

Termination resistor - PSI-TERMINATOR-PB - 2313944

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Active termination resistor for PROFIBUS and RS-485 bus systems. Compact design, electrical isolation between supply and data interface, bus termination can be activated, 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.

Your advantages

- ✓ 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
- ✓ 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
GTIN	4046356579445
Weight per Piece (excluding packing)	120.000 g
Custom tariff number	85389091
Country of origin	Germany

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Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
	Use in potentially explosive areas is not permitted in China.

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 the manufacturer's declaration for altitude operation)
Degree of protection	IP20

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 2014/30/EU
Mounting type	DIN rail mounting
Net weight	124.2 g
Housing material	PA 6.6-FR
Color	green
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%)
	1818 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	849 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

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)

Interfaces

Interface 1	PROFIBUS acc. to IEC 61158, RS-485 2-conductor
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Technical data

Interfaces

Connection method	D-SUB 9, COMBICON
Transmission length	≤ 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 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Serial transmission speed	≤ 12 Mbps
Output nominal voltage	5 V DC

Function

Status and diagnostic indicators	LEDs: UL (communications power), data activity (not marked)
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Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	25g, 11 ms period, half-sine shock pulse
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (Data line, asymmetrical)
Standards/regulations	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

Environmental Product Compliance

Termination resistor - PSI-TERMINATOR-PB - 2313944

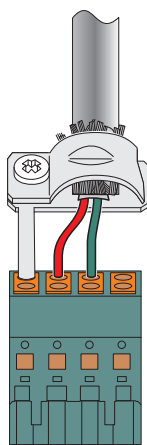
Technical data

Environmental Product Compliance

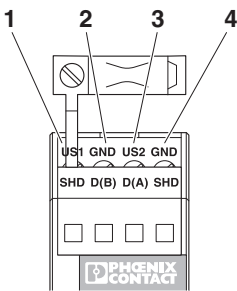
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Schematic diagram



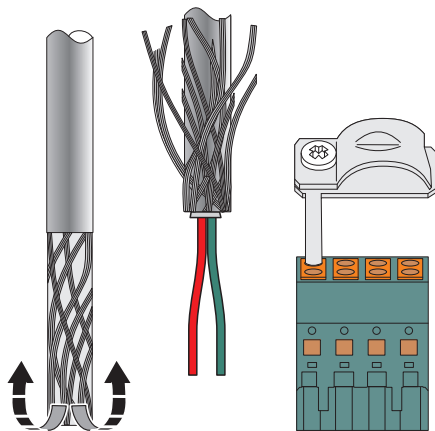
Schematic diagram



Power supply

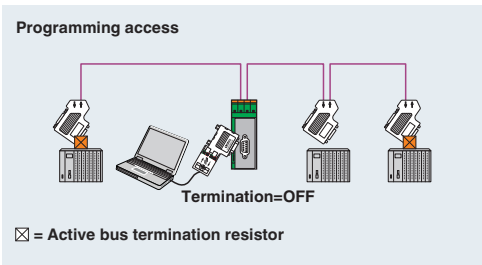
Connecting cables with a shield clamp

Schematic diagram



Push the braided shield back

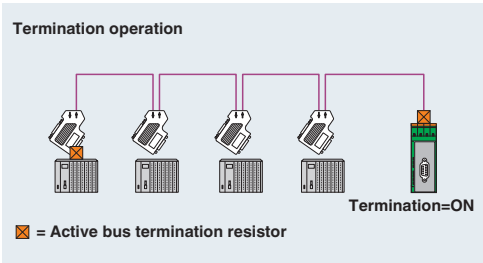
Application drawing



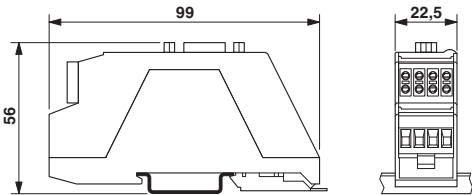
Fixed service interface in (professional) bus system

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Application drawing

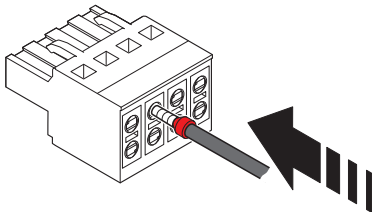


Dimensional drawing



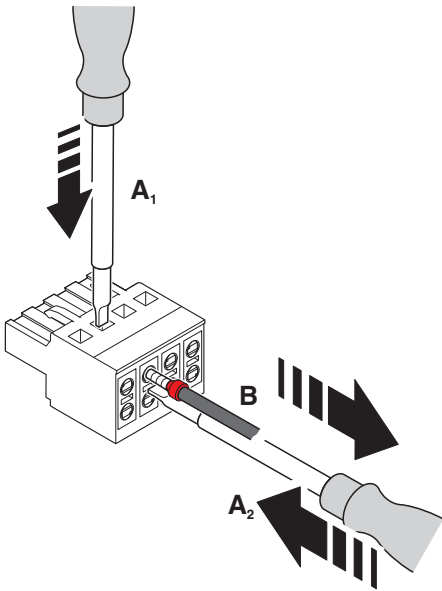
Permanent termination at the end of the (professional) bus system

Schematic diagram



Install signal cable

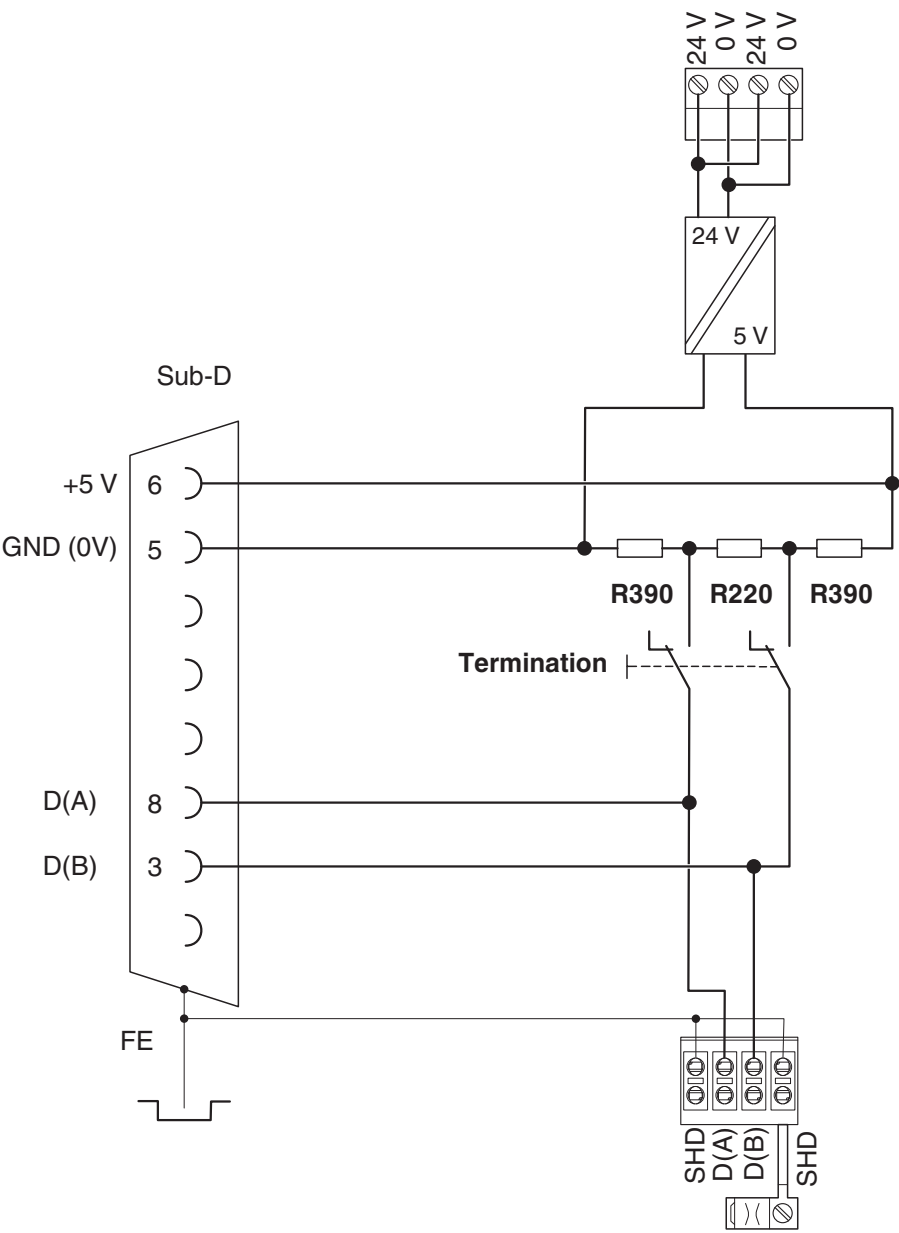
Schematic diagram



Deinstall signal cable

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Block diagram



Classifications

eCl@ss

eCl@ss 10.0.1	19070403
eCl@ss 11.0	19070403

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Classifications

eCl@ss

eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	19070400
eCl@ss 5.1	19070400
eCl@ss 6.0	19070400
eCl@ss 7.0	19070403
eCl@ss 9.0	19070403

ETIM

ETIM 3.0	EC000673
ETIM 4.0	EC000310
ETIM 6.0	EC000448
ETIM 7.0	EC000448

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	32121617
UNSPSC 18.0	32121617
UNSPSC 19.0	32121617
UNSPSC 20.0	32121617
UNSPSC 21.0	32121617

Accessories

Accessories

Data cable by the meter

Bus system cable - PSM-CABLE-PROFIB/FC - 2744652



By the meter, Bus system cable, PROFIBUS (12 Mbps), shielded, PVC FR VI/PVC, Violet, 2-wire (1X2XAWG22/1), color single wire: Red, green, cable length: Free entry (1.0 ... 1000.0 m)

Data plug

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Accessories

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



D-SUB connector, 9-pos., male connector, 90° cable entry, 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, 90° cable entry, 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, 90° cable entry, 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, 90° cable entry, 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/35/M12 - 2902320



D-SUB plug, 9-pos., pin, assignment: 3, 5, 6, 8; two 35° cable entries M12 (B-coded). Bus system: PROFIBUS DP up to 12 Mbps. Termination resistor via separate M12 terminator.

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Accessories

D-SUB bus connector - SUBCON-PLUS-PROFIB/90/M12 - 2902318



D-SUB plug, 9-pos., pin, assignment: 3, 5, 6, 8; two 90° M12 cable glands (B-coded). Bus system: PROFIBUS DP up to 12 Mbps. Termination resistor via separate M12 terminator.

D-SUB bus connector - SUBCON-PLUS-PROFIB/90X/M12 - 2902729



D-SUB plug, 9-pos., pin, assignment: 3, 5, 6, 8; two 90° cable entries M12 (B-coded). Bus system: PROFIBUS DP up to 12 Mbps. Termination resistor via separate M12 terminator. Long version; S7-compatible.

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



Quick stripping tool for PROFIBUS cable, type Fast Connect

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



D-SUB connector, 9-pos., male connector, 35° cable entry, 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/PG/SC2 - 2708245



D-SUB connector, 9-pos., male connector, 35° cable entry, 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

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Accessories

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

Repeater - 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

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

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Accessories

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 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