

# FO converters - PSI-MOS-RS422/FO 850 E - 2708355

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FO converter with integrated optical diagnosis, alarm contact, for RS-422/RS-485 4-wire/ INTERBUS to 2 Mbps, terminal equipment with an FO interface (BFOC), 850 nm, for HCS/fiber glass cable

## Product Features

- Supply voltage routed through via DIN rail connectors
- Connections can be plugged in using a COMBICON screw terminal block
- High-quality electrical isolation between all interfaces (INTERBUS // 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
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- Automatic data rate detection for all data rates up to 2 Mbps



## Key commercial data

package_quantity	1
GTIN	4017918974053

## 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	103 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

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## Technical data

### Ambient conditions

<b>Noise immunity</b>	EN 61000-6-2:2005
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### Serial interface

<b>Interface 1</b>	RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1
<b>Operating mode</b>	Full duplex
<b>Connection method</b>	Pluggable screw connection
<b>Transmission medium</b>	Copper
<b>Transmission length</b>	≤ 1000 m (depending on the data rate, with shielded, twisted data cable)
<b>Termination resistor</b>	220 Ω
<b>Termination resistor</b>	100 Ω
<b>Termination resistor</b>	220 Ω
<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>Serial transmission speed</b>	≤ 2 Mbps

### Optical interface FO

<b>Transmit capacity, minimum</b>	-4.6 dBm (200/230 μm)
<b>Transmit capacity, minimum</b>	-17.6 dBm (50/125 μm)
<b>Transmit capacity, minimum</b>	-13.6 dBm (62,5/125 μm)
<b>Minimum receiver sensitivity</b>	-33.2 dBm
<b>Wavelength</b>	850 nm
<b>Transmission length incl. 3 dB system reserve</b>	2800 m (with F-K 200/230 8 dB/km with quick mounting connector)
<b>Transmission length incl. 3 dB system reserve</b>	4200 m (with F-G 50/125 2.5 dB/km)
<b>Transmission length incl. 3 dB system reserve</b>	4800 m (with F-G 62,5/125 3.0 dB/km)
<b>Transmission medium</b>	HCS fiber
<b>Transmission medium</b>	Multi-mode fiberglass
<b>Transmission protocol</b>	Transparent to protocol for RS-422 interface
<b>Connection method</b>	B-FOC (ST <sup>®</sup> )

### Fault warning output

<b>Maximum switching voltage</b>	60 V DC
<b>Maximum switching voltage</b>	42 V AC
<b>Limiting continuous current</b>	0.46 A

### Power supply

<b>Supply voltage range</b>	18 V DC ... 30 V DC
<b>Max. current consumption</b>	130 mA
<b>Typical current consumption</b>	120 mA (24 V DC)

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## Technical data

### Power supply

<b>Connection method</b>	COMBICON plug-in screw terminal block
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### General

<b>Transmission channels</b>	2 (1/1) RD, TD, full duplex
<b>Bit distortion, input</b>	± 35 % (permitted)
<b>Bit distortion, output</b>	< 6.25 %
<b>Electrical isolation</b>	(VCC // RS-422)
<b>Test voltage data interface/power supply</b>	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
<b>Electromagnetic compatibility</b>	Conformance with EMC Directive 2004/108/EC
<b>Noise emission</b>	EN 55011
<b>Net weight</b>	190 g
<b>Housing material</b>	PA 6.6-FR
<b>Color</b>	green
<b>MTBF</b>	320 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
<b>MTBF</b>	48 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
<b>Conformance</b>	CE-compliant
<b>ATEX</b>	# II 3 G Ex nAC IIC T4 X
<b>ATEX</b>	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)
<b>UL, USA / Canada</b>	Class I, Zone 2, AEx nc IIC T5
<b>UL, USA / Canada</b>	Class I, zone 2, Ex nC nL IIC T5 X
<b>UL, USA / Canada</b>	Class I, Div. 2, Groups A, B, C, D

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27230207
<b>eCl@ss 4.1</b>	27230207
<b>eCl@ss 5.0</b>	27230207
<b>eCl@ss 5.1</b>	27230207
<b>eCl@ss 6.0</b>	27230207
<b>eCl@ss 7.0</b>	27230207
<b>eCl@ss 8.0</b>	27230207

### ETIM

<b>ETIM 2.0</b>	EC001423
<b>ETIM 3.0</b>	EC001423
<b>ETIM 4.0</b>	EC001423
<b>ETIM 5.0</b>	EC001423

