

Interface converter - PSM-ME-RS232/RS485-P - 2744416

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Interface converter, for converting RS-232 (V.24) to RS-422 (V.11) and RS-485, with electrical isolation, 2 channels, rail-mountable

Product Features

- RS-422 4-wire point-to-point operation
- RS-485 2-wire operation, half duplex
- RS-485 4-wire operation, full duplex
- Automatic RS-485 transmit/receive changeover
- Transmission speed of 4.8 kbps to 115.2 kbps
- Integrated data indicator for dynamic indication of transmit and receive data
- High-quality 3-way isolation between power supply, RS-232, and RS-422/RS-485 for safe decoupling of potentials with 2 kV
- Integrated surge protection with transient discharge to the DIN rail



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	200.0 g
Custom tariff number	85176200
Country of origin	Germany

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
Depth	114.5 mm

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 50 082-2

General

Transmission channels	2 (1/1), RxD, TxD, full duplex
Bit delay	≤ 2.5 µs
Bit distortion	≤ 5 %
Electrical isolation	VCC // V.24 (RS-232) // RS-485
Test voltage data interfaces	1.5 kV AC
Test voltage data interface/power supply	1.5 kV AC
	1.5 kV AC
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 50 081-1
Net weight	139.88 g
Housing material	PA 6.6-FR
Color	green
MTBF	10 Years (Telcordia standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
MTTF	1654 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))
	746 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	310 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
Degree of pollution	2
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc (Please follow the special installation instructions in the documentation!)
IECEX	Ex nA IIC T4 Gc
UL, USA / Canada	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

Power supply

Nominal supply voltage	24 V AC/DC
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Power supply

Supply voltage range	18 V AC/DC ... 30 V AC/DC (via pluggable COMBICON screw terminal block)
Typical current consumption	85 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm ²
Conductor cross section flexible min.	0.20 mm ²
Conductor cross section solid max.	2.50 mm ²
Conductor cross section solid min.	0.20 mm ²
Max. AWG conductor cross section, flexible	12
Min. AWG conductor cross section, flexible	24
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

Serial interface

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 (twisted pair)
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Pin assignment	DTE/DCE switchover via switch
Protocols supported	transparent protocol
Serial transmission speed	1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 31.25; 38.4; 57.6; 75; 93.75; 115.2 kbps
Interface 2	RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1
Connection method	Pluggable screw connection
Transmission length	1200 m (twisted pair)
Termination resistor	390 Ω
	150 Ω
	390 Ω (Can be connected)
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	13
Protocols supported	transparent protocol
Serial transmission speed	1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 75; 93.75; 115.2 kbps
Interface 3	RS-485 interface in acc. with EIA/TIA-485, DIN 66259-1
Connection method	Pluggable screw connection
Data direction switching	Automatic control or via RTS/CTS

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Technical data

Serial interface

Transmission length	1200 m (twisted pair)
Termination resistor	390 Ω
	150 Ω
	390 Ω (Can be connected)
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section AWG max.	14
Conductor cross section AWG min.	24
Protocols supported	transparent protocol
Serial transmission speed	1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 75; 93.75; 115.2 kbps

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
Noise emission	EN 50 081-1
Noise immunity	EN 50 082-2
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc
IECEX	Ex nA IIC T4 Gc
UL, USA / Canada	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

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Classifications

eCl@ss

eCl@ss 4.0	27250312
eCl@ss 4.1	27250312
eCl@ss 5.0	27242208
eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC000698
ETIM 3.0	EC000698
ETIM 4.0	EC000698
ETIM 5.0	EC000310

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / DNV / EAC / KC / cULus Recognized

Ex Approvals

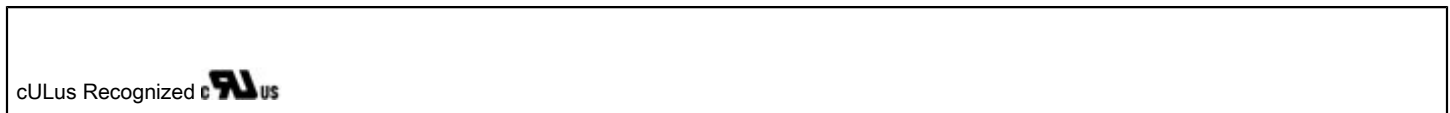
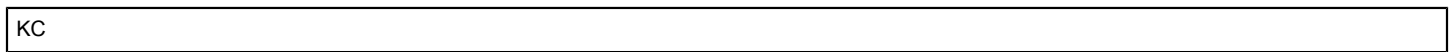
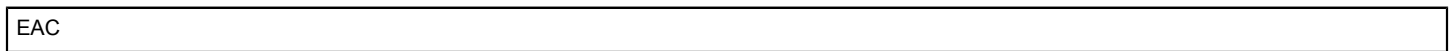
cUL Recognized / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

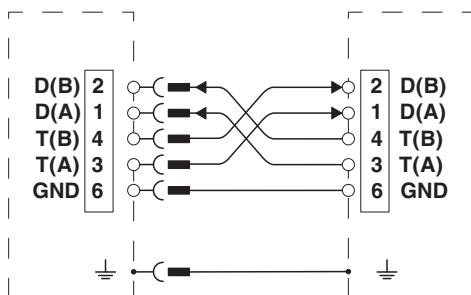
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Approvals

