

Repeater - PSI-REP-CNET - 2313737

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Modular repeater for electrical isolation and increasing the range for ControlNet, 5 Mbps data rate, 4-way isolation, DIN-rail mountable, 24 V DC power supply

Your advantages

- ✓ Can be combined with PSI-MOS FO converters in a modular way using DIN rail connectors
- ✓ All connections can be plugged in using BNC plugs or a COMBICON screw terminal block
- ✓ Supply voltage and data signals routed through via DIN rail connectors
- ✓ Redundant power supply possible by means of optional system power supply unit
- ✓ High-quality electrical isolation between all interfaces (ControlNet (A) // ControlNet (B) // power supply // DIN rail connector)
- ✓ Approved for use in zone 2
- ✓ Bit retiming for unrestricted cascading of devices

RoHS



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 513821
GTIN	4046356513821

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	108 mm
Depth	117 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Technical data

Ambient conditions

Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2

General

Bit distortion, input	± 35 %
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // CNET // CNET
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011
Net weight	245 g
Housing material	PA 6.6-FR
Color	green
MTBF	1187 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	254 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	1856 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	837 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	345 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	65 mA
Typical current consumption	38 mA (24 V DC)

Interfaces

Interface 1	ControlNet interface, according to EN 50170
Connection method	BNC 75 Ω
File format/coding	Serial asynchronous UART/NRZ
Transmission length	≤ 1000 m
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

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Technical data

Interfaces

Serial transmission speed	5 Mbps
Interface 2	ControlNet interface, according to EN 50170
Connection method	BNC 75 Ω
File format/coding	Serial asynchronous UART/NRZ
Transmission length	≤ 1000 m
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Serial transmission speed	5 Mbps

Function

Status and diagnostic indicators	Port A (module status indicator), port B (module status indicator)
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Digital outputs

Output name	Relay output
Number of outputs	1
Contact type	N/O contact
Minimum switching voltage	18 V DC
Maximum switching voltage	30 V DC
Limiting continuous current	500 mA

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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
Noise emission	EN 55011
Noise immunity	EN 61000-6-2
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV
Standards/regulations	EN 55011
	EN 61000-4-6
Shock	15g in all directions in acc. with IEC 60068-2-27

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Technical data

Standards and Regulations

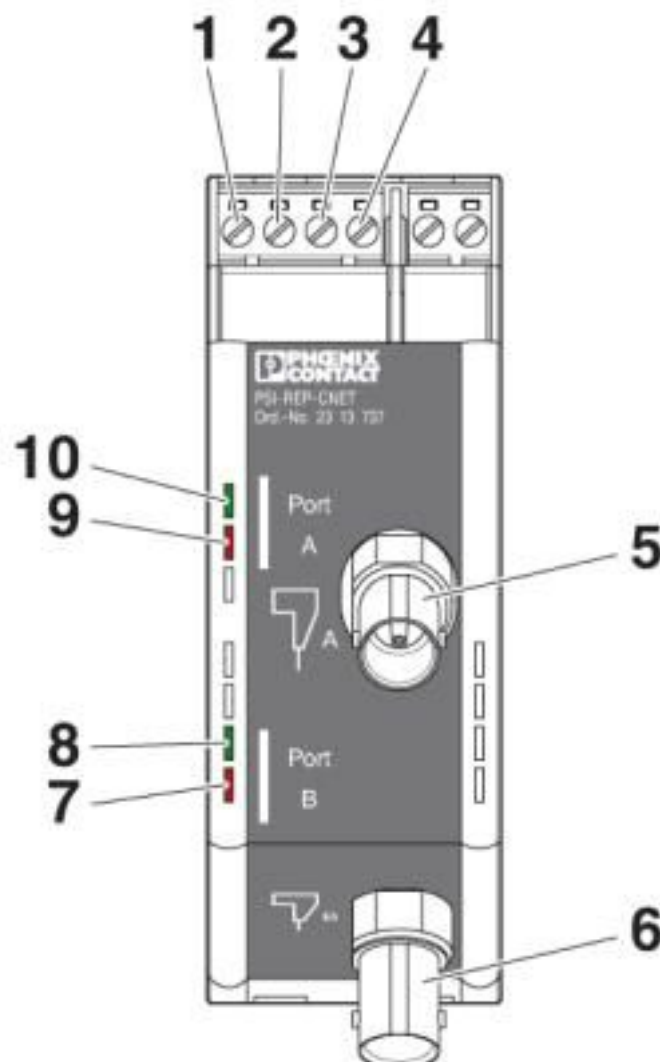
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
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Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

