SIEMENS

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	E01
Firmware version	V1.0.x
Vendor identification (VendorID)	002AH
Product function	
• I&M data	Yes; I&M0 to I&M4
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	STEP 7 V13 SP1 or higher
• STEP 7 configurable/integrated as of version	From V5.5 SP4 Hotfix 3
• PROFINET as of GSD version/GSD revision	GSDML V2.3.1

Configuration control	
via dataset	Yes

Supply voltage	
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	
• integrated switch	Yes
• M12 port	Yes; 2x M12 d-coded
Protocols	
• PROFINET IO Device	Yes

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	
PROFINET IO Device	
Services	
— Open IE communication	Yes
— IRT	Yes; 250 µs, 500 µs, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms
— PROFIenergy	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Redundancy mode	
— MRP	Yes
— MRPD	Yes

Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes

Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostic functions	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
• SILCL according to IEC 62061	SILCL 2

Ambient conditions	
Ambient temperature during operation	
• min.	-25 °C
• max.	55 °C

Connection method	
Power supply	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
last modified:	09/10/2018