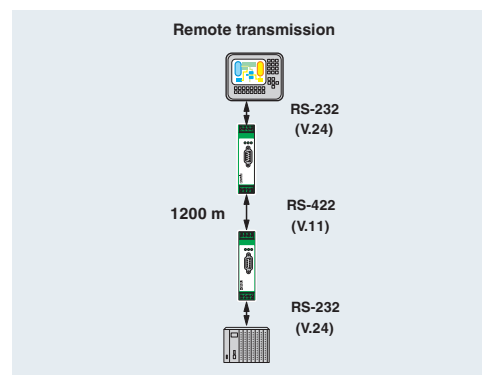


Drawings

Connection diagram



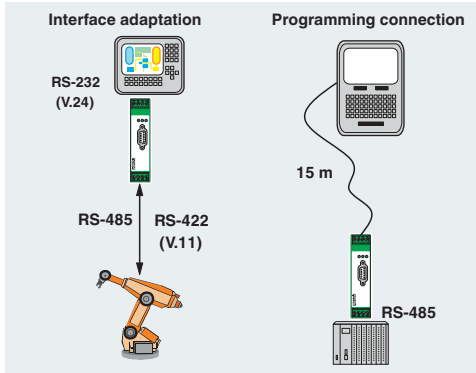
Application drawing



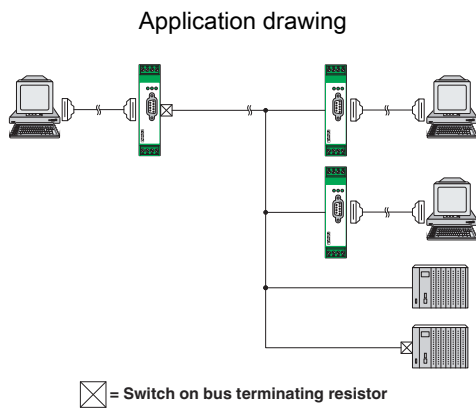
Remote transmission

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Application drawing

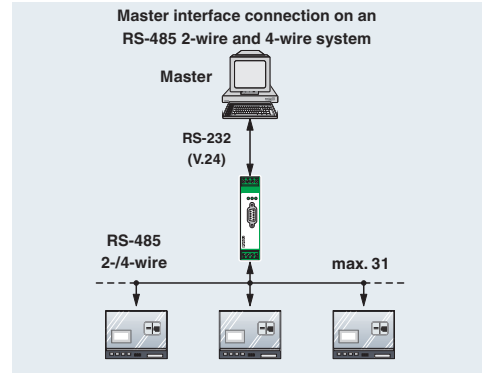


Interface adaptation or programming connection



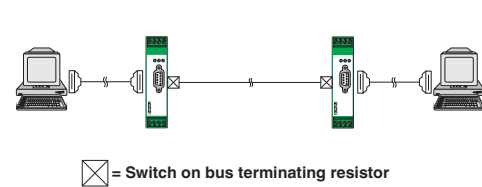
Activate termination resistors - RS-485

Application drawing



Master interface connection

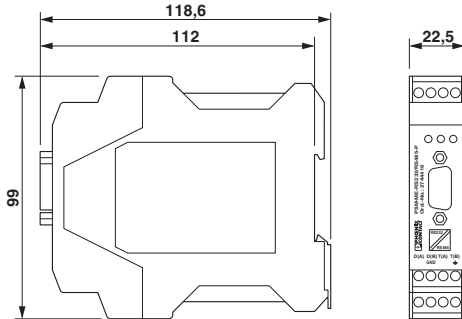
Application drawing



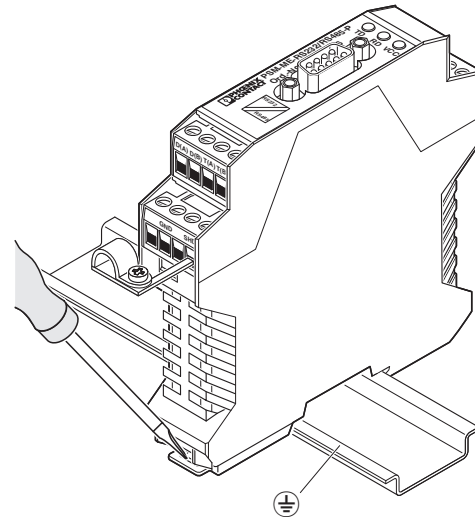
Activate termination resistors - RS-422

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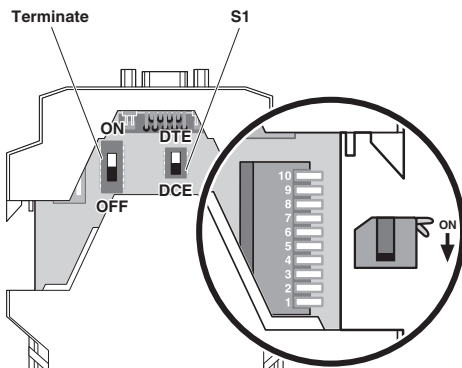
Dimensional drawing



Schematic diagram

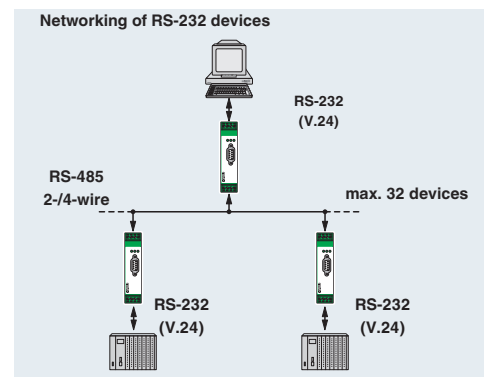


Schematic diagram



DIP switches

Application drawing



Networking of RS-232 devices

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Circuit diagram

