

Siemens  
EcoTech



SIMATIC ET 200MP PROFINET IO device Interface module IM 155-5 PN BA for ET 200MP electronic modules; up to 12 IO modules; Integrated 2-port switch; RJ45 Shared Device with 2 IO controllers, MRP; FW update; I&M0...3



### General information

Product type designation	IM 155-5 PN BA
HW functional status	From FS02
Firmware version	V4.3.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Vendor identification (VendorID)	0x002A
Device identifier (DeviceID)	0X0312

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>IRT</li> <li>Tool changer</li> <li>Local coupling, IO data</li> </ul>	<ul style="list-style-type: none"> <li>Yes; I&amp;M0 to I&amp;M3</li> <li>No</li> <li>No</li> <li>No</li> <li>No</li> <li>No</li> </ul>

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> </ul>	<ul style="list-style-type: none"> <li>V15.1</li> <li>use GSD file</li> <li>GSDML V2.3</li> </ul>

Configuration control	
via dataset	No

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>	5 ms

Input current	
Current consumption (rated value)	1 A; at 24 V DC and without load
Current consumption, max.	1.7 A
Inrush current, max.	2.8 A
$I^2t$	0.04 A <sup>2</sup> ·s

Power	
Infeed power to the backplane bus	14 W

Power loss	
Power loss, typ.	3 W

Address area	
Address space per module	
• Address space per module, max.	64 byte; For input and output data respectively
Address space per station	
• Address space per station, max.	64 byte; For input and output data respectively
Hardware configuration	
Integrated power supply	Yes; 14 W
System power supply can be plugged in to left of IM	No
Number of permissible power segments	1; incl. interface module
Rack	
• Modules per rack, max.	12; I/O modules
Submodules	
• Number of submodules per station, max.	108; 9 per I/O module
Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch)
1. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes
• Number of ports	2
• integrated switch	Yes
• BusAdapter (PROFINET)	No
Protocols	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client
PROFINET IO Device	
Services	
— IRT	No
— PROFINergy	No
— Prioritized startup	No
— Shared device	Yes
— Number of IO Controllers with shared device, max.	2
Interface types	
RJ 45 (Ethernet)	
• 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; FW V4.3.0 or higher
PROFIBUS	No
EtherNet/IP	No
Modbus TCP	No
Redundancy mode	
• PROFINET system redundancy (S2)	No
— on S7-1500R/H	No
— on S7-400H	No
• PROFINET system redundancy (R1)	No
• H-Sync forwarding	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
• Connection display LINK TX/RX	Yes; 2x green-yellow LEDs

#### 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
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#### Isolation

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

Siemens Eco Profile (SEP)	Siemens EcoTech
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Network loading class	2
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#### Ecological footprint

• environmental product declaration	Yes
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#### Global warming potential

— global warming potential, (total) [CO2 eq]	64.1 kg
— global warming potential, (during production) [CO2 eq]	11.1 kg
— global warming potential, (during operation) [CO2 eq]	53.6 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.669 kg

#### Ambient conditions

##### Ambient temperature during operation

• horizontal installation, min.	-30 °C; From FS03
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; From FS03
• vertical installation, max.	40 °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
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#### Dimensions

Width	35 mm
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Height	147 mm
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Depth	129 mm
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#### Weights

Weight, approx.	236 g
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#### 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	10	EC001604
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604
IDEA	4	3564
UNSPSC	15	32-15-17-05

#### Approvals / Certificates

General Product Approval	other	Environment
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[Confirmation](#)



[Environmental Con-  
firmations](#)

last modified:

3/31/2025



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