### UNSPSC

<b>UNSPSC 6.01</b>	30211506
<b>UNSPSC 7.0901</b>	39121008

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## classifications

### UNSPSC

<b>UNSPSC 11</b>	39121008
<b>UNSPSC 12.01</b>	39121008
<b>UNSPSC 13.2</b>	43201553

## approvals

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

### Approval details

ATEX	
Nominal voltage UN	
Nominal current IN	
mm <sup>2</sup> /AWG/kcmil	

UL Listed
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cUL Listed
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cULus Listed
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UL Recognized
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cUL Recognized
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cULus Recognized
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## FO converters - PSI-MOS-RS422/FO 850 E - 2708355

accessories

### Connector set

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



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### 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



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### Power supply

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### accessories

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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### Assembly tool

PSM-HCS-KONFTOOL/B-FOC - 2708465



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### Measuring tools

PSM-FO-POWERMETER - 2799539



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### Adapter

PSM-SET-BFOC-LINK/2 - 2799429



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### accessories

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#### Data plug

SUBCON-PLUS 9/F - 2744241



SUBCON-PLUS 9/M - 2744018



#### Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



#### Interface converter

PSM-ME-RS232/RS485-P - 2744416



#### Data cable preassembled

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### accessories

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



FL MM PATCH 5,0 SC-ST - 2901811



FL MM PATCH 1,0 ST-ST - 2901815





## FO converters - PSI-MOS-RS422/FO 850 E - 2708355

### accessories

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FL MM PATCH 2,0 ST-ST - 2901816



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FL MM PATCH 5,0 ST-ST - 2901817



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FL MM PATCH 1,0 ST-SCRJ - 2901820



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FL MM PATCH 2,0 ST-SCRJ - 2901821



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FL MM PATCH 5,0 ST-SCRJ - 2901822



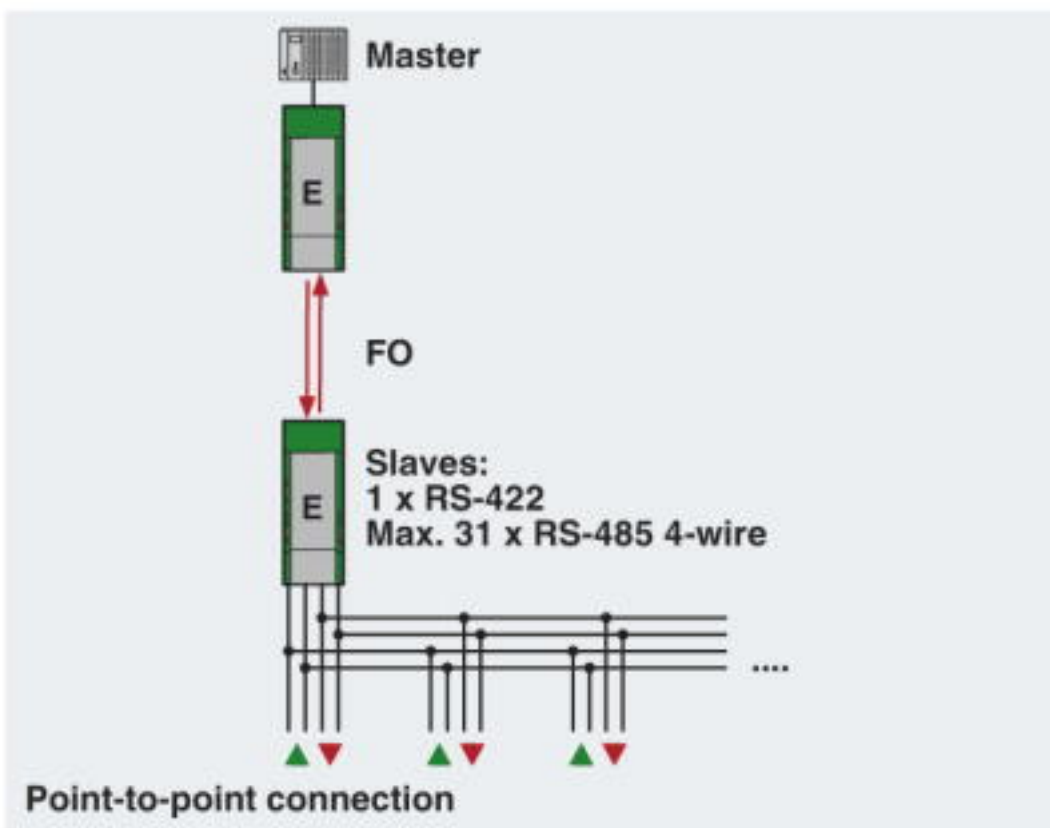
# FO converters - PSI-MOS-RS422/FO 850 E - 2708355

accessories

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

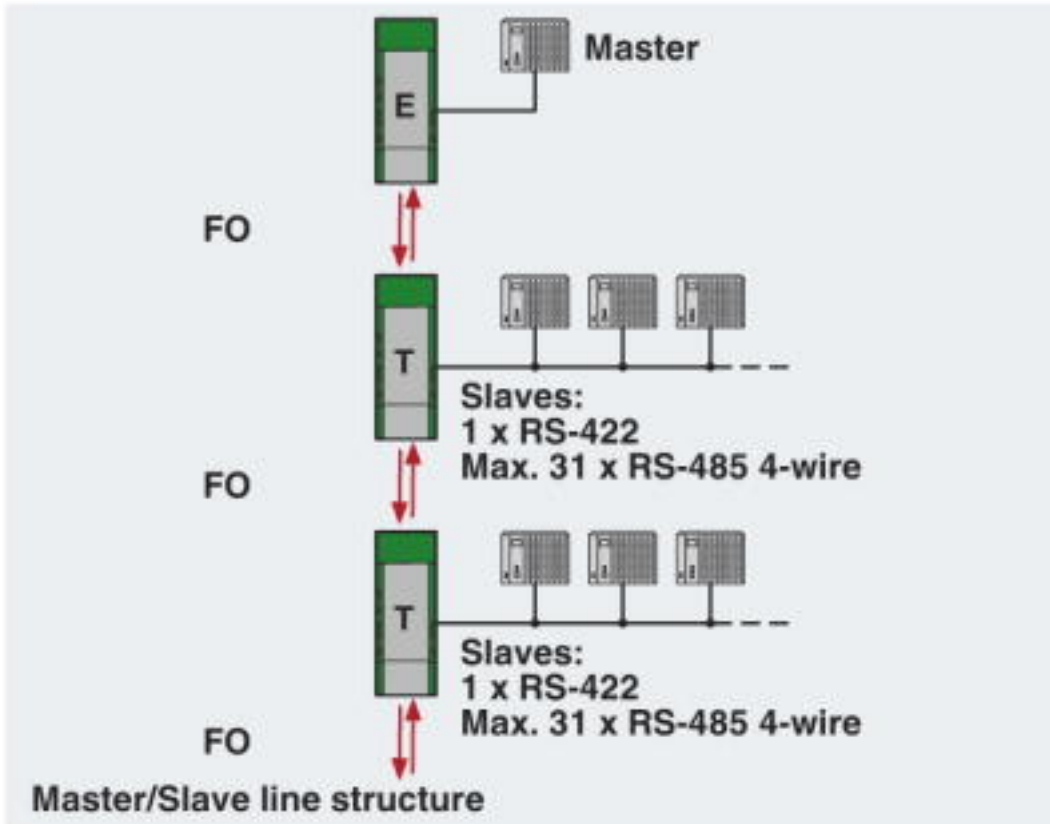
## Drawings

Application drawing



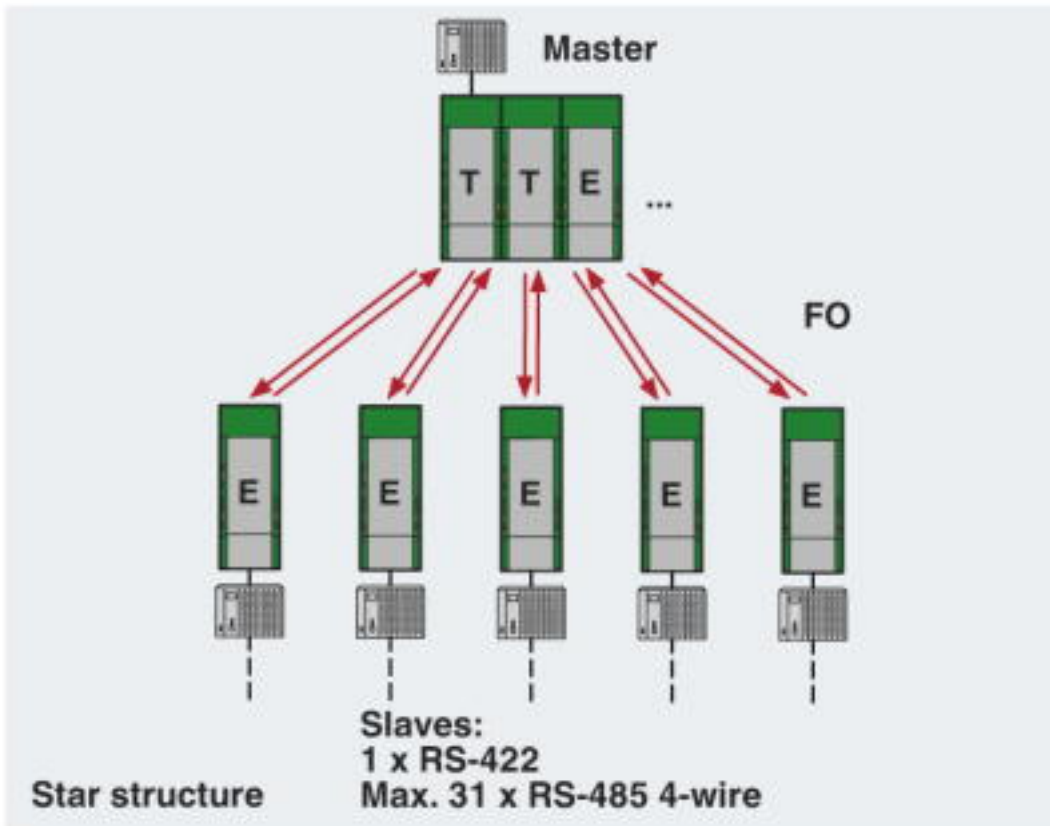
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Application drawing



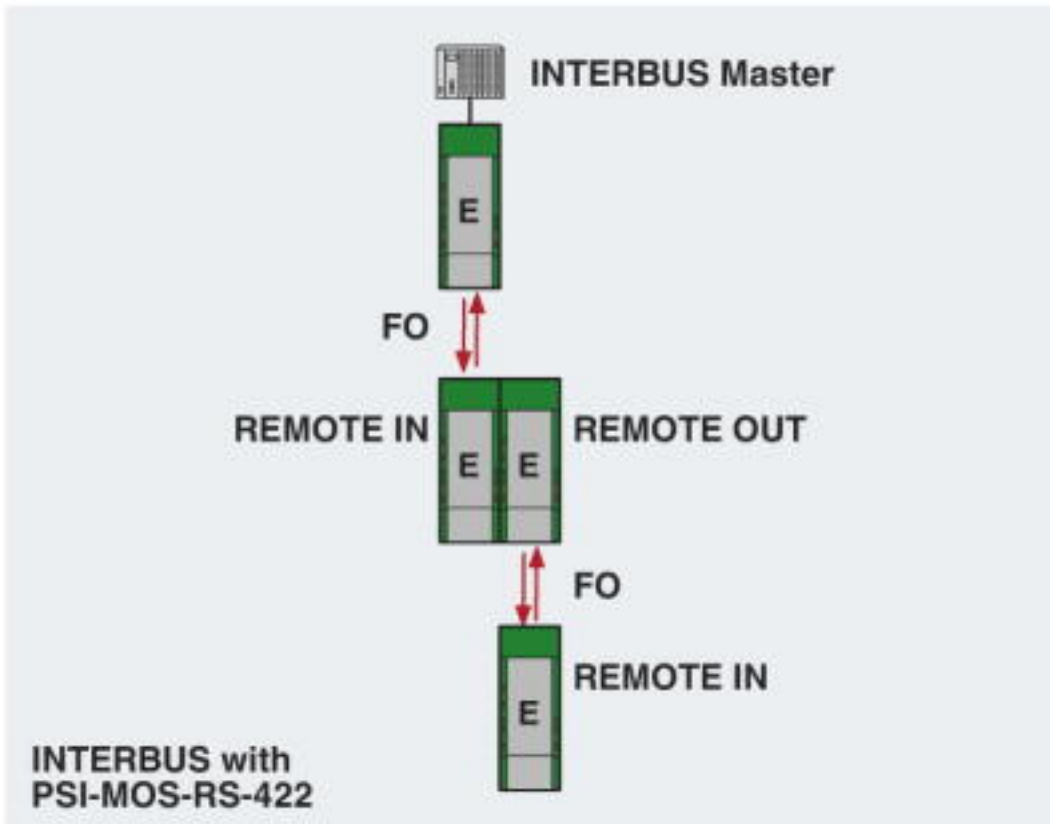
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Application drawing



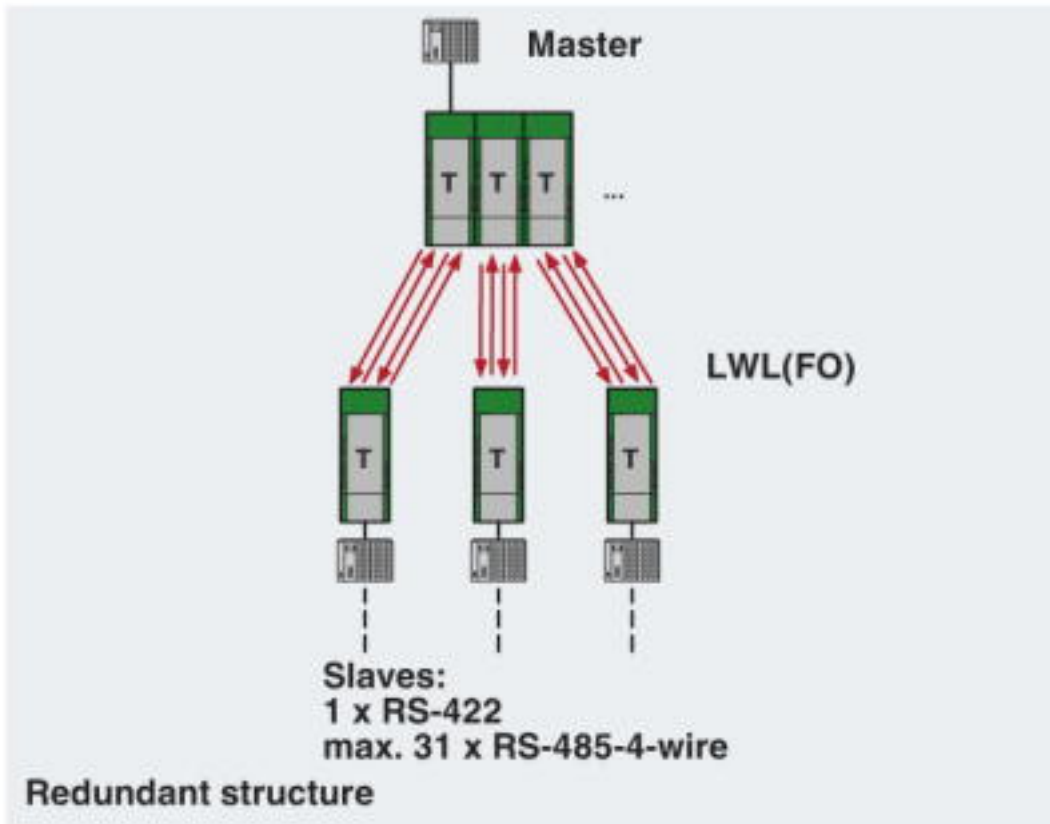
# FO converters - PSI-MOS-RS422/FO 850 E - 2708355

Application drawing

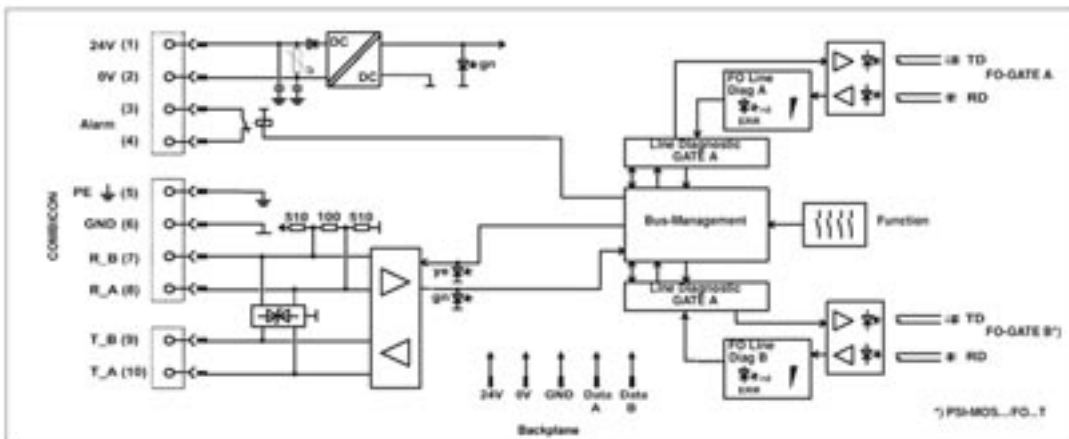


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Application drawing



Block diagram



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