



SIMATIC ET 200SP, PROFINET, 2-port interface module IM 155-6PN/2 High Feature, 1 slot 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/2 HF
HW functional status	From FS02
Firmware version	V4.2
<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>Tool changer</li> </ul>	Yes; Docking station and docking unit
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V15.1
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	Configurable via GSD file
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.34
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>	10 ms
Input current	
Current consumption, max.	700 mA
Inrush current, max.	4.5 A
$I^2t$	0.25 A <sup>2</sup> ·s
Power loss	
Power loss, typ.	2.4 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	288 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>	1 440 byte
Hardware configuration	
Rack	
<ul style="list-style-type: none"> <li>Quantity of operable ET 200SP modules, max.</li> </ul>	64
<ul style="list-style-type: none"> <li>Quantity of operable ET 200AL modules, max.</li> </ul>	16
Submodules	

• Number of submodules per station, max. 256

## Interfaces

Number of PROFINET interfaces 1; 2 ports (switch)

### 1. Interface

#### Interface types

- RJ 45 (Ethernet) Yes
- Number of ports 2; via 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

#### PROFINET IO Device

##### Services

- IRT Yes; 250 µs to 4 ms in 125 µs frame
- PROFIenergy 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

Modbus TCP No

#### Number of connections

- Number of MtM communication relationships/connections, max. 16

#### Redundancy mode

- PROFINET system redundancy (S2) Yes; NAP S2
- 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 µs

max. cycle 4 ms

Bus cycle time (TDP), min. 250 µs

Jitter, max. 1 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
<b>Permissible potential difference</b>	
between different circuits	Safety extra low voltage SELV
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Network loading class	3
<b>Ambient conditions</b>	
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>	<ul style="list-style-type: none"> <li>-30 °C; No condensation</li> <li>60 °C</li> <li>-30 °C; No condensation</li> <li>50 °C</li> </ul>
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
<b>connection method</b>	
ET-Connection	
<ul style="list-style-type: none"> <li>• via BU/BA Send</li> </ul>	Yes; + 16 ET 200AL modules
<b>Mechanics/material</b>	
Strain relief	Yes; Optional
<b>Dimensions</b>	
Width	50 mm
Height	117 mm
Depth	74 mm
<b>Weights</b>	
Weight, approx.	120 g; without BusAdapter
<b>last modified:</b>	8/7/2023 