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Especialistas en Automatización

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## Repeater - PSM-ME-RS485/RS485-P - 2744429

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Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

### Why buy this product

- Transmission speeds of up to 1.5 Mbps
- Space-saving slim 22.5 mm device
- High-quality 3-way isolation between all interfaces
- Integrated, connectable termination resistors
- All connections can be plugged in using a COMBICON screw terminal block
- Shipbuilding approval according to DNV



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 171797

### 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

#### 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)

# Repeater - PSM-ME-RS485/RS485-P - 2744429

## Technical data

### Ambient conditions

Degree of protection	IP20
Noise immunity	EN 50 082-2

### General

Transmission channels	2 (1/1), TD, RD, half duplex
Bit delay	< 200 ns
Bit distortion	< 1.5 %
Bit distortion, input	max. ± 35 %
Bit distortion, output	< 3.6 %
Electrical isolation	VCC // RS-485 (A) // RS-485 (B)
Test voltage data interfaces	1.5 kV AC
Test voltage data interface/power supply	1.5 kV AC
	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Noise emission	EN 50 081-1
Net weight	188.8 g
Housing material	PA 6.6-FR
Color	green
MTTF	1808 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))
	796 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	334 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
Conformance	CE-compliant
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

Supply voltage range	18 V AC/DC ... 30 V AC/DC (via pluggable COMBICON screw terminal block)
Typical current consumption	90 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm <sup>2</sup>
Conductor cross section flexible min.	0.20 mm <sup>2</sup>
Conductor cross section solid max.	2.50 mm <sup>2</sup>
Conductor cross section solid min.	0.20 mm <sup>2</sup>
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

# Repeater - PSM-ME-RS485/RS485-P - 2744429

## Technical data

### Serial interface

Interface 1	RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire
Operating mode	Semi-duplex
Connection method	Pluggable screw connection
File format/coding	UART (11/10 bit switchable; NRZ)
Data direction switching	Automatic control, min. station response time 1 bits
Transmission medium	2-wire twisted pair, shielded
Transmission length	≤ 1200 m (depends on transmission speed, bus system and cable type)
Cascadability	9 (4,8 ... 93,75 kbps)
	8 (115.2 kbps)
	7 (136 kbps)
	6 (187.5 kbps)
	5 (375 ... 1500 kbps)
Termination resistor	390 Ω
	180 Ω
	390 Ω (Can be connected)
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
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 / 136 / 187.5 / 375 / 500 / 1500 kbps
Interface 2	RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire
Operating mode	Semi-duplex
File format/coding	UART (11/10 bit switchable; NRZ)
Data direction switching	Automatic control, min. station response time 1 bits
Transmission medium	2-wire twisted pair, shielded
Transmission length	≤ 1200 m (depends on transmission speed, bus system and cable type)
Cascadability	9 (4,8 ... 93,75 kbps)
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
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 / 136 / 187.5 / 375 / 500 / 1500 kbps

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m

# Repeater - PSM-ME-RS485/RS485-P - 2744429

## Technical data

### Standards and Regulations

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 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
Conformance	CE-compliant
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

## 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

### 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

# Repeater - PSM-ME-RS485/RS485-P - 2744429

## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals


cUL Recognized / UL Listed / cUL Listed / cULus Listed


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#### Approvals submitted

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### Approval details


UL Recognized 

cUL Recognized 

DNV

EAC

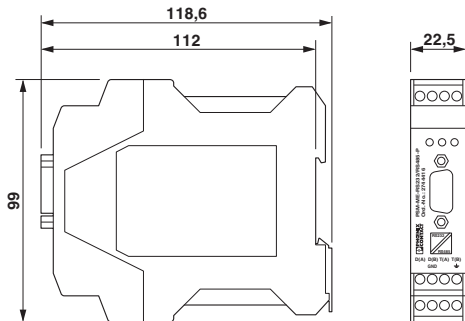
KC

cULus Recognized 

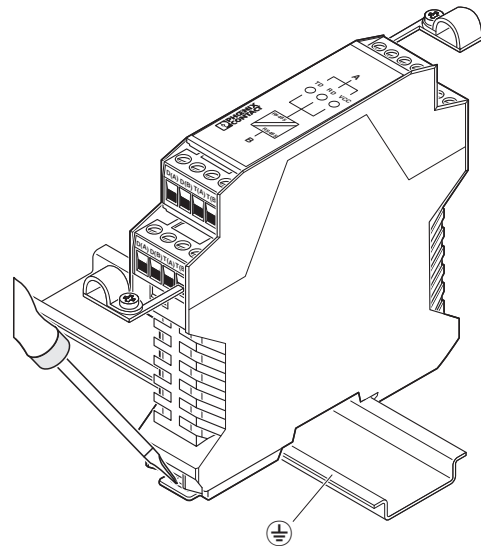
## Drawings

# Repeater - PSM-ME-RS485/RS485-P - 2744429

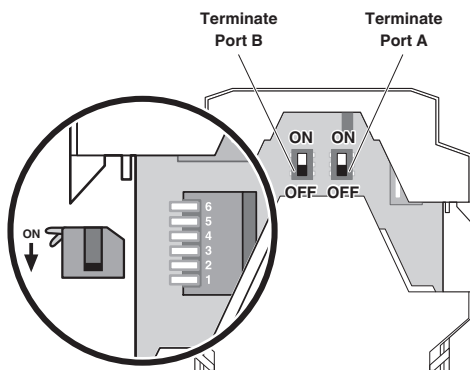
Dimensional drawing



Schematic diagram

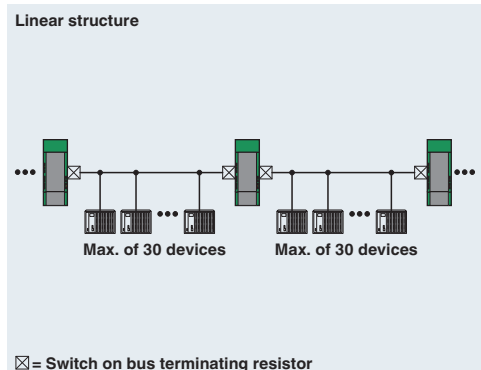


Schematic diagram



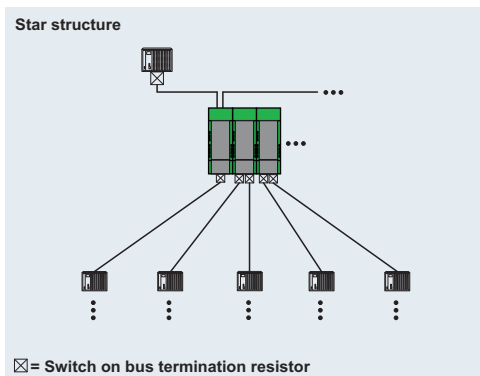
DIP switches

Application drawing



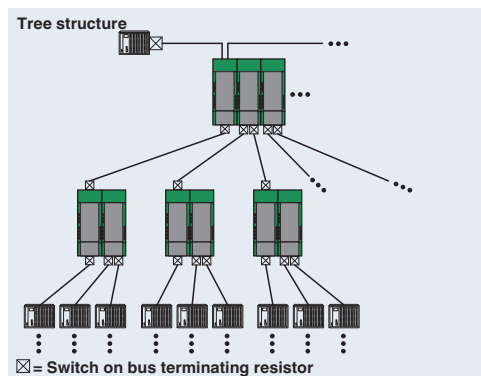
Line structure

Application drawing



Star structure

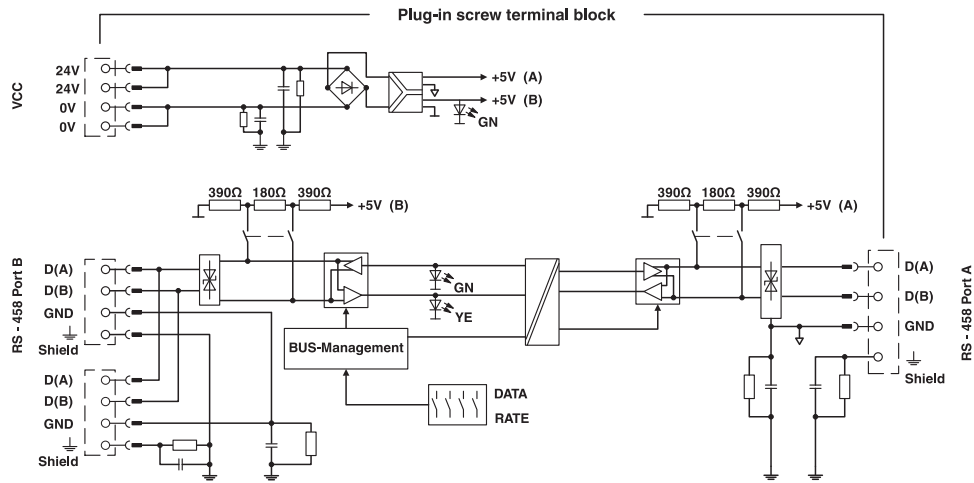
Application drawing



Tree structure

# Repeater - PSM-ME-RS485/RS485-P - 2744429

Circuit diagram



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