## 6ES7155-5AA00-0AA0

**Data sheet** 



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

Product type designation IN 155-5 PN BA HW functional status From FS02 Firmware version V4.3.0 Vendor identification (VendorID) 0x002A Device identifier (DeviceID) 0x0312 Product function  • I&M data Yes; I&M0 to I&M3 • Module swapping during operation (hot swapping) No • Isochronous mode No Engineering with • STEP 7 TIAP Portal configurable/integrated from V5.5 SP3 /- • PROFINET from GSD version/GSD revision V2.3 /- Configuration control via user data No sua 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 • Mains/voltage failure stored energy time fingut current Current consumption (rated value) 1 A Inrush current, max. 2.8 A IPt 0.04 A*s Power Infeed power to the backplane bus 14 W Power loss Power loss, typ. Address space per module • Address space per station	General information	General information		
Firmware version   V4.3.0	Product type designation	IM 155-5 PN BA		
Vendor identification (VendorID)  Device identifier (DeviceID)  OX0312  Product function  • I&M data  • Module swapping during operation (hot swapping) • Isochronous mode  Engineering with  • STEP 7 TIA Portal configurable/integrated from version • STEP 7 configurable/integrated from version • PROFINET from GSD version/GSD revision  V2.3 /-  Configuration control  via user data No via dataset No Supply voltage  Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Short-circuit protection Yes Short-circuit protection Yes Mains buffering • Mains/voltage failure stored energy time  Input current  Current consumption (rated value) 1 A Current consumption, max. 1.7 A Inrush current, max. 2.8 A Pt  Power loss, typ.  Power loss, typ.  Address space per module • Address space per module • Address space per module • Address space per module, max. 64 byte; per input / output	HW functional status	From FS02		
Device identifier (DeviceID)  Product function  Item diata  No  No  No  Isochronous mode  Engineering with  STEP 7 TIA Portal configurable/integrated from version  PROFINET from GSD version/GSD revision  Via user data  No  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  Reverse polarity protection  Wains buffering  Mains buffering  Mains buffering  Mains voltage failure stored energy time  Current consumption, max.  Int  Inrush current, max.  Int  Power Inses, typ.  Address space per module  Address space per module  Address space per module  Address space per module  Address space per input / output  No  V15.1 kiMh HSP 187  V25.1 kiMh HSP 187  V25.5 SP3 / -  V25.5 SP3 / -  V25.5 SP3 / -  V25.5 SP3 / -  V2.3 / -  V2.3 / -  V2.3 / -  V2.3 / -  V2.4 V  V2.3 / -  V2.4 V  V2.9 / V	Firmware version	V4.3.0		
Product function  • I&M data  • Module swapping during operation (hot swapping) • Iscochronous mode  • STEP 7 TIA Portal configurable/integrated from version • STEP 7 to configurable/integrated from version • STEP 7 configurable/integrated from version • STEP 7 configurable/integrated from version • PROFINET from GSD version/GSD revision  V2.3 /-  Configuration control  via user data No via dataset No  Supply voltage  Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) \$\frac{28.8 \text{ V}}{88.9 \text{ V}}\$  Reverse polarity protection Yes  Mains buffering • Mains/voltage failure stored energy time  Input current  Current consumption (rated value) 1 A  Current consumption, max. 1.7 A  Inrush current, max. 2.8 A  I't 0.04 A²'s  Power  Infeed power to the backplane bus 14 W  Power loss Power loss, typ. 3 W  Address space per module • Address space per module, max. 64 byte; per input / output	Vendor identification (VendorID)	0x002A		
IskM data Module swapping during operation (hot swapping) Isochronous mode  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configuration control V3.1 -  V5.5 SP3 / - V2.3 / -  Configuration control Via user data No No Supply voltage Rated value (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes Short-circuit protection Yes Short-circuit protection Yes Mains buffering Mains/voltage failure stored energy time Sms Input current Current consumption (rated value) 1 A Current consumption (rated value) 1 A Current consumption (max. 1.7 A Inrush current, max. 2.8 A Pt 0.04 A²-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 Address space per module, max. 64 byte; per input / output	Device identifier (DeviceID)	0X0312		
Module swapping during operation (hot swapping) Isochronous mode  Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 Configurable/integrated from version PROFINET from GSD version/GSD revision  V2.3 / -  Configuration control  via user data No No Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Short-circuit protection Yes Short-circuit protection Aians buffering Mains/voltage failure stored energy time Current consumption (rated value)  Current consumption (rated value)  Land Current consumption, max.  Inush current, max.  Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissi	Product function			
● Isochronous mode  Engineering with  ● STEP 7 TIA Portal configurable/integrated from version  ● STEP 7 configurable/integrated from version  ● PROFINET from GSD version/GSD revision  V2.3 /-  Configuration control  via user data  No via dataset  No Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes Short-circuit protection  Mains/voltage failure stored energy time  ■ Mains/voltage failure stored energy time  Input current  Current consumption, max.  Inrush current, max.  Power  Infeed power to the backplane bus  Power loss  Power loss  Power loss  Power loss, typ.  Address area  Address space per module  ● Address space per module, max.  64 byte; per input / output	I&M data	Yes; I&M0 to I&M3		
Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision  V2.3 /-  Configuration control  via user data No via dataset No  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) Short-circuit protection Yes Short-circuit protection Anish suffering Mains/voltage failure stored energy time Mains/voltage failure stored energy time Tourrent consumption (rated value)  Current consumption, max. 1.7 A Inrush current, max. 2.8 A IPt 0.04 A²-s  Power Infeed power to the backplane bus Power loss Power loss Power loss Power loss Power loss space per module Address space per module, max. 64 byte; per input / output	<ul> <li>Module swapping during operation (hot swapping)</li> </ul>	No		
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFINET from GSD version/GSD revision V2.3 / -  Configuration control via user data No via dataset No Supply voltage Rated value (DC) 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. Pt Outh A <sup>2</sup> -s  Power Infeed power to the backplane bus Power loss, typ. Address area Address space per module Address space per module, max.  1. 4 by 5. SP3 / -  V2.3 / -  V5.5 SP3 / -  V2.3 / -  V2.3 / -  V2.3 / -  V2.3 / -  V2.4 V  Poyen Sendand Se	• Isochronous mode	No		
STEP 7 configurable/integrated from version     STEP 7 configurable/integrated from version     PROFINET from GSD version/GSD revision  V2.3 /-  Configuration control  via user data  No  via dataset  No  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Short-circuit protection  Mains buffering  Mains/voltage failure stored energy time  Input current  Current consumption (rated value)  1 A  Current consumption, max.  1.7 A  Inrush current, max.  2.8 A  Pt  0.04 A²-s  Power  Infeed power to the backplane bus  Power loss  Power loss, typ.  Address space per module  Address space per module, max.  64 byte; per input / output	Engineering with			
● PROFINET from GSD version/GSD revision  Value of data  Via user data  Via dataset  No  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Short-circuit protection  Mains buffering  ● Mains/voltage failure stored energy time  Input current  Current consumption (rated value)  Current consumption, max.  I?t  O.04 A²-s  Power  Infeed power to the backplane bus  14 W  Power loss  Power loss, typ.  Address space per module  ● Address space per module, max.  64 byte; per input / output		V15.1 with HSP 187		
Via user data Via dataset No  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/voltage failure stored energy time Input current Current consumption (rated value) Current consumption, max. Inrush current, max.  If  0.04 A²-s  Power Infeed power to the backplane bus Power loss Power loss, typ. Address space per module • Address space per module, max.  No  24 V Power loss No  19 19.2 V Permissible range, lower limit (DC) 28.8 V Power loss No  19 4 W Power loss Power loss, typ. Address space per module • Address space per module, max. 64 byte; per input / output	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -		
via user data via dataset No  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/voltage failure stored energy time  Input current  Current consumption (rated value)  Current consumption, max.  Inush current, max.  Inush current, max.  Inteed power to the backplane bus  Power loss  Power loss, typ.  Address space per module Address space per module, max.  64 byte; per input / output	<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	V2.3 / -		
Via dataset  Supply voltage  Rated value (DC)  permissible range, lower 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.  1.7 A  Inrush current, max.  1.8 A  Ift  0.04 A <sup>2</sup> ·s  Power  Infeed power to the backplane bus  Power loss  Power loss  Power loss, typ.  Address space per module  Address space per module, max.  64 byte; per input / output	Configuration control			
Rated value (DC)  Permissible range, lower 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.  Inrush current, max.  Pt  0.04 A²-s  Power  Infeed power to the backplane bus  Power loss  Power loss, typ.  Address area  Address space per module  Address space per module, max.  64 byte; per input / output	via user data	No		
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Short-circuit protection  Yes  Short-circuit protection  Mains buffering  Mains/voltage failure stored energy time  Input current  Current consumption (rated value)  Current consumption, max.  Inrush current, max.  It  Inrush current, max.  It  Power  Infeed power to the backplane bus  Power loss, typ.  Address area  Address space per module  Address space per module, max.  64 byte; per input / output	via dataset	No		
permissible range, lower 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.  Inrush current, max.  I²t  O.04 A²-s  Power Infeed power to the backplane bus Power loss, typ.  Address area Address space per module • Address space per module, max.  192 19.2 V 28.8 V 28.8 V 28.8 A 3 W 4 W 29 Address space per module 4 Address space per module, max. 6 4 byte; per input / output	Supply voltage			
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.  Inrush current, max.  It 0.04 A²-s  Power  Infeed power to the backplane bus  Power loss, typ.  Address space per module  Address space per module, max.  28.8 V	Rated value (DC)	24 V		
Reverse polarity protection  Short-circuit protection  Mains buffering  Mains/voltage failure stored energy time  Input current  Current consumption (rated value)  Inrush current, max.  Irush current, max.  If 0.04 A²-s  Power  Infeed power to the backplane bus  Power loss  Power loss  Power loss, typ.  Address space per module  Address space per module, max.  64 byte; per input / output	permissible range, lower limit (DC)	19.2 V		
Short-circuit protection  Mains buffering  Mains/voltage failure stored energy time  Input current  Current consumption (rated value)  Current consumption, max.  Inrush current, max.  I**  Power  Infeed power to the backplane bus  Power loss  Power loss, typ.  Address area  Address space per module  Address space per module, max.  Yes  In Mains buffering  1 A  1 A  2 B  A  1 A  2 B  A  4 W  Power loss  Address space per module  Address space per module, max.  64 byte; per input / output	permissible range, upper limit (DC)	28.8 V		
Mains buffering	Reverse polarity protection	Yes		
<ul> <li>Mains/voltage failure stored energy time</li> <li>Input current</li> <li>Current consumption (rated value)</li> <li>Current consumption, max.</li> <li>Inrush current, max.</li> <li>I²t</li> <li>0.04 A²·s</li> <li>Power</li> <li>Infeed power to the backplane bus</li> <li>Power loss</li> <li>Power loss, typ.</li> <li>Address area</li> <li>Address space per module</li> <li>Address space per module, max.</li> <li>64 byte; per input / output</li> </ul>	Short-circuit protection	Yes		
Input current Current consumption (rated value)  Current consumption, max.  Inrush current, max.  I²t  O.04 A²·s  Power Infeed power to the backplane bus  Power loss Power loss, typ.  Address area  Address space per module  Address space per module, max.  64 byte; per input / output	Mains buffering			
Current consumption (rated value)  Current consumption, max.  Inrush current, max.  I²t  O.04 A²·s  Power  Infeed power to the backplane bus  14 W  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  1.7 A  1.7 A  0.04 A²·s  9.8 A  1.8 W  1.9 W	<ul> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms		
Current consumption, max.  Inrush current, max.  I²t  0.04 A²·s  Power  Infeed power to the backplane bus  14 W  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  1.7 A  2.8 A  1.004 A²·s  9.004 A²·s  14 W  Power loss  64 byte; per input / output	Input current			
Inrush current, max.  I²t  0.04 A²·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; per input / output	Current consumption (rated value)	1 A		
I²t 0.04 A²·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; per input / output	Current consumption, max.	1.7 A		
Power Infeed power to the backplane bus  Power loss  Power loss, typ.  3 W  Address area  Address space per module  • Address space per module, max.  64 byte; per input / output	Inrush current, max.	2.8 A		
Infeed power to the backplane bus  Power loss  Power loss, typ.  3 W  Address area  Address space per module  • Address space per module, max.  64 byte; per input / output	l²t	0.04 A <sup>2</sup> ·s		
Power loss Power loss, typ. 3 W  Address area  Address space per module  • Address space per module, max. 64 byte; per input / output	Power			
Power loss, typ. 3 W  Address area  Address space per module  • Address space per module, max. 64 byte; per input / output	Infeed power to the backplane bus	14 W		
Address area  Address space per module  • Address space per module, max.  64 byte; per input / output	Power loss			
Address space per module  • Address space per module, max.  64 byte; per input / output	Power loss, typ.	3 W		
Address space per module, max.  64 byte; per input / output	Address area			
	Address space per module			
Address space per station	<ul> <li>Address space per module, max.</li> </ul>	64 byte; per input / output		
	Address space per station			

