



SIMATIC ET 200MP. PROFINET IO device Interface module IM 155-5 PN HF, for ET 200MP electronic modules; Up to 12 IO modules without PS; Up to 30 IO modules with additional PS; Integrated 2-port switch; RJ45 shared device; MRP; IRT  $\geq 0.25$  ms; Isochronous mode FW update; I&M0...3; Prioritized startup, S2 redundancy; Shared device with 4 controllers Suitable for operation with active backplane bus (FW V4.4 or higher)

General information	
Product type designation	IM 155-5 PN HF
HW functional status	From FS03
Firmware version	V4.4
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0X0312
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Module swapping during operation (hot swapping)</li> </ul>	Yes; In combination with active backplane bus
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Tool changer</li> </ul>	No
<ul style="list-style-type: none"> <li>Local coupling, IO data</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V16
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	use GSD file
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML 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	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Input current	
Current consumption (rated value)	0.2 A; at 24 V DC and without load
Current consumption, max.	1.2 A
Inrush current, max.	9 A
$I^2t$	0.09 A <sup>2</sup> ·s
Power	
Infeed power to the backplane bus	14 W
Power available from the backplane bus	2.3 W; in case of operation with separate system power supply to the left of IM
Power loss	
Power loss, typ.	4.5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	256 byte; For input and output data respectively

Address space per station	
• Address space per station, max.	512 byte; For input and output data respectively
<b>Hardware configuration</b>	
Integrated power supply	Yes; 14 W
System power supply can be plugged in to left of IM	Yes; only with design with U-connectors
Number of permissible power segments	3; incl. interface module
<b>Rack</b>	
• Modules per rack, max.	30; I/O modules
<b>Submodules</b>	
• Number of submodules per station, max.	256; 9 per I/O module
<b>Interfaces</b>	
Number of PROFINET interfaces	1; 2 ports (switch)
<b>1. Interface</b>	
<b>Interface types</b>	
• RJ 45 (Ethernet)	Yes
• Number of ports	2
• integrated switch	Yes
• BusAdapter (PROFINET)	No
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client / HRP client
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	Yes; 250 µs to 4 ms in 125 µs frame
— PROFINergy	No
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
<b>Protocols</b>	
Modbus TCP	No
<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	Yes; NAP S2
— on S7-1500R/H	Yes
— on S7-400H	Yes; use GSD file
• PROFINET system redundancy (R1)	No
• H-Sync forwarding	Yes
<b>Media redundancy</b>	
— MRP	Yes
— MRPD	Yes
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
<b>Isochronous mode</b>	
Bus cycle time (TDP), min.	250 µs
Jitter, max.	1 µs
<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

<ul style="list-style-type: none"> <li>• MAINT LED</li> </ul>	Yes; Yellow LED
<ul style="list-style-type: none"> <li>• Connection display LINK TX/RX</li> </ul>	Yes; 2x green-yellow LEDs
<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>Ambient conditions</b>	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> </ul>	-25 °C; from FS04
<ul style="list-style-type: none"> <li>• horizontal installation, max.</li> </ul>	60 °C
<ul style="list-style-type: none"> <li>• vertical installation, min.</li> </ul>	-25 °C; from FS04
<ul style="list-style-type: none"> <li>• vertical installation, max.</li> </ul>	40 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> </ul>	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
<b>connection method</b>	
ET-Connection	
<ul style="list-style-type: none"> <li>• via BU/BA Send</li> </ul>	No
<b>Dimensions</b>	
Width	35 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	350 g
<b>last modified:</b>	4/25/2024 