

PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Active termination resistor for PROFIBUS and RS-485 bus systems, redundant power supply, routing of the supply voltage via DIN rail connector, electrical isolation, switchable termination, integrated programming interface

Product description

PROFIBUS or other RS-485 networks can be actively terminated at the bus end using the **PSI-TERMINATOR-PB-TBUS**. 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 devices, the required power supply is provided at the alternative D-SUB connection. When several devices are installed in combination, the supply voltage can be conveniently routed through the DIN rail connector.

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
- Installation as single device or in combination with other devices
- Extended temperature range of -40 °C ... +70 °C
- Electrical isolation of power supply and data interface
- Redundant power supply
- Supply voltage routed through a DIN rail connector for use in combination with other devices

Commercial data

Item number	2702636
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC141
GTIN	4055626251530
Weight per piece (including packing)	135.64 g
Weight per piece (excluding packing)	73.69 g
Customs tariff number	85389091
Country of origin	DE

PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Technical data

Notes

Utilization restriction

CCCx note	Use in potentially explosive areas is not permitted in China.
-----------	---

Product properties

Product type	Terminal resistor
MTTF	3305 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	1923 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	911 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation	RS-485 // VCC
Maximum power dissipation for nominal condition	0.24 W
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)

Supply

Supply voltage range	18 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
Nominal supply voltage	24 V DC (via pluggable COMBICON screw terminal block)
Typical current consumption	10 mA (24 V DC, no load on D-SUB)
	60 mA (24 V DC, current drain at D-SUB of 150 mA)
Max. current consumption	12 mA (18 V DC, no load on D-SUB)
	77 mA (18 V DC, current drain at D-SUB of 150 mA)

Function

Status and diagnostic indicators	LEDs: US (power supply), ACT (data activity)
----------------------------------	--

Connection data

Supply	
Single conductor/terminal point, rigid	0.2 mm ² ... 2.5 mm ²
Single-wire/terminal point, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section, flexible [AWG]	24 ... 12
Stripping length	7.00 mm
Tightening torque	0.6 Nm ... 0.8 Nm

Interfaces

PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Signal	Modbus
	PROFIBUS

Data: PROFIBUS acc. to IEC 61158, RS-485 2-conductor

Serial transmission speed	≤ 12 Mbps
Connection method	D-SUB-9, COMBICON
Tightening torque	0.4 Nm (D-SUB interface)
Transmission length	≤ 1200 m (Depends on transmission speed and cable type)
Termination resistor	390 Ω
	220 Ω
	390 Ω (Can be connected)
Single conductor/terminal point, rigid	0.2 mm ² ... 1.5 mm ²
Single-wire/terminal point, flexible	0.2 mm ² ... 1.5 mm ²
Max. AWG conductor cross-section, flexible	16
Min. AWG conductor cross-section, flexible	24
Single-wire/terminal point, rigid AWG max.	16
Single-wire/terminal point, rigid AWG min.	24
Stripping length	8 mm
Output nominal voltage	5 V DC

Dimensions

Dimensional drawing	
Width	22.5 mm
Height	92 mm
Depth	73 mm

Material specifications

Color (Housing)	green (RAL 6021)
Material (Housing)	PA 6.6-FR

Mechanical tests

Free fall in accordance with EN 60068-2-31	Free fall: 1 m
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	Vibration (operation): 5g, 10...150 Hz, 2.5 h, in XYZ direction
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Shock (operation): 25g, 11 ms period, half-sine shock pulse

Environmental and real-life conditions

Ambient conditions	
Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C

PSI-TERMINATOR-PB-TBUS - Termination resistor

2702636

<https://www.phoenixcontact.com/us/products/2702636>



Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
	≤ 2000 m (Restrictions for ATEX applications)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Air pressure (operation)	≤ 80 kPa (When used in EX zone 2)

Approvals

CE

Certificate	CE-compliant
-------------	--------------

ATEX

Identification	Ex II 3 G Ex ec IIC T4 Gc
Certificate	PxCIF16ATEX2702636X
Note	Please follow the special installation instructions in the documentation!

