

Repeater - PSI-REP-RS485W2 - 2313096

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Modular repeater for electrical isolation and range increase in RS-485 2-wire bus systems up to 500 kbps, 4-way isolation, rail-mountable, supply 24 V DC

Product Features

- Data rates of up to 500 kbps (adjustable via DIP switches)
- High-quality 4-way isolation between all interfaces
- Bit oversampling for reliable detection of sporadic disturbances
- Bit retiming for unrestricted cascading of devices
- Integrated, connectable termination resistors
- Can be combined with PSI-MOS FO converters in a modular way thanks to DIN rail connectors
- Approved for use in zone 2



Key commercial data

package_quantity	1
GTIN	4046356098816

Technical data

Note:

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

Width	35 mm
Height	99 mm
Depth	105 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Altitude	5000 m (For restrictions see manufacturer's declaration)
Noise immunity	EN 61000-4-2

Serial interface

Interface 1	RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire
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Technical data

Serial interface

Connection method	Pluggable screw connection
File format/coding	UART (11/10 bit switchable; NRZ)
Data direction switching	Automatic control, min. station response time 2 bits
Transmission medium	2-wire twisted pair, shielded
Transmission length	max. 1200 m (depends on transmission speed, bus system and cable type)
Termination resistor	390 Ω
Termination resistor	180 Ω
Termination resistor	390 Ω (Can be connected)
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Serial transmission speed	Can be set manually: 4,8/9,6/19,2/38,4/57,6/75/93,75/115,2/136/187,5/375/500 Kbps

Power supply

Nominal supply voltage	24 V DC ±20 %
Typical current consumption	75 mA (24 V DC)

General

Transmission channels	2 (1/1), TD, RD, half duplex
Bit delay	< 1 Bit
Bit distortion, input	max. ± 35 %
Bit distortion, output	< 6.25 %
Electrical isolation	(VCC // TBUS // RS-485 (A) // RS-485 (B))
Test voltage data interfaces	1.5 kV
Test voltage data interface/power supply	1.5 kV
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Housing material	PA 6.6-FR
Color	green
MTBF	1247 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	261 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
ATEX	# II 3 G Ex nA II T4 X
UL, USA / Canada	508 recognized
UL, USA / Canada	Class I, Zone 2, AEx nA IIC T6
UL, USA / Canada	Class I, Zone 2, Ex nA IIC T6 Gc X
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

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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	27242208

ETIM

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

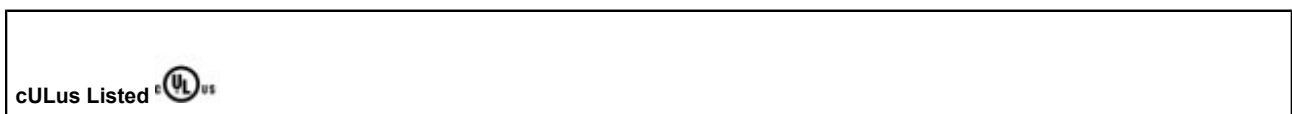
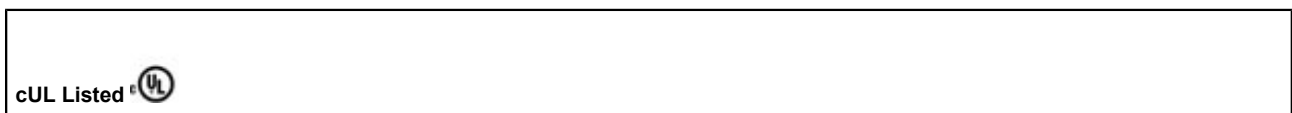
UNSPSC

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

approvals


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

Approval details




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approvals

UL Recognized 

cUL Recognized 

cULus Recognized 

accessories

Power supply

MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



DIN rail connector

ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



Mounting material

ME-SAS - 2853899



Screwdriver tools

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accessories

SZF 1-0,6X3,5 - 1204517



Terminal resistor

PSI-TERMINATOR-PB - 2313944



Media converter

PSI-MOS-RS485W2/FO 660 E - 2708313



PSI-MOS-RS485W2/FO 850 E - 2708339



PSI-MOS-RS485W2/FO1300 E - 2708562



Adapter

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accessories

PSM PTK - 2760623

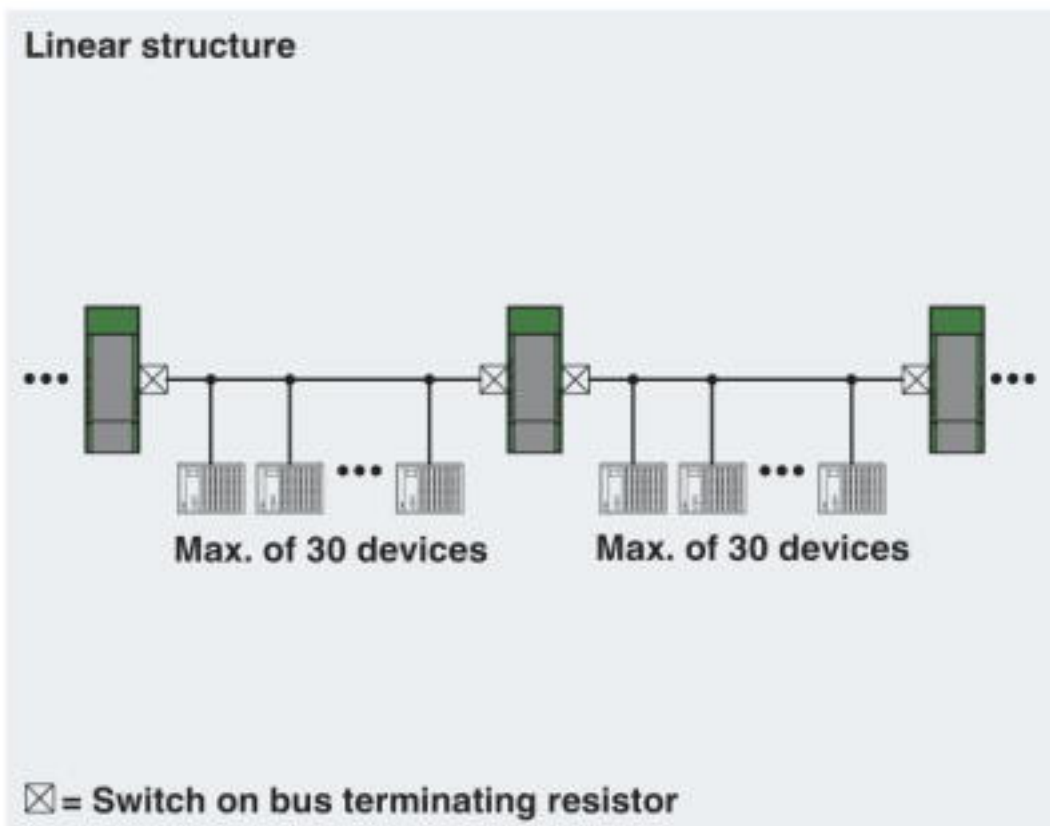


PSM PTK-4 - 2799364



Drawings

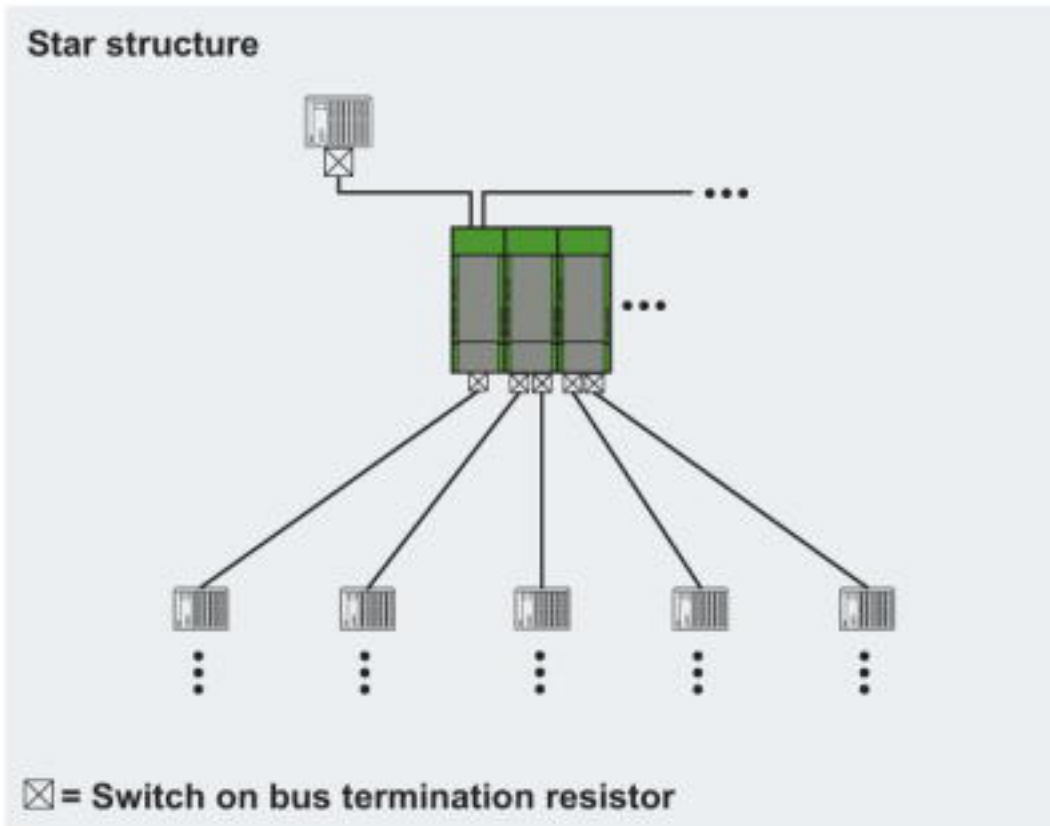
Application drawing



Line structure

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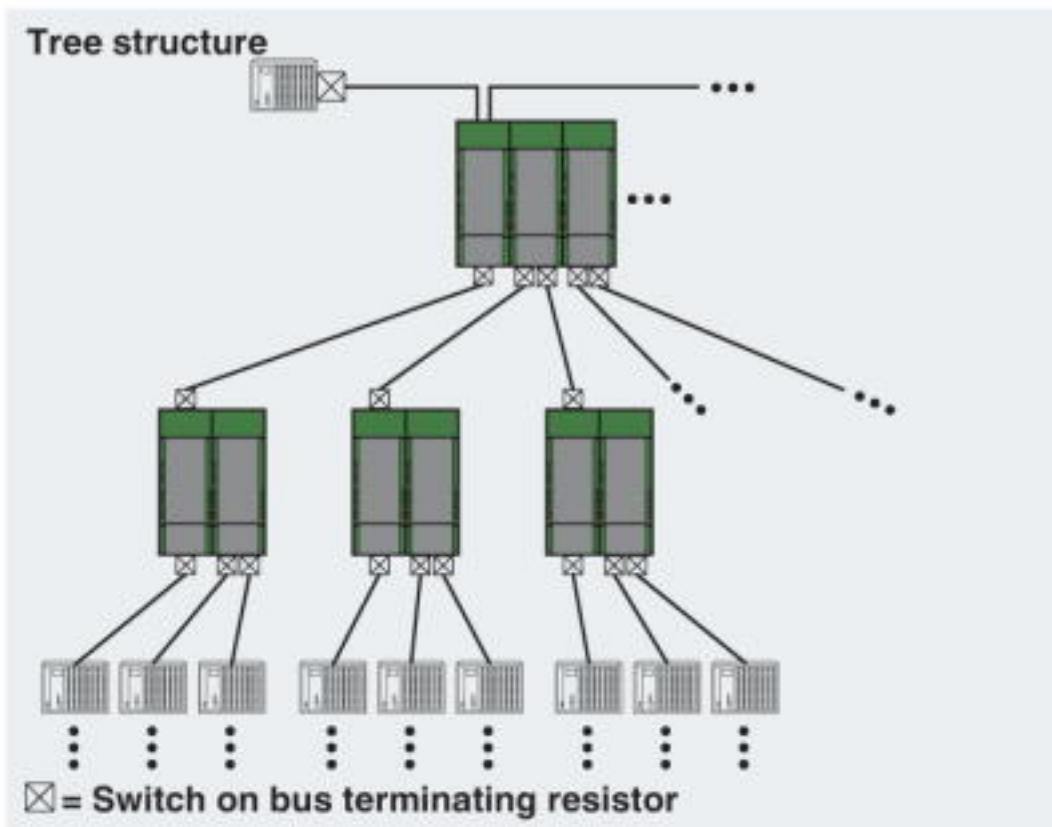
Application drawing



Star structure

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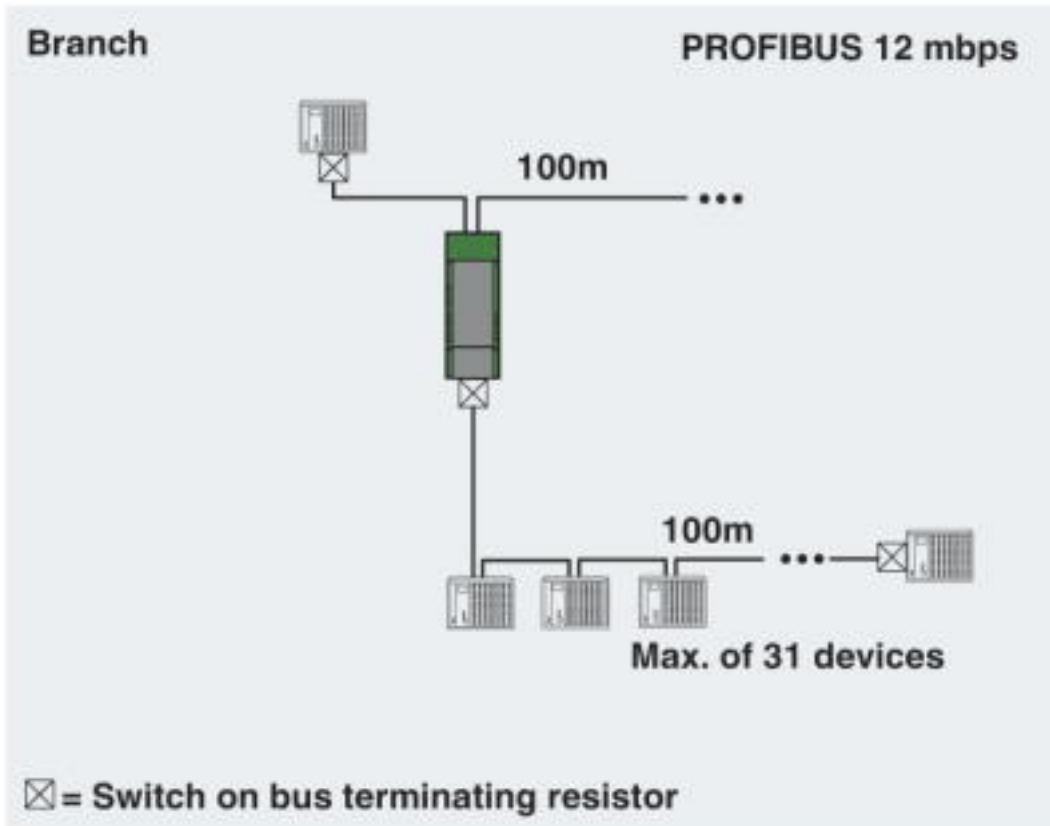
Application drawing



Tree structure

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Application drawing



Branch/bus segmentation

Block diagram

