

SIMATIC ET 200SP, PROFINET bundle IM, IM 155-6PN ST, max. 32 I/O modules and 16 ET 200AL modules, single hot swap, bundle consists of: Interface module (6ES7155-6AU01-0BN0), Server module (6ES7193-6PA00-0AA0), BusAdapter BA 2xRJ45 (6ES7193-6AR00-0AA0)



General information	
Product type designation	IM 155-6 PN ST
HW functional status	FS01
Firmware version	V4.1
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; Single hot swapping
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V14
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP4 and higher
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	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
Short-circuit protection	Yes
<b>Mains buffering</b>	
• Mains/voltage failure stored energy time	10 ms

<b>Input current</b>	
Current consumption (rated value)	450 mA
Current consumption, max.	550 mA
Inrush current, max.	3.7 A
$I^2t$	0.09 A <sup>2</sup> ·s

<b>Power</b>	
Infeed power to the backplane bus	4.5 W

<b>Power loss</b>	
Power loss, typ.	1.9 W

<b>Address area</b>	
Address space per module	
• Address space per module, max.	256 byte; per input / output
Address space per station	
• Address space per station, max.	512 byte; Dependent on configuration

<b>Hardware configuration</b>	
Rack	
• Modules per rack, max.	32; + 16 ET 200AL modules
Submodules	
• Number of submodules per station, max.	256

<b>Interfaces</b>	
Number of PROFINET interfaces	1; 2 ports (switch)

<b>1. Interface</b>	
Interface types	
• Number of ports	2
• integrated switch	Yes
• RJ 45 (Ethernet)	Yes; Pre-assembled BusAdapter BA 2x RJ45
• BusAdapter (PROFINET)	Yes; Applicable BusAdapter: BA 2x RJ45, BA 2x FC
Protocols	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP

<b>Interface types</b>	
RJ 45 (Ethernet)	

- Transmission procedure
- 10 Mbps
- 100 Mbps
- Autonegotiation
- Autocrossing

PROFINET with 100 Mbit/s full duplex (100BASE-TX)  
 Yes; for Ethernet services  
 Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)  
 Yes  
 Yes

## Protocols

### PROFINET IO Device

#### Services

— Isochronous mode	No
— Open IE communication	Yes
— IRT	Yes; with send cycles of between 250 µs and 4 ms in increments of 125 µs
— PROFINergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	2

#### Redundancy mode

- PROFINET system redundancy (S2) No

#### Media redundancy

- MRP Yes
- MRPD No

#### Open IE communication

- TCP/IP Yes
- SNMP Yes
- LLDP Yes

## 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; 1 500 V AC

between supply and all other circuits No

## Permissible potential difference

between different circuits	Safety extra low voltage SELV
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### Isolation

Isolation tested with	707 V DC (type test)
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### Standards, approvals, certificates

Network loading class	2
Security level	According to Security Level 1 Test Cases V1.1.1

### 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>	0 °C 60 °C 0 °C 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

### Connection method

ET-Connection	
<ul style="list-style-type: none"> <li>via BU/BA Send</li> </ul>	Yes; + 16 ET 200AL modules

### Dimensions

Width	50 mm
Height	117 mm
Depth	74 mm

### Weights

Weight, approx.	190 g; IM 155-6 PN BA with 2x RJ45 ports and server module
<b>last modified:</b>	04/17/2020