UL, USA/Canada

Identification	508 Listed
----------------	------------

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
----------------	----------------------------------

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
-------------------------------	---

Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

Electrostatic discharge

Contact discharge	± 6 kV (Test Level 3)
Discharge in air	± 8 kV (Test Level 3)
Indirect discharge	± 6 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

Electromagnetic HF field

Frequency range	80 MHz ... 3 GHz (Test Level 3)
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

Fast transients (burst)

Input	± 2.2 kV (Test Level 3)
-------	-------------------------

PSI-TERMINATOR-PB-TBUS - Termination resistor

2702636

<https://www.phoenixcontact.com/us/products/2702636>



Signal	± 2.2 kV (Test Level 3)
Comments	Criterion B

Surge current load (surge)	
Standards/regulations	EN 61000-4-5

Surge current load (surge)	
Input	± 0.5 kV (sym./asym.)
Signal	± 1 kV (Data line, asymmetrical)
Comments	Criterion B

Conducted interference	
Standards/regulations	EN 61000-4-6

Conducted interference	
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Emitted interference	
Standards/regulations	EN 55011
Comments	Class A, industrial applications

Criteria	
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Standards and regulations

Free from substances that could impair the application of coating	VDMA 24364:2018-05
---	--------------------

Mounting

Mounting type	DIN rail mounting
---------------	-------------------

PSI-TERMINATOR-PB-TBUS - Termination resistor

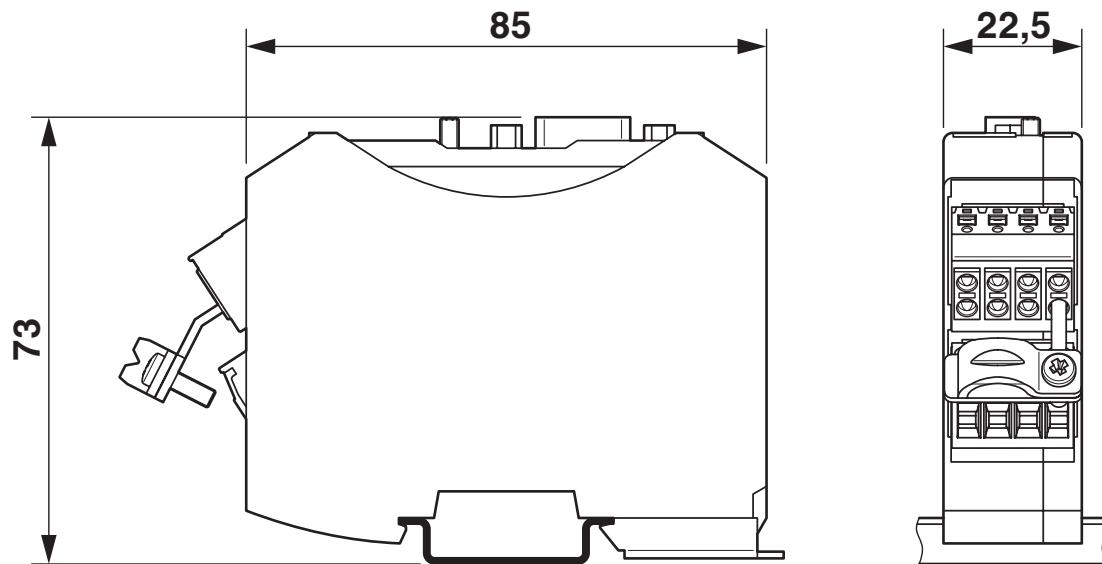


2702636

<https://www.phoenixcontact.com/us/products/2702636>

Drawings

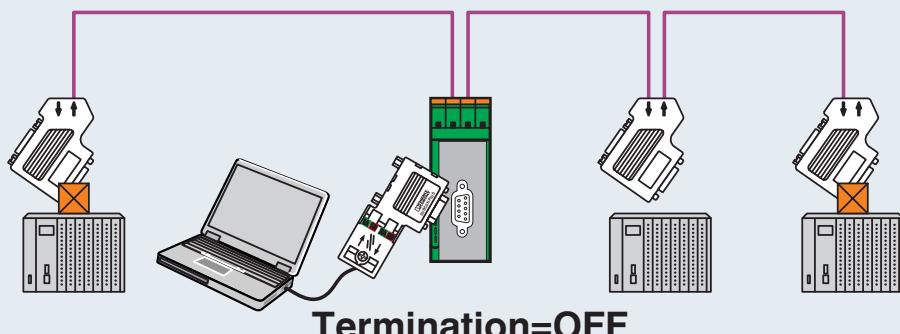
Dimensional drawing



Compact housing

Application drawing

Programming access

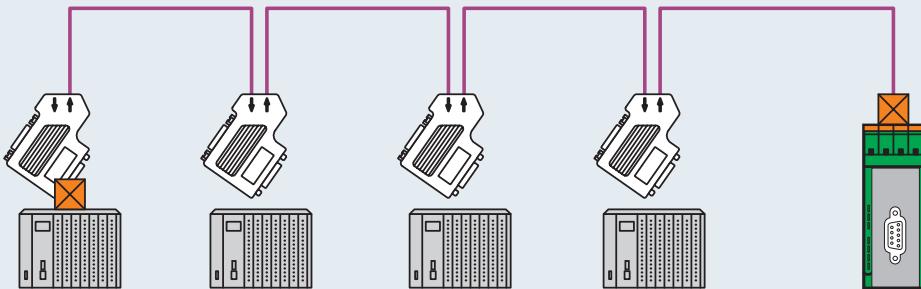


= Active bus termination resistor

Fixed service interface in (professional) bus system

Application drawing

Termination operation



 = Active bus termination resistor

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

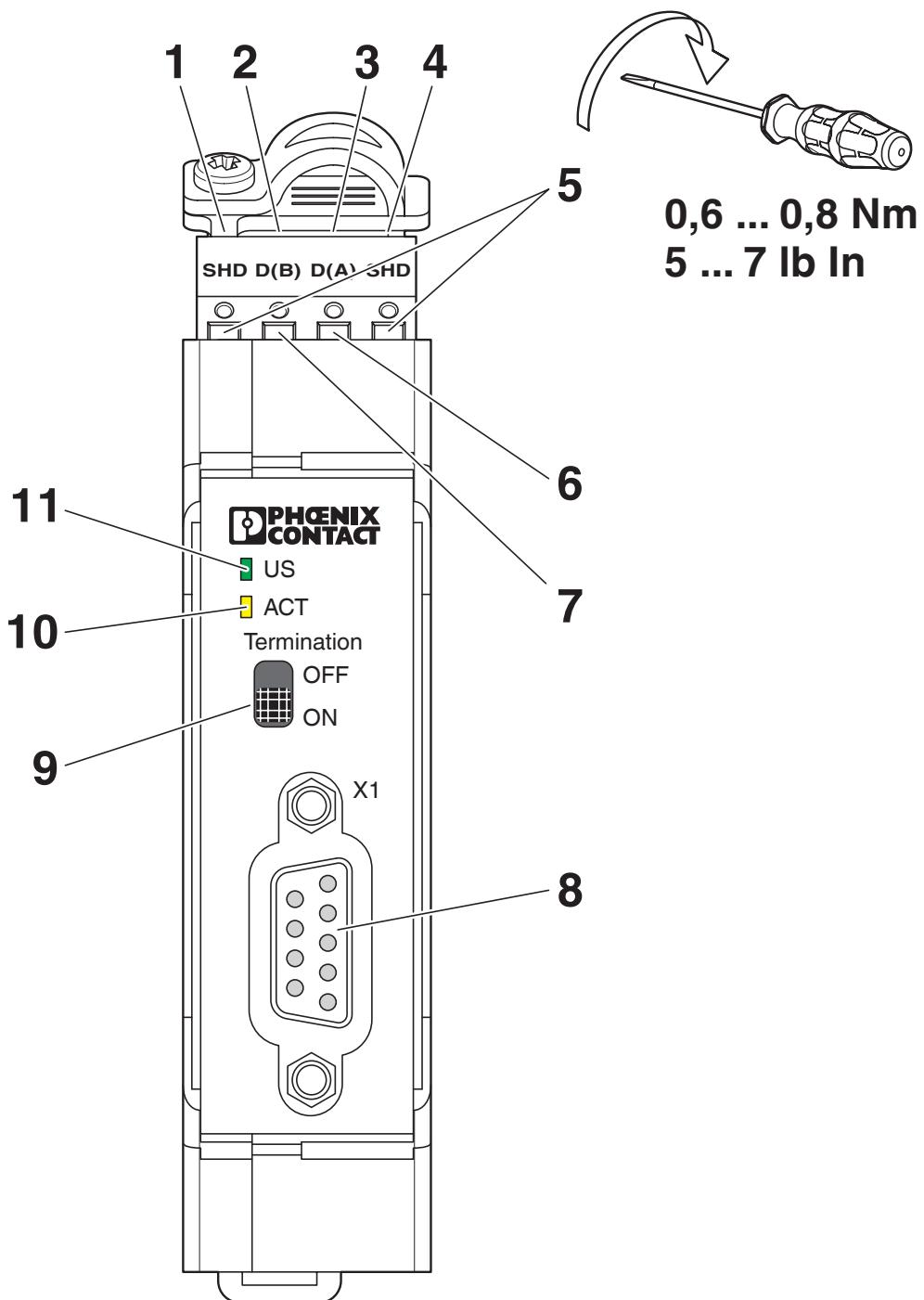
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Schematic diagram



Front view

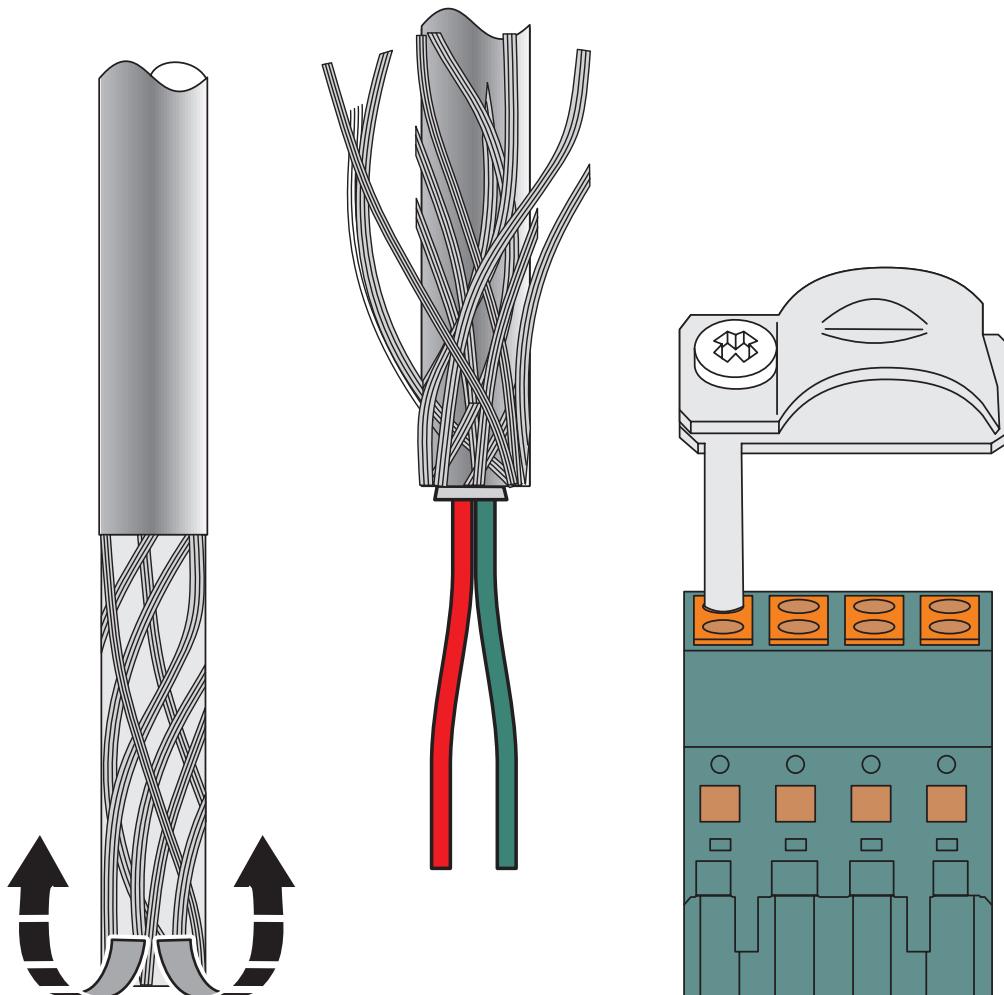
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Schematic diagram



Push the braided shield back

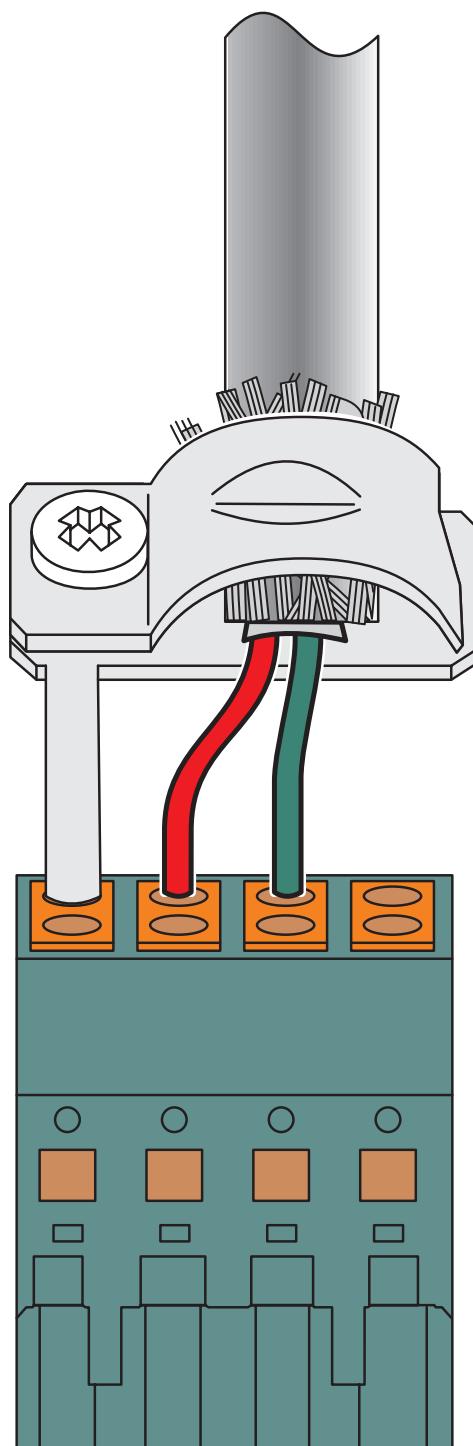
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Schematic diagram



Connecting cables with a shield clamp

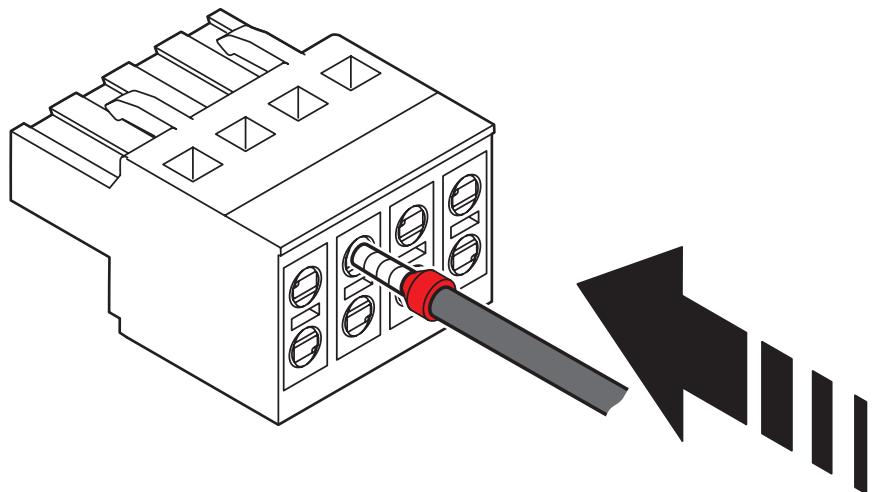
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Schematic diagram



Install signal cable

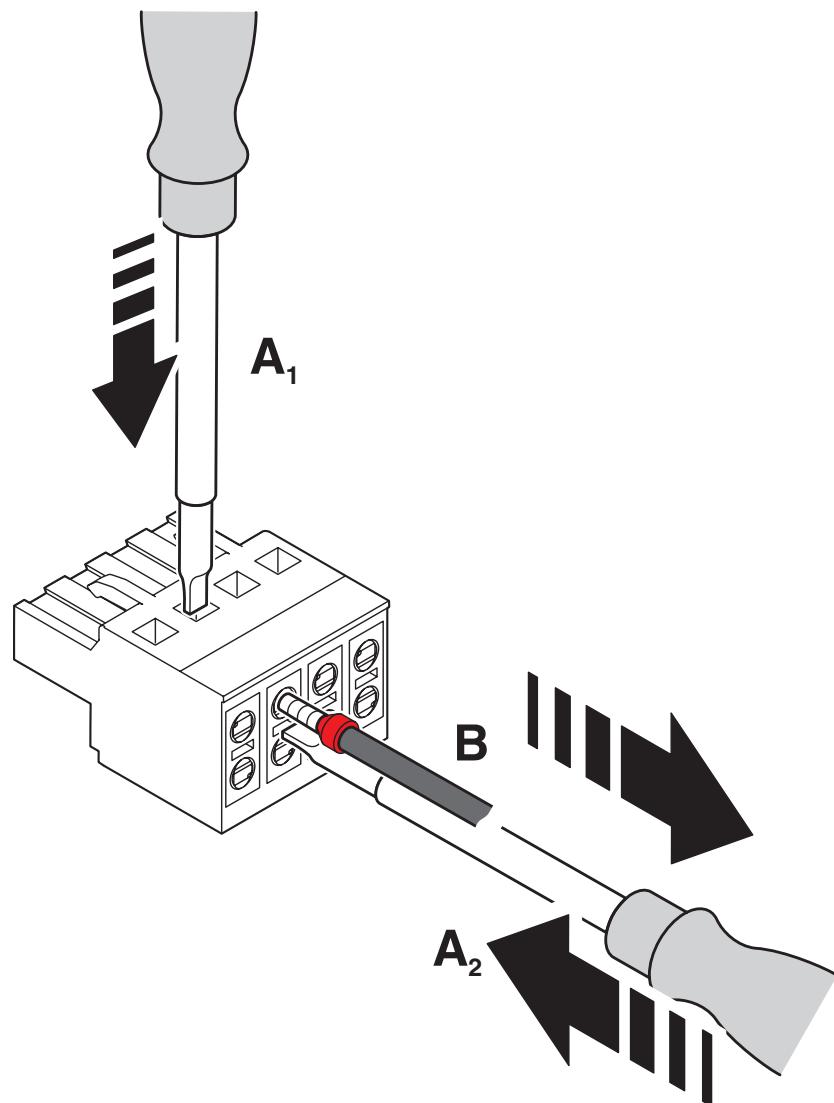
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Schematic diagram



Deinstall signal cable

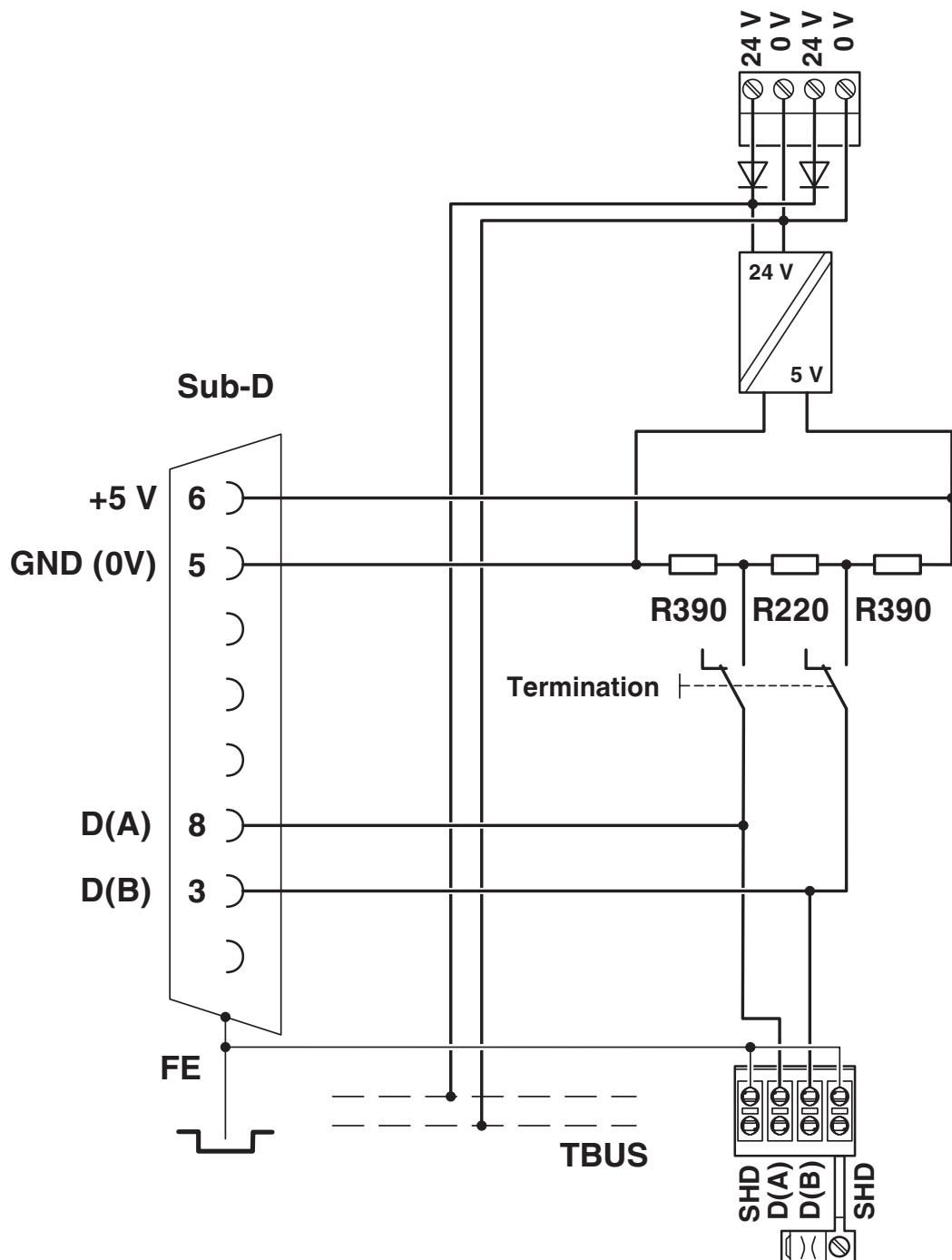
PSI-TERMINATOR-PB-TBUS - Termination resistor



2702636

<https://www.phoenixcontact.com/us/products/2702636>

Block diagram



Basic circuit diagram

PSI-TERMINATOR-PB-TBUS - Termination resistor

2702636

<https://www.phoenixcontact.com/us/products/2702636>



Classifications

ECLASS

ECLASS-13.0	19070403
ECLASS-15.0	19070403

ETIM

ETIM 9.0	EC000448
----------	----------

UNSPSC

UNSPSC 21.0	32121600
-------------	----------

PSI-TERMINATOR-PB-TBUS - Termination resistor

2702636

<https://www.phoenixcontact.com/us/products/2702636>



Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.	

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	d60f1396-450b-48d2-9be3-ffd4cd90d5f7

Phoenix Contact 2025 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA

586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com