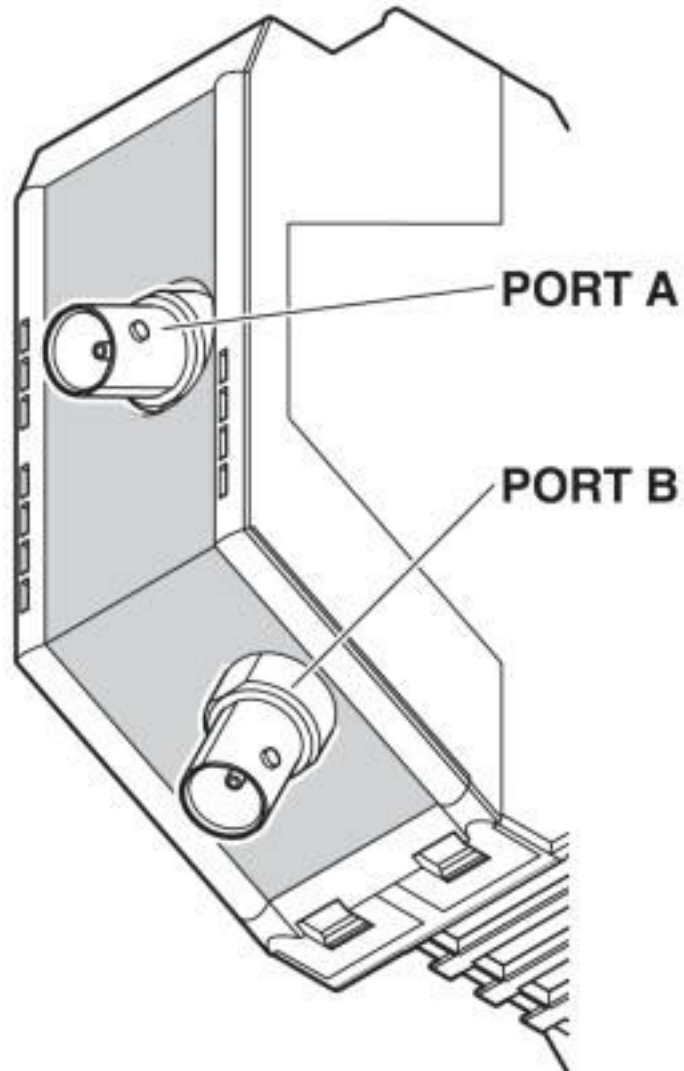
Schematic diagram



Function elements

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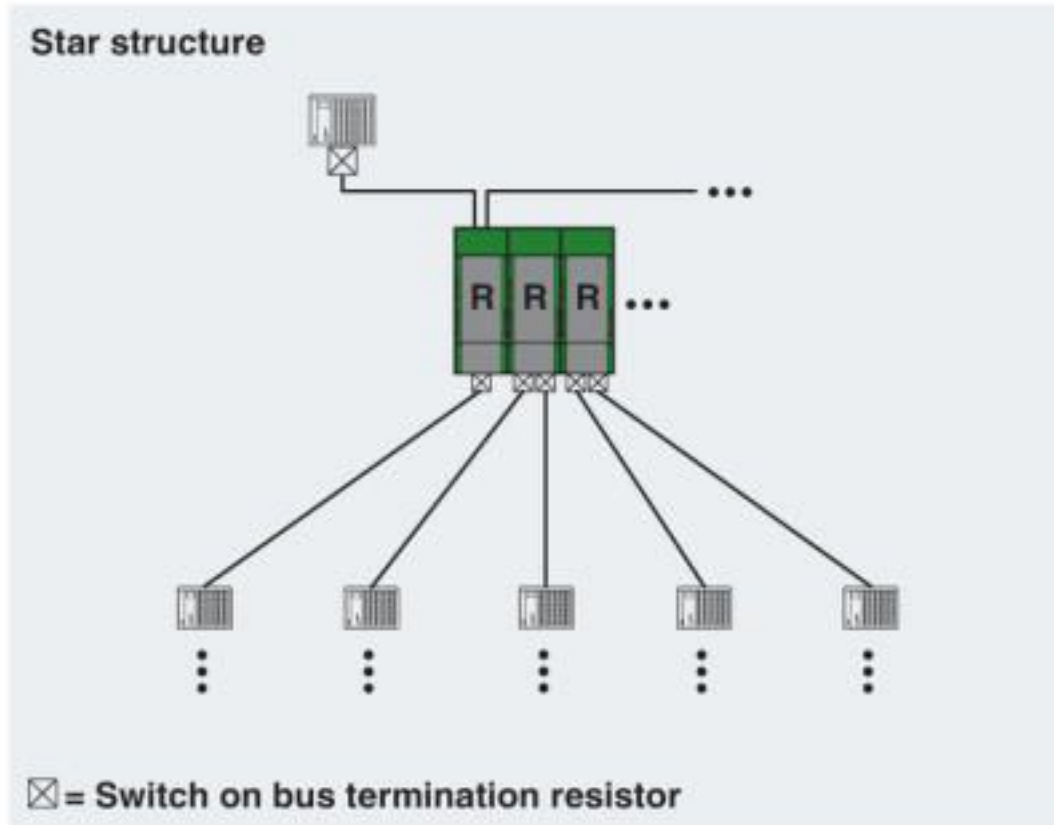
