

Repeater - PSM-ME-REP LON485-P - 2708041

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Repeater, for potential isolation and increasing the range in RS-485 2-wire LON bus systems, 3-way isolation, rail-mountable

Your advantages

- ✓ Integrated surge protection with transient discharge to the DIN rail
- ✓ 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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 907570
GTIN	4017918907570
Weight per Piece (excluding packing)	188.800 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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

Caption	Slim design
Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Repeater - PSM-ME-REP LON485-P - 2708041

Technical data

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 the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

General

Transmission channels	2 (1/1), RxD, TxD, full duplex
Bit distortion	< 1.5 % (applies to device: Distortions caused by system-specific cables are not accounted for)
Electrical isolation	VCC // RS-485 (A) // RS-485 (B)
Test voltage data interfaces	2 kV AC
Test voltage data interface/power supply	2 kV AC
	2 kV
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 50 081-1
Net weight	188.8 g
Housing material	PA
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))
Degree of pollution	2

Power supply

Nominal supply voltage	24 V AC/DC ±20 %
Max. current consumption	100 mA
Typical current consumption	90 mA (24 V DC)

Interfaces

Interface 1	RS-485 interface in acc. with EIA/TIA-485, DIN 66259-4
Operating mode	Semi-duplex
Connection method	Pluggable screw connection
File format/coding	Manchester, slip-tolerant
Data direction switching	Automatic control
Transmission medium	2-wire twisted pair, shielded
Transmission length	≤ 1200 m (depends on transmission speed, bus system and cable type)
Termination resistor	120 Ω
Conductor cross section flexible min.	0.2 mm²

Repeater - PSM-ME-REP LON485-P - 2708041

Technical data

Interfaces

Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Serial transmission speed	39.1/ 78.1/ 500/ 625/ 1000/ 1250/ 2000 kbps
Interface 2	RS-485 interface in acc. with EIA/TIA-485, DIN 66259-4
Operating mode	Semi-duplex
Connection method	Pluggable screw connection
File format/coding	Manchester, slip-tolerant
Data direction switching	Automatic control
Transmission medium	2-wire twisted pair, shielded
Transmission length	≤ 1200 m (depends on transmission speed, bus system and cable type)
Termination resistor	120 Ω
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	39.1/ 78.1/ 500/ 625/ 1000/ 1250/ 2000 kbps

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	EAC
Identification	EAC
Designation	ATEX
Identification	# II 3 G Ex nA IIC T4 Gc
Certificate	IBExU16ATEXB004 X
Additional text	Please follow the special installation instructions in the documentation!
Designation	IECEX
Identification	Ex nA IIC T4 Gc
Certificate	IECEX IBE 15.0034X
Designation	UL, USA/Canada
Identification	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
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 50 081-1
Noise immunity	EN 61000-6-2:2005

Repeater - PSM-ME-REP LON485-P - 2708041

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Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 2 kV
Standards/regulations	EN 55011
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

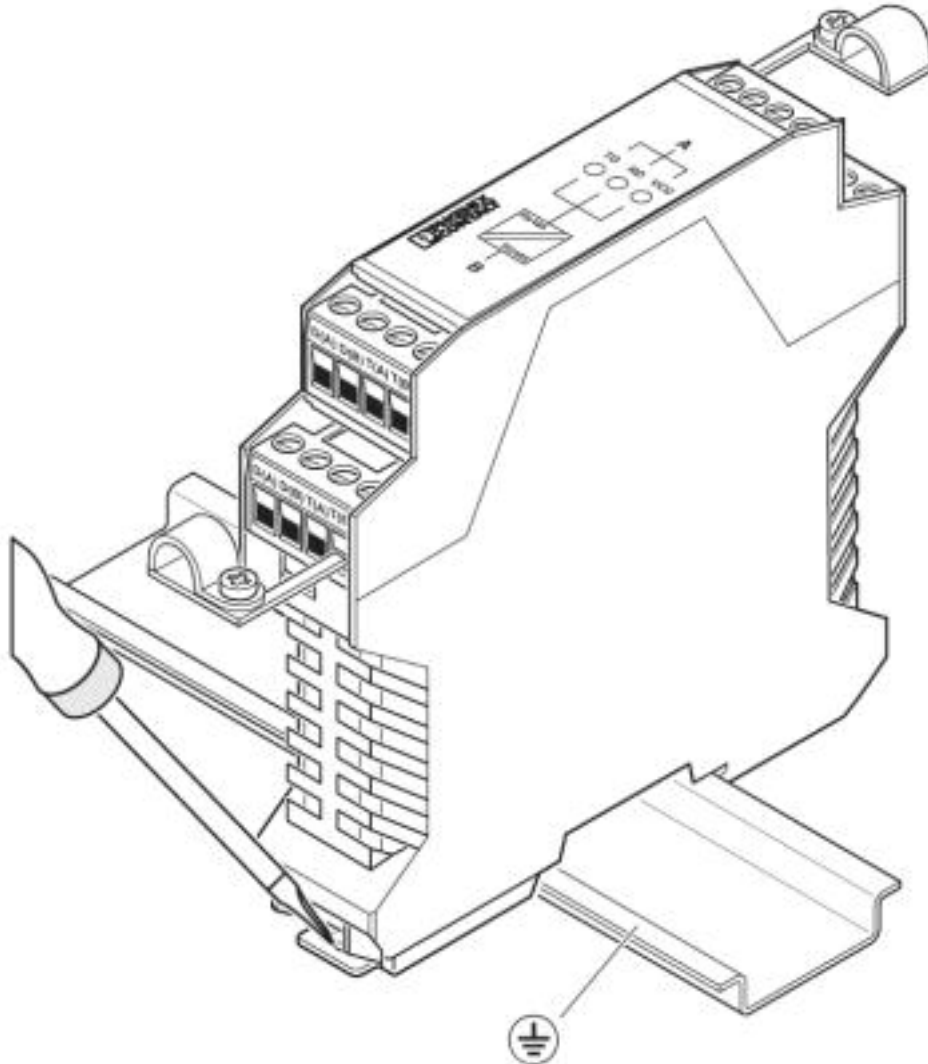
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Repeater - PSM-ME-REP LON485-P - 2708041

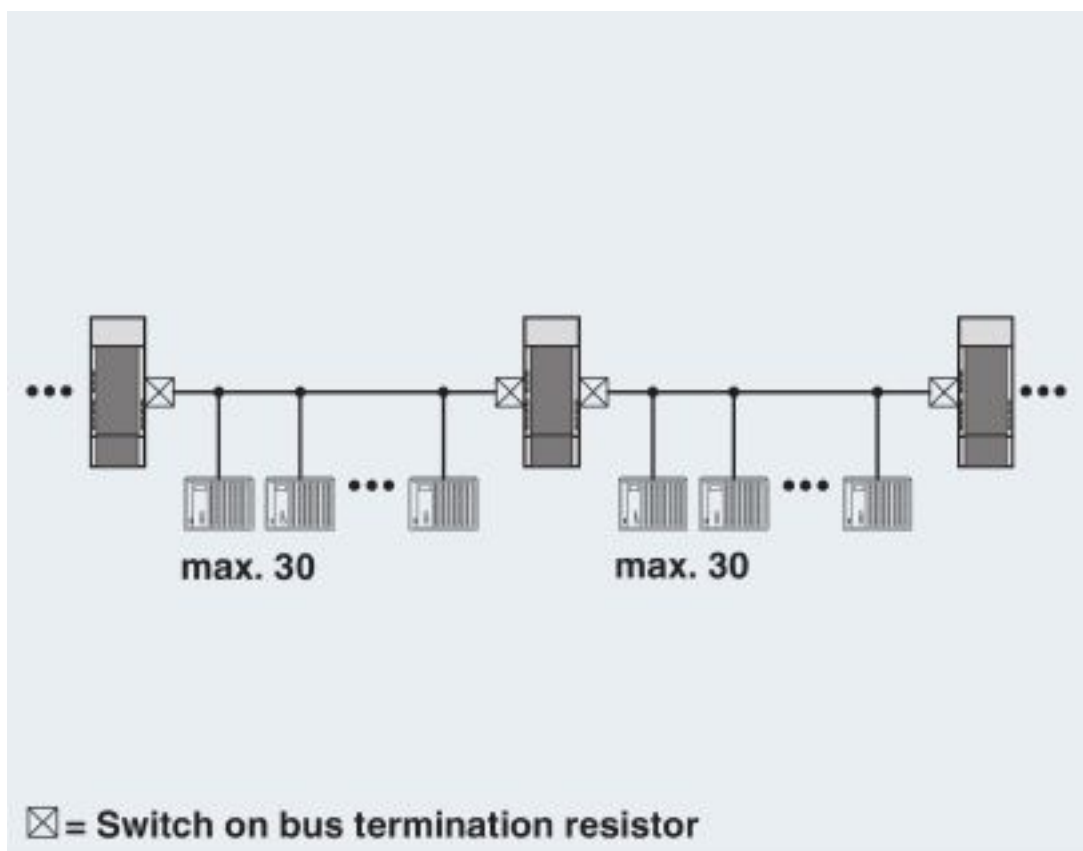
Schematic diagram



Removal

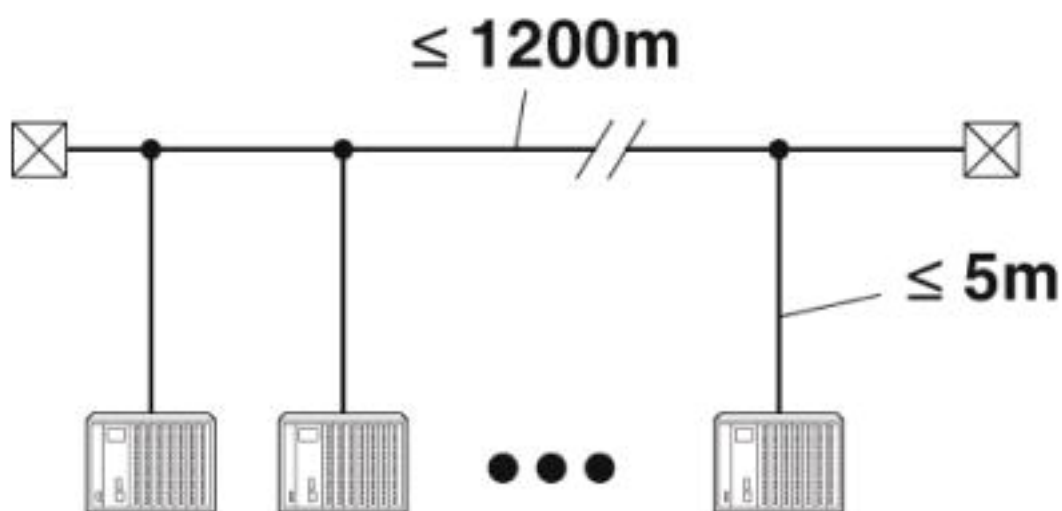
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Application drawing



