

FO converters - PSI-MOS-PROFIB/FO 850 E - 2708274

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FO converter with integrated optical diagnosis, alarm contact, for PROFIBUS up to 12 Mbps, terminal equipment with an FO interface (BFOC), 850 nm, for fiber glass cable

Product Features

- Connections can be plugged in using a COMBICON screw terminal block
- Can be combined with the PSI copper repeater in a modular way using DIN rail connectors
- Supply voltage and data signals routed through via DIN rail connectors
- Automatic data rate detection or fixed data rate setting via DIP switches
- High-quality electrical isolation between all interfaces (PROFIBUS // fiber optic ports // power supply // DIN rail connector)
- Redundant power supply possible by means of optional system power supply unit
- Approved for use in zone 2
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- Suitable for all data rates up to 12 Mbps
- Bit retiming for any cascading depth



Key commercial data

package_quantity	1
GTIN	4017918973971

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	106 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 % (no condensation)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

Serial interface

Interface 1	PROFIBUS acc. to IEC 61158, RS-485 2-wire, half duplex, automatic control
Operating mode	Semi-duplex
Connection method	D-SUB-9 female connector
File format/coding	UART (11 Bit, NRZ)
Data direction switching	Automatic control
Transmission medium	Copper
Transmission length	≤ 1200 m (depending on the data rate, with shielded, twisted pair data cable)
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	14
Serial transmission speed	≤ 12 Mbps

Optical interface FO

Transmit capacity, minimum	-4.2 dBm (200/230 μm)
Transmit capacity, minimum	-17.8 dBm (50/125 μm)
Transmit capacity, minimum	-14.6 dBm (62,5/125 μm)
Minimum receiver sensitivity	-30 dBm (50/125 μm)
Maximum receiver sensitivity	-3 dBm (200/230 μm)
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2600 m (with F-G 50/125 2.5 dB/km)
Transmission length incl. 3 dB system reserve	3300 m (with F-G 62,5/125 3.0 dB/km)
Transmission length incl. 3 dB system reserve	800 m (With F-K 200/230 10 dB/km with quick mounting connector)
Transmission medium	HCS fiber
Transmission medium	Multi-mode fiberglass
Transmission protocol	Protocol-transparent to the RS-485 interface
Connection method	B-FOC (ST [®])

Fault warning output

Maximum switching voltage	60 V DC
Maximum switching voltage	42 V AC
Limiting continuous current	0.46 A

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Power supply

Nominal supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	130 mA
Typical current consumption	120 mA (24 V DC)
Connection method	COMBICON plug-in screw terminal block

General

Bit delay	≤ 1 Bit
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	(VCC // RS-485)
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Net weight	185 g
Housing material	PA 6.6-FR
Color	green
MTBF	252 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	42 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	247 Years (SN 29500 standard, temperature 25°C, operating cycle 21% (5 days a week, 8 hours a day))
MTTF	200 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25% (5 days a week, 12 hours a day))
MTTF	130 Years (SN 29500 standard, temperature 40°C, operating cycle 100% (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nAC IIC T4 X
ATEX	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)
UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
UL, USA / Canada	Class I, zone 2, Ex nC nL IIC T5 X
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

classifications

eCl@ss

eCl@ss 4.0	27230207
eCl@ss 4.1	27230207
eCl@ss 5.0	27230207
eCl@ss 5.1	27230207
eCl@ss 6.0	27230207
eCl@ss 7.0	27230207
eCl@ss 8.0	27230207

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classifications

ETIM

ETIM 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC001423

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

Approval details

ATEX	
Nominal voltage UN	
Nominal current IN	
mm ² /AWG/kcmil	

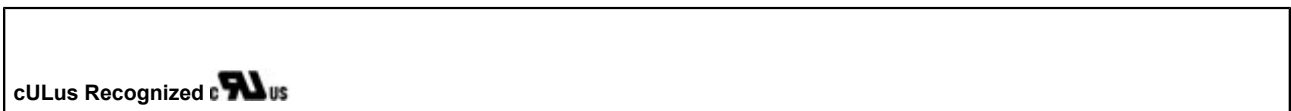
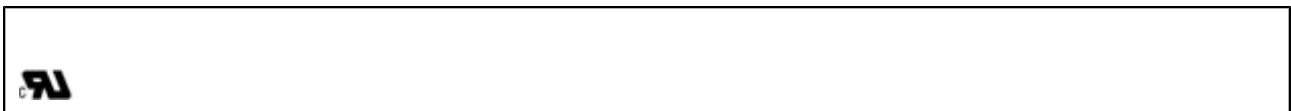
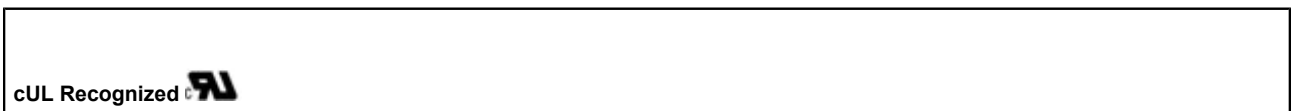
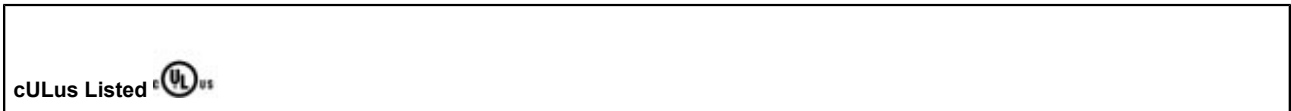
UL Listed

cUL Listed

Nominal voltage UN	
Nominal current IN	
mm ² /AWG/kcmil	

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approvals



accessories

Connector set

PSM-SET-B-FOC/4-HCS - 2708481



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accessories

Data cable by the meter

PSM-LWL-HCS-RUGGED-200/230 - 2799885



PSM-LWL-HCSO-200/230 - 2799445



PSM-LWL-GDM-RUGGED- 50/125 - 2799322



PSM-LWL-GDO- 50/125 - 2799432



PSM-CABLE-PROFIB/FC - 2744652



Power supply

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accessories

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



DIN rail connector

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



Assembly tool

PSM-HCS-KONFTOOL/B-FOC - 2708465



Measuring tools

PSM-FO-POWERMETER - 2799539



Adapter

PSM-SET-BFOC-LINK/2 - 2799429



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accessories

PSM PTK - 2760623



PSM PTK-4 - 2799364



Data plug

SUBCON-PLUS-PROFIB/SC2 - 2708232



SUBCON-PLUS-PROFIB/PG/SC2 - 2708245



SUBCON-PLUS-PROFIB/AX/SC - 2744380



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accessories

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



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



Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



Stripping tool

PSM-STRIP-FC/PROFIB - 2744623



Interface converter

PSI-REP-PROFIBUS/12MB - 2708863



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accessories

PSM-ME-RS485/RS485-P - 2744429



Data cable preassembled

FL MM PATCH 1,0 LC-ST - 2989174



FL MM PATCH 2,0 LC-ST - 2989271



FL MM PATCH 5,0 LC-ST - 2901801



FL MM PATCH 1,0 SC-ST - 2901809



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FL MM PATCH 5,0 SC-ST - 2901811



FL MM PATCH 1,0 ST-ST - 2901815



FL MM PATCH 2,0 ST-ST - 2901816



FL MM PATCH 5,0 ST-ST - 2901817



FL MM PATCH 1,0 ST-SCRJ - 2901820



FL MM PATCH 2,0 ST-SCRJ - 2901821



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accessories

FL MM PATCH 5,0 ST-SCRJ - 2901822



Terminal resistor

PSI-TERMINATOR-PB - 2313944



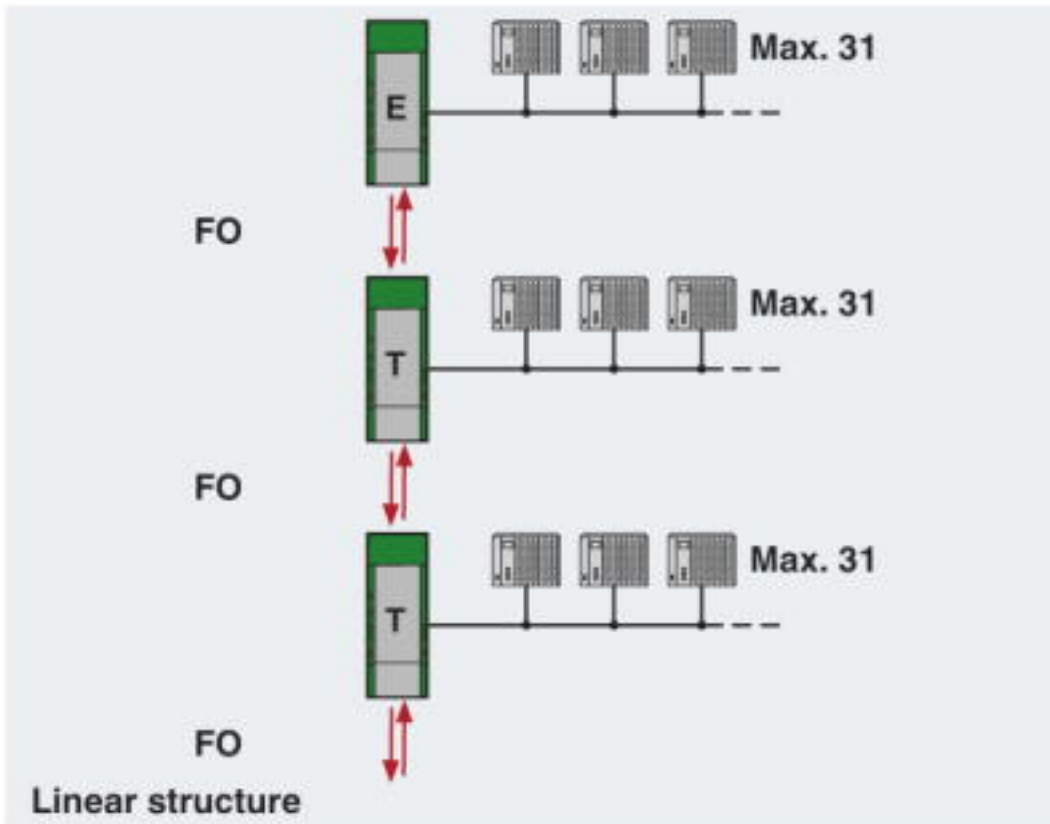
accessories

ME 17,5 TBUS 1,5/PP000-3,81 BK - 2890014

Drawings

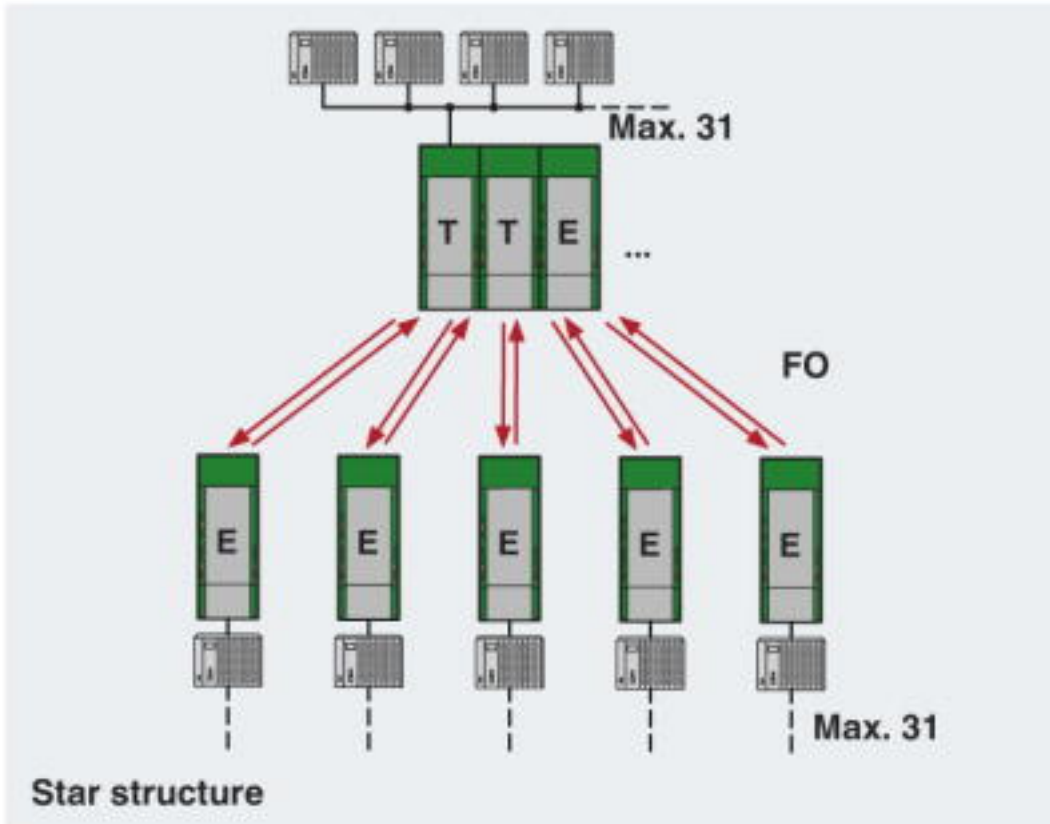
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Application drawing



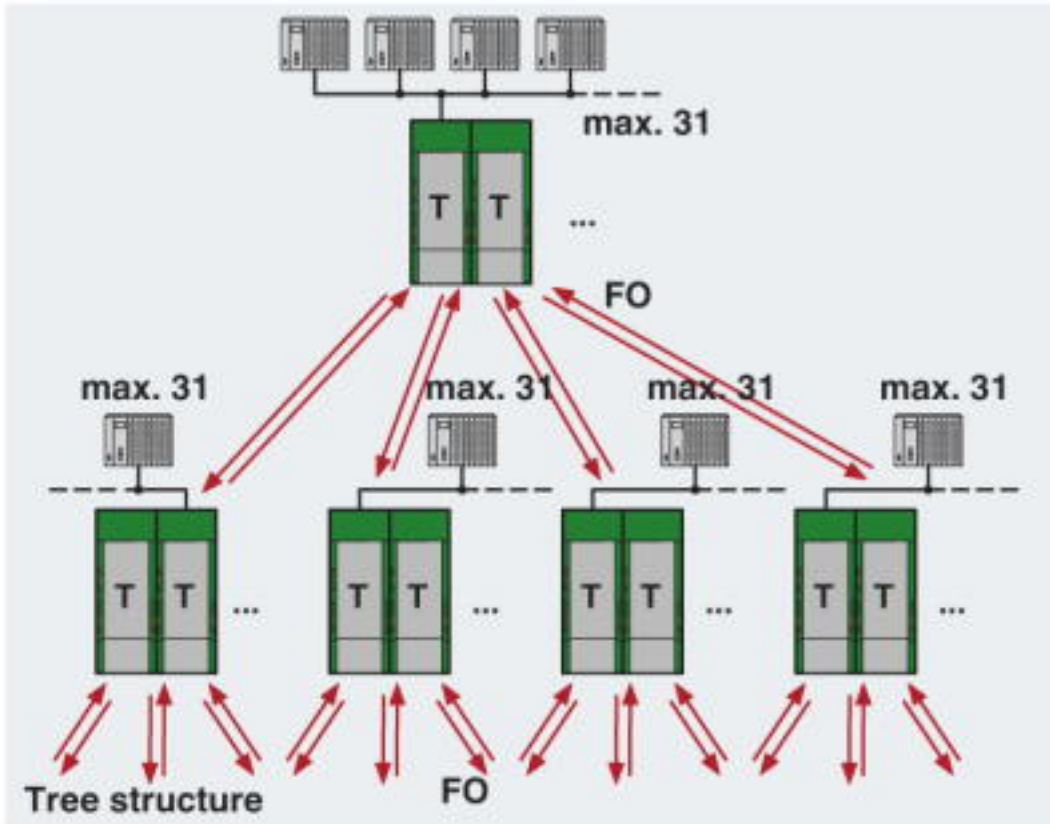
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Application drawing



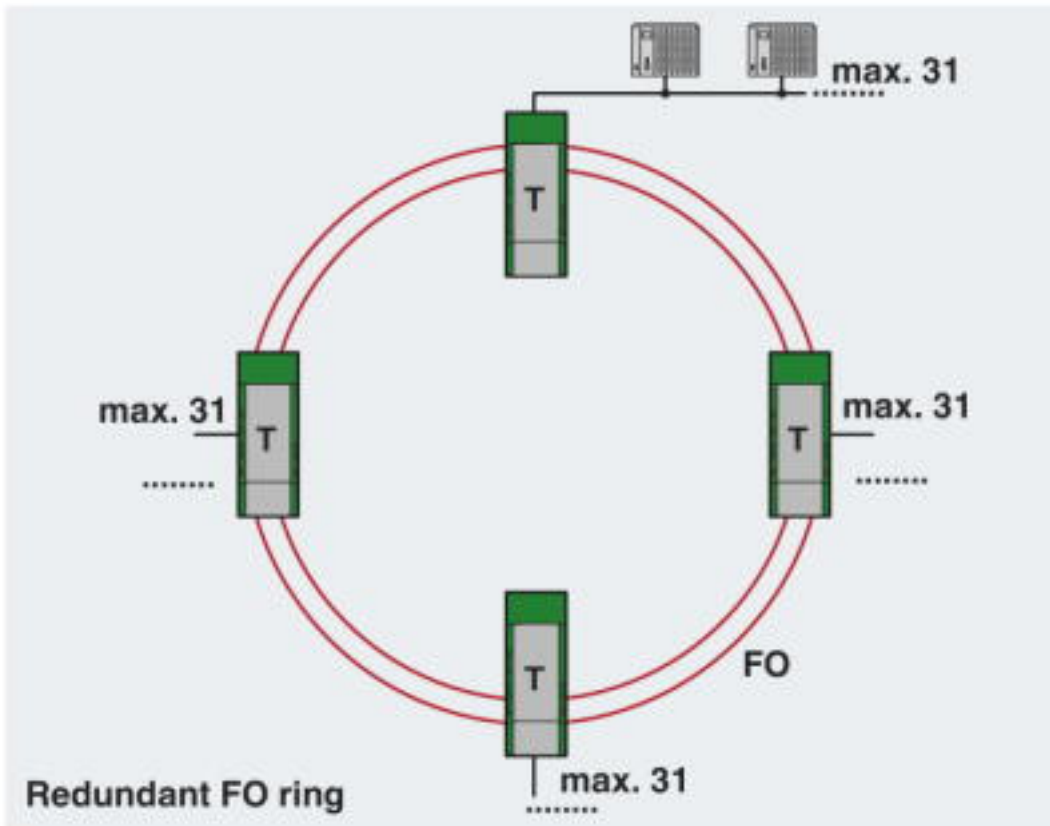
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Application drawing



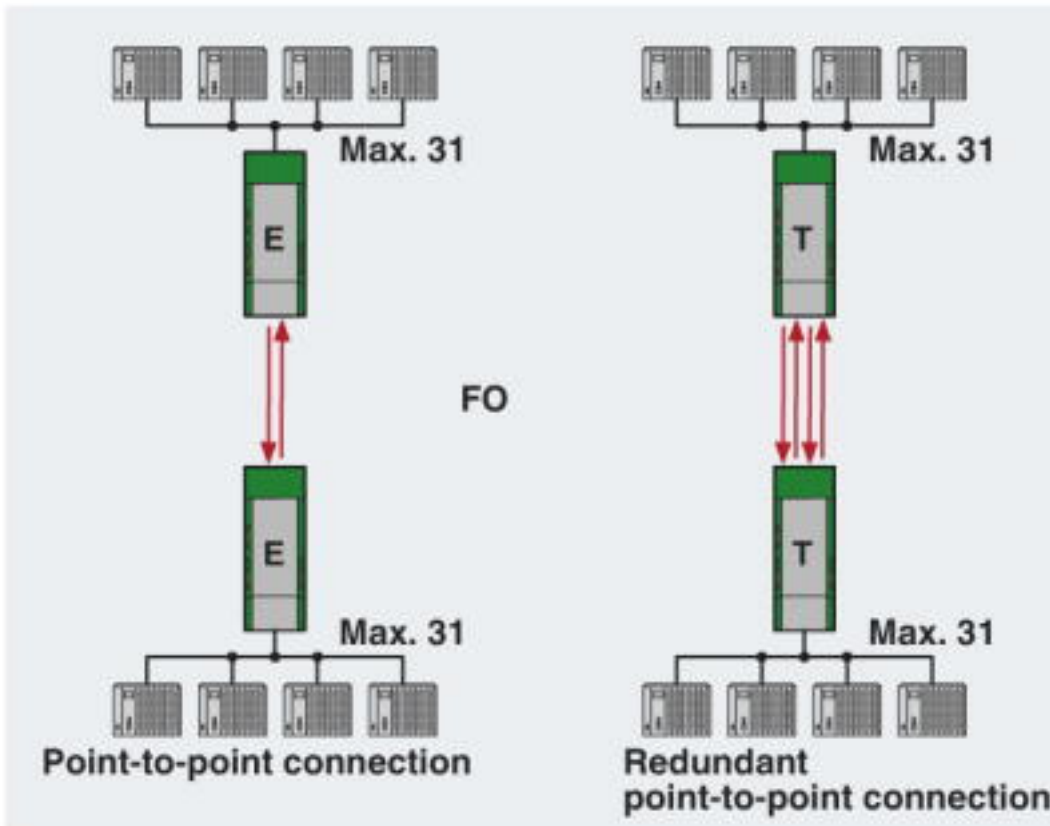
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Application drawing

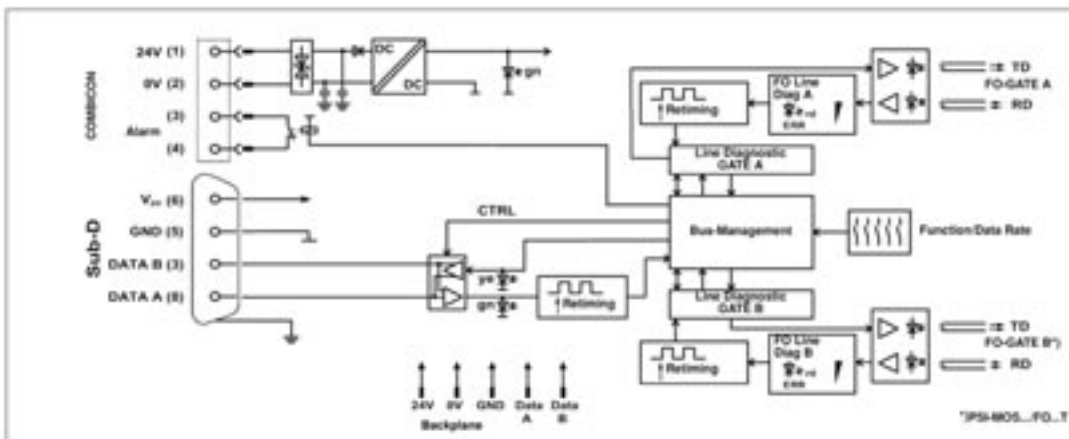


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Application drawing



Block diagram



*) only with PSI-MOS.../FO...T

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