

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
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Module swapping during operation (hot swapping)	Yes; Multi-hot swapping
• Isochronous mode	Yes
• IRT	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V14
• STEP 7 configurable/integrated from version	V5.5 SP4
• PROFINET from GSD version/GSD revision	GSDML V2.45
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
Short-circuit 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 ² t	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
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	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1; 2 ports (switch)
1. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes; with BusAdapter
• Number of ports	2; with BusAdapter
• integrated switch	Yes

• BusAdapter (PROFINET)	Yes; 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; PROFINET MRP client / HRP client
PROFINET IO Device	
Services	
— IRT	Yes; 125 µs to 4 ms in 125 µs frame
— Dynamic Frame Packing (DFP)	No
— PROFINergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Interface types	
RJ 45 (Ethernet)	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	No
Modbus TCP	No
Redundancy mode	
• PROFINET system redundancy (S2)	No
• PROFINET system redundancy (R1)	No
• H-Sync forwarding	Yes
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; 1500 V AC (type test)
between supply and all other circuits	No
Permissible potential difference	
between different circuits	Safety extra low voltage SELV

Isolation			
Isolation tested with	707 V DC (type test)		
Standards, approvals, certificates			
Network loading class	3		
Ecological footprint			
• environmental product declaration	Yes		
Global warming potential			
— global warming potential, (total) [CO2 eq]	105 kg		
— global warming potential, (during production) [CO2 eq]	13.7 kg		
— global warming potential, (during operation) [CO2 eq]	91.9 kg		
— global warming potential, (after end of life cycle) [CO2 eq]	-0.617 kg		
Security			
PROFINET Security Class	1		
Ambient conditions			
Ambient temperature during operation			
• horizontal installation, min.	-25 °C; No condensation		
• horizontal installation, max.	60 °C		
• vertical installation, min.	-25 °C; No condensation		
• vertical installation, max.	50 °C		
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual		
Absolute humidity			
• dew point, min.	-60 °C; suitable for dry room applications		
Connection method			
ET-Connection			
• via BU/BA Send	No		
Dimensions			
Width	50 mm		
Height	117 mm		
Depth	74 mm		
Weights			
Weight, approx.	147 g; without BusAdapter		
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			



[Manufacturer Declaration](#)

[Miscellaneous](#)

[PROFINET](#)



General Product Approval



[China RoHS](#)



For use in hazardous locations



[FM](#)

[CCC-Ex](#)



[Miscellaneous](#)

For use in hazardous locations

Maritime application

[Type Examination Certificate](#)

[CCC-Ex](#)



Maritime application

Environment

[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



Environment

Industrial Communication

[China RoHS](#)

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