

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7521-1BH00-0AB0

SIMATIC S7-1500 DI 16X24VDC HF

Used with the applicable SIMATIC S7-1500 digital input system configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official pages follow this cover with source pagination retained.

[A5E03485952-AH](#)

Product overview

2.1 Properties

Article number:

6ES7521-1BH00-0AB0

View of the module

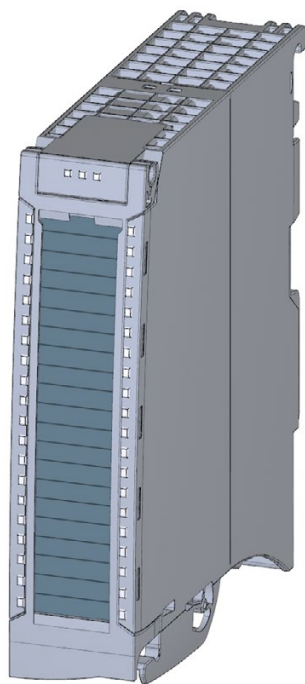


Figure 2-1 View of the DI 16x24VDC HF module

Wiring

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

You can find information on wiring the front connector, creating a cable shield, etc. in the Wiring section of the S7-1500/ET 200MP

(<http://support.automation.siemens.com/WW/view/en/59191792>) system manual.

Wiring and block diagram

The figure below shows you how to wire the module and the assignment of the channels to the addresses (input byte a to input byte b). You can set parameters so that channels 0 and 1 are used for counting. Channels 2 to 15 can continue to be used as digital inputs.

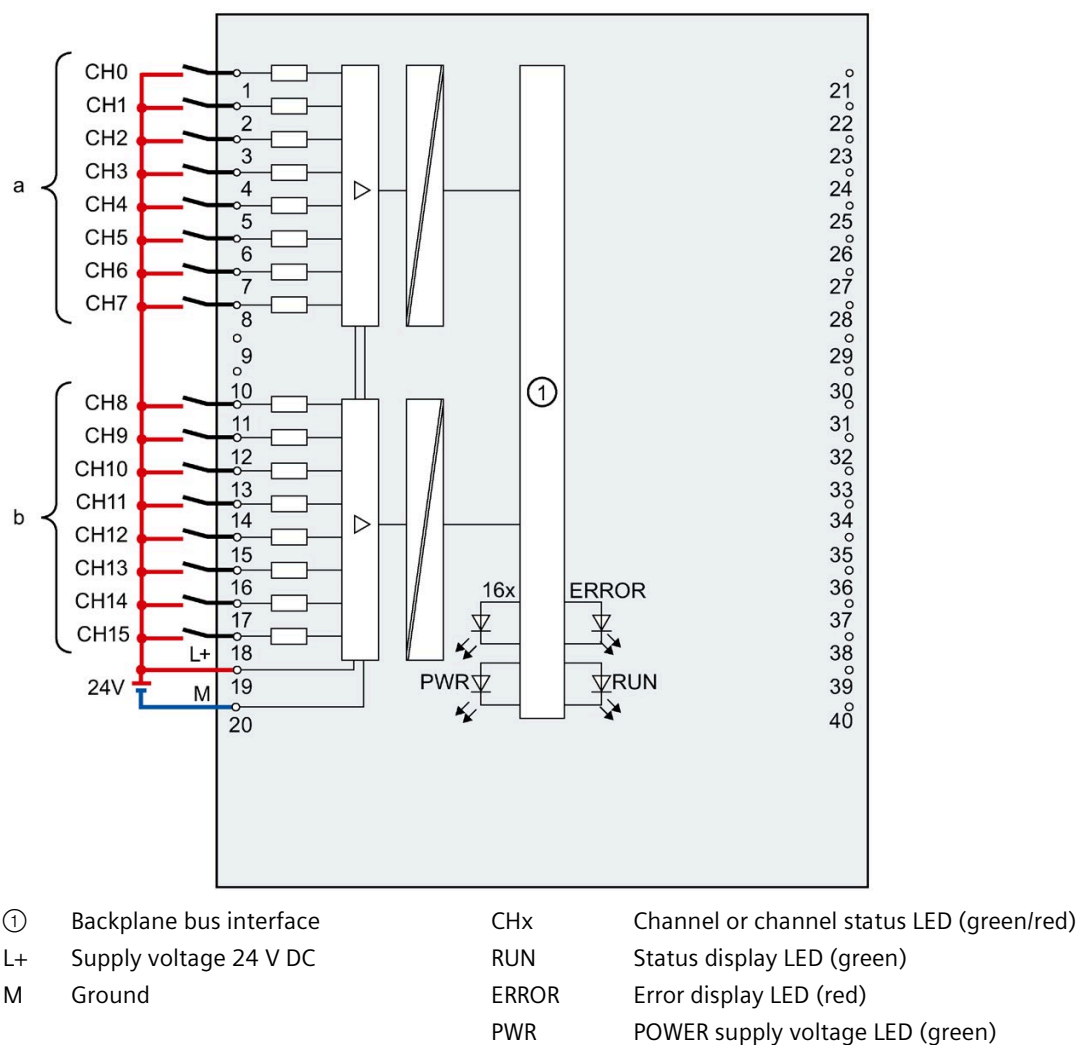


Figure 3-1 Block diagram and terminal assignment

Technical specifications

Technical specifications of the DI 16x24VDC HF

The following table shows the technical specifications as of 05/2022. You will find a data sheet including daily updated technical specifications on the Internet (<https://support.industry.siemens.com/cs/ww/en/pv/6ES7521-1BH00-0AB0/td?dl=en>).

Article number	6ES7521-1BH00-0AB0
General information	
Product type designation	DI 16x24VDC HF
HW functional status	from FS04
Firmware version	V2.2.0
FW update possible	Yes
Product function	
I&M data	Yes; I&M0 to I&M3
Isochronous mode	Yes
Prioritized startup	Yes
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
STEP 7 configurable/integrated from version	V5.5 SP3 / -
PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
DI	Yes
Counter	Yes
Oversampling	No
MSI	Yes
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, max.	20 mA; with 24 V DC supply
Power	
Power available from the backplane bus	1.1 W
Power loss	
Power loss, typ.	2.6 W

Article number	6ES7521-1BH00-0AB0
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	Yes
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Digital input functions, parameterizable	
• Gate start/stop	Yes
• Freely usable digital input	Yes
• Counter	
– Number, max.	2
– Counting frequency, max.	6 kHz
– Counting width	32 bit
– Counting direction up/down	Up
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V
Input current	
• for signal "1", typ.	2.5 mA
Input delay (for rated value of input voltage) for standard inputs	
– parameterizable	Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms
– at "0" to "1", min.	0.05 ms
– at "0" to "1", max.	20 ms
– at "1" to "0", min.	0.05 ms
– at "1" to "0", max.	20 ms
for interrupt inputs	
– parameterizable	Yes
for technological functions	
– parameterizable	Yes
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
– permissible quiescent current (2-wire sensor), max.	1.5 mA