SIEMENS

SIMATIC NET

S7-1500 - PROFINET
SIMATIC CM 1542-1

Operating Instructions

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Documentation references A

CM 1542-1, firmware V3.0 (6GK7542-1AX00-0XE0)
CM 1542-1, firmware V4.1 (6GK7542-1AX10-0XE0)

12/2024
C79000-G8976-C355-07

Technical specifications - 6GK7542-1AX00-0XE0	
Weight	400 g
Dimensions (W x H x D)	35 x 147 x 129 mm
Mounting type	Mounting in S7-1500 rack, S7-1500 mounting bar installation

* Also read the information in the Ambient temperature (Page 64) section.

6.2 Technical specifications of the CM (6GK7542-1AX10-0XE0)

You will find the product functions in the section Properties and functions (Page 15).

Observe the information in the System Manual S7-1500 automation system /1/ (Page 75).

In addition to the information in the system description, the following technical specifications apply to the module.

Technical specifications - 6GK7542-1AX10-0XE0		
Product name	CM 1542-1	
Article number	6GK7542-1AX10-0XE0	
Attachment to Industrial Ethernet		
Quantity	1 x PROFINET interface with 2-port switch	
Design	2 x RJ45 socket, galvanically isolated	
Properties		
• Standard	• 100BASE-TX, IEEE 802.3-2005	
• Transmission speeds	• 100 Mbps	
• Other properties	• Full duplex, auto-crossover	
	• In PROFINET operation, only 100 Mbps full duplex	
Aging time	5 minutes	
Special features of the ports X1 P1 and X1 P2	Integration in ring topology / MRP possible	
Power supply		
Design	Via S7-1500 backplane bus (15 V)	
Further electrical data		
Current consumption (typical)	200 mA from S7-1500 backplane bus	
Active power loss (typical)	3 W	
Overvoltage category according to IEC / EN 60664-1	Category II	
Permissible ambient conditions		
Ambient temperature *	During operation with the rack installed horizontally	-30 °C ... +60 °C, without condensation or ice
	During operation with the rack installed vertically	-30 °C ... +40 °C, without condensation or ice
	During storage	-40 °C ... +70 °C
	During transportation	-40 °C ... +70 °C
Relative humidity	During operation	≤ 95 % at 30 °C, no condensation

Technical specifications - 6GK7542-1AX10-0XE0	
Permitted contaminant concentration	Corrosive gas test according to ISA-S71.04 severity level G1, G2, G3
Design, dimensions and weight	
Module format	Compact module S7-1500, single width
Degree of protection	IP20
Weight	260 g
Dimensions (W x H x D)	35 x 147 x 129 mm
Mounting type	Mounting in S7-1500 rack, S7-1500 mounting bar installation

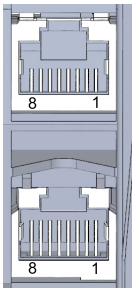
* Also read the information in the Ambient temperature (Page 64) section.

6.3 Terminal assignment

PROFINET interface X1 with 2-port switch

The table below shows the pin assignment of the ports of the PROFINET interface (RJ-45 jack). The assignment corresponds to the Ethernet standard IEEE 802.3.

Table 6-1 Pin assignment of the PROFINET interface with 2-port switch

View	No.	Terminal	Designation
X1 P1  X1 P2	1	TD	Transmit Data +
	2	TD_N	Transmit Data -
	3	RD	Receive Data +
	4	GND	Ground
	5	GND	Ground
	6	RD_N	Receive Data -
	7	GND	Ground
	8	GND	Ground