Address space per station, max.	64 byte; per input / output
Hardware configuration	
Integrated power supply	Yes
System power supply can be plugged in to left of IM	No
Number of permissible power segments	1
Rack	
Modules per rack, max.	12; I/O modules
Submodules	
<ul> <li>Number of submodules per station, max.</li> </ul>	108; 9 submodules / I/O modules
Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch) RJ45
1. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes
<ul> <li>Number of ports</li> </ul>	2
<ul> <li>integrated switch</li> </ul>	Yes
BusAdapter (PROFINET)	No
Protocols	
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	
Services	
— IRT	No No
— PROFlenergy	No No
— Prioritized startup	No Voc
<ul><li>— Shared device</li><li>— Number of IO Controllers with shared device,</li></ul>	Yes 2
— Number of 10 Controllers with shared device, max.	2
Redundancy mode	
PROFINET system redundancy (S2)	No
Media redundancy	
— MRP	Yes
— MRPD	No
Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
Isochronous mode	
Equidistance	No
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; 1 500 V AC

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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)
Standards, approvals, certificates	
Network loading class	2
Ambient conditions	
Ambient temperature during operation	
<ul> <li>horizontal installation, min.</li> </ul>	-30 °C; From FS03
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-30 °C; From FS03
<ul> <li>vertical installation, max.</li> </ul>	40 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	236 g

4/26/2021

last modified: