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# 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.

## 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
- 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 STK
GTIN	4 046356 579445

## Technical data

### Note

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

Width	22.5 mm
Height	99 mm

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## Technical data

### Dimensions

Depth	56 mm
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### 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

### General

Electrical isolation	DIN EN 50178 (RS-485 // VCC)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
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 % (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 (Please follow the special installation instructions in the documentation!)
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

### 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)

### Serial interface

Interface 1	PROFIBUS acc. to IEC 61158, RS-485 2-conductor
Connection method	D-SUB 9, COMBICON
Transmission length	≤ 1200 m (Depends on transmission speed and cable type)
Termination resistor	390 Ω

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## Technical data

### Serial interface

	220 Ω
	390 Ω (Can be connected)
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
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 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
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 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
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

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## Classifications

### eCl@ss

eCl@ss 7.0	27242208
eCl@ss 8.0	19070403

### ETIM

ETIM 3.0	EC000673
ETIM 4.0	EC000310
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

UL Listed / cUL Listed / EAC / cULus Listed

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#### Ex Approvals

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

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Approvals submitted

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### Approval details

UL Listed
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cUL Listed
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EAC
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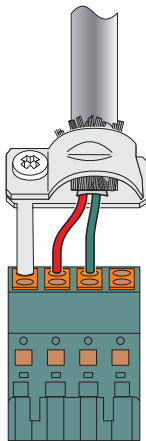
# Termination resistor - PSI-TERMINATOR-PB - 2313944

## Approvals

cULus Listed

## Drawings

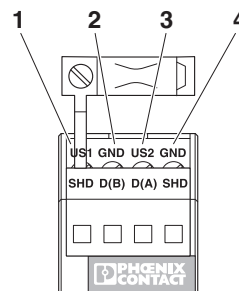
Schematic diagram



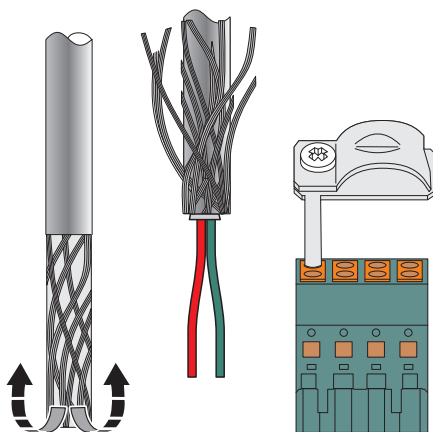
Power supply

Connecting cables with a shield connection clamp

Schematic diagram

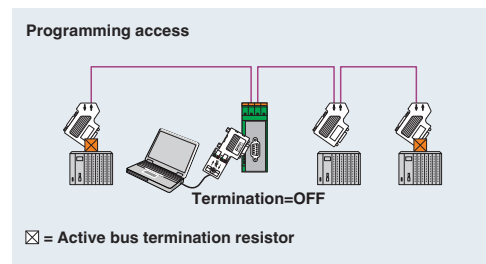


Schematic diagram



Push the braided shield back

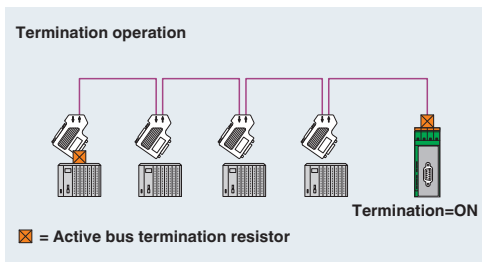
Application drawing



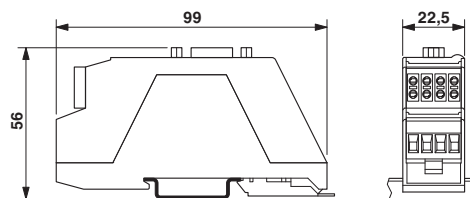
Fixed service interface in (professional) bus system

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Application drawing

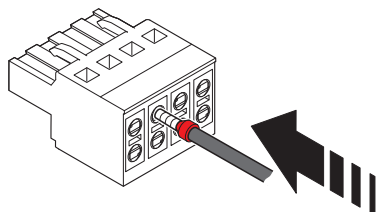


Dimensional drawing



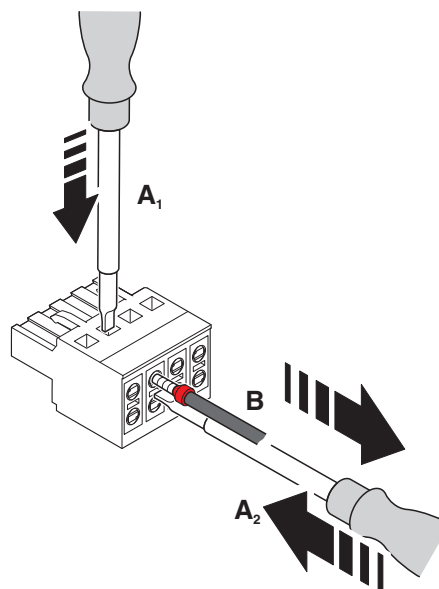
Permanent termination at the end of the (professional) bus system

Schematic diagram



Install signal cable

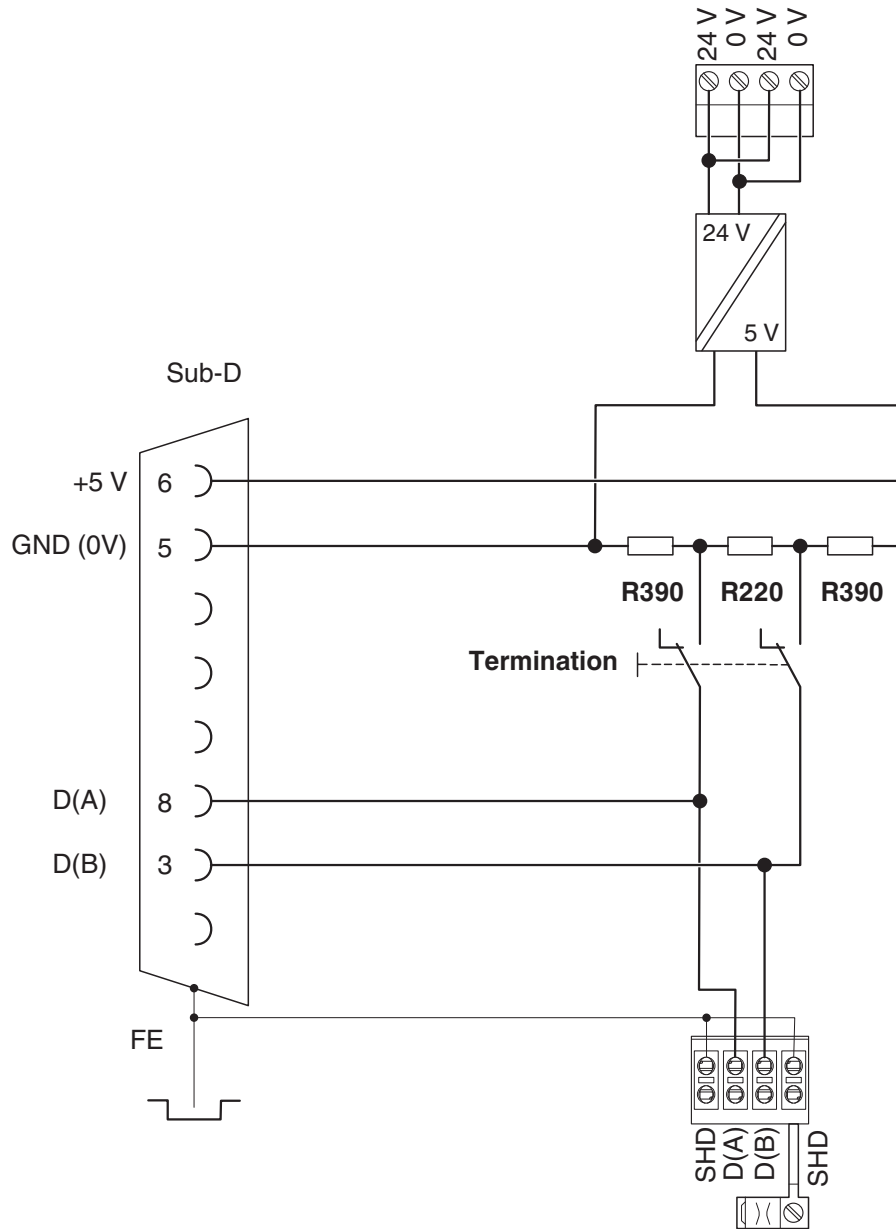
Schematic diagram



Deinstall signal cable

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Block diagram





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Product	Code	Reference	Product link
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