Schematic diagram



Device connections

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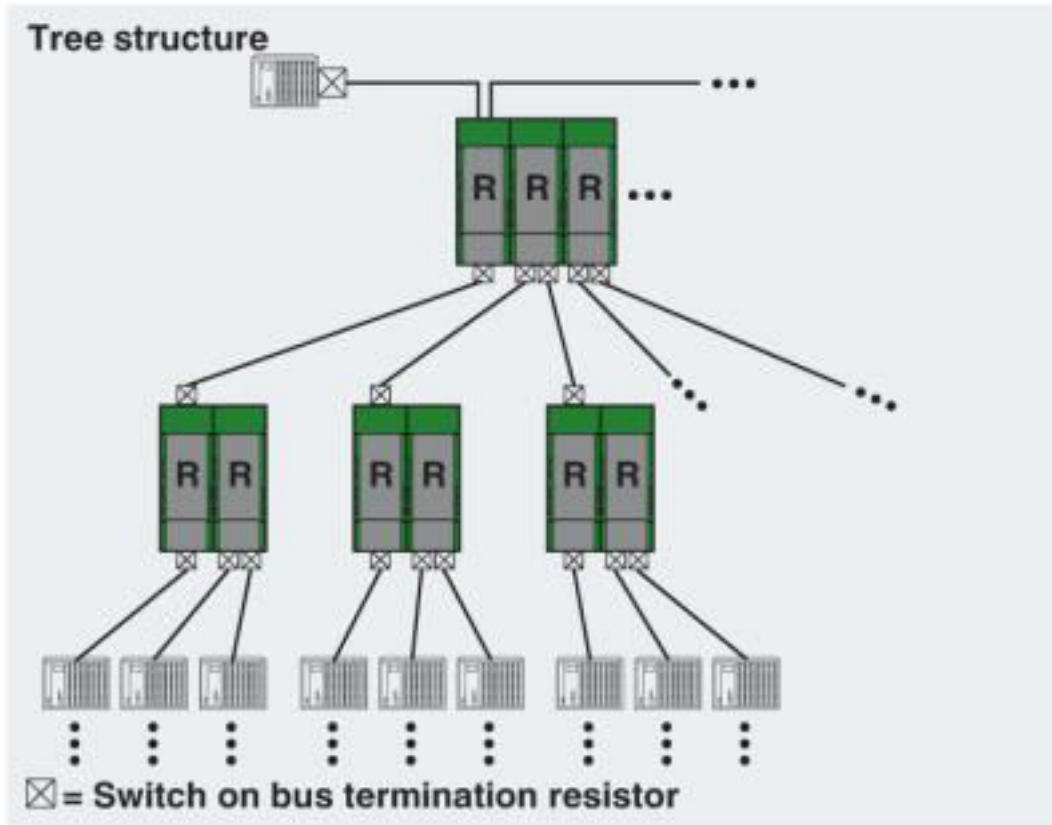
Application drawing



Star structure

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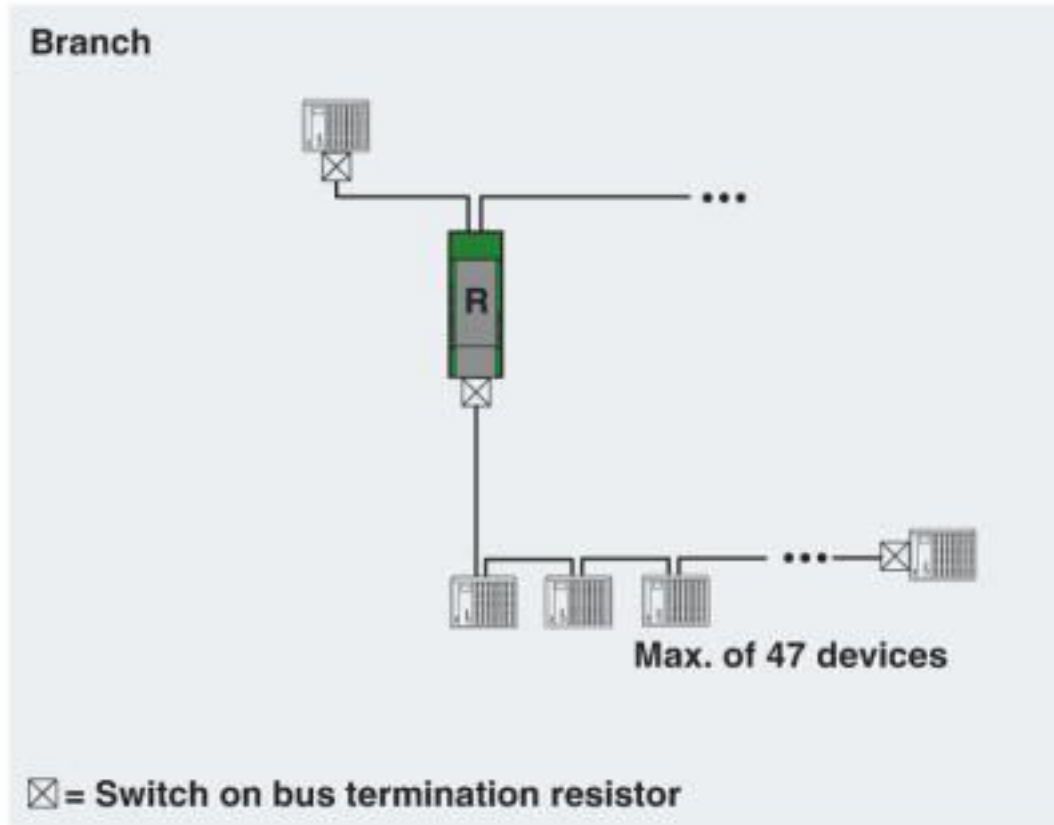
Application drawing



