

# Repeater - PSI-REP-PROFIBUS/12MB - 2708863

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Modular repeater for electrical isolation and range increase for PROFIBUS up to 12 Mbps, 4-way isolation, rail-mountable, supply 24 V DC

## Product Features

- Automatic data rate detection or fixed data rate setting via DIP switches
- Suitable for all data rates up to 12 Mbps
- High-quality 4-way isolation between all interfaces
- Bit oversampling for reliable detection of sporadic disturbances
- Bit retiming for unrestricted cascading of devices
- Filtering of faulty telegrams based on start delimiter detection
- Can be combined with PSI-MOS FO converters in a modular way thanks to DIN rail connectors



## Key commercial data

package_quantity	1
GTIN	4046356078993

## 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
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-4-2

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## Technical data

### Serial interface

<b>Interface 1</b>	PROFIBUS acc. to IEC 61158, RS-485 2-conductor
<b>Operating mode</b>	Through PROFIBUS connector
<b>Connection method</b>	D-SUB-9 female connector
<b>File format/coding</b>	UART (11 Bit, NRZ)
<b>Data direction switching</b>	Automatic control, min. station response time 2 bits
<b>Transmission medium</b>	2-wire twisted pair, shielded
<b>Transmission length</b>	≤ 1200 m (Depends on transmission speed and cable type)
<b>Termination resistor</b>	external
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	24
<b>Conductor cross section AWG/kcmil max</b>	14
<b>Output nominal voltage</b>	5 V DC ±5 %
<b>Output current</b>	50 mA

### Power supply

<b>Supply voltage range</b>	18 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
<b>Typical current consumption</b>	90 mA (24 V DC)

### General

<b>Transmission channels</b>	2 (1/1), TD, RD, half duplex
<b>Bit delay</b>	1 Bit (Direct mode)
<b>Bit distortion, input</b>	max. ± 35 %
<b>Bit distortion, output</b>	< 6.25 %
<b>Electrical isolation</b>	VCC // TBUS // PROFIBUS (A) // PROFIBUS (B)
<b>Test voltage data interfaces</b>	1.5 kV
<b>Test voltage data interface/power supply</b>	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
<b>Standards/regulations</b>	DIN EN 50178, DIN EN 60950
<b>Electromagnetic compatibility</b>	Conformance with EMC Directive 2004/108/EC
<b>Noise emission</b>	EN 55011
<b>Net weight</b>	200 g
<b>Housing material</b>	PA 6.6-FR
<b>Color</b>	green
<b>MTBF</b>	1136 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
<b>MTBF</b>	238 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
<b>MTTF</b>	1638 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))
<b>MTTF</b>	812 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))

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## Technical data

### General

<b>MTTF</b>	340 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
<b>Conformance</b>	CE-compliant
<b>ATEX</b>	# II 3 G Ex nA nC IIC T4 Gc X (Please follow the special installation instructions in the documentation!)
<b>UL, USA / Canada</b>	cULus listed UL 508
<b>UL, USA / Canada</b>	Class I, Zone 2, AEx nA IIC T6
<b>UL, USA / Canada</b>	Class I, Zone 2, Ex nA IIC T6 Gc X
<b>UL, USA / Canada</b>	Class I, Div. 2, Groups A, B, C, D

### classifications

#### eCl@ss

<b>eCl@ss 4.0</b>	27250312
<b>eCl@ss 4.1</b>	27250312
<b>eCl@ss 5.0</b>	27242208
<b>eCl@ss 5.1</b>	27242208
<b>eCl@ss 6.0</b>	27242208
<b>eCl@ss 7.0</b>	27242208
<b>eCl@ss 8.0</b>	27143129

#### ETIM

<b>ETIM 2.0</b>	EC000698
<b>ETIM 3.0</b>	EC000698
<b>ETIM 4.0</b>	EC000698
<b>ETIM 5.0</b>	EC000698

#### UNSPSC

<b>UNSPSC 6.01</b>	30211506
<b>UNSPSC 7.0901</b>	39121008
<b>UNSPSC 11</b>	39121008
<b>UNSPSC 12.01</b>	39121008
<b>UNSPSC 13.2</b>	43201553

### approvals

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

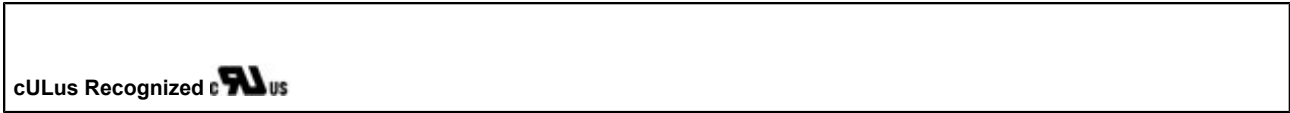
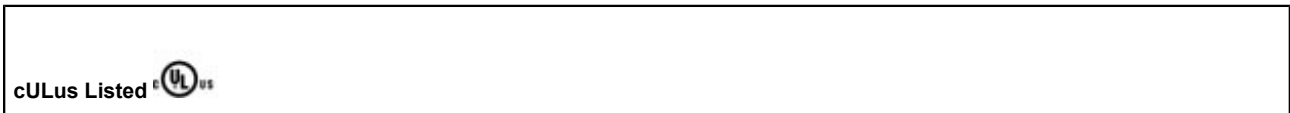
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#### Approval details



# Repeater - PSI-REP-PROFIBUS/12MB - 2708863

## approvals



## accessories

### Data plug

SUBCON-PLUS-PROFIB/PG/SC2 - 2708245



## Repeater - PSI-REP-PROFIBUS/12MB - 2708863

accessories

SUBCON-PLUS-PROFIB/90/PG/SC - 2313708



SUBCON-PLUS-PROFIB/90/PG/IDC - 2313685



SUBCON-PLUS-PROFIB/AX/M12 - 2902321



SUBCON-PLUS-PROFIB/90X/M12 - 2902729



SUBCON-PLUS-PROFIB/90/M12 - 2902318



SUBCON-PLUS-PROFIB/35/M12 - 2902320



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accessories

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## Data cable by the meter

PSM-CABLE-PROFIB/FC - 2744652



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## Power supply

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



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## DIN rail connector

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



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## Terminal resistor

PSI-TERMINATOR-PB - 2313944



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## Media converter

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### accessories

PSI-MOS-PROFIB/FO 660 T - 2708287



PSI-MOS-PROFIB/FO 660 E - 2708290



PSI-MOS-PROFIB/FO 850 T - 2708261



PSI-MOS-PROFIB/FO 850 E - 2708274



PSI-MOS-PROFIB/FO1300 T - 2708892



PSI-MOS-PROFIB/FO1300 E - 2708559

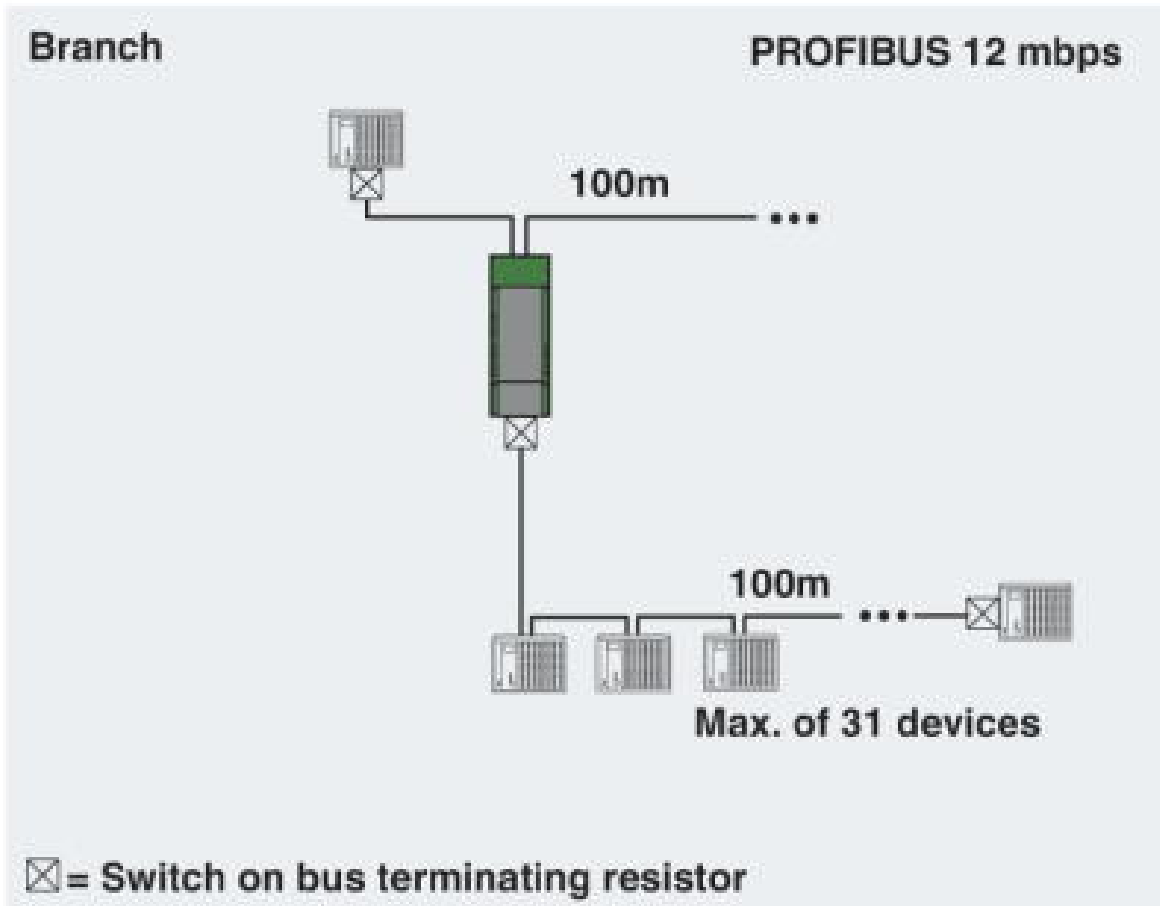


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accessories

Drawings

Application drawing

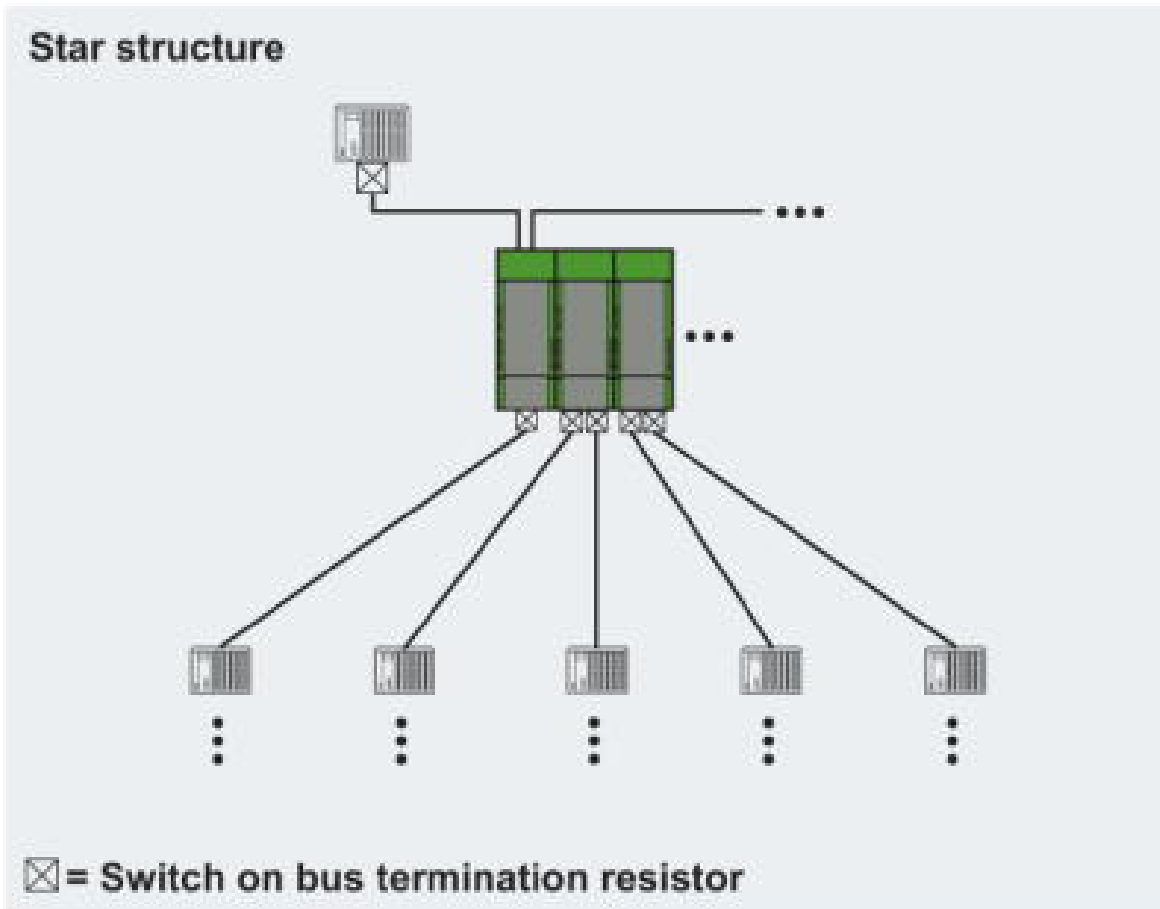


Branch line



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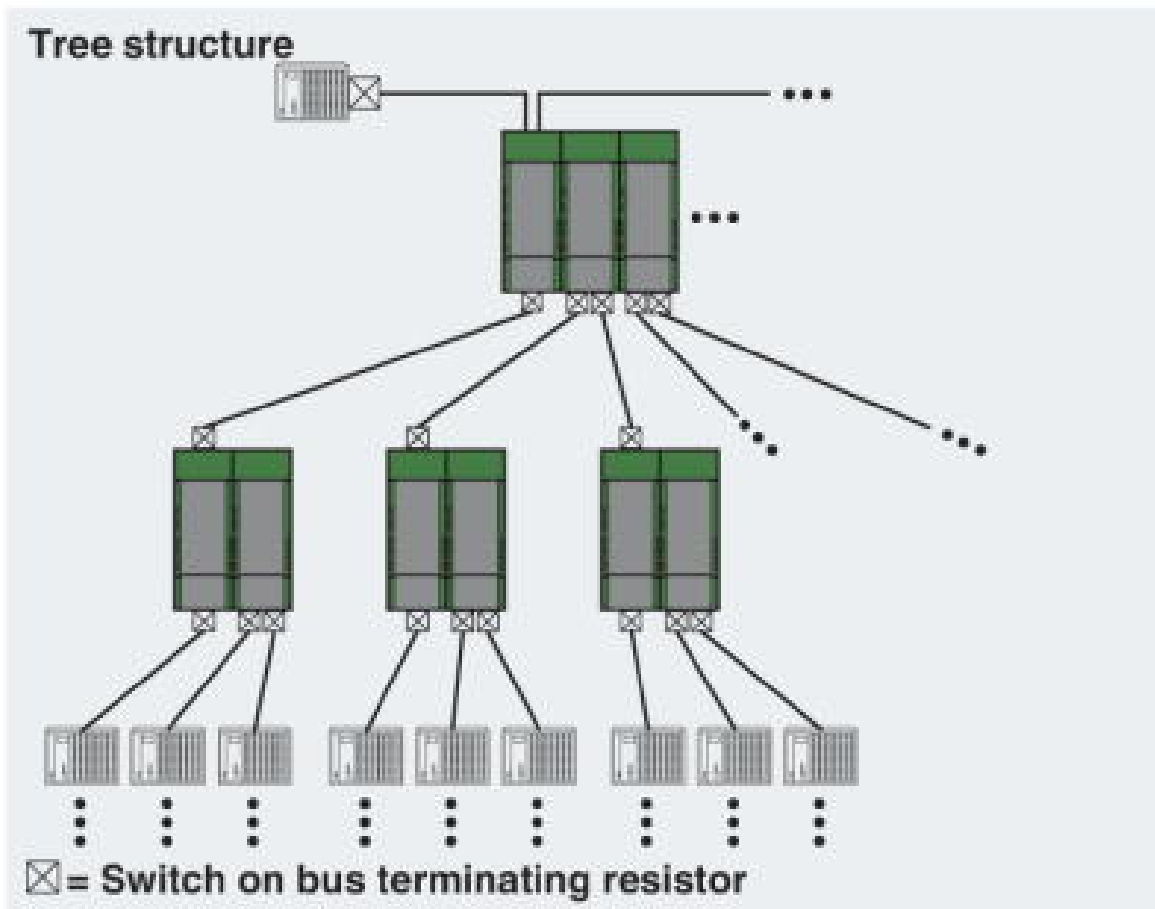
Application drawing



Star structure

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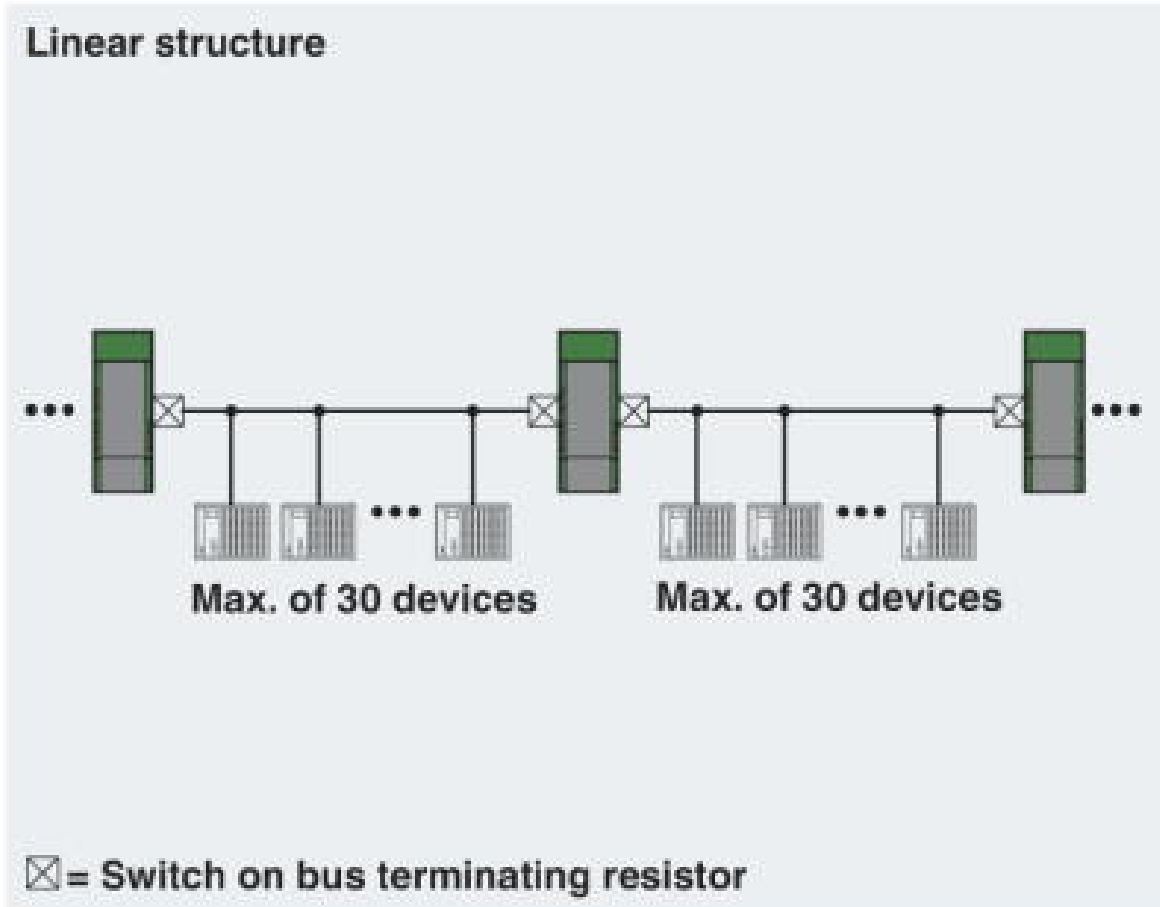
Application drawing



Tree structure

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Application drawing



Line structure

Block diagram

