Data sheet

6ES7155-5AA00-0AC0



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)

Product type designation IM 155.5 PN HF HW functional statius From FS03 Frimware version V4.4 • FW update possible Yes Vendor identification (VendorID) 002AH Device identification (VendorID) 002AH Fill Was and the swapping during operation (hot swapping) Ves; in combination with active backplane bus • I&M data	General information	
Firmware version FV update possible Vendor identification (VendorID) Device identifier (DeviceID) Product function I&M data Yes; I&M0 to I&M3 Module swapping during operation (hot swapping) I sochronous mode Tool changer Local coupling, IO data Engineering with STEP 7 The Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from SD version/GSD revision SDML V2.3 Configuration control via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) 19.2 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time S 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 Pt Power Infeed power to the backplane bus 2.3 W; in case of operation with separate system power supply to the left of IM Power loss	Product type designation	IM 155-5 PN HF
Vendor identification (VendorID) 002AH Device identific (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 • Tool changer No • Local coupling, IO data No Engineering with • STEP 7 TIA Portal configurable/integrated from version • STEP 7 TIA Portal configurable/integrated from version • STEP 7 TIA Portal configurable/integrated from version • STEP 7 ton Portal configurable/integrated from version • STEP 7 ton Portal configurable/integrated from version • STEP 7 ton Fortal configurable/integrated from version • Yes Supply voltage Rated value (DC) • 24 V permissible range, lower limit (DC) • 19.2 V permissible range, lower limit (DC) • Yes Short-circuit protection Yes Short-circuit pr	HW functional status	From FS03
Vendor identification (VendorID) Device identifier (DeviceID) Product function I kiM data Module swapping during operation (hot swapping) I sochronous mode Tool changer Local coupling, IO data STEP 7 TIA Portal configurable/integrated from version STEP 7 Tool protable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision STML V2.3 Configuration control via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) PROFINET from GSD version Yes Short-circuit protection Yes Short-circuit protection Yes Short-circuit protection Yes Mains-voltage failure stored energy time Mains-voltage failure stored energy time Current consumption (rated value) Current consumption (rated value) Current consumption, max. Pt Ough A²-s Power Infeed power to the backplane bus Power valiable from the backplane bus 2.3 W; in case of operation with separate system power supply to the left of IM Power loss	Firmware version	V4.4
Device identifier (DeviceID) Product function I I&M data Module swapping during operation (hot swapping) I Isochronous mode Tool changer Local coupling, IO data Engineering with STEP 7 TIA Portal configurable/integrated from version FROF INET from GSD version/GSD revision PROF INET from GSD version/GSD revision Configuration control via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Mains buffering Mains voltage failure stored energy time Mains voltage failure stored energy time Short-circuit protection Mains voltage failure stored energy time Input current Current consumption, max. Incush current, max. 9 A Incush current, max. 9 A Power Infeed power to the backplane bus Power loss	FW update possible	Yes
Product function • I&M data • Module swapping during operation (hot swapping) • Isochronous mode • Tool changer • Tool changer • Local coupling, IO data Engineering with • STEP 7 TIA Portal configurable/integrated from version • STEP 7 Tool from GSD version/GSD revision • STEP 7 Tool country • PROFINET from GSD version/GSD revision Configuration control via dataset Yes Supply voltage Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • PROFIction of Wes Short-circuit protection Mains buffering • Mains/voltage failure stored energy time Input current Current consumption, max. Incush current, max. Power Infeed power to the backplane bus Power Ioss	Vendor identification (VendorID)	002AH
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Module swapping during operation (hot swapping) Isochronous mode Tool changer Local coupling, IO data No Regineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Tool from GSD version/GSD revision STEP 7 tool from GSD version/GSD revision Was attaset Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) Permissible range, upper limit (DC) Short-circuit protection Wains buffering Mains buffering Mains voltage failure stored energy time Smark Input current Current consumption (rated value) Current consumption, max. Input current, max. Permover Infeed power to the backplane bus Power available from the backplane bus Power loss In on the sackplane bus Power loss In on the tackplane bus Power loss In the consumption with separate system power supply to the left of IM Power loss	Product function	
Isochronous mode Tool changer Color coupling, IO data Coupling, IO data Coupling, IO data Coupling, IO data Configuering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version Configuration control Via dataset Ves Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Short-circuit protection Ves Short-circuit protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. 1.2 A Inrush current, max. 9 A Inrush current, max. 9 A Inrush current, max. 9 A Pewer Infeed power to the backplane bus Power loss	I&M data	Yes; I&M0 to I&M3
■ Tool changer ■ Local coupling, IO data ■ No Engineering with ■ STEP 7 TIA Portal configurable/integrated from version ■ STEP 7 configurable/integrated from version ■ PROFINET from GSD version/GSD revision Configuration control Via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC)	 Module swapping during operation (hot swapping) 	Yes; In combination with active backplane bus
Local coupling, IO data Pagineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TON For Onfigurable/integrated from version STEP 7 TON For Onfigurable/integrated from version STEP 7 TON FOR GSD version/GSD revision GSDML V2.3 Configuration control Via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range upper limit (D	 Isochronous mode 	Yes
Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version SCONFINET from GSD version/GSD revision Configuration control Via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Solverse polarity protection Yes Short-circuit protection Yes Mains buffering Mains Noltage failure stored energy time Input current Current consumption (rated value) Current consumption (rated value) Current consumption, max. 1.2 A Inrush current, max. 9 A Inrush current, max. 9 A Inrush current, max. 1.4 W Power Infeed power to the backplane bus Power loss	Tool changer	No
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configuration control Via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Short-circuit protection Yes Mains buffering Mains buffering Mains Voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Pewer Infeed power to the backplane bus Power available from the backplane bus Power loss Ves V16 use GSD file GSDML V2.3 SDML V2.3 Yes SDML V2.3 Yes SUPPLY Ves Supply voltage 19.2 V Pes	Local coupling, IO data	No
STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision Supply voltage Rated value (DC) permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, up	Engineering with	
PROFINET from GSD version/GSD revision Configuration control via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. 1.2 A Inrush current, max. 9 A Ift 0.09 A²-s Power Infeed power to the backplane bus Power loss	 STEP 7 TIA Portal configurable/integrated from version 	V16
Via dataset Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Power Infeed power to the backplane bus Power loss Power loss	 STEP 7 configurable/integrated from version 	use GSD file
via dataset Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inush current, max. Power Infeed power to the backplane bus Power loss Power loss	PROFINET from GSD version/GSD revision	GSDML V2.3
Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Power Infeed power to the backplane bus Power loss 24 V D C and without load 28.8 V 89 A 14 W Power loss	Configuration control	
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Irt O.09 A²-s Power Infeed power to the backplane bus Power loss	via dataset	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Short-circuit protection Mains buffering • Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Irth 0.09 A²-s Power Infeed power to the backplane bus Power loss Power loss	Supply voltage	
permissible range, upper limit (DC) Reverse polarity protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Sms Input current Current consumption (rated value) Current consumption, max. Inrush current, max. In under the current, max. If the same the backplane bus Power available from the backplane bus Power loss Power loss	Rated value (DC)	24 V
Reverse polarity protection Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time 5 ms Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Ift 0.09 A²·s Power Infeed power to the backplane bus Power available from the backplane bus Power loss Yes 5 ms 0.2 A; at 24 V DC and without load 1.2 A 0.9 A 1.2 A 1.4 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	permissible range, lower limit (DC)	19.2 V
Short-circuit protection Mains buffering Mains/voltage failure stored energy time 5 ms Input current Current consumption (rated value) Current consumption, max. 1.2 A Inrush current, max. 9 A I²t 0.09 A²-s Power Infeed power to the backplane bus 14 W Power available from the backplane bus Power loss	permissible range, upper limit (DC)	28.8 V
Mains buffering ■ Mains/voltage failure stored energy time 5 ms Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Inrush current, max. Inush current, max. Inush current, max. Integration of the backplane bus Infeed power to the backplane bus 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	Reverse polarity protection	Yes
● Mains/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max. I²t O.09 A²·s Power Infeed power to the backplane bus Power available from the backplane bus 14 W Power loss	Short-circuit protection	Yes
Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Inush current, m	Mains buffering	
Current consumption (rated value) Current consumption, max. Inrush current, max. It Output Output	Mains/voltage failure stored energy time	5 ms
Current consumption, max. Inrush current, max. 9 A 12t 0.09 A²-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	Input current	
Inrush current, max. Power	Current consumption (rated value)	0.2 A; at 24 V DC and without load
I²t 0.09 A²·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	Current consumption, max.	1.2 A
Power Ioss 14 W 2.3 W; in case of operation with separate system power supply to the left of IM Power loss	Inrush current, max.	9 A
Infeed power to the backplane bus 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	l²t	0.09 A²·s
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	
Power loss	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, typ. 4.5 W	Power loss	
	Power loss, typ.	4.5 W
Address area	Address area	
Address space per module	Address space per module	
Address space per module, max. 256 byte; For input and output data respectively		256 byte; For input and output data respectively

Address space per station	
Address space per station • Address space per station, max.	512 byte; For input and output data respectively
Hardware configuration	312 byte, 1 or imput and output data respectively
Integrated power supply	Yes; 14 W
	Yes; only with design with U-connectors
System power supply can be plugged in to left of IM Number of permissible power segments	3; incl. interface module
Rack	5, III. III. III. III. III. III. III. II
Modules per rack, max.	30: I/O modules
Submodules	
Number of submodules per station, max.	256; 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 / HRP client
PROFINET IO Device	
Services	
— IRT	Yes; 250 μs to 4 ms in 125 μs frame
— PROFlenergy	No
 Prioritized startup 	Yes
— Shared device	Yes
Number of IO Controllers with shared device, max.	4
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	No
Redundancy mode	
 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
Media redundancy	
	Yes
— MRP	
— MRPD	Yes
— MRPD Open IE communication	Yes
— MRPD Open IE communication ● TCP/IP	Yes
— MRPD Open IE communication ● TCP/IP ● SNMP	Yes Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP	Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode	Yes Yes Yes Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min.	Yes Yes Yes Yes Yes Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max.	Yes Yes Yes Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information	Yes Yes Yes Yes Yes 1 µs
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator	Yes Yes Yes Yes Yes 1 µs Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator Alarms	Yes Yes Yes Yes Yes Yes 250 µs 1 µs Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator Alarms Diagnostics function	Yes Yes Yes Yes Yes 1 µs Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator Alarms Diagnostics function Diagnostics indication LED	Yes Yes Yes Yes Yes Yes 250 µs 1 µs Yes Yes Yes
— MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator Alarms Diagnostics function	Yes Yes Yes Yes Yes 250 µs 1 µs Yes Yes

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
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	
ET-Connection	
• via BU/BA Send	No
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	350 g

last modified:

4/25/2024