max.	600 m
<b>Encoders</b>	
<b>Connectable encoders</b>	
2-wire sensor	Yes
• Permitted quiescent current (2-wire sensor), max.	1.5 mA
<b>Interrupts/diagnostics/status information</b>	
<b>Interrupts</b>	
Diagnostics interrupt	Yes
Hardware interrupt	Yes
<b>Diagnostics alarms</b>	
Diagnostics	Yes
Wire break	Yes; to I < 550 µA
Short-circuit	No
Fuse blown	No
<b>Diagnostics indicator LED</b>	
RUN LED	Yes; green LED
ERROR LED	Yes; red LED
Monitoring of supply voltage (PWR LED)	No
Channel status display	Yes; green LED
For channel diagnostics	Yes; red LED
For module diagnostics	Yes; red LED
<b>Electrical isolation</b>	
<b>Electrical isolation of channels</b>	
Between the channels	Yes
Between the channels, in groups of	1
Between the channels and backplane bus	Yes
<b>Permitted potential difference</b>	
Between different circuits	146 V DC / 132 V AC

<b>6ES7521-7EH00-0AB0</b>	
<b>Isolation</b>	
Isolation tested with	1200 V DC
<b>Ambient conditions</b>	
<b>Ambient temperature in operation</b>	
Horizontal mounting position, min.	0 °C
Horizontal mounting position, max.	60 °C
Vertical mounting position, min.	0 °C
Vertical mounting position, max.	40 °C
<b>Distributed mode</b>	
Prioritized startup	Yes
<b>Dimensions</b>	
Width	35 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	240 g



**Power reduction (derating) in relation to the mounting position and ambient temperature (per module)**

The following graphs show the number of channels (CHx) that can be used simultaneously in relation to the mounting position of the S7-1500/ET 200MP automation system and the ambient temperature.

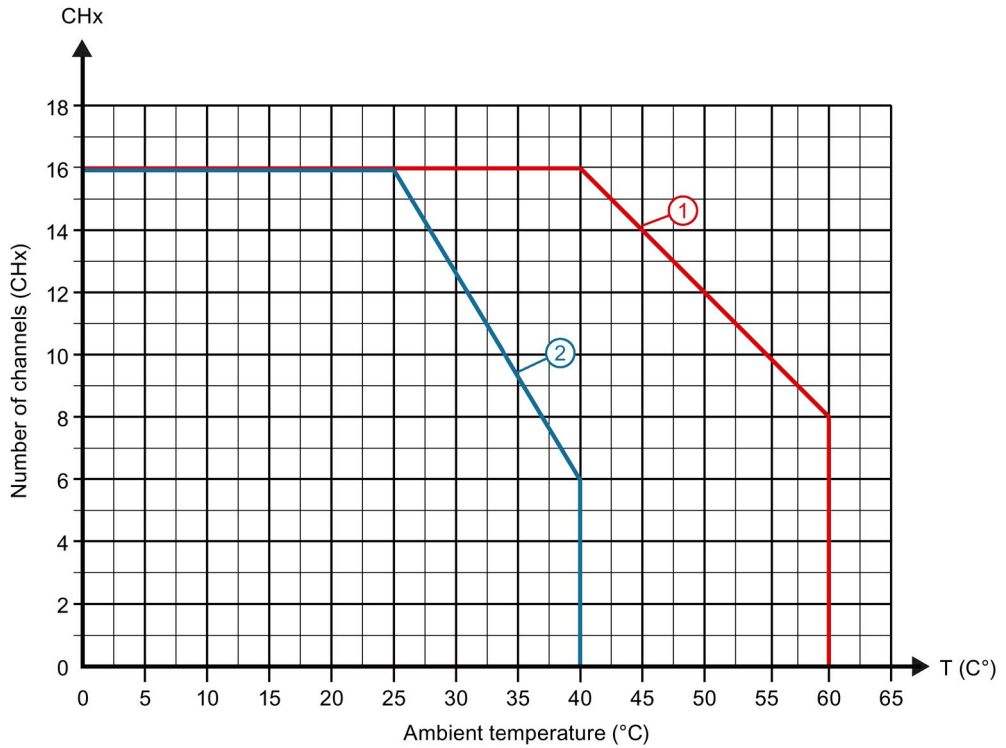


Figure 6-1 Information on channels used simultaneously (per module):

## Dimensional drawing

### A.1 Dimensional drawing

The dimensional drawing of the module on the mounting rail, as well as a dimensional drawing with open front cover, are provided in this appendix. Always observe the specified dimensions for installations in cabinets, control rooms, etc.

