

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"> <li>FW update possible</li> </ul>	Yes
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Module swapping during operation (hot swapping)</li> </ul>	Yes; Multi-hot swapping
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	Yes
<ul style="list-style-type: none"> <li>IRT</li> </ul>	Yes
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V14
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP4
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	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	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Input current	
Current consumption, max.	500 mA
Inrush current, max.	4.5 A
$I^2t$	0.09 A <sup>2</sup> ·s
Power loss	
Power loss, typ.	1.7 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	32 byte; For input and output data respectively
Address space per station	
<ul style="list-style-type: none"> <li>Address space per station, max.</li> </ul>	968 byte
Hardware configuration	
Rack	
<ul style="list-style-type: none"> <li>Quantity of operable ET 200SP modules, max.</li> </ul>	30
<ul style="list-style-type: none"> <li>Quantity of operable ET 200AL modules, max.</li> </ul>	0
Submodules	
<ul style="list-style-type: none"> <li>Number of submodules per station, max.</li> </ul>	125
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1; 2 ports (switch)
1. Interface	
Interface types	
<ul style="list-style-type: none"> <li>RJ 45 (Ethernet)</li> </ul>	Yes; with BusAdapter
<ul style="list-style-type: none"> <li>Number of ports</li> </ul>	2; with BusAdapter
<ul style="list-style-type: none"> <li>integrated switch</li> </ul>	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
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client / HRP client
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	Yes; 125 µs to 4 ms in 125 µs frame
— Dynamic Frame Packing (DFP)	No
— PROFIenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	No
Modbus TCP	No
<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	No
• PROFINET system redundancy (R1)	No
• H-Sync forwarding	Yes
<b>Media redundancy</b>	
— MRP	Yes
— MRPD	Yes
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
<b>Isochronous mode</b>	
Equidistance	Yes
shortest clock pulse	125 µs
max. cycle	4 ms
Bus cycle time (TDP), min.	125 µs
Jitter, max.	0.25 µs
<b>Interrupts/diagnostics/status information</b>	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
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
<b>Permissible potential difference</b>	
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			
<ul style="list-style-type: none"> <li>environmental product declaration</li> </ul>	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			
<ul style="list-style-type: none"> <li>horizontal installation, min.</li> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul>	-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"> <li>Installation altitude above sea level, max.</li> </ul>	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual		
Absolute humidity			
<ul style="list-style-type: none"> <li>dew point, min.</li> </ul>	-60 °C; suitable for dry room applications		
Connection method			
ET-Connection			
<ul style="list-style-type: none"> <li>via BU/BA Send</li> </ul>	No		
Dimensions			
Width	50 mm		
Height	117 mm		
Depth	74 mm		
Weights			
Weight, approx.	147 g; without BusAdapter		
Classifications			
		Version	Classification
	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](#)



IECEX

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For use in hazardous locations

Maritime application

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[CCC-Ex](#)



Maritime application

Environment

[NK / Nippon Kaiji Kyokai](#)



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

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



Industrial Communication

[PROFINET](#)

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