

SIMATIC ET 200SP, PROFINET interface module IM155-6PN High Speed max. 30 I/O modules, 0.125 ms isochronous mode Multi-hotswap, incl. server module



General information	
Product type designation	IM 155-6 PN HS
HW functional status	From FS02
Firmware version	V4.0
<ul style="list-style-type: none"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Module swapping during operation (hot swapping) 	Yes; Multi-hot swapping
<ul style="list-style-type: none"> Isochronous mode 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V14 or higher
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP4 and higher
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	- / V2.3
Configuration control	
via dataset	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
Mains buffering	
• Mains/voltage failure stored energy time	5 ms

Input current	
Current consumption, max.	500 mA
Inrush current, max.	4.5 A
I^2t	0.09 A ² ·s

Power loss	
Power loss, typ.	1.7 W

Address area	
Address space per module	
• Address space per module, max.	32 byte; For input and output data respectively
Address space per station	
• Address space per station, max.	968 byte; For input and output data respectively

Hardware configuration	
Rack	
• Quantity of operable ET 200SP modules, max.	30
• Quantity of operable ET 200AL modules, max.	0
Submodules	
• Number of submodules per station, max.	125

Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch)

1. Interface	
Interface types	
• Number of ports	2
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes; Compatible BusAdapter: BA 2x RJ45, BA 2x FC, BA 2x SCRJ, BA SCRJ / RJ45, BA SCRJ / FC, BA 2x LC, BA LC / RJ45, BA LC / FC
Protocols	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring

Interface types	
RJ 45 (Ethernet)	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 10 Mbps	No

- 100 Mbps Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)
- Autonegotiation Yes
- Autocrossing Yes

Protocols

PROFINET IO Device	
Services	
— IRT	Yes; 125 µs, 250 µs, 500 µs, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 µs to 4 ms in 125 µs frame
— PROFINergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Redundancy mode	
• PROFINET system redundancy (S2)	No
Media redundancy	
— MRP	Yes
— MRPD	Yes
Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
Isochronous mode	
Equidistance	Yes
shortest clock pulse	125 µs
max. cycle	4 ms
Bus cycle time (TDP), min.	125 µs
Jitter, max.	0.25 µs
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Connection display LINK TX/RX	Yes; 2x green link LEDs on BusAdapter
Potential separation	
between backplane bus and electronics	No
between PROFINET and all other circuits	Yes

between supply and all other circuits	No
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Isolation

Isolation tested with	707 V DC between supply voltage and electronics (type test); 1 500 V AC between Ethernet and electronics (type test)
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Standards, approvals, certificates

Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.1

Ambient conditions

Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	<ul style="list-style-type: none"> -25 °C; No condensation 60 °C -25 °C; No condensation 50 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

Connection method

ET-Connection	
<ul style="list-style-type: none"> • via BU/BA Send 	No

Dimensions

Width	50 mm
Height	117 mm
Depth	74 mm

Weights

Weight, approx.	147 g; without BusAdapter
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