

FO converters - PSI-MOS-RS485W2/FO 660 E - 2708313

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FO converter with integrated optical diagnosis, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, terminal equipment with an FO interface (FSMA), 660 nm, for polymer/HCS fiber 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
- 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
- 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
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Suitable for data rates up to 500 kbps



Key commercial data

| | |
|------------------|---------------|
| package_quantity | 1 |
| GTIN | 4017918974015 |

Technical data

Note:

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

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) |

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Technical data

Ambient conditions

| | |
|-----------------------------|--|
| Altitude | 5000 m (For restrictions see manufacturer's declaration) |
| 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 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 | 4,8/ 9,6/ 19,2/ 38,4/ 57,6/ 75/ 93,75/ 115,2/ 136/ 187,5/ 375/ 500 |

Optical interface FO

| | |
|--|---|
| Transmit capacity, minimum | -4.6 dBm (980/1000 μm) |
| Transmit capacity, minimum | -16 dBm (200/230 μm) |
| Minimum receiver sensitivity | -30.2 dBm |
| Maximum receiver sensitivity | -3 dBm (980/1000 μm) |
| Wavelength | 660 nm |
| Transmission length incl. 3 dB system reserve | 100 m (With F-P 980/1000 230 dB/km with quick mounting connector) |
| Transmission length incl. 3 dB system reserve | 800 m (With F-K 200/230 10 dB/km with quick mounting connector) |
| Transmission medium | Polymer fiber |
| Transmission protocol | Protocol-transparent to the RS-485 interface |
| Connection method | F-SMA |

Fault warning output

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

Power supply

| | |
|-----------------------------|---------------------|
| Supply voltage range | 18 V DC ... 30 V DC |
|-----------------------------|---------------------|

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Power supply

| | |
|------------------------------------|---------------------------------------|
| Max. current consumption | 130 mA |
| Typical current consumption | 100 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 | 190 g |
| Housing material | PA 6.6-FR |
| Color | green |
| MTBF | 358 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
| MTBF | 73 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 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 |

ETIM

| | |
|-----------------|----------|
| ETIM 2.0 | EC001423 |
| ETIM 3.0 | EC001423 |
| ETIM 4.0 | EC001423 |
| ETIM 5.0 | EC001423 |

UNSPSC

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classifications

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

Approval details

| | |
|----------------------------|--|
| ATEX | |
| Nominal voltage UN | |
| Nominal current IN | |
| mm ² /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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approvals

