

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

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.



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

## Product Description

This converter converts a V.24 (RS-232) interface into a 20 mA TTY current loop interface bidirectionally. The interference immune TTY signal allows problem-free data transmission over distances of up to 1000 m using a twisted-pair and shielded 4-wire cable.

## Your advantages

- Mounting on standard EN DIN rails
- Transmission distances of up to 1000 m in active TTY mode
- High-quality 3-way isolation up to 2 kV (VCC // RS-232 // TTY)
- In the case of variable cable lengths, the TTY 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
- Conversion of RS-232 TxD/RxD full duplex data signals to the TTY current loop standard
- Semi-active, active or passive TTY mode, depending on pin assignment
- 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
- RS-232 connection via 9-pos. D-SUB and standard RS-232 cable
- Transmission speed of up to 19.2 kbps
- Shipbuilding approval in accordance with DNV GL

## Commercial Data

Item number	2744458
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DNC
Product Key	DNC111
Catalog Page	Page 427 (C-6-2019)
GTIN	4017918171803
Weight per Piece (including packing)	186.6 g
Weight per Piece (excluding packing)	179.6 g
Customs tariff number	85176200
Country of origin	DE

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## Technical Data

### Notes

#### Utilization restriction

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

#### Utilization restriction

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

### Product properties

Product type	Interface converter
MTBF	1989 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	410 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) // TTY
Maximum power dissipation for nominal condition	1.8 W
Test voltage data interface/power supply	2 kV <sub>rms</sub> (50 Hz, 1 min.)
	2 kV AC
Test voltage data interfaces	2 kV AC

#### Supply

Nominal supply voltage	24 V AC/DC ±20 % (via pluggable COMBICON screw terminal block)
Typical current consumption	75 mA (24 V DC)
Protective circuit	Surge protection; Suppressor diode

### Connection data

#### Supply

Tightening torque	0.56 Nm ... 0.79 Nm
-------------------	---------------------

### Interfaces

Bit distortion	< 5 %
Bit delay	< 3 μs
Signal	Modbus
Transmission channels	2 (1/1), RxD, TxD, full duplex

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

Serial transmission speed	≤ 19.2 kbps
Connection method	D-SUB 9 plug
Pin assignment	DTE/DCE switchover via switch
Transmission length	15 m (shielded twisted pair)

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Max. AWG conductor cross section, flexible	13
Min. AWG conductor cross section, flexible	24
Protocols supported	transparent protocol

Data: TTY interface, CL2 in acc. with DIN 66348-1

Serial transmission speed	≤ 19.2 kbps
Connection method	Pluggable screw connection
Transmission length	1000 m (shielded twisted pair)
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section AWG max.	13
Conductor cross section AWG min.	24
Load/output load current output	≤ 500 Ω
Impedance	≤ 117 Ω (Output) 126 Ω (Input)
Output current	2x 20 mA ±10 % (Loop current)

## Dimensions

Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	118.6 mm

## Material specifications

Material Housing	PA
------------------	----

## 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

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

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

## EAC

Identification	EAC
----------------	-----

## 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

## Corrosive gas test

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

## Shipbuilding

Identification	DNV GL
----------------	--------

## 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 61000-6-4

## 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)
Comments	Criterion B

## Electromagnetic HF field

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

## 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
-----------------------	--------------

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## 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
-----------------------	--------------

## Surge current load (surge)

Input	± 0.5 kV (2 Ω)
Signal	± 2 kV (42 Ω)
Comments	Criterion B

## Conducted interference

Standards/regulations	EN 61000-4-6
-----------------------	--------------

## 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
---------------	-------------------

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

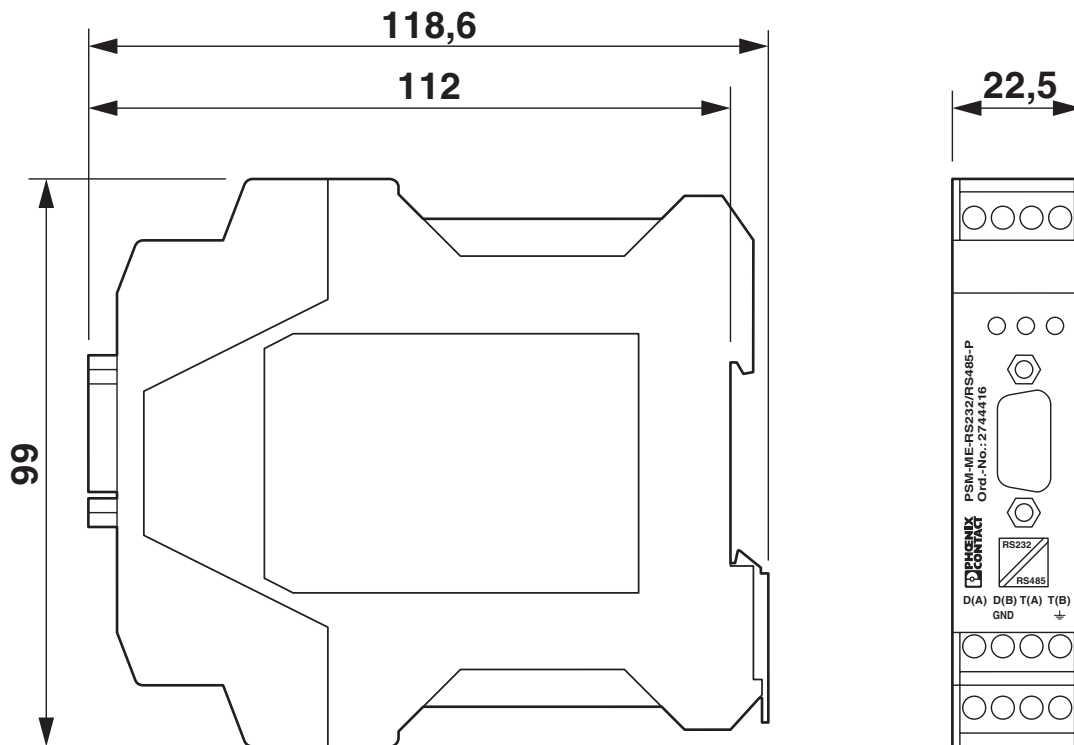
2744458

<https://www.phoenixcontact.com/in/products/2744458>



## Drawings

Dimensional drawing



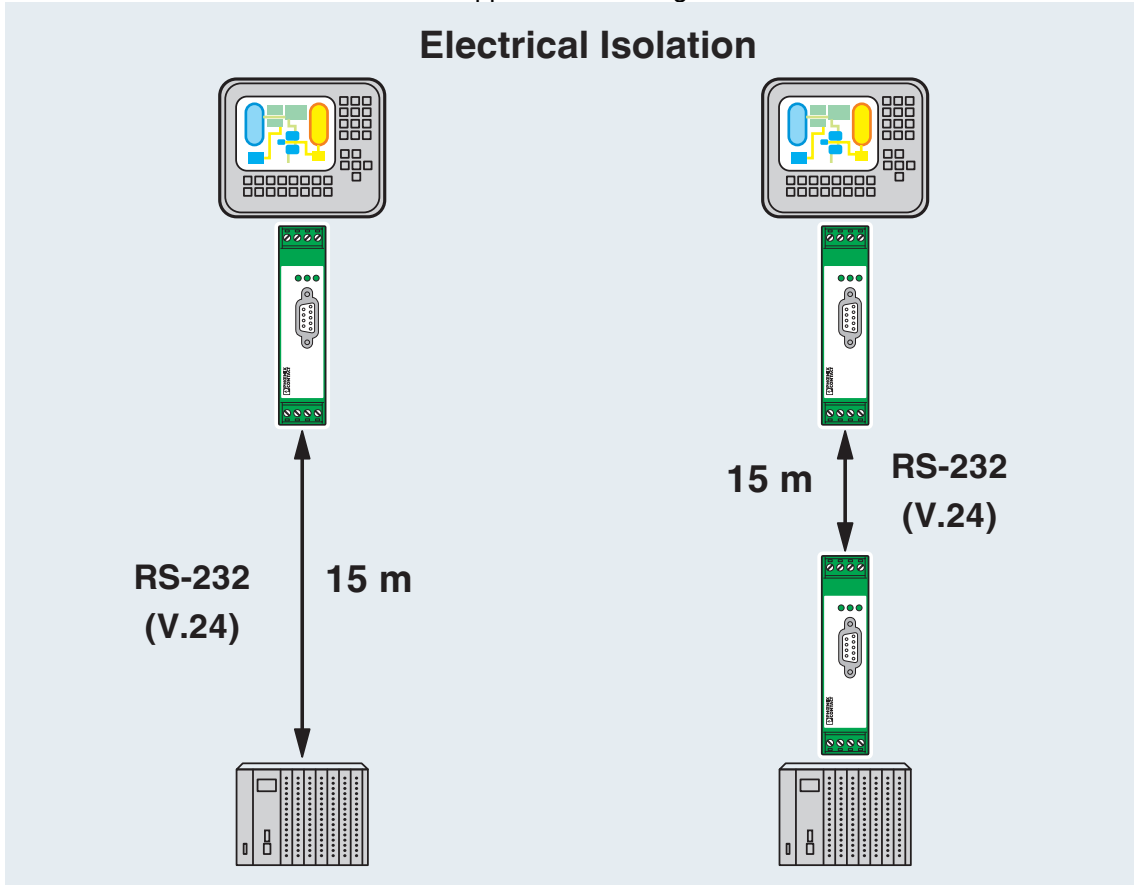
Slim design

2744458

<https://www.phoenixcontact.com/in/products/2744458>

## Application drawing

### Electrical Isolation



Electrical isolation

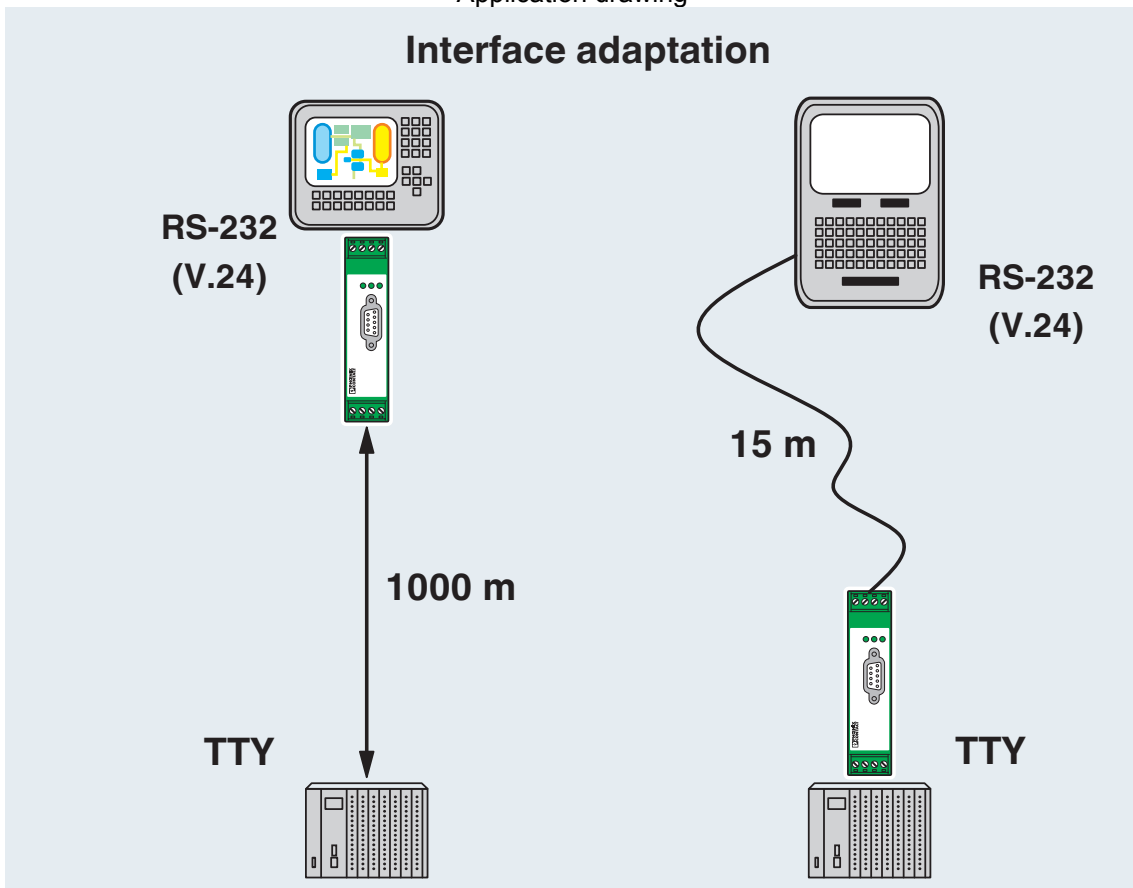
# PSM-ME-RS232/TTY-P - Interface converter



2744458

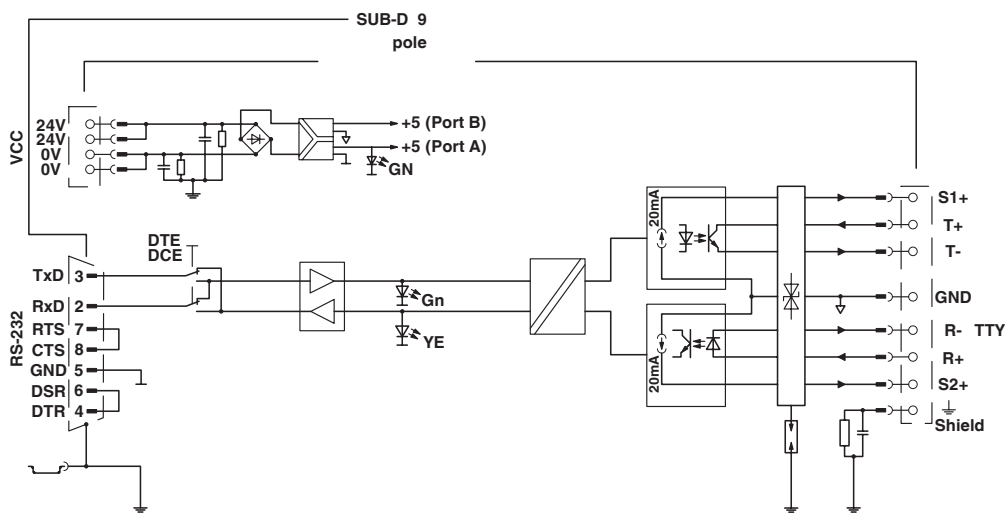
<https://www.phoenixcontact.com/in/products/2744458>

## Application drawing



Interface adaptation

## Circuit diagram

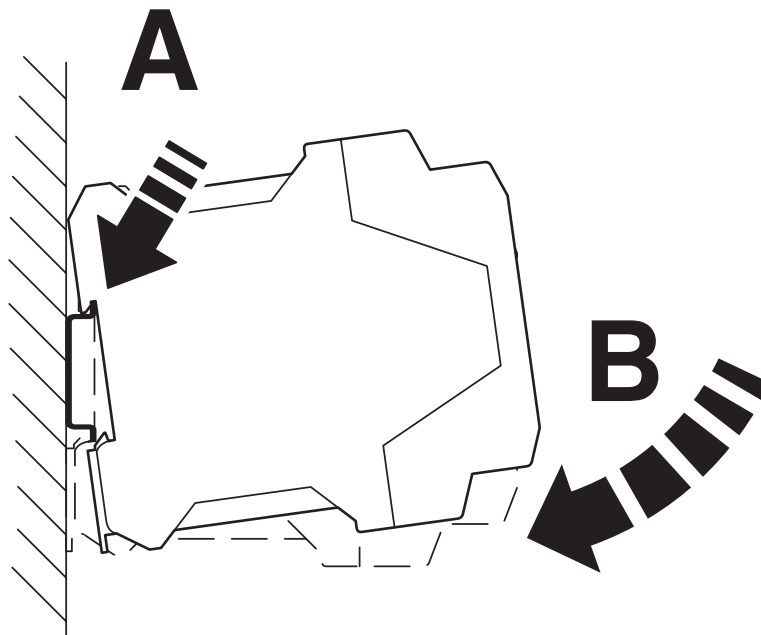




2744458

<https://www.phoenixcontact.com/in/products/2744458>

Schematic diagram



Mounting

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## Approvals



**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



**cUL Recognized**  
Approval ID: FILE E 199827

Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
24 V	0.075 A	-	-



**cUL Listed**  
Approval ID: FILE E 199827



**UL Listed**  
Approval ID: FILE E 199827

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001423
----------	----------

### UNSPSC

UNSPSC 21.0	32151700
-------------	----------

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## 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"

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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

## Accessories

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

2799474

<https://www.phoenixcontact.com/in/products/2799474>

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



---

### ME-SAS - Shield connection clamp

2853899

<https://www.phoenixcontact.com/in/products/2853899>

Shield connection clamp for terminal points starting from 2.5 mm<sup>2</sup>



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



2744458

<https://www.phoenixcontact.com/in/products/2744458>

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

1204517

<https://www.phoenixcontact.com/in/products/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

---

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

2761499

<https://www.phoenixcontact.com/in/products/2761499>



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

---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.

A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420

[info@phoenixcontact.co.in](mailto:info@phoenixcontact.co.in)