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Termination resistor - PSI-TERMINATOR-PB - 2313944

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Active termination resistor with redundant voltage supply for PROFIBUS and RS-485 bus systems. Compact design. Electrical isolation between supply and data interface. Bus termination can be switched. Integrated programming interface.

Product description

PROFIBUS or other RS-485 networks can be actively terminated at the end of the bus using the PSI-TERMINATOR-PB. This ensures safe communication even if the bus device is connected/disconnected during operation. In addition, the connectable termination enables the device to be operated as a service interface at any point in the bus system. For the operation of active programming and diagnostic devices, the required power supply is provided at the alternative D-SUB connection.

Why buy this product

- ☑ Diagnostic LEDs for voltage and data activity
- ☑ Interference-free bus communication thanks to active termination
- ☑ Compact housing design
- ☑ Fixed programming interface in the network
- ☑ Termination can be connected externally
- ☑ Redundant power supply
- ☑ DIN rail mounting
- ☑ Extended temperature range of -20°C ... +65°C
- ☑ Electrical isolation of power supply and data interface

Key commercial data

Packing unit	1 pc
GTIN	4 046356 579445
Weight per Piece (excluding packing)	124.2 g
Custom tariff number	85389091
Country of origin	Germany

Technical data

Note:

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Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	22.5 mm
Height	99 mm
Depth	56 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20

Serial interface

Interface 1	PROFIBUS acc. to IEC 61158, RS-485 2-conductor
Connection method	D-SUB 9, COMBICON
Transmission length	$\leq$ 1200 m (Depends on transmission speed and cable type)
Termination resistor	390 Ω
	220 Ω
	390 Ω (Can be connected)
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	1.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Serial transmission speed	$\leq$ 12 Mbps
Output nominal voltage	5 V DC

Power supply

Nominal supply voltage	24 V DC (via pluggable COMBICON screw terminal block)
Supply voltage range	19.2 V DC ... 28.8 V DC (via pluggable COMBICON screw terminal block)
Typical current consumption	45 mA (24 V DC)

General

Electrical isolation	DIN EN 50178 (RS-485 // VCC)
Test voltage data interface/power supply	1.5 kV$_{rms}$ (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Net weight	70 g
Housing material	PA 6.6-FR
Color	green

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General

MTBF	2383 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	559 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	3550 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))
	1818 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	849 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA	Class I, Zone 2, AEx nA IIC T5
UL, USA / Canada	508 listed
	Class I, Div. 2, Groups A, B, C, D
UL, Canada	Class I, zone 2, Ex nA IIC T5 Gc X

Classifications

eCl@ss

eCl@ss 4.0	27240490
eCl@ss 4.1	27240490
eCl@ss 5.0	27242208
eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
eCl@ss 8.0	27230206

ETIM

ETIM 3.0	EC000673
ETIM 4.0	EC001423
ETIM 5.0	EC000448

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553

Approvals

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed / cULus Listed

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Ex Approvals

ATEX / ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed

cUL Listed

UL Listed

cUL Listed

cULus Listed

Accessories

Accessories

Data cable by the meter

Cable - PSM-CABLE-PROFIB/FC - 2744652

PROFIBUS cable, Fast Connect type, up to 12 Mbps (02YSY (ST)CY 1x2x22 AWG)

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Accessories

Data plug

D-SUB bus connector - SUBCON-PLUS-PROFIB/90/IDC - 2313672

D-SUB connector, 9-pos., male connector, cable entry < 90°, bus system: PROFIBUS DP up to 12 Mbps, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; IDC terminal block connection

D-SUB bus connector - SUBCON-PLUS-PROFIB/90/PG/IDC - 2313685

D-SUB connector, 9-pos., male connector, cable entry < 90°, bus system: PROFIBUS DP up to 12 Mbps with Pg D-SUB socket for connecting a programming device, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; IDC terminal block connection

D-SUB bus connector - SUBCON-PLUS-PROFIB/90/SC - 2313698

D-SUB connector, 9-pos., male connector, cable entry < 90°, bus system: PROFIBUS DP up to 12 Mbps, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; screw connection terminal blocks

D-SUB bus connector - SUBCON-PLUS-PROFIB/90/PG/SC - 2313708

D-SUB connector, 9-pos., male connector, cable entry < 90°, bus system: PROFIBUS DP up to 12 Mbps with PG D-SUB socket for connecting a programming device, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; screw connection terminal blocks

D-SUB bus connector - SUBCON-PLUS-PROFIB/SC2 - 2708232

D-SUB connector, 9-pos., male connector, cable entry < 35°, bus system: PROFIBUS DP up to 12 Mbps, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; screw connection terminal blocks

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D-SUB bus connector - SUBCON-PLUS-PROFIB/PG/SC2 - 2708245

D-SUB connector, 9-pos., male connector, cable entry < 35°, bus system: PROFIBUS DP up to 12 Mbps with Pg D-SUB socket for connecting a programming device, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; screw connection terminal blocks

D-SUB bus connector - SUBCON-PLUS-PROFIB/AX/SC - 2744380

D-SUB connector, 9-pos., male connector, axial version with two cable entries, bus system: PROFIBUS DP up to 12 Mbps, termination resistor can be switched on via slide switch, pin assignment: 3, 5, 6, 8; screw connection terminal blocks

Interface converter

Repeater - PSI-REP-PROFIBUS/12MB - 2708863

Modular repeater for electrical isolation and range increase for PROFIBUS up to 12 Mbps, 4-way isolation, rail-mountable, supply 24 V DC

Repeater - PSI-REP-RS485W2 - 2313096

Modular repeater for electrical isolation and range increase in RS-485 2-wire bus systems up to 500 kbps, 4-way isolation, rail-mountable, supply 24 V DC

Interface converter - PSM-ME-RS485/RS485-P - 2744429

Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

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Accessories

Interface converter - PSM-ME-RS232/RS485-P - 2744416

Interface converter, for converting RS-232 (V.24) to RS-422 (V.11) and RS-485, with electrical isolation, 2 channels, rail-mountable

Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504

Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

Stripping tool

Stripping tool - PSM-STRIP-FC/PROFIB - 2744623

Quick stripping tool for PROFIBUS cable, type Fast Connect
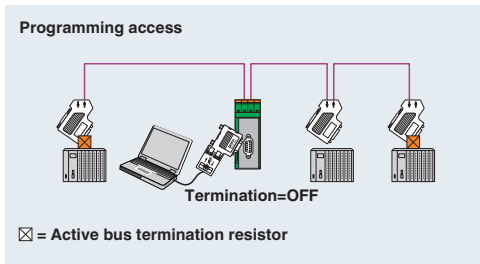
Stripping pliers - QUICK WIREFOX 6 - 1204384

Stripping tool for cables with PVC insulation, stripping range: 0.08 to 6 mm², wire cutting up to 6 mm² flexible or 4 mm² rigid
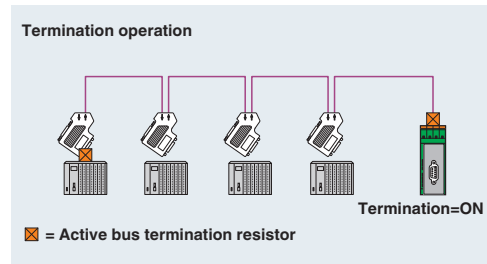
Drawings

Termination resistor - PSI-TERMINATOR-PB - 2313944

Application drawing

Application drawing

Fixed service interface in (professional) bus system

Permanent termination at the end of the (professional) bus system