

# FO converters - PSI-MOS-RS485W2/FO1300 E - 2708562

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FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, MODBUS ...) up to 500 kbps, NRZ coding, termination device with an FO interface (SC-Duplex), 1300 nm, for fiberglass cable

## Product Features

- Supply voltage and data signals routed through via DIN rail connectors
- 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
- Automatic data rate detection or fixed data rate setting via DIP switches
- Redundant power supply possible by means of optional system power supply unit
- High-quality electrical isolation between all interfaces (RS-485 // fiber optic ports // power supply // DIN rail connector)
- Approved for use in zone 2
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- Suitable for data rates up to 500 kbps



## Key commercial data

package_quantity	1
GTIN	4046356176279

## 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	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)

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## Technical data

### Ambient conditions

Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

### Serial interface

Interface 1	RS-485 interface, 2-wire
Operating mode	Semi-duplex
Connection method	Pluggable screw connection
File format/coding	UART (11/10 bit switchable; NRZ), slip-tolerant
Data direction switching	Automatic control
Transmission medium	Copper
Transmission length	≤ 1200 m (depending on the data rate, with shielded, twisted data cable)
Termination resistor	390 Ω
Termination resistor	220 Ω
Termination resistor	390 Ω (Can be connected)
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Serial transmission speed	4.8/ 9.6/ 19.2/ 38.4/ 57.6/ 75/ 93.75/ 115.2/ 136/ 187.5/ 375/ 500 kbps

### Optical interface FO

Wavelength	1300 nm
Transmission length incl. 3 dB system reserve	25 km (With F-G 50/125 0.7 dB/km at 1300 nm)
Transmission length incl. 3 dB system reserve	22 km (with F-G 62.5/125 0.8 dB/km at 1300 nm)
Transmission length incl. 3 dB system reserve	45 km (With F-E 9/125 0,4 dB/km at 1300 nm)
Transmission medium	Multi-mode fiberglass
Transmission medium	Single-mode fiberglass
Transmission protocol	Protocol-transparent to the RS-485 interface
Connection method	SC duplex

### Fault warning output

Maximum switching voltage	60 V DC
Maximum switching voltage	42 V AC
Limiting continuous current	1 A

### Power supply

Supply voltage range	18 V DC ... 32 V DC
Typical current consumption	170 mA (24 V DC)
Connection method	COMBICON plug-in screw terminal block

### General

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## Technical data

### General

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	(VCC // RS-485)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive 89/336/EC
Noise emission	EN 55011
Net weight	190 g
Housing material	PA 6.6-FR
Color	green
MTBF	484 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	102 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA / Canada	508 listed
UL, USA / Canada	508 recognized

## 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

### ETIM

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

### UNSPSC

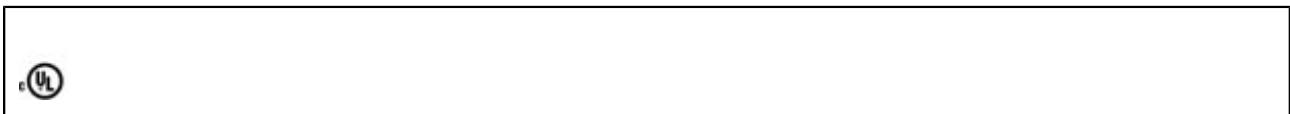
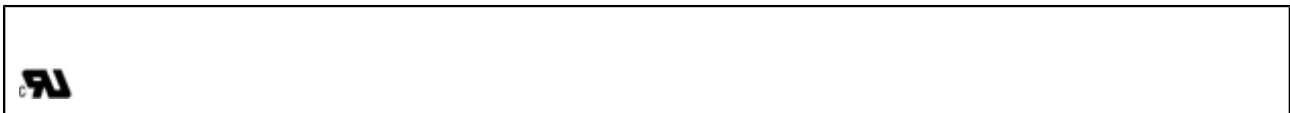
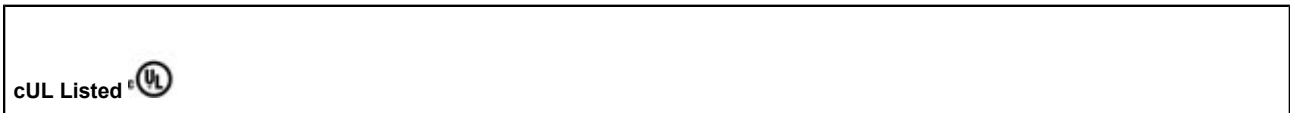
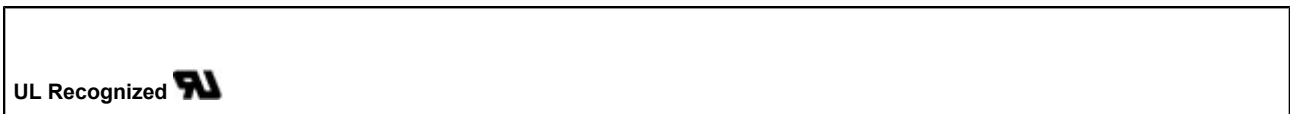
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UNSPSC 13.2	43201553

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## approvals

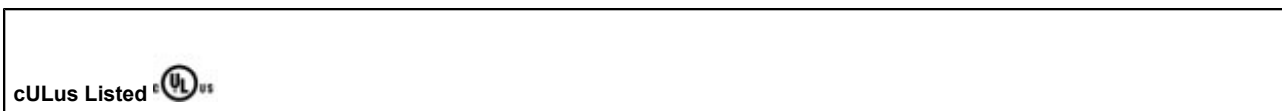
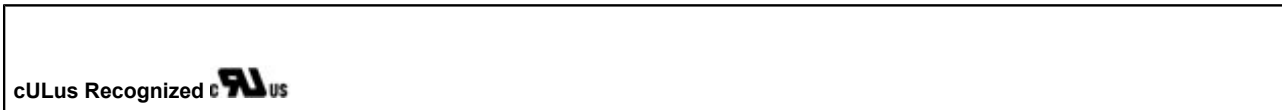
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### Approval details



# FO converters - PSI-MOS-RS485W2/FO1300 E - 2708562

approvals



accessories

## Data cable preassembled

FL MM PATCH 1,0 LC-SC - 2989161



FL MM PATCH 2,0 LC-SC - 2989268



FL MM PATCH 5,0 LC-SC - 2901800



FL MM PATCH 1,0 SC-SC - 2901805



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### accessories

FL MM PATCH 2,0 SC-SC - 2901807



FL MM PATCH 5,0 SC-SC - 2901808



FL MM PATCH 1,0 SC-ST - 2901809



FL MM PATCH 2,0 SC-ST - 2901810



FL MM PATCH 5,0 SC-ST - 2901811



FL MM PATCH 1,0 SC-SCRJ - 2901812



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### accessories

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FL MM PATCH 2,0 SC-SCRJ - 2901813



FL MM PATCH 5,0 SC-SCRJ - 2901814



FL SM PATCH 1,0 LC-SC - 2989190



FL SM PATCH 2,0 LC-SC - 2989297



FL SM PATCH 5,0 LC-SC - 2901827



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### accessories

FL SM PATCH 1,0 SC-SC - 2901829



FL SM PATCH 2,0 SC-SC - 2901830



FL SM PATCH 5,0 SC-SC - 2901831



FL SM PATCH 1,0 SC-ST - 2901832



FL SM PATCH 2,0 SC-ST - 2901833



FL SM PATCH 5,0 SC-ST - 2901834





## FO converters - PSI-MOS-RS485W2/FO1300 E - 2708562

accessories

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FOC-GDM-RUGGED-1016/IP20/... - 2901558



FOC-GDM-RUGGED-1016/... - 1402193



FOC-GDO-1017/IP20/... - 2901559



FOC-GDO-1017/... - 1402194



### Data cable by the meter

PSM-LWL-GDO- 50/125 - 2799432



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accessories

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



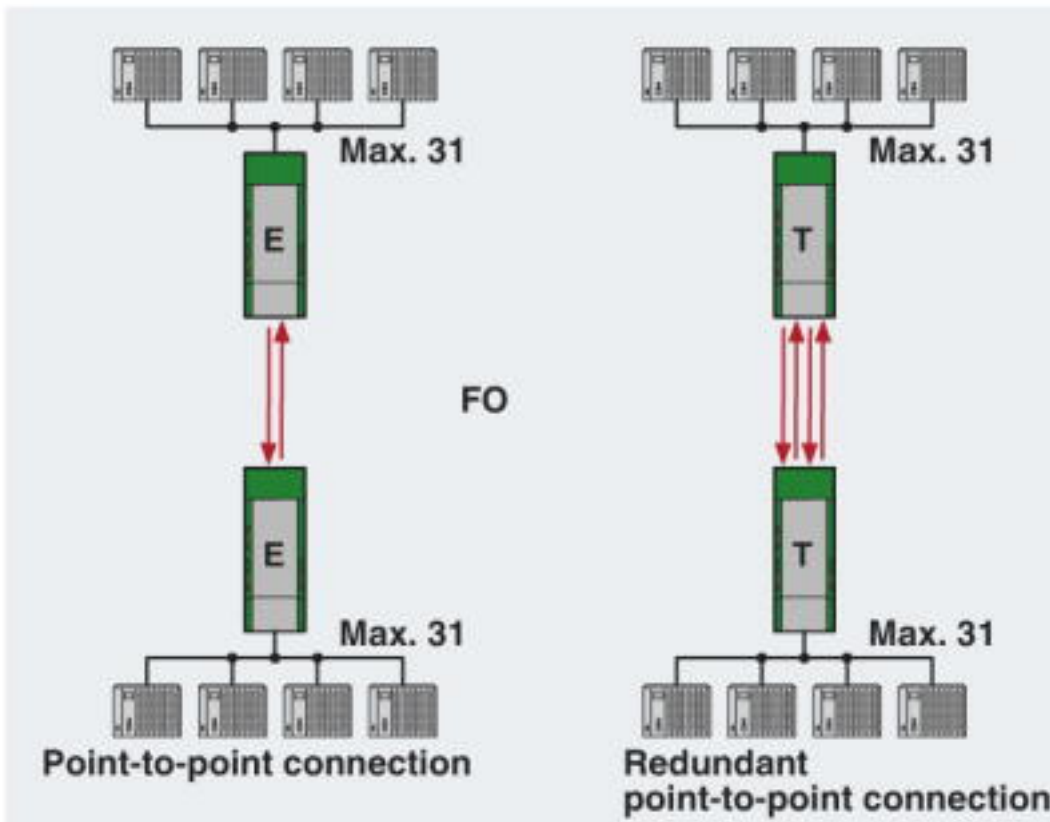
## Terminal resistor

PSI-TERMINATOR-PB - 2313944



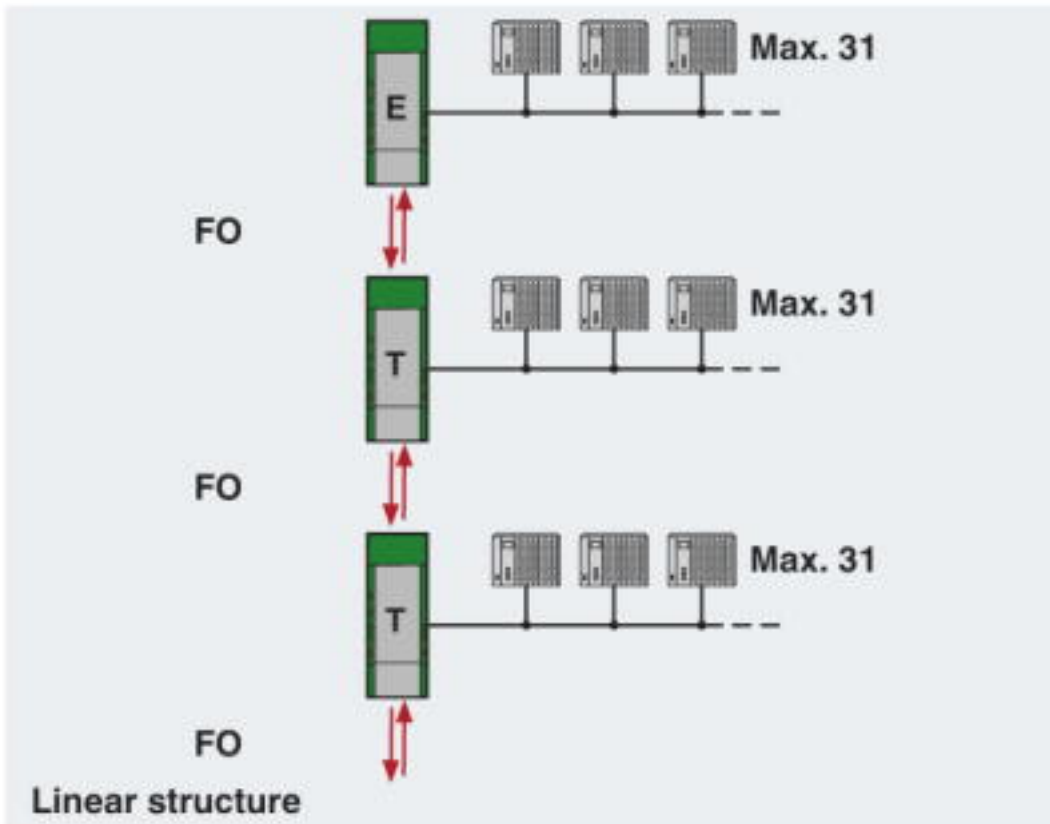
## Drawings

Application drawing



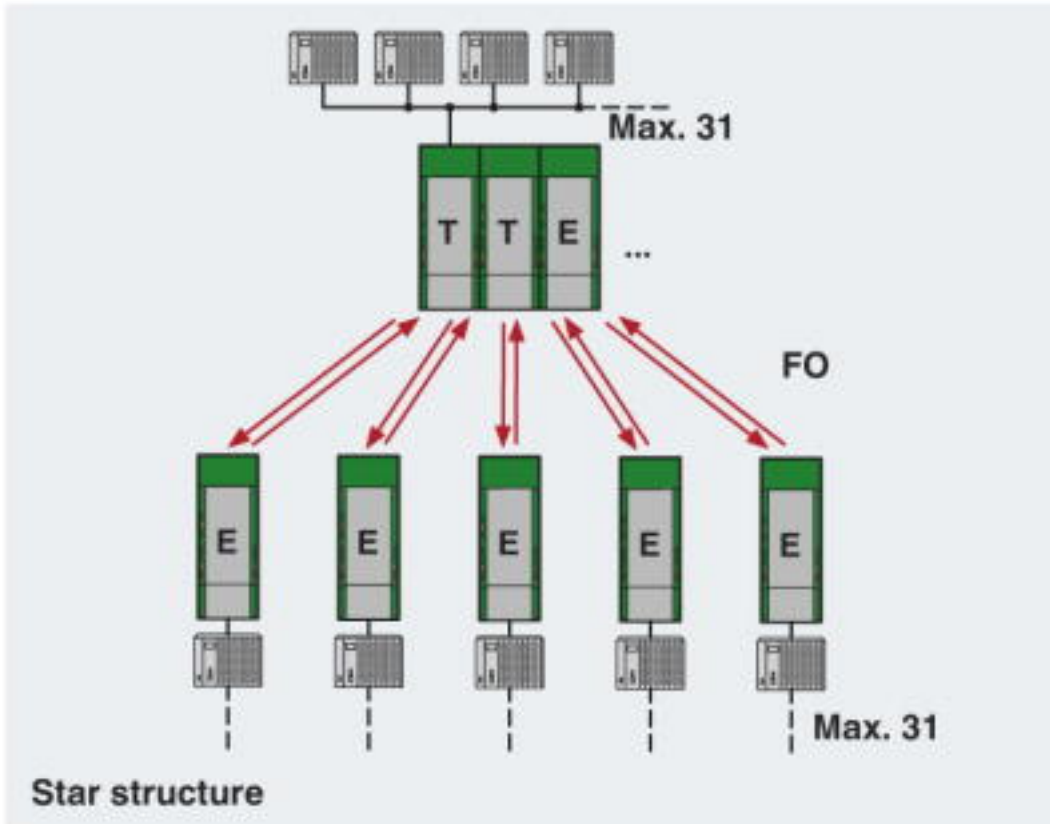
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Application drawing



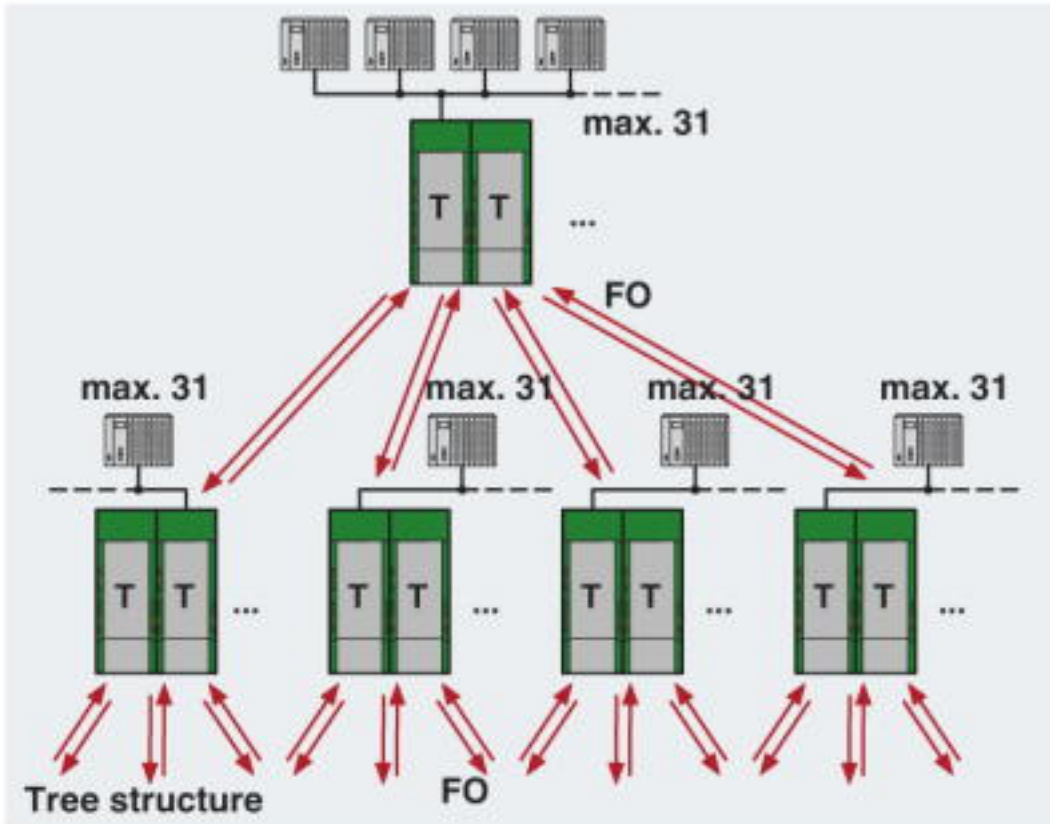
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Application drawing



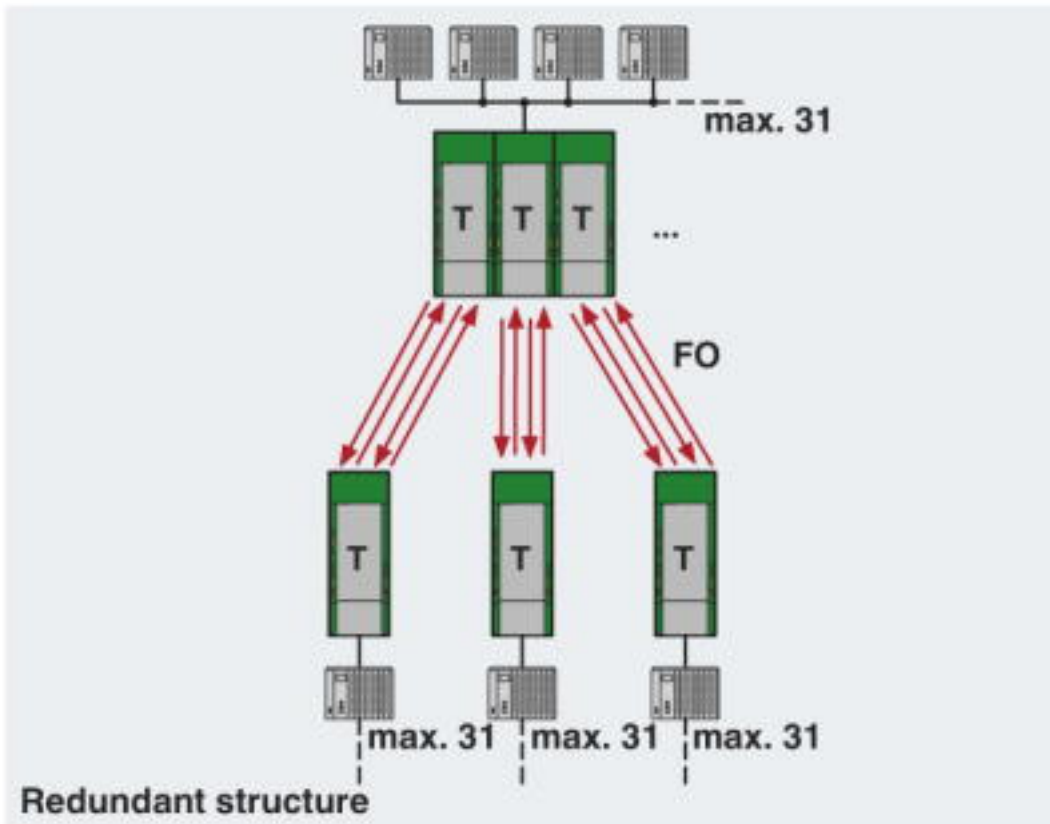
# FO converters - PSI-MOS-RS485W2/FO1300 E - 2708562

Application drawing



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Application drawing



Block diagram