cULus Recognized  US

accessories

Connector set

PSM-SET-FSMA/4-KT - 2799720



PSM-SET-FSMA/4-HCS - 2799487



Data cable by the meter

PSM-LWL-KDHEAVY-980/1000 - 2744319



PSM-LWL-RUGGED-980/1000 - 2744322



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accessories

PSM-LWL-RUGGED-FLEX-980/1000 - 2744335



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



PSM-LWL-HCSO-200/230 - 2799445



PSM-CABLE-PROFIB/FC - 2744652



Power supply

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



DIN rail connector

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accessories

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



Assembly tool

PSM-POF-KONFTOOL - 2744131



PSM-SET-FSMA-POLISH - 2799348



Measuring tools

PSM-FO-POWERMETER - 2799539



Adapter

PSM-SET-FSMA-LINK/2 - 2799416



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accessories

PSM PTK - 2760623



PSM PTK-4 - 2799364



Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



Stripping tool

PSM-STRIP-FC/PROFIB - 2744623



Interface converter

PSI-REP-RS485W2 - 2313096



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accessories

PSM-ME-RS485/RS485-P - 2744429



Data plug

SUBCON-PLUS M1 - 2761826



SUBCON-PLUS F1 - 2744267



SUBCON-PLUS M2 - 2761839



SUBCON-PLUS F2 - 2799490



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accessories

SUBCON-PLUS F5 - 2744102



SUBCON-PLUS 9/M - 2744018



SUBCON-PLUS 9/F - 2744241



Terminal resistor

PSI-TERMINATOR-PB - 2313944



Media converter

PSI-MOS-RS485W2/FO 660 T - 2708300



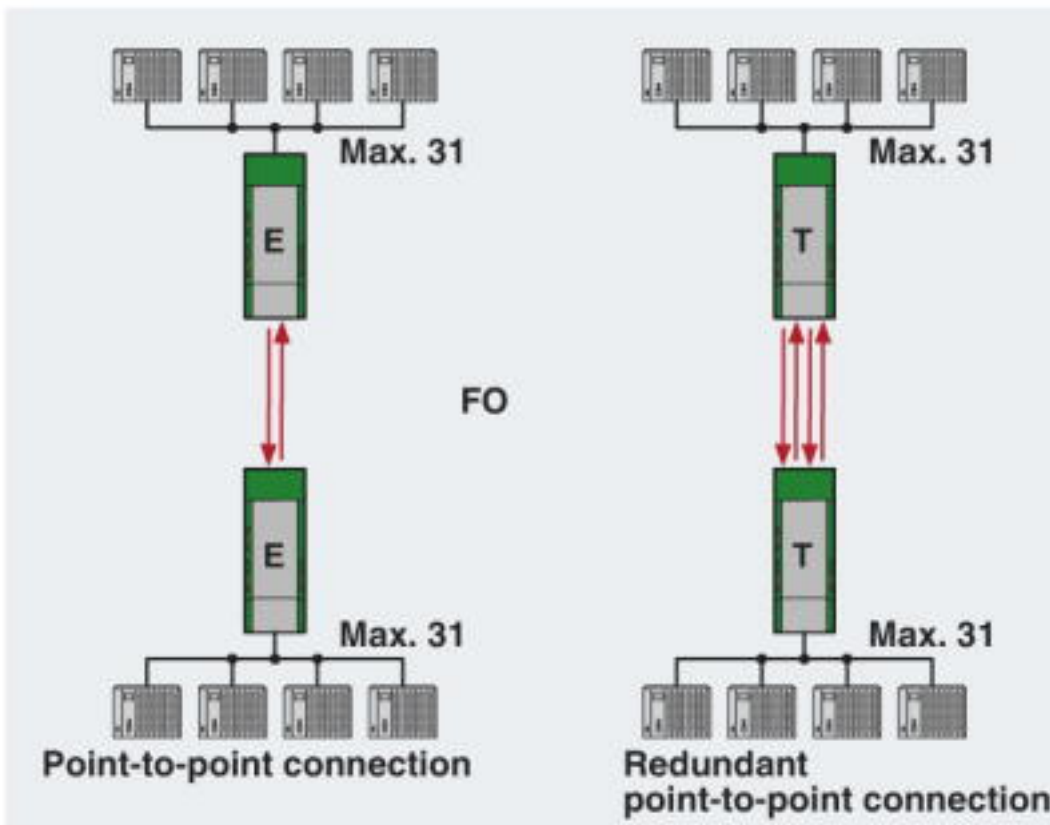
FO converters - PSI-MOS-RS485W2/FO 660 E - 2708313

accessories

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

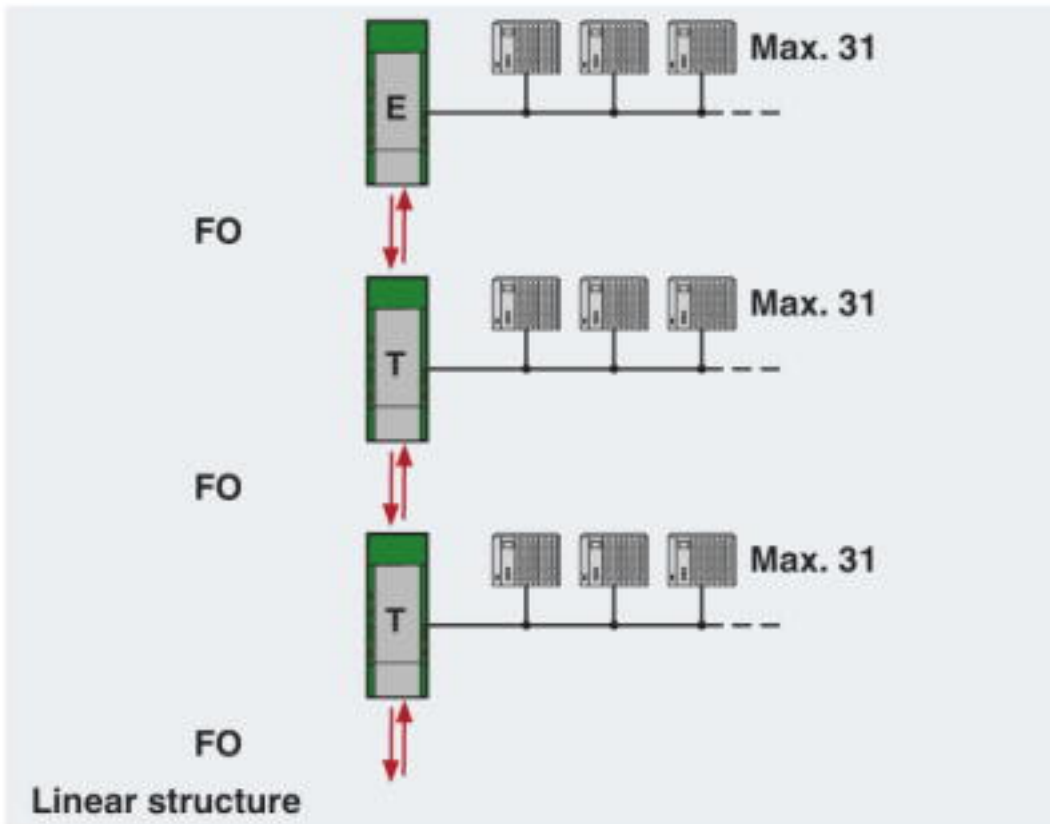
Drawings

Application drawing



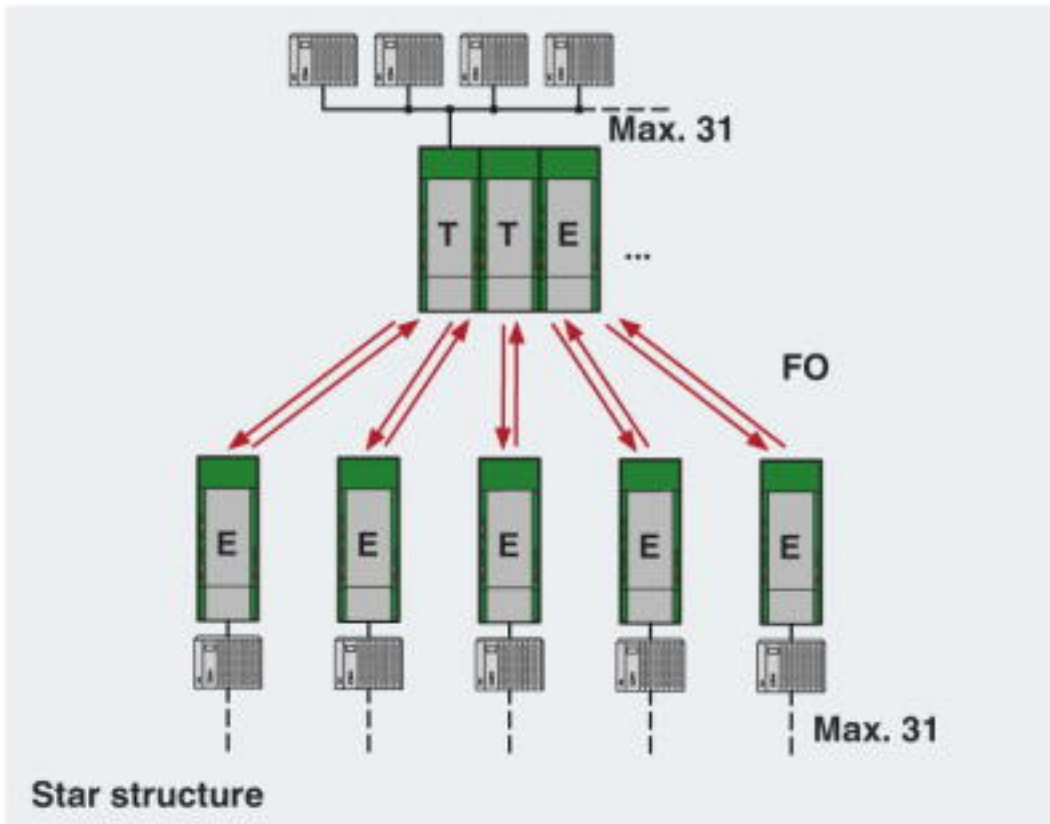
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Application drawing



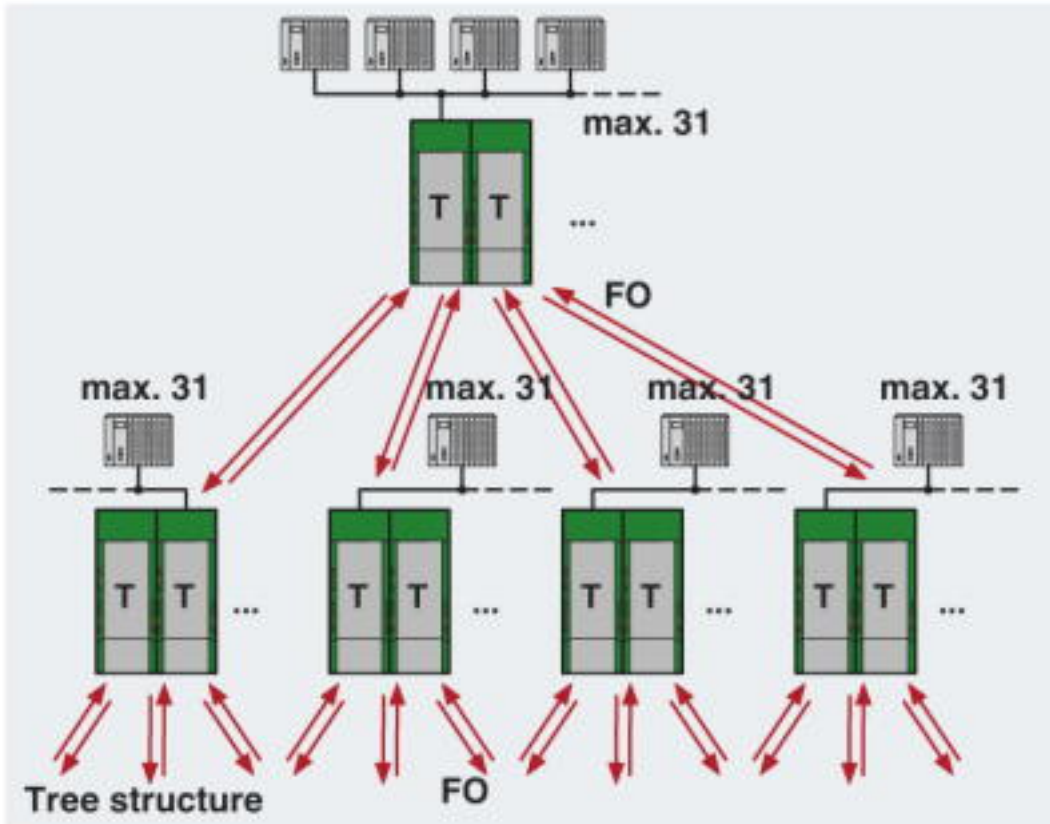
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Application drawing



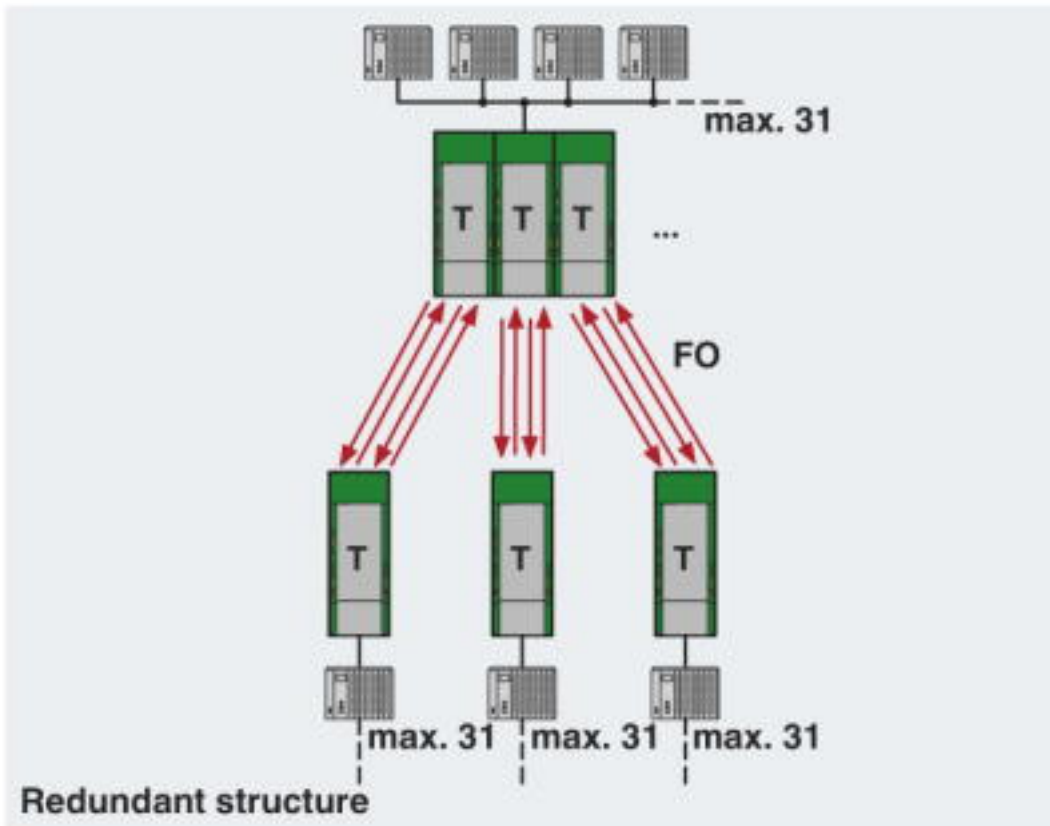
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Application drawing