Tree structure

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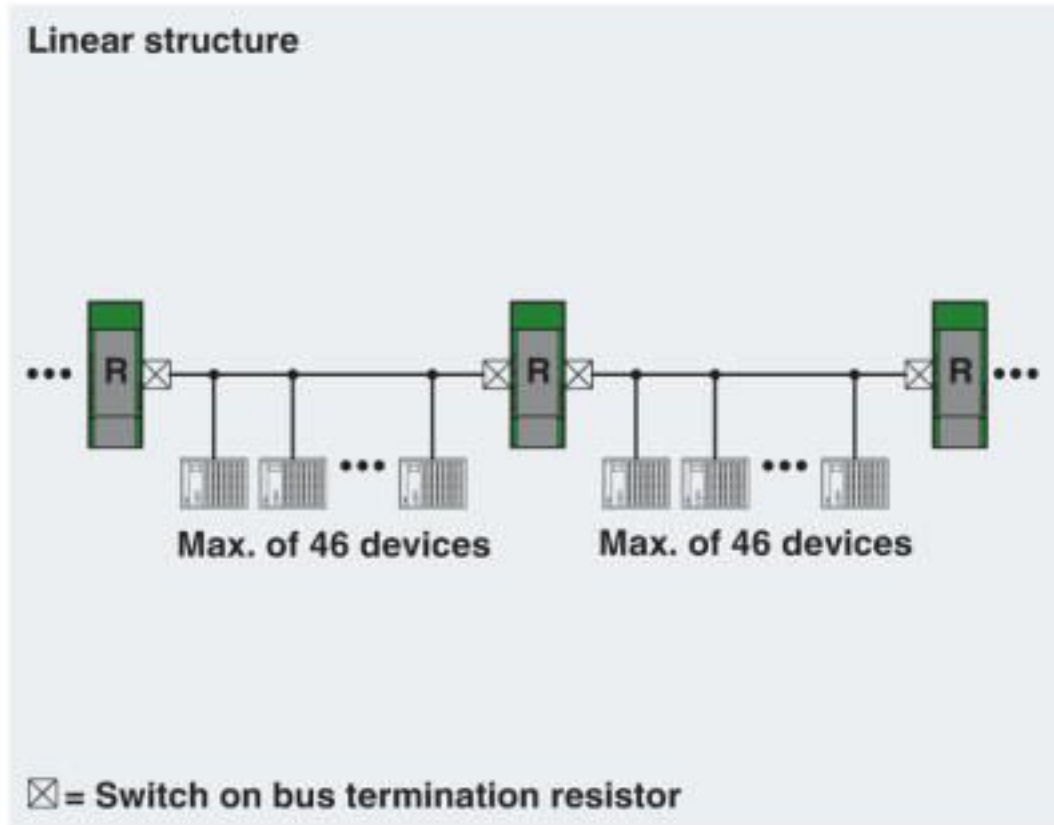
Application drawing



Branch line

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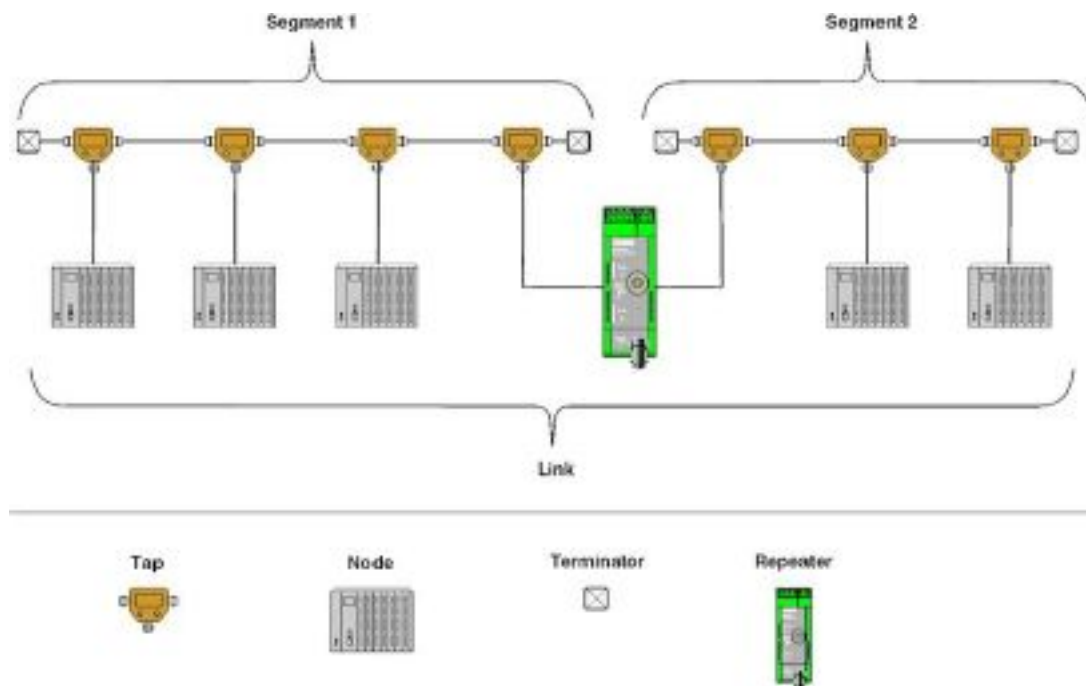
Application drawing