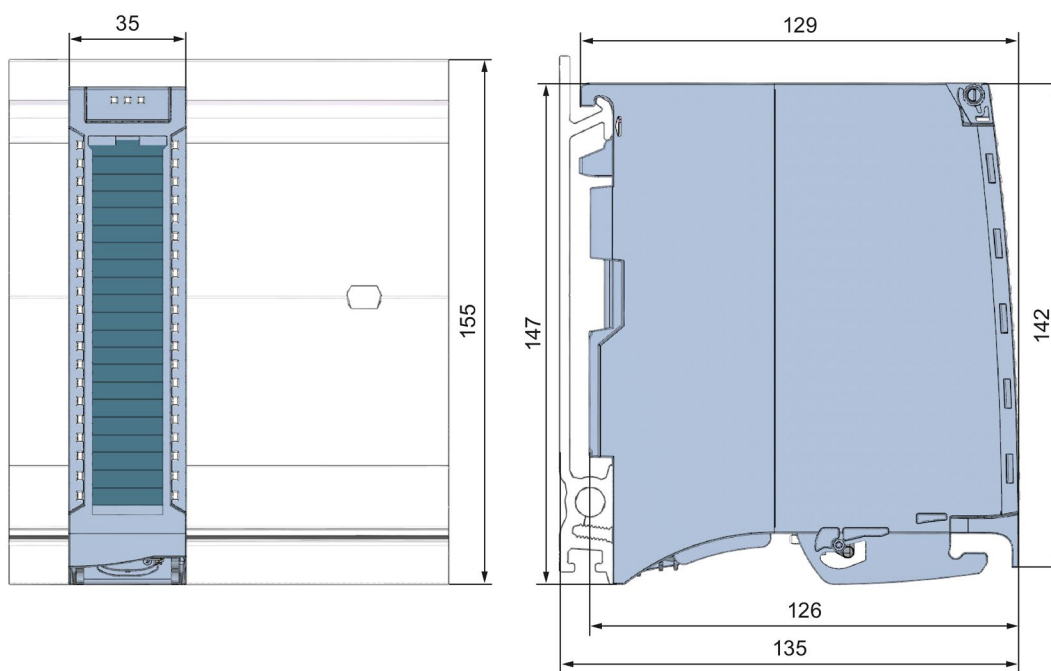


Figure A-1 Dimension drawing of the DI 16x24...125VUC HF module

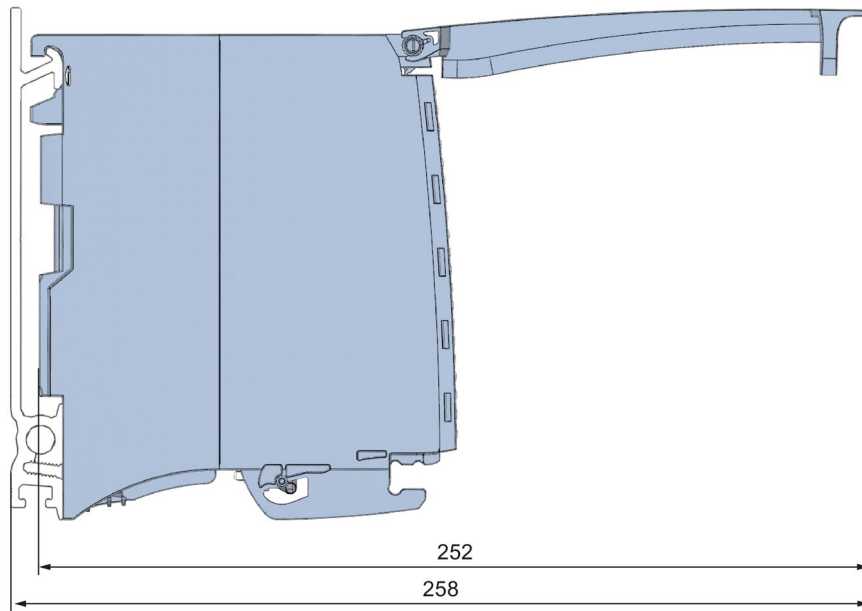


Figure A-2 Dimension drawing of the DI 16x24...125VUC HF module, side view with open front cover

## Parameter data records

### B.1 Parameter assignment and structure of the parameter data records

The data records of the module have an identical structure, regardless of whether you configure the module with PROFIBUS DP or PROFINET IO.

#### Dependencies for configuration with GSD file

When a GSD file is used to configure a module, dependencies can arise when "assigning the parameters".

There are no dependencies for this module. You can assign the individual parameters in any combination.

#### Parameter assignment in the user program

You have the option to reconfigure the module in RUN (e.g. the input delay values of selected channels can be edited without having an effect on the other channels).

#### Parameter assignment in RUN

The "WRREC" instruction is used to transfer the parameters to the module using data records 0 to 15. The parameters set in STEP 7 do not change in the CPU, which means the parameters set in STEP 7 are still valid after a restart.

The parameters are only checked for plausibility by the module after the transfer.

#### Output parameter STATUS

The module ignores errors that occurred during the transfer of parameters with the WRREC instruction and continues operation with the previous parameter assignment. However, a corresponding error code is written to the STATUS output parameter.

The description of the WRREC instruction and the error codes is available in the STEP 7 online help.

#### Operation of the module behind a PROFIBUS DP interface module

If the module is operated behind a PROFIBUS DP interface module, the parameter data records 0 and 1 are not read back. You obtain the diagnostics data records 0 and 1 with the read back parameter data records 0 and 1. You can find additional information in the Interrupts section of the device manual for the PROFIBUS DP interface module in the Internet.

## B.2 Structure of the parameter data records

### Assignment of data record and channel

For the configuration with 1 x 16-channel, the parameters are located in data records 0 to 15 and are assigned as follows:

- Data record 0 for channel 0
- Data record 1 for channel 1
- ...
- Data record 14 for channel 14
- Data record 15 for channel 15

For the configuration as a 4 x 8-channel module, the module has 4 submodules with eight channels each. The parameters for the channels are located in data records 0 to 7 and are assigned as follows:

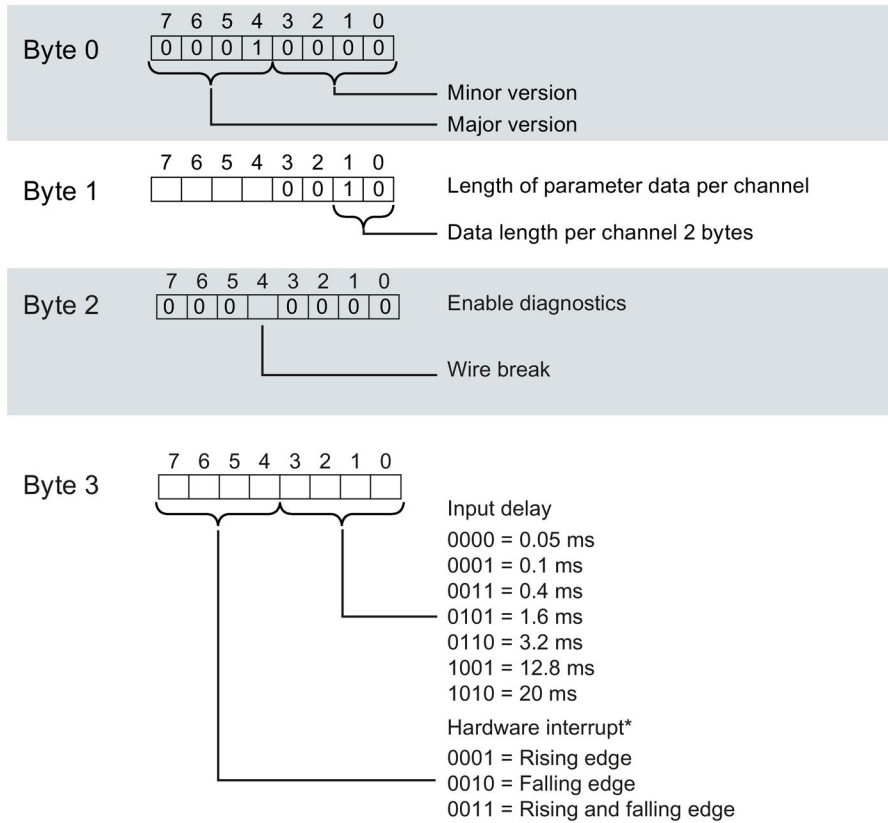
- Data records 0 to 7 for channels 0 to 7 (submodule 1)
- Data records 0 to 7 for channels 8 to 15 (submodule 2)

Address the respective submodule for data record transfer.

**Data record structure**

The figure below shows the structure of data record 0 for channel 0 as an example. The structure is identical for channels 1 to 15. The values in byte 0 and byte 1 are fixed and may not be changed.

Enable a parameter by setting the corresponding bit to "1".



\* Enabling the hardware interrupts via a data record is only possible if the channel is assigned to a hardware interrupt OB in STEP 7

Figure B-1 Structure of data record 0: Bytes 0 to 3



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