



SIMATIC ET 200SP, PROFINET, 3-port interface module, IM 155-6PN/3 High Feature, 2 slots for BusAdapter, max. 64 I/O modules and 16 ET 200AL modules, S2 redundancy, multi-hotswap, 0.25 ms, isochronous mode, optional PN strain relief, including server module

General information	
Product type designation	IM 155-6 PN/3 HF
HW functional status	From FS02
Firmware version	V4.2
<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
<ul style="list-style-type: none"> Tool changer 	Yes; Docking station and docking unit
<ul style="list-style-type: none"> Local coupling, IO data 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling modules 	16
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling submodules per module 	4
<ul style="list-style-type: none"> Local coupling, data records 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V15.1
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	Configurable via GSD file
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML 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	
<ul style="list-style-type: none"> Mains/voltage failure stored energy time 	10 ms
Input current	
Current consumption (rated value)	175 mA; At 24 V, 2 slots 2x RJ45 BusAdapter, no I/O modules
Current consumption, max.	950 mA
Inrush current, max.	9 A
I^2t	0.34 A ² ·s
Power loss	
Power loss, typ.	4.9 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	288 byte; For input and output data respectively
Address space per station	

• Address space per station, max.	1 440 byte; Dependent on configuration
Hardware configuration	
Rack	
• Quantity of operable ET 200SP modules, max.	64
• Quantity of operable ET 200AL modules, max.	16
Submodules	
• Number of submodules per station, max.	256
Interfaces	
Number of PROFINET interfaces	1; 3 ports (switch)
1. Interface	
Interface types	
• Number of ports	3; Via 2 BusAdapter slots
• 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; PROFINET MRP
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	
Number of connections	
• Number of MtM communication relationships/connections, max.	16
PROFINET IO Device	
Services	
— IRT	Yes; 250 μ s, 500 μ s, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 μ s to 4 ms in 125 μ s frame
— PROFIenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Redundancy mode	
• PROFINET system redundancy (S2)	Yes; NAP S2
• Redundant PROFINET configuration (R1)	No
• H-Sync forwarding	Yes
Media redundancy	
— MRP	Yes
— MRPD	No
Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
Isochronous mode	
Equidistance	Yes
shortest clock pulse	250 μ s
max. cycle	4 ms
Bus cycle time (TDP), min.	250 μ s
Jitter, max.	1 μ s
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes

Diagnostics indication LED	
<ul style="list-style-type: none"> • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Connection display LINK TX/RX 	<ul style="list-style-type: none"> Yes; green LED Yes; red LED Yes; Yellow LED Yes; green PWR LED 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
Isolation	
Isolation tested with	707 V DC (type test)
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"> -30 °C 60 °C -30 °C 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 / header	
ET-Connection	
<ul style="list-style-type: none"> • via BU/BA Send 	Yes; + 16 ET 200AL modules
Mechanics/material	
Strain relief	Yes; Optional
Dimensions	
Width	100 mm
Height	117 mm
Depth	74 mm
Weights	
Weight, approx.	220 g; without BusAdapter
last modified:	3/2/2021 