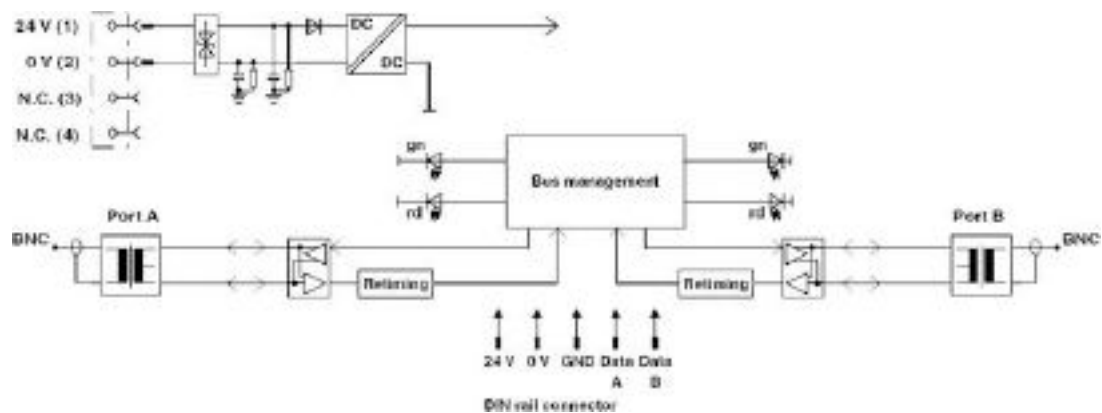
Line structure

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Application drawing

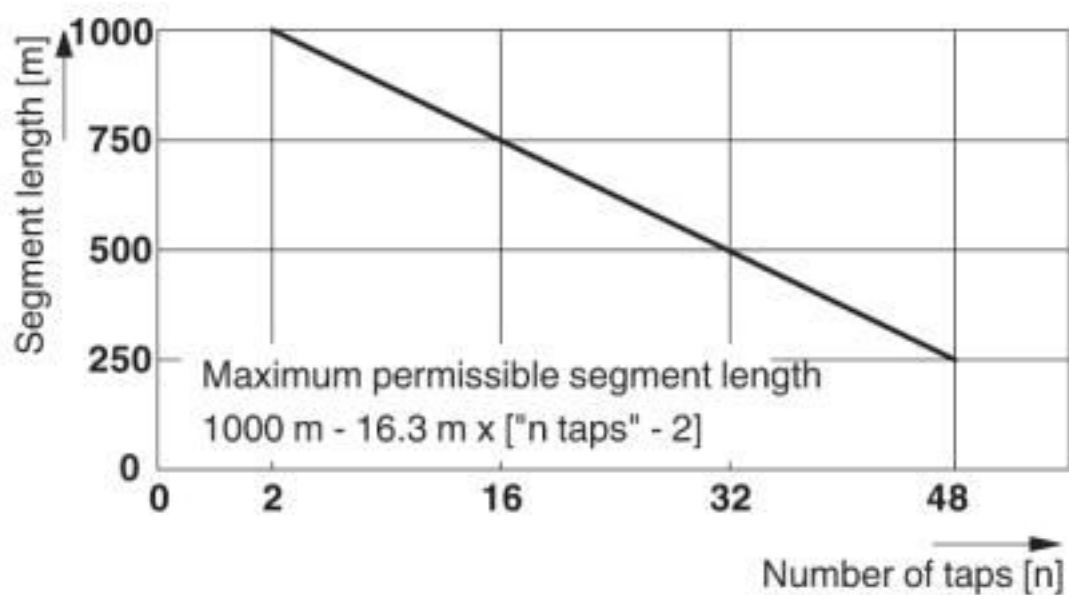


Block diagram

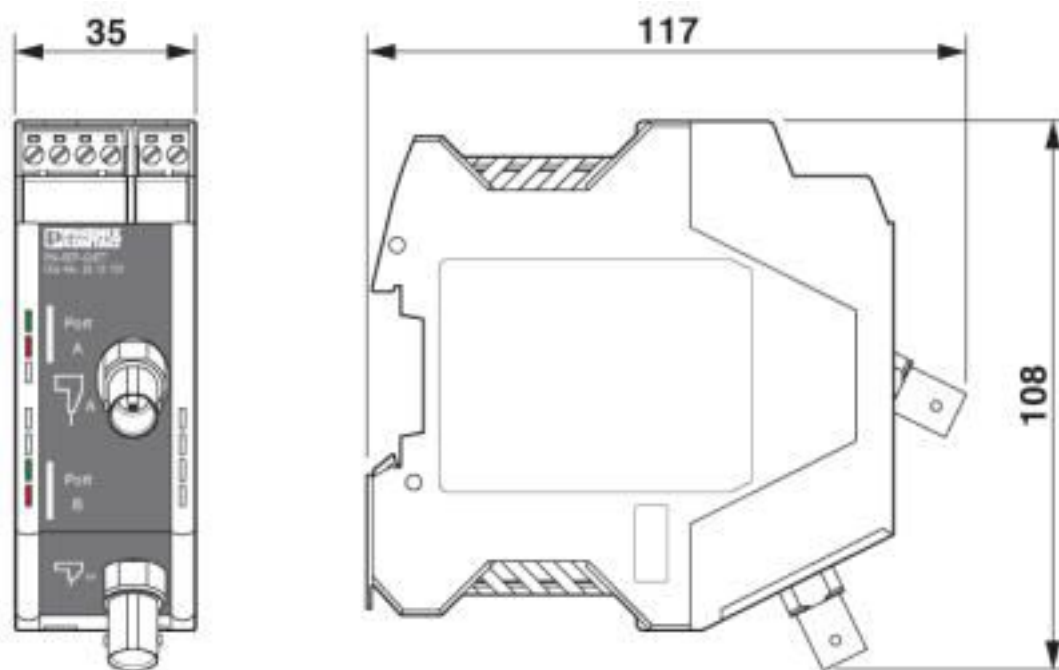


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Diagram



Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27240490
eCl@ss 4.1	27240490
eCl@ss 5.0	27242208

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Classifications

eCl@ss

eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
eCl@ss 8.0	27242208
eCl@ss 9.0	27242208

ETIM

ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC001423
ETIM 6.0	EC001423

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39122114
UNSPSC 19.0	39122114

Accessories

Accessories

DIN rail connector

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Media converter

FO converters - PSI-MOS-CNET/FO 850 E - 2313711



Fiber optic converter with integrated optical diagnostics, for ControlNet, 5 Mbps data rate, termination device, interfaces: 1 x CNET, 1 x Alarm, 1 x FO (B-FOC), 850 nm, for PCF/fiberglass (multi-mode)

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Accessories

FO converters - PSI-MOS-CNET/FO 850 T - 2313724



Fiber optic converter with integrated optical diagnostics, for ControlNet, 5 Mbps data rate, T-coupler, interfaces: 1 x CNET, 1 x Alarm, 2 x FO (B-FOC), 850 nm, for PCF/fiberglass (multi-mode)

Power supply

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



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A, for the potentially explosive area

Surge protection for transceiver systems

Surge protection device - C-UFB- 5DC/E - 2782300



Attachment plug with surge voltage coarse and fine protection, for coaxial signal interfaces with floating shield, signal voltage 5 V. Connection: BNC socket/plug

Mouser Electronics

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