Interface converter - PSM-ME-RS232/RS232-P - 2744461

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Interface converter, for the isolation of RS-232 (V.24) interfaces, 4 channels, rail-mountable

Product Description

A considerably higher level of immunity to interference can be achieved in industrial applications by using V.24 (RS-232) isolator modules. The high-quality 3-way isolation results in an electrically isolated and interference-proof V.24 (RS-232) interface. This decoupling also protects the expensive terminal devices against damage.

Your advantages

- Mounting on standard EN DIN rails
- In the case of variable cable lengths, the RS-232 connection on the field side can be established conveniently using plug-in screw terminal blocks
- High-quality 3-way isolation up to 2 kV (VCC // RS-232 // RS-232)
- Integrated surge protection with transient discharge to the DIN rail
- Maximum transmission speed of 115.2 kbps
- Transmission of TxD/RxD data channels and RTS/CTS control lines
- 24 V DC or AC power supply suitable for the control cabinet
- Active data transmission indicated by separate data indicators for the transmit and receive channels
- Shipbuilding approval in accordance with DNV GL

RoHS RS-232 dnp Distributed Network Protocol

Key Commercial Data

Packing unit	1 pc
GTIN	4 017918 188795
GTIN	4017918188795
Weight per Piece (excluding packing)	181.200 g
Custom tariff number	85176200
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

Caption	Slim design
Width	22.5 mm
Height	99 mm
Depth	118.6 mm

Ambient conditions

Ambient temperature (operation)	0 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

General

Transmission channels	4 (2/2), RxD, TxD, RTS, CTS; full duplex
Bit delay	< 3 µs
Bit distortion	< 5 %
Electrical isolation	VCC // V.24 (RS-232) (A) // V.24 (RS-232) (B)
Test voltage data interfaces	2 kV AC
Test voltage data interface/power supply	2 kV AC
	2 kV_{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3
Net weight	123.18 g
Housing material	PA
Color	green
MTBF	2263 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	438 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Power supply

Nominal supply voltage	24 V AC/DC ±20 %
Supply voltage range	19.2 V AC/DC ... 28.8 V AC/DC

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Power supply

Typical current consumption	40 mA (24 V DC)
Protective circuit	Surge protection Suppressor diode

Interfaces

Interface 1	V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1
Connection method	D-SUB 9 plug
Transmission length	15 m (shielded twisted pair)
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	13
Pin assignment	DTE/DCE switchover via switch
Protocols supported	transparent protocol
Serial transmission speed	115.2 kbps
Interface 2	V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1
Connection method	Pluggable screw connection
Transmission length	15 m (shielded twisted pair)
Conductor cross section flexible min.	0.2 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	13

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	EAC
Identification	EAC
Designation	UL, USA/Canada
Identification	508 Recognized
	Class I, Div. 2, Groups A, B, C, D
	Class I, Zone 2, AEx nA IIC T4
	Class I, Zone 2, Ex nA IIC T4 Gc X
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A
Designation	Shipbuilding
Identification	DNV GL
Temperature	B
Humidity	A
Vibration	A

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Conformance/approvals

EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

Standards and Regulations

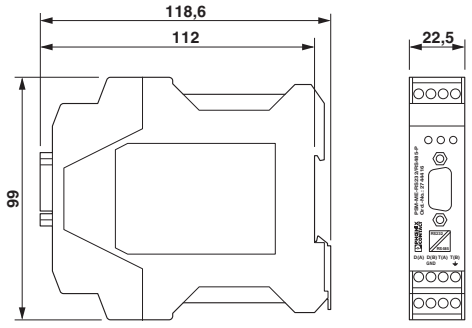
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Standards/regulations	EN 61000-4-3
Frequency range	Test Level 3
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 2 kV (12 Ω)
Standards/regulations	EN 55011
	EN 61000-4-6

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

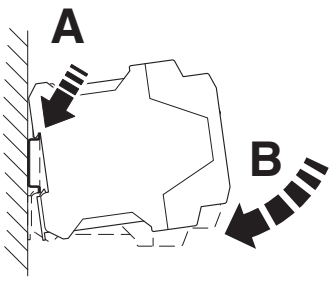
Drawings

Dimensional drawing



Slim design

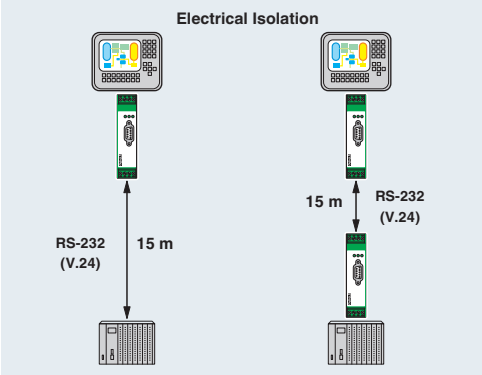
Schematic diagram



Mounting

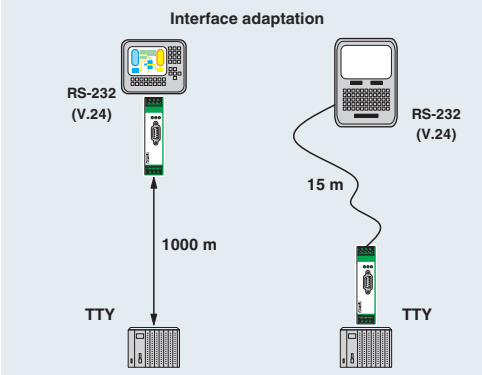
Interface converter - PSM-ME-RS232/RS232-P - 2744461

Application drawing



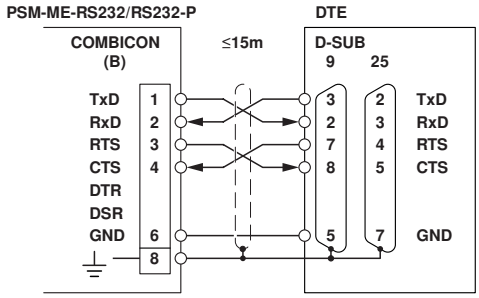
Electrical isolation

Application drawing



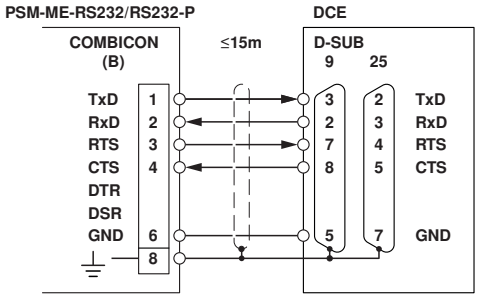
Interface adaptation

Connection diagram



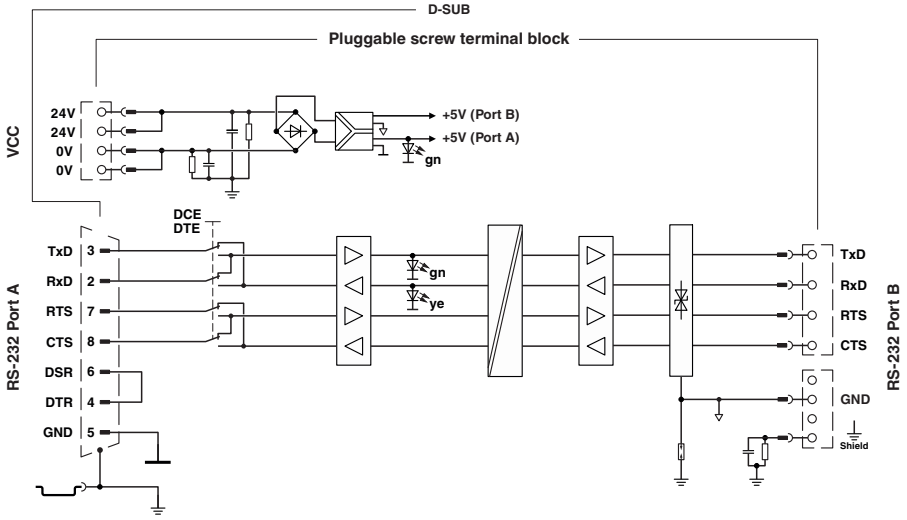
Connection to a DTE device

Connection diagram



Connection to a DCE device

Circuit diagram



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Classifications

eCl@ss

eCl@ss 10.0.1	27242208
eCl@ss 11.0	27242208
eCl@ss 4.0	27250300
eCl@ss 4.1	27250300
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242208
eCl@ss 8.0	27242208
eCl@ss 9.0	27242208

ETIM

ETIM 2.0	EC000310
ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC000310
ETIM 6.0	EC001423
ETIM 7.0	EC001423

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39122114
UNSPSC 18.0	39122114
UNSPSC 19.0	39122114
UNSPSC 20.0	39122114
UNSPSC 21.0	39122114

Approvals

Approvals

Approvals

DNV GL / UL Recognized / cUL Recognized / EAC / cULus Recognized

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Approvals

Ex Approvals

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

Approval details

DNV GL	https://approvalfinder.dnvgl.com/	TAA00001KR
UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
EAC		EAC-Zulassung
cULus Recognized		

Accessories

Accessories

Adapter cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474



RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1

Data plug

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Accessories

D-SUB bus connector - SUBCON 9/F-SH - 2761499



D-SUB plug, 9-pos. female connector, one cable entry < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

Mounting material

Shield connection clamp - ME-SAS - 2853899



Shield connection clamp for printed circuit terminal block

Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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