SIEMENS

Data sheet

6ES7158-3AD10-0XA0



SIMATIC PN/PN Coupler for deterministic data exchange between max.4 PN-Controller per subnet, also from subnet to subnet, PROFIsafe data exchange, I/O-, MSI-, MSO- and data record communication, redundant power supply, PNconnection via SIMATIC BusAdapter (BA), delivery w/o BusAdapter

General information		
Product type designation	PN/PN coupler	
Firmware version		
FW update possible	Yes	
Product function		
I&M data	Yes; I&M0 to I&M3	
Isochronous mode	No; For operation on isochronous bus	
Tool changer	Yes; Docking station and docking unit	
 Local coupling, IO data 	Yes	
 — Number of coupling modules 	16	
 — Number of coupling submodules per module 	4; 1x write, 3x read	
 Local coupling, data records 	Yes	
 — Number of coupling modules 	16	
 — Number of coupling submodules per module 	4; 1x write, 3x read	
— Record length, max.	4 096 byte	
— FIFO depth in storage mode	8	
Engineering with		
STEP 7 TIA Portal configurable/integrated from version	STEP 7 V15.1 or higher	
 PROFINET from GSD version/GSD revision 	V2.3	
Installation type/mounting		
Mounting	Mounting rail 7.5 mm and 15 mm	
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	
Mains buffering		
 Mains/voltage failure stored energy time 	10 ms	
Input current		
Current consumption, max.	360 mA; For 19.2 V input voltage at the right-hand supply terminal, including 2 plugged BA $\rm 2x\ LC$	
Inrush current, max.	1.6 A	
l²t	0.031 A ² ·s	
from supply voltage 1L+, max.	320 mA; For 19.2 V input voltage at the left-hand supply terminal, including 2 plugged BA $\rm 2x\ LC$	
Power loss		
Power loss, typ.	4 W; For 24 V input voltage and 2 plugged BA 2x RJ45 If BusAdapters with an optical interface are plugged, there is an additional 750 mW per optical interface (3 W with 2 plugged BA 2x LC)	
Address area		

Address space per module

Address space per statuon Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address space per statuon, max. T 440 byte; per input / output Address statuon, max. T 440 byte; per input / output Address statuon, max. T 440 byte; per input / output Address statuon, max. T 440 byte; per input / output Address statuon, max. T 440 byte; per input / output Address statuon, max. T 440 byte; per input / output / outp	- Address anges per medule, may	254 bits: may 254 bitss of input data and 252 bitss of sutput data
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Hardware sontiguration Submodules • Number of submodules par station, max. 110 Interfaces Yes, Via SIMATC BusAdapter Transmission rate, max. 100 Mbbrs Interface Yes, Via SIMATC BusAdapter Transmission rate, max. 100 Mbbrs Interface Yes, Via SIMATC BusAdapter * Integrated switch Yes • BusAdapter Yes • Ruber of ports 2: via BusAdapter • Ruber of ports Yes: As INRP or MRPD client; max. 50 or 30 devices in the ring 2. Unterface Yes • Ruber of ports 2: via BusAdapter • Ruber ared and and Yes • Ruber		4.440 hide and inset / subside
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• H-Sync forwardingYesMedia redundancyYes- MRPYes- MRPDYesOpen IE communicationYes• TCP/IPYes• SNMPYes		
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MRP Yes MRPD Yes Open IE communication Yes • TCP/IP Yes • SNMP Yes		res
MRPD Yes Open IE communication Yes • TCP/IP Yes • SNMP Yes		Neg.
Open IE communication • TCP/IP Yes • SNMP Yes		
• TCP/IP Yes • SNMP Yes		Yes
• SNMP Yes		
• LLDP Yes		
	• LLDP	Yes

Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes; Parameterizable
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
MAINT LED	Yes; Yellow LED
• LINK LED	Yes; 2x green link LEDs on BusAdapter
 Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
Potential separation	
between supply voltage and electronics	Yes; to power input 2
between Ethernet and electronics	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Network loading class	3
Ambient conditions	
Ambient temperature during operation	
• min.	-30 °C; From FS05
• max.	60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 50 °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 section "Climatic and mechanical environmental conditions"
Mechanics/material	
Strain relief	Yes; Optional, for RJ45 and FC BusAdapter only
Dimensions	
Width	100 mm; Minimized with good handling
Height	117 mm
Depth	74 mm; with mounting rail
Weights	
Weight, approx.	200 g; without BusAdapter

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