

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

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's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



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
-------------------------	---

## 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 % (no condensation)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-4-2

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

## 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>	max. 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

### Fault warning output

<b>Maximum switching voltage</b>	30 V DC (1 A)
<b>Maximum switching voltage</b>	65 V DC (0.46 A)
<b>Maximum switching voltage</b>	150 V AC (0.46 A)

### 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))

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

## Technical data

### General

<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))
<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 nAC IIC T4 X
<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>	27242208

#### 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

---

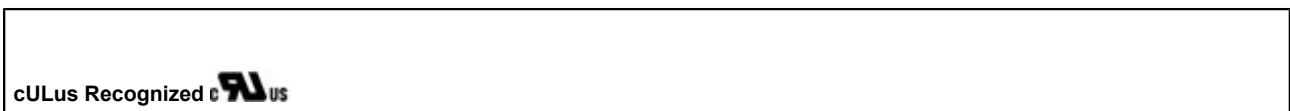
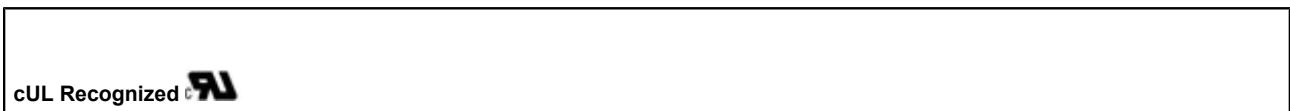
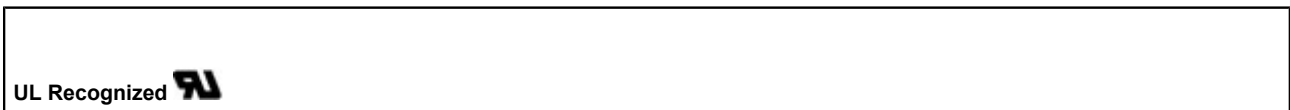
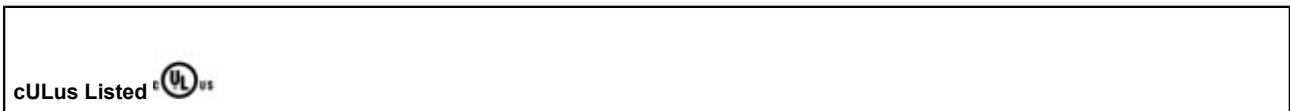
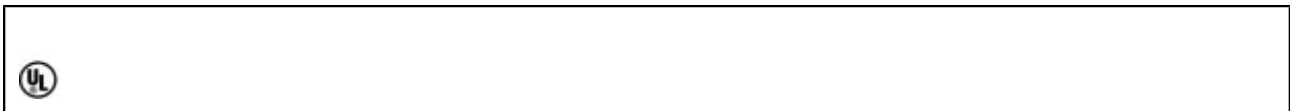
ATEX / UL Listed / cUL Listed / UL Listed / cUL Listed / cULus Listed / UL Recognized / cUL Recognized / cULus Recognized /

