



SIMATIC ET 200SP, MultiFieldbus, 2-port interface module, IM 155-6MF High Feature, PN IO, Ethernet IP, Modbus TCP, 1 slot for BusAdapter, max. 64 I/O modules and 16 ET 200AL modules, multi-hot swap, optional cable grip, including server module

General information	
Product type designation	IM 155-6 MF HF
Firmware version	V5.2
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0313H
Manufacturer ID according to ODVA (VendorID)	04E3H
Device ID according to ODVA (Product code)	0FA2H
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> <li>Module swapping during operation (hot swapping)</li> <li>Isochronous mode</li> <li>Tool changer</li> <li>Local coupling, IO data                             <ul style="list-style-type: none"> <li>Number of coupling modules</li> </ul> </li> </ul>	Yes; I&M0 to I&M3 Yes; Multi-hot swapping No Yes; Docking station and docking unit Yes 6; 1x output + max. 5x input
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PROFINET from GSD version/GSD revision</li> <li>Multi Fieldbus Configuration Tool (MFCT)</li> </ul>	via IM155-6PN/2 HF in compatibility mode via IM155-6PN/2 HF in compatibility mode GSDML V2.3 from V1.3
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	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	10 ms; according to IEC 61131-2 (6.2.1.3) severity degree PS2
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	

- Address space per station, max. 1 440 byte

## Hardware configuration

<b>Rack</b>	
• Quantity of operable ET 200SP modules, max.	64
• Quantity of operable ET 200AL modules, max.	16
<b>Submodules</b>	
• Number of submodules per station, max.	256

## Interfaces

Number of PROFINET interfaces	1; 2 ports (switch)
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### 1. Interface

<b>Interface types</b>	
• RJ 45 (Ethernet)	Yes; with BusAdapter
• Number of ports	2; with BusAdapter
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	No
— PROFIenergy	Yes
— Prioritized startup	No
— 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

<b>RJ 45 (Ethernet)</b>	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes

### Protocols

Supports protocol for PROFINET IO	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	Yes
Modbus TCP	Yes

<b>Number of connections</b>	
• Number of MtM communication relationships/connections, max.	16

<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	Yes; NAP S2
• H-Sync forwarding	Yes

<b>Media redundancy</b>	
— MRP	Yes
— MRPD	No

<b>EtherNet/IP</b>	
<b>Services</b>	
— 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

<b>Updating times</b>	
— Requested Packet Interval (RPI)	2 ms

<b>Address area</b>	
— 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

<b>Connections</b>	
— Number of rack connections	2
<b>Modbus TCP</b>	
<b>Services</b>	
— 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
<b>Address space per station</b>	
— 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)
<b>Updating time</b>	
— I/O request interval	2 ms
<b>Connections</b>	
— number of connections per device	9; (1x inputs / 2x outputs / 4x volatile registers / 2x Device Info)
<b>Open IE communication</b>	
• TCP/IP	Yes
• UDP	Yes
• SNMP	Yes
• LLDP	Yes
• ARP	Yes
• IGMP	Yes
• Multicast	Yes
• Broadcast	Yes
• IPv4	Yes
• IPv6	No
<b>Interrupts/diagnostics/status information</b>	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
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>Ecological footprint</b>	
• environmental product declaration	Yes
<b>Global warming potential</b>	
— global warming potential, (total) [CO2 eq]	105 kg
— global warming potential, (during production) [CO2 eq]	13.7 kg
— global warming potential, (during operation) [CO2 eq]	91.9 kg

— global warming potential, (after end of life cycle)  
[CO2 eq]

-0.617 kg

### 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

#### 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

### Classifications

	Version	Classification
eClass	14	27-24-26-08
eClass	12	27-24-26-08
eClass	9.1	27-24-26-08
eClass	9	27-24-26-08
eClass	8	27-24-26-08
eClass	7.1	27-24-26-08
eClass	6	27-24-26-08
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604
IDEA	4	3564
UNSPSC	15	32-15-17-05

### Approvals / Certificates

#### General Product Approval



[Manufacturer Declaration](#)



[KC](#)



#### For use in hazardous locations



[CCC-Ex](#)

[FM](#)



[Miscellaneous](#)

#### Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



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