Line structure

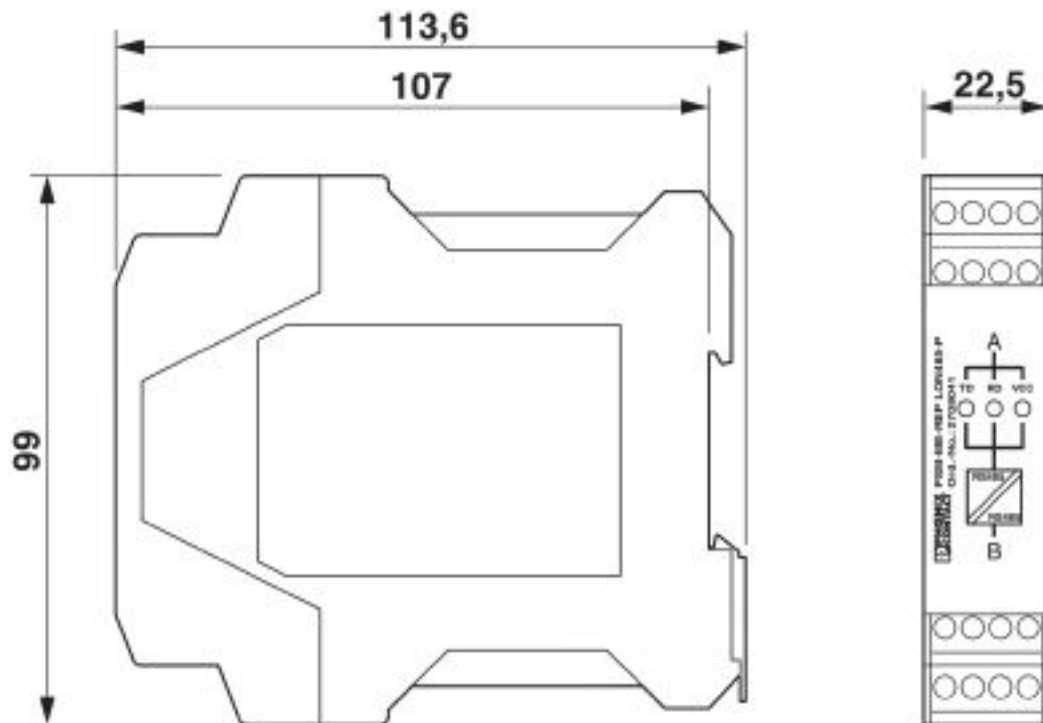
Application drawing



Cable lengths according to the RS-485 standard

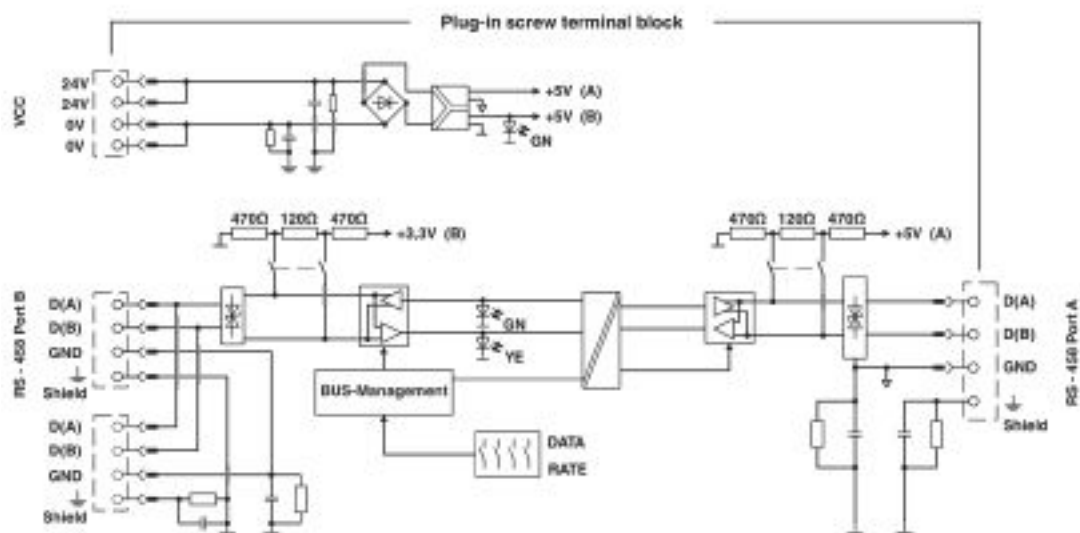
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Dimensional drawing



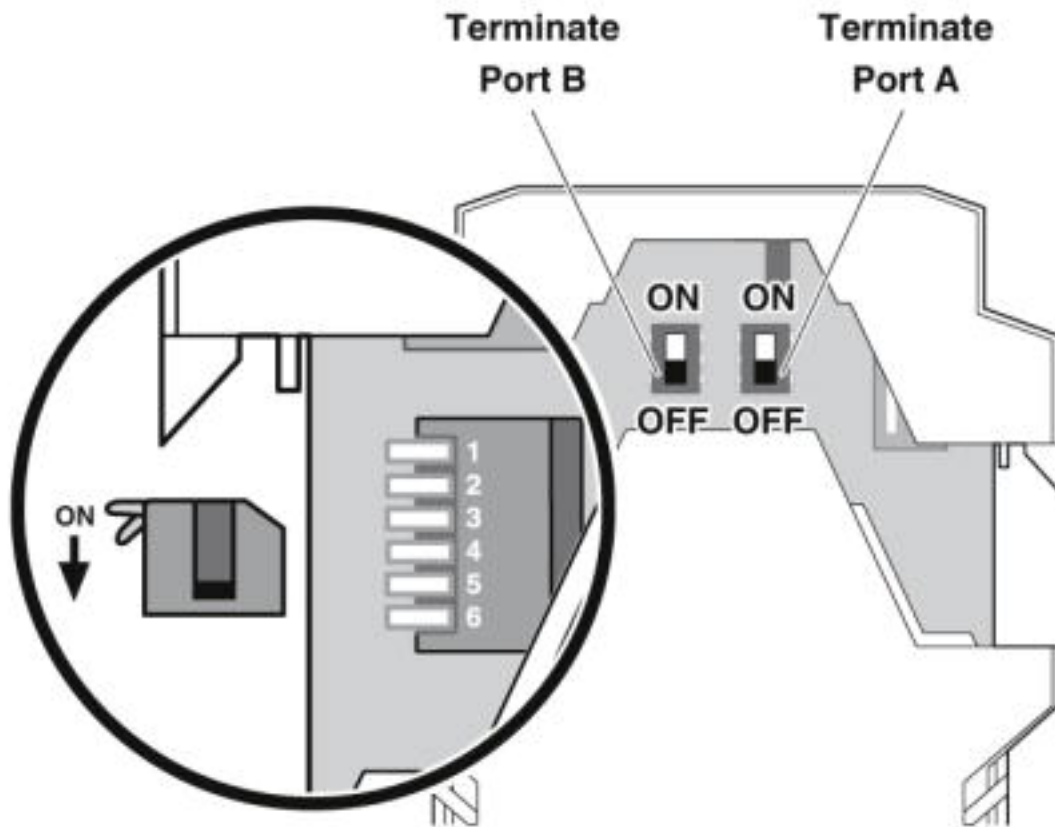
Slim design

Circuit diagram



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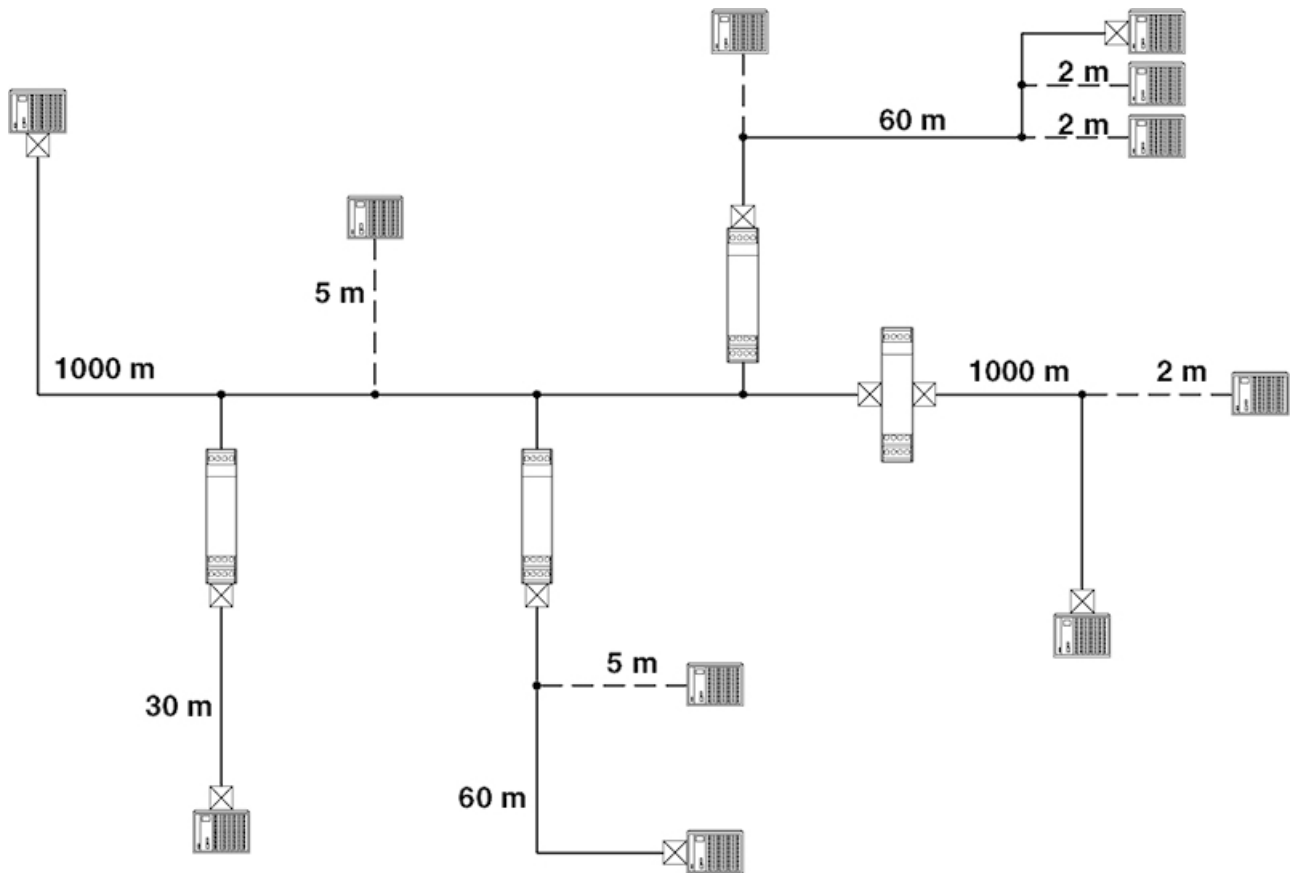
Schematic diagram



DIP switches

Repeater - PSM-ME-REP LON485-P - 2708041

Application drawing



Cable lengths

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Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 4.0	27250300
eCl@ss 4.1	27250300
eCl@ss 5.0	27242200
eCl@ss 5.1	27242200
eCl@ss 6.0	19179200
eCl@ss 7.0	19179290
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC000698
ETIM 3.0	EC000698
ETIM 4.0	EC000698
ETIM 5.0	EC000310
ETIM 6.0	EC000310
ETIM 7.0	EC000310

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43222604
UNSPSC 18.0	43222604
UNSPSC 19.0	43222604
UNSPSC 20.0	43222604
UNSPSC 21.0	43222604

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

Ex Approvals

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

Approval details

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Approvals

UL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

cUL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

EAC



RU *-
DE.A*30.B.01735

cULus Recognized



Accessories

Accessories

Mounting material

Shield connection clamp - ME-SAS - 2853899



Shield connection clamp for printed circuit terminal block

Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip