

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"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Module swapping during operation (hot swapping) 	Yes; Single hot swapping
<ul style="list-style-type: none"> Isochronous mode 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	V14
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP4 and higher
<ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision 	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
Mains buffering	
• Mains/voltage failure stored energy time	10 ms

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

Power	
Infeed power to the backplane bus	4.5 W

Power loss	
Power loss, typ.	1.9 W

Address area	
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

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

Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch)

1. Interface	
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

Interface types	
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

- 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

Isolation	
Isolation tested with	707 V DC (type test)
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"> horizontal installation, min. 	0 °C
<ul style="list-style-type: none"> horizontal installation, max. 	60 °C
<ul style="list-style-type: none"> vertical installation, min. 	0 °C
<ul style="list-style-type: none"> vertical installation, max. 	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	
ET-Connection	
<ul style="list-style-type: none"> via BU/BA Send 	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
last modified:	05/13/2020