SIEMENS

Data sheet

6ES7155-6AU01-0CN0



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

Product type designation HW functional status From FS02 From FS	General information	
Firmware version V4.2 • FW update possible Yes Product function • I&M data • Module swapping during operation (hot swapping) • Isochronous mode • Tool changer • Tool changer • Tool changer • Tool round the swapping during operation (hot swapping) • Isochronous mode • Tool changer • Tool changer • Yes; Docking station and docking unit Engineering with • STEP 7 TIA Portal configurable/integrated from version • PROFINET from GSD version/GSD revision • Profine GSD version/GSD revision • PROFINET from GSD version/GSD revision • Profine GSD version version • Profine GSD version/GSD revision • Profine GSD ver	Product type designation	IM 155-6 PN/2 HF
FW update possible Product function Rikk data	HW functional status	From FS02
Product function Note was paping during operation (hot swapping) Yes; NaM0 to NaM3	Firmware version	V4.2
I I I I I I I I I I I I I I I I I I I	FW update possible	Yes
Module swapping during operation (hot swapping) Isochronous mode Tool changer Yes; Docking station and docking unit Engineering with STEP 7 Th Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision Configuration control Via dataset Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Short-circuit protection Was short-circuit protection Yes Short-circuit protection Yes Short-circuit protection Via dataset Anisokolage failure stored energy time Mains/voltage failure stored energy time Oursent consumption, max. 700 mA Inrush current, max. Pt 0.25 A²-s Power loss, typ. Address space per module, max. Address space per module, max. Address space per station Address space per station, max. 1 440 byte Hardware configuration Rack Quantity of operable ET 200SP modules, max. 64 Quantity of operable ET 200SP modules, max. 64 Quantity of operable ET 200AL modules, max. 16	Product function	
Isochronous mode Tool changer Tool changer Fingineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 toonfigurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision STEP 7 toonfigurable/integrated from version PROFINET from GSD version/GSD revision SSDML V2.3 Configurable via GSD file SSDML V2.3 Configurable via GSD file SSDML V2.3 Supply voltage Rated value (DC) 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 buffering Mains buffering Mains voltage failure stored energy time 10 ms Input current Current consumption, max. Inrush current, max. 4.5 A Pt 0.25 A²-s Power loss Power loss Power loss, typ. Address space per module Address space per module Address space per station Address spac	• I&M data	Yes; I&M0 to I&M3
Tool changer Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Tonfigurable/integrated from version Configurable via GSD file PROFINET from GSD version/GSD revision STEP 7 Tonfiguration control Via dataset Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pes Non-t-icruit protection Yes Mains buffering Mains/voltage failure stored energy time Pour tonsumption, max. Ton mA Inrush current Current consumption, max. Pt Durent consumption, max. Pt Durent consumption, max. Power loss Power loss, typ. 2.4 W Address space per module Address space per module, max. Address space per station Address pace per statio	 Module swapping during operation (hot swapping) 	Yes; Multi-hot swapping
Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Tonfigurable/integrated from version PROFINET from GSD version/GSD revision GSDML V2.3 Configuration control Via dataset Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range and protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time To ms Input current Current consumption, max. Full Current consumption, max. Full Current consumption, max. Full Current consumption, max. Pet 0.25 A²-s Power loss Power loss Power loss, typ. Address space per module Address space per module Address space per station Address configuration Rack Quantity of operable ET 200SP modules, max. Address Quantity of operable ET 200SL modules, max.	 Isochronous mode 	Yes
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision SDML V2.3 Configuration control via dataset Yes Supply voltage Rated value (DC) permissible range, lover limit (DC) permissible range, upper limit (DC) Pesses volume lim	Tool changer	Yes; Docking station and docking unit
STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision GSDML V2.3 Configuration control via dataset Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range to the control via dataset Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range to the control Pes Short-circuit protection Yes Short-circuit protection Pes Mains buffering Mains voltage failure stored energy time Pour current Current consumption, max. Pit Prover loss, Prover loss, typ. Power loss, typ. Power loss, typ. Address space per module Address space per module Address space per module Address space per station Address space per station, max. Address space per station Address space per station, max. Address space per station, max. Address space per station, max. Address space per station Address space per station, max. Address space per station. Address space per station. Address space per station. Address space per station.	Engineering with	
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Via dataset Ves Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Short-circuit protection Yes Short-circuit protection Yes Mains buffering • Mains/voltage failure stored energy time Input current Current consumption, max. Inrush current, max. Ift 0.25 A²-s Power loss Power loss, typ. Address space per module • Address space per module, max. Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	 STEP 7 configurable/integrated from version 	Configurable via GSD file
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, max. 700 mA Inrush current, max. 4.5 A Pt 0.25 A²-s Power loss Power loss Power loss, typ. 2.4 W Address space per module • 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 Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	 PROFINET from GSD version/GSD revision 	GSDML V2.3
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, max. 700 mA Inrush current, max. 4.5 A Ift 0.25 A²-s Power loss Power loss Power loss, typ. 2.4 W Address space per module • Address space per module, max. 288 byte; For input and output data respectively Address space per station • Address space per station, max. 1440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200SL modules, max. 16	Configuration control	
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, max. 700 mA Inrush current, max. 4.5 A I²t 0.25 A²-s Power loss Power loss, typ. 2.4 W Address apace per module • Address space per module, max. 288 byte; For input and output data respectively Address space per station • Address space per station, max. 1440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	via dataset	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Yes Short-direction Mains buffering Mains/voltage failure stored energy time 10 ms Input current Current consumption, max. Inrush current, max. If 0.25 A²-s Power loss Power loss, typ. Address space per module Address space per module Address space per station Address space per station Address space per station, max. 1 440 byte Hardware configuration Rack Quantity of operable ET 200SP modules, max. 4 9 Quantity of operable ET 200AL modules, max. 16	Supply voltage	
permissible range, upper limit (DC) Reverse polarity protection Yes Short-circuit protection Yes Mains buffering • Mains/voltage failure stored energy time Input current Current consumption, max. Inrush current, max. If t 0.25 A²-s Power loss Power loss Power loss Address space per module • Address space per module, max. Address space per station • Address space per station, max. Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	Rated value (DC)	24 V
Reverse polarity protection Yes Short-circuit protection Yes Mains buffering • Mains/voltage failure stored energy time 10 ms Input current Current consumption, max. 700 mA Inrush current, max. 4.5 A I't 0.25 A²-s Power loss Power loss Power loss, typ. 2.4 W Address area Address space per module • Address space per module, max. 288 byte; For input and output data respectively Address space per station • Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	permissible range, lower limit (DC)	19.2 V
Short-circuit protection Mains buffering Mains/voltage failure stored energy time Input current Current consumption, max. Inrush current, max. It 0.25 A²-s Power loss Power loss, typ. Address area Address space per module Address space per module, max. Address space per station Address space per station Address space per station, max. Address space per station	permissible range, upper limit (DC)	28.8 V
Mains buffering ● Mains/voltage failure stored energy time Input current Current consumption, max. Inrush current, max. I²t 0.25 A²-s Power loss Power loss, typ. Address area Address space per module ● Address space per module, max. Address space per station ● Address space per station ● Address space per station, max. 1 440 byte Hardware configuration Rack ● Quantity of operable ET 200SP modules, max. 64 ● Quantity of operable ET 200AL modules, max. 10 ms 10 ms 10 ms 10 ms 12 max 4.5 A 12 moduma 4.5 A 4.6 A 4.6 A 4.7 A 4.5	Reverse polarity protection	Yes
Mains/voltage failure stored energy time Input current Current consumption, max. Inrush current, max. I** O.25 A*-s Power loss Power loss, typ. Address area Address space per module • Address space per module, max. Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Short-circuit protection	Yes
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Current consumption, max. Inrush current, max. It 0.25 A²-s Power loss Power loss, typ. Address area Address space per module • Address space per module, max. Address space per station • Address pace per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	 Mains/voltage failure stored energy time 	10 ms
Inrush current, max. It 0.25 A²-s Power loss Power loss, typ. Address area Address space per module • Address space per module, max. Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Input current	
Power loss Power loss, typ. 2.4 W Address area Address space per module • 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 Hardware configuration Rack • Quantity of operable ET 200SP modules, max. 64 • Quantity of operable ET 200AL modules, max. 16	Current consumption, max.	700 mA
Power loss Power loss, typ. 2.4 W Address area Address space per module • Address space per module, max. Address space per station • Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Inrush current, max.	4.5 A
Power loss, typ. Address area Address space per module • Address space per module, max. Address space per station • Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	l²t	0.25 A ² ·s
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Address space per module, max. Address space per station Address space per station, max. 1 440 byte Hardware configuration Rack Quantity of operable ET 200SP modules, max. Quantity of operable ET 200AL modules, max. 16	Address area	
Address space per station • Address space per station, max. 1 440 byte Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Address space per module	
Address space per station, max. 1 440 byte Hardware configuration Rack Quantity of operable ET 200SP modules, max. Quantity of operable ET 200AL modules, max. 16	Address space per module, max.	288 byte; For input and output data respectively
Hardware configuration Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Address space per station	
Rack • Quantity of operable ET 200SP modules, max. • Quantity of operable ET 200AL modules, max. 16	Address space per station, max.	1 440 byte
 Quantity of operable ET 200SP modules, max. Quantity of operable ET 200AL modules, max. 16 	Hardware configuration	
Quantity of operable ET 200AL modules, max.	Rack	
Quantity of operable ET 200AL modules, max.	Quantity of operable ET 200SP modules, max.	64
Submodules		16
	Submodules	

Interfaces Number of PROFINET interfaces 1. Interface Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	1; 2 ports (switch)
1. Interface Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	1; 2 ports (switch)
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	
RJ 45 (Ethernet)Number of portsintegrated switch	
Number of ports integrated switch	
• integrated switch	Yes
-	2; via BusAdapter
	Yes
BusAdapter (PROFINET)	Yes; compatible BusAdapters: BA 2x RJ45, BA 2x M12, BA 2x FC, BA 2x LC, BA LC/RJ45, BA LC/FC, BA 2x SCRJ, BA SCRJ/RJ45, BA SCRJ/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
— PROFlenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
nterface 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
sochronous mode	
Equidistance	Yes
shortest clock pulse	250 μs
max. cycle	4 ms
Bus cycle time (TDP), min.	250 μs
Jitter, max.	1 µs
nterrupts/diagnostics/status information	
	Yes
Status indicator	Yes
Status indicator Alarms	V
	Yes
Alarms	Yes
Alarms Diagnostics function	Yes; green LED
Alarms Diagnostics function Diagnostics indication LED	
Alarms Diagnostics function Diagnostics indication LED • RUN LED	Yes; green LED
Alarms Diagnostics function Diagnostics indication LED • RUN LED • ERROR LED	Yes; green LED Yes; red LED
Alarms Diagnostics function Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED	Yes; green LED Yes; red LED Yes; Yellow LED
Alarms Diagnostics function Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED)	Yes; green LED Yes; red LED Yes; Yellow LED Yes; green PWR LED
Alarms Diagnostics function Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Connection display LINK TX/RX	Yes; green LED Yes; red LED Yes; Yellow LED Yes; green PWR LED

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	3
Security level	According to Security Level 1 Test Cases V1.1.1
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-30 °C; No condensation
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-30 °C; No condensation
vertical installation, max.	50 °C
Altitude during operation relating to sea level	
 Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
connection method / header	
ET-Connection	
via BU/BA Send	Yes; + 16 ET 200AL modules
Mechanics/material	
Strain relief	Yes; Optional
Dimensions	
Width	50 mm
Height	117 mm
Depth	74 mm
Weights	
Weight, approx.	120 g; without BusAdapter

5/4/2023

last modified: