6ES7155-5AA00-0AC0

Data sheet



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 >=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	
 FW update possible 	Yes	
Vendor identification (VendorID)	002AH	
Device identifier (DeviceID)	0X0312	
Product function		
I&M data	Yes; I&M0 to I&M3	
 Module swapping during operation (hot swapping) 	Yes; In combination with active backplane bus	
Isochronous mode	Yes	
Engineering with		
 STEP 7 TIA Portal configurable/integrated from version 	V16 with HSP 308	
 STEP 7 configurable/integrated from version 	V5.5 SP3 / -	
 PROFINET from GSD version/GSD revision 	V2.3 / -	
Configuration control		
via user data	No	
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 	5 ms	
Input current		
Current consumption (rated value)	0.2 A	
Current consumption, max.	1.2 A	
Inrush current, max.	9 A	
l²t	0.09 A ² ·s	
Power		
Infeed power to the backplane bus	14 W	
Power available from the backplane bus	2.3 W	
Power loss		
Power loss, typ.	4.5 W	
Address area		
Address space per module		

Address space per module, max.	256 byte; per input / output
Address space per module, max. Address space per station	230 byte, per input / output
Address space per station, max.	512 byte; per input / output
Hardware configuration	312 byte, per input? output
	Yes
Integrated power supply can be plugged in to left of IM	
System power supply can be plugged in to left of IM Number of permissible power segments	Yes; only with design with U-connectors 3
Rack	3
Modules per rack, max.	30; I/O modules
Submodules	oo, no mounes
Number of submodules per station, max.	256
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface types • RJ 45 (Ethernet)	Yes
Number of ports	2
integrated switch	Yes
Protocols	100
PROFINET IO Device	Yes
Open IE communication	Yes
Media redundancy	Yes
Interface types	
RJ 45 (Ethernet)	
Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
Autonegotiation	Yes
Autocrossing	Yes
Protocols	
PROFINET IO Device	
PROFINET IO Device Services	
Services	Yes
Services — IRT	Yes No
Services — IRT — PROFlenergy	No
Services — IRT — PROFlenergy — Prioritized startup	No Yes
Services — IRT — PROFlenergy	No
Services — IRT — PROFlenergy — Prioritized startup — Shared device	No Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device,	No Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max.	No Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H	No Yes Yes 4 Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H	No Yes Yes 4 Yes Yes Yes Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1)	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding	No Yes Yes 4 Yes Yes Yes Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy	Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP	No Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD	Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication	No Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP	No Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP	No Yes Yes 4 Yes Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Interrupts/diagnostics/status information	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Interrupts/diagnostics/status information Status indicator	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Interrupts/diagnostics/status information Status indicator Alarms	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) — on S7-1500R/H — on S7-400H • Redundant PROFINET configuration (R1) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Interrupts/diagnostics/status information Status indicator	No Yes Yes 4 Yes Yes Yes Yes; With GSDML file as of STEP 7 V5.5 SP3 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

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; 1 500 V AC
between supply and all other circuits	No
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-25 °C; from FS04
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-25 °C; from FS04
 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
connection method / header	
ET-Connection	
• via BU/BA Send	No
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	350 g

4/26/2021

last modified: