

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



2744461

<https://www.phoenixcontact.com/us/products/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
- High-quality 3-way isolation up to 2 kV (VCC // RS-232 // RS-232)
- 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
- Integrated surge protection with transient discharge to the DIN rail
- 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
- Maximum transmission speed of 115.2 kbps
- Shipbuilding approval in accordance with DNV GL

Commercial data

Item number	2744461
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC111
Catalog page	Page 426 (C-6-2019)
GTIN	4017918188795
Weight per piece (including packing)	184 g
Weight per piece (excluding packing)	123.18 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Notes

Utilization restriction

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

CCCex note	Use in potentially explosive areas is not permitted in China.
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Product properties

Product type	Interface converter
Application	RS-232
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))

Electrical properties

Electrical isolation	VCC // V.24 (RS-232) (A) // V.24 (RS-232) (B)
Maximum power dissipation for nominal condition	0.96 W
Test voltage data interface/power supply	2 kV _{rms} (50 Hz, 1 min.)
	2 kV AC
Test voltage data interfaces	2 kV AC

Supply

Supply voltage range	19.2 V AC/DC ... 28.8 V AC/DC
Nominal supply voltage	24 V AC/DC ±20 %
Typical current consumption	40 mA (24 V DC)
Protective circuit	Surge protection; Suppressor diode

Connection data

Supply

Tightening torque	0.56 Nm ... 0.79 Nm
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Interfaces

Bit distortion	< 5 %
Bit delay	< 3 μs
Signal	Modbus
Transmission channels	4 (2/2), Rx/D, Tx/D, RTS, CTS; full duplex

Data: V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1

Serial transmission speed	115.2 kbps
Connection method	D-SUB 9 plug
Pin assignment	DTE/DCE switchover via switch

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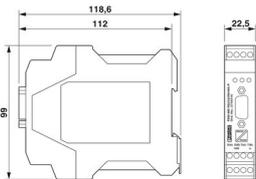
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Transmission length	15 m (shielded twisted pair)
Single-wire/terminal point, flexible	0.2 mm ² ... 2.5 mm ²
Max. AWG conductor cross section, flexible	13
Min. AWG conductor cross section, flexible	24
Protocols supported	transparent protocol

Data: 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)
Single-wire/terminal point, flexible	0.2 mm ² ... 2.5 mm ²
Max. AWG conductor cross section, flexible	13
Min. AWG conductor cross section, flexible	24

Dimensions

Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	118.6 mm

Material specifications

Material	PA
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Environmental and real-life conditions

Ambient conditions

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

Approvals

CE

Certificate	CE-compliant
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EAC

Identification	EAC
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UL, USA/Canada

	508 Recognized
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Identification	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

Corrosive gas test

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

Identification	DNV GL
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DNV GL data

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

EMC data

Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

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

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	Test Level 3
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	± 4 kV (5 kHz)
Signal	± 2 kV (5 kHz)
Comments	Criterion B

Surge current load (surge)

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

Input	± 0.5 kV (2 Ω)
Signal	± 2 kV (12 Ω)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

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.

Mounting

Mounting type	DIN rail mounting
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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2744461>



cUL Recognized
Approval ID: FILE E 238705



UL Recognized
Approval ID: FILE E 238705



EAC
Approval ID: TR TS_D_01871-19



DNV GL
Approval ID: TAA00001KR

UAE-RoHS
Approval ID: 23-02-63194



cUL Recognized
Approval ID: FILE E 199827



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Classifications

ECLASS

ECLASS-11.0	27242208
ECLASS-12.0	27242208
ECLASS-13.0	27242208

ETIM

ETIM 8.0	EC001423
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UNSPSC

UNSPSC 21.0	32151700
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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