---

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

approvals

Approval details



accessories

Data plug

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

### accessories

SUBCON-PLUS-PROFIB/PG/SC2 - 2708245



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



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



### Data cable by the meter

PSM-CABLE-PROFIB/FC - 2744652



### Power supply

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



### DIN rail connector

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

accessories

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



---

## Terminal resistor

PSI-TERMINATOR-PB - 2313944



---

## Interface converter

PSM-ME-RS485/RS485-P - 2744429



---

## Media converter

PSI-MOS-PROFIB/FO 660 T - 2708287



PSI-MOS-PROFIB/FO 660 E - 2708290



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

## accessories

PSI-MOS-PROFIB/FO 850 T - 2708261



PSI-MOS-PROFIB/FO 850 E - 2708274



PSI-MOS-PROFIB/FO1300 T - 2708892



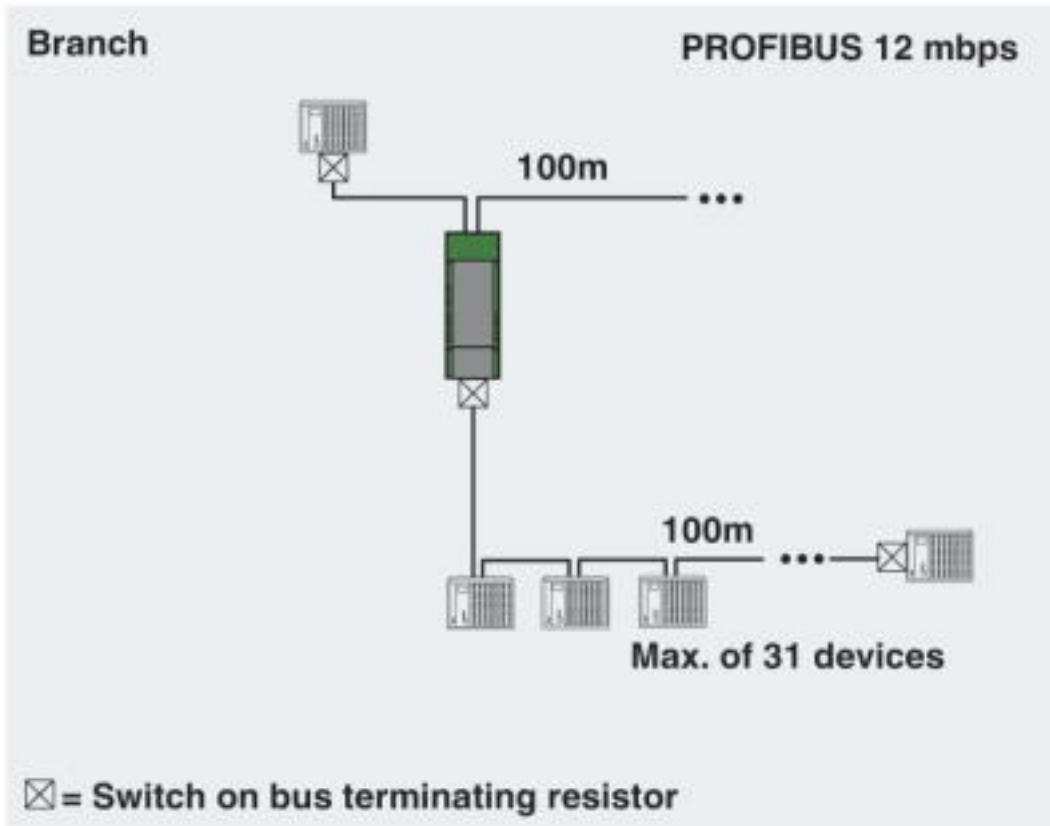
PSI-MOS-PROFIB/FO1300 E - 2708559



## Drawings

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

Application drawing

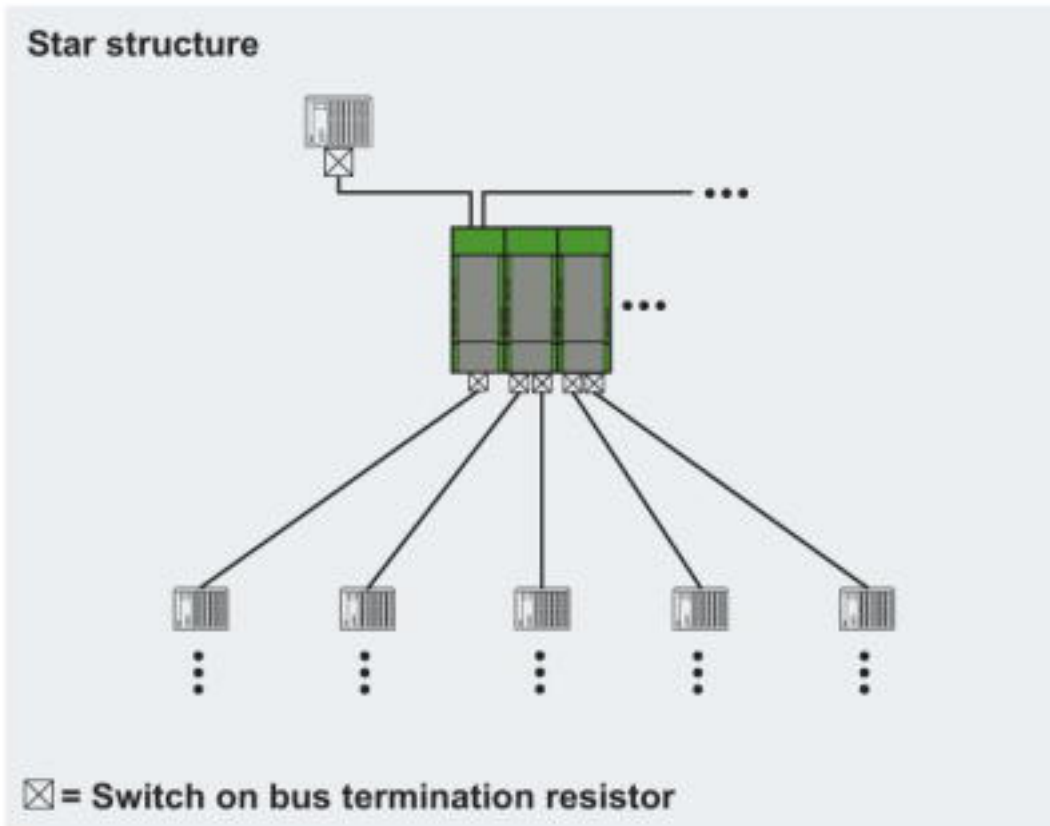


Branch line



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

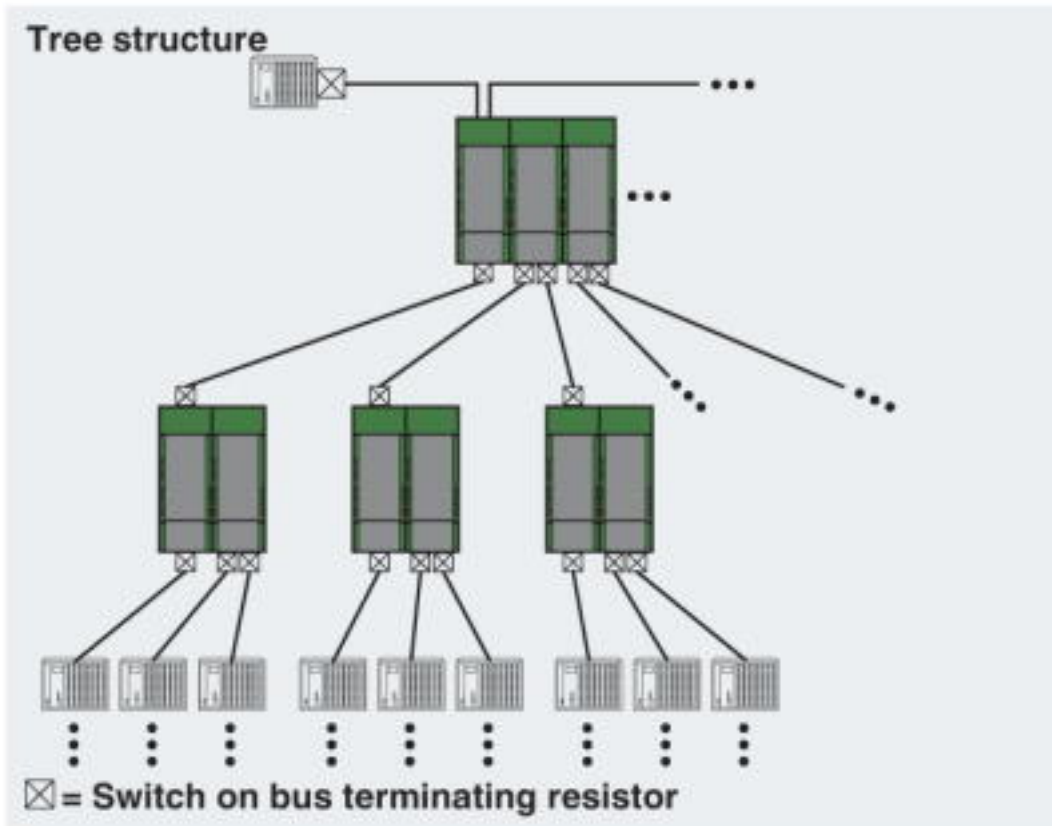
Application drawing



Star structure

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

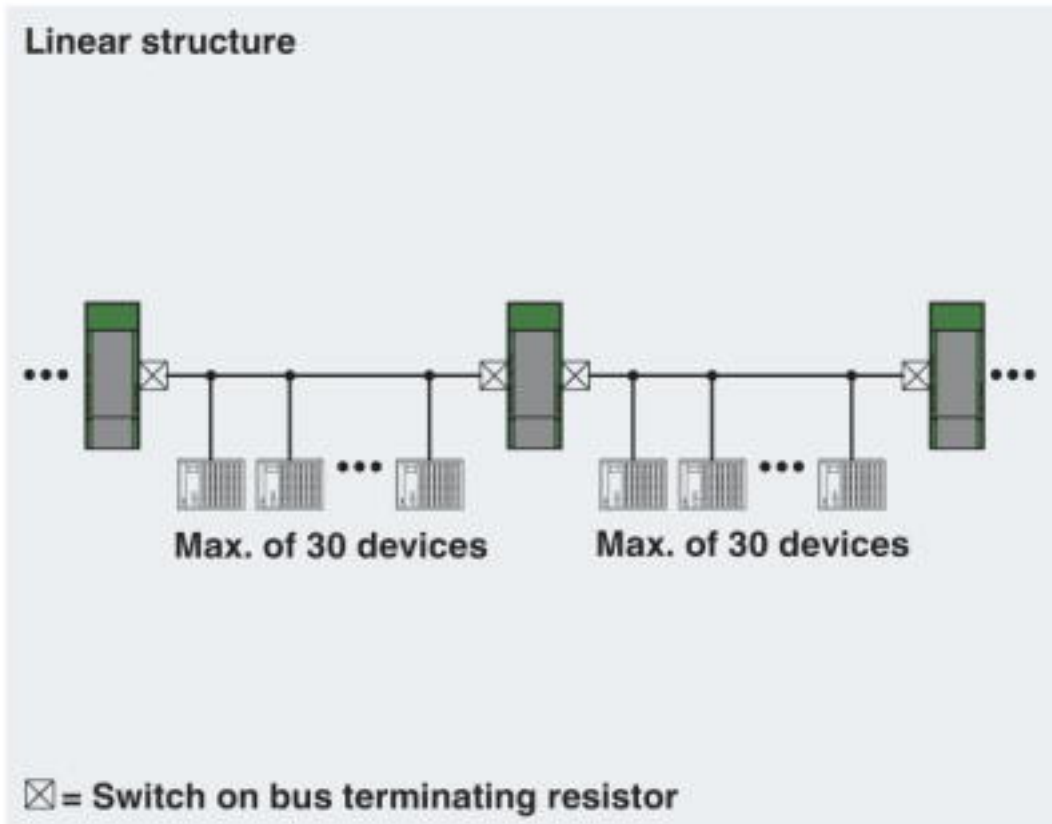
Application drawing



Tree structure

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

Application drawing



Line structure

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

Block diagram

