SIEMENS

Data sheet 6ES7157-1AB00-0AB0



SIMATIC ET 200AL, PROFINET interface module IM 157-1 PN, Degree of protection IP67

General information	
Product type designation	IM 157-1 PN
HW functional status	FS02
Firmware version	V1.0.x
Vendor identification (VendorID)	002AH
Product function	
● I&M data	Yes; I&M0 to I&M4
● Isochronous mode	No
● IRT	Yes
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	STEP 7 V13 SP1 or higher
● STEP 7 configurable/integrated from version	From V5.5 SP4 Hotfix 3
● PROFINET from GSD version/GSD revision	GSDML V2.3.1
Configuration control	
via dataset	Yes
Supply voltage	
power supply according to NEC Class 2 required	No
Load voltage 1L+	
● Rated value (DC)	24 V
● permissible range, lower limit (DC)	20.4 V
● permissible range, upper limit (DC)	28.8 V
● Reverse polarity protection	Yes; against destruction
Input current	
Current consumption (rated value)	100 mA
from load voltage 1L+ (unswitched voltage)	4 A; Maximum value
from load voltage 2L+, max.	4 A; Maximum value
Power loss	
Power loss, typ.	2.9 W
Address area	
Address space per station	
● Address space per station, max.	1 430 byte
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface type	PROFINET
Interface types	
● M12 port	Yes; 2x M12 D-coded
● integrated switch	Yes
Protocols	

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● PROFINET IO Device	Yes
● Open IE communication	Yes
PROFINET IO Device	
Services	
— IRT	Yes; 250 µs, 500 µs, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms
— PROFIenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Interface types	
M12 port	
● Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
● 10 Mbps	Yes; for Ethernet services
● 100 Mbps	Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)
● Autonegotiation	Yes
● Autocrossing	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
PROFIBUS	No
EtherNet/IP	No
Redundancy mode	
● PROFINET system redundancy (S2)	No
● PROFINET system redundancy (R1)	No
Media redundancy	
— MRP	Yes
— MRPD	Yes
Open IE communication	
● TCP/IP	Yes
● SNMP	Yes
● LLDP	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes
Diagnostics indication LED	
● RUN LED	Yes; green LED
● ERROR LED	Yes; red LED
● MAINT LED	Yes; Yellow LED
● Connection display LINK TX/RX	Yes; 2x green LED
Potential separation	
between the load voltages	Yes
between PROFINET and all other circuits	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes; from FS01
Highest safety class achievable for safety-related tripping of standard modules	
● Performance level according to ISO 13849-1	PL d
● Category according to ISO 13849-1	Cat. 3
● SIL acc. to IEC 62061	SIL 2
● remark on safety-oriented shutdown	https://www.siemes.plc.com/?s=6ES7157-1AB00-0AB0
Security	
PROFINET Security Class	0
Ambient conditions	
Ambient temperature during operation	

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● min.	-25 °C
● max.	55 °C
Altitude during operation relating to sea level	
● Ambient air temperature-barometric pressure-altitude	Up to max. 5 000 m, at installation height > 2 000 m additional restrictions
Connection method	
Design of electrical connection for supply voltage	M8, 4-pole
ET-Connection	
● ET-Connection	M8, 4-pin, shielded
Dimensions	
Width	45 mm
Height	159 mm
Depth	40 mm
Weights	
Weight, approx.	263 g

Classifications

	Version	Classification
eClass	16	27-24-26-08
eClass	14	27-24-26-08
eClass	12	27-24-26-08
eClass	9.1	27-24-26-08
eClass	9	27-24-26-08
eClass	8	27-24-26-08
eClass	7.1	27-24-26-08
eClass	6	27-24-26-08
ETIM	10	EC001604
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604
IDEA	4	3564
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous | Manufacturer Declaration

General Product Approval | **Maritime application**

China RoHS | Manufacturer Declaration

Maritime application

NK / Nippon Kaiji Kyokai | CCS (China Classification Society)

Maritime application | **other** | **Industrial Communication**

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PROFINET

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