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Data sheet 6ES7155-5AA01-0AB0



Figure similar

SIMATIC ET 200MP, PROFINET interface module IM 155-5 PN ST for up to 30 S7-1500/ET 200MP I/O modules; integrated 2-port switch with 2 fixed RJ45 ports; 100 Mbps

General information	
Product type designation	IM 155-5 PN ST
HW functional status	from FS01
Firmware version	V4.1.0
● FW update possible	Yes
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	Yes
● IRT	Yes
● Tool changer	No
● Local coupling, IO data	No
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V15
● STEP 7 configurable/integrated from version	use GSD file
● PROFINET from GSD version/GSD revision	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	
● Mains/voltage failure stored energy time	10 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 $A^2 \cdot s$
Power	
Infeed power to the backplane bus	14 W
Power consumption 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

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Address area	
Address space per module	
● Address space per module, max.	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
Hardware configuration	
Integrated power supply	Yes; 14 W
System power supply can be plugged in to left of IM	Yes
Number of permissible power segments	3; incl. interface module
Rack	
● Modules per rack, max.	30; I/O modules
Submodules	
● Number of submodules per station, max.	256; 9 per I/O module
Interfaces	
Transmission procedure	100BASE-TX
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	Yes; 250 µs to 4 ms in 125 µs frame
— Dynamic Frame Packing (DFP)	No
— PROFIenergy	No
— Prioritized startup	Yes
— 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	
PROFINET IO	Yes
PROFIsafe	Yes
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

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Isochronous mode	
Equidistance	Yes
shortest clock pulse	250 µs
max. cycle	4 ms
Bus cycle time (TDP), min.	250 µs
Jitter, max.	1 µs
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
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Siemens Eco Profile (SEP)	Siemens EcoTech
Network loading class	3
Ecological footprint	
● environmental product declaration	Yes
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
Security	
PROFINET Security Class	0
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-25 °C; From FS03
● horizontal installation, max.	60 °C
● vertical installation, min.	-25 °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
Absolute humidity	
● dew point, min.	-60 °C; suitable for dry room applications
Connection method	
ET-Connection	
● via BU/BA Send	No
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Classifications	

	Version	Classification
eClass	16	27-24-26-08

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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

Miscellaneous

General Product Approval

Manufacturer Declaration

China RoHS

For use in hazardous locations

FM

CCC-Ex

For use in hazardous locations

Type Examination Certificate

Miscellaneous

CCC-Ex

Maritime application

Maritime application

NK / Nippon Kaiji Kyokai

Maritime application

CCS (China Classification Society)

KR (Korean Register of Shipping)

Environment

Industrial Communication

PROFINET

last modified: 5/20/2026

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