



SIMATIC ET 200SP MultiFieldbus interface module IM 155-6 MF High Feature, PN IO, Ethernet IP, Modbus TCP, max. 64 I/O modules and 16 ET 200AL modules, S2 redundancy, multi hot swap, 0.25 ms, isochronous mode, optional PN strain relief PN security class 1 including server module (6ES7193-6PA00-0AA0)

General information	
Product type designation	IM 155-6 MF HF
Firmware version	V6.2
• FW update possible	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0313H
Manufacturer ID according to ODVA (VendorID)	0x04E3
Device ID according to ODVA (Product code)	0FA2H
Product function	
• I&M data	Yes; I&M0 to I&M4
• Module swapping during operation (hot swapping)	Yes; Multi-hot swapping
• Isochronous mode	Yes
• Tool changer	Yes; Docking station and docking unit
• Local coupling, IO data	Yes
— Number of coupling modules	6; 1x output + max. 5x input
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V19
• STEP 7 configurable/integrated from version	V5.7 SP3
• PROFINET from GSD version/GSD revision	GSDML V2.43
• Multi Fieldbus Configuration Tool (MFCT)	V1.5.2.0 or higher
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)	550 mA
Current consumption, max.	650 mA
Inrush current, max.	1 A
I ² t	0.05 A ² ·s
Power loss	
Power loss, typ.	2 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
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; with BusAdapter
• Number of ports	2; with BusAdapter
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes; BA 2x RJ45, BA 2x M12, BA 2x FC
Protocols	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client
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.	14; 2x PN controller + 2x EtherNet/IP scanner + 10x Modbus TCP master
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	Yes
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	Yes
EtherNet/IP	
Services	
— CIP Implicit Messaging	Yes
— CIP Explicit Messaging	Yes
— CIP Safety	No
— Configuration control via Explicit Messaging	No
— Shared device	Yes; 2x PN controller + 2x EtherNet/IP scanner + 10x Modbus TCP master
— Number of scanners with shared device, max.	2
Updating times	
— Requested Packet Interval (RPI)	2 ms
Address area	
— Address space per module, max.	288 byte; (246 byte outputs / 288 byte inputs)
— ForwardOpen (Class1 & 32 bit Header)	500 byte; (246 byte outputs / 500 byte inputs)
— LargeForwardOpen (Class3)	4 002 byte
Connections	
— Number of rack connections	2
Modbus TCP	

Services	
— read coils (code=1)	Yes
— read discrete inputs (code=2)	Yes
— Read Holding Registers (Code=3)	Yes
— write single coil (code=5)	Yes
— write multiple coils (code=15)	Yes
— Write Multiple Registers (Code=16)	Yes
— Parameter change by master	Yes
— Modbus TCP Security Protocol	No
Address space per station	
— Address space per station, max.	500 byte; (246 byte outputs / 500 byte inputs)
— Access-consistent address space	250 byte; (246 byte outputs / 250 byte inputs)
Updating time	
— I/O request interval	2 ms
Connections	
— number of connections per device	9; (1x inputs / 2x outputs / 4x volatile registers / 2x Device Info)
Open IE communication	
• TCP/IP	Yes
• UDP	Yes
• SNMP	Yes
• LLDP	Yes
• ARP	Yes
• IGMP	Yes
• Multicast	Yes
• Broadcast	Yes
• IPv4	Yes
• IPv6	No
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
• NS LED	Yes; green/red LED
• MS LED	Yes; green/red LED
• IO LED	Yes; red-green-yellow 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
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
product functions / security / header	
PROFINET Security Class	1
signed firmware update	Yes
Secure Boot	No

safely removing data	Yes
data integrity	Yes
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 ET 200SP system manual
connection method	
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

last modified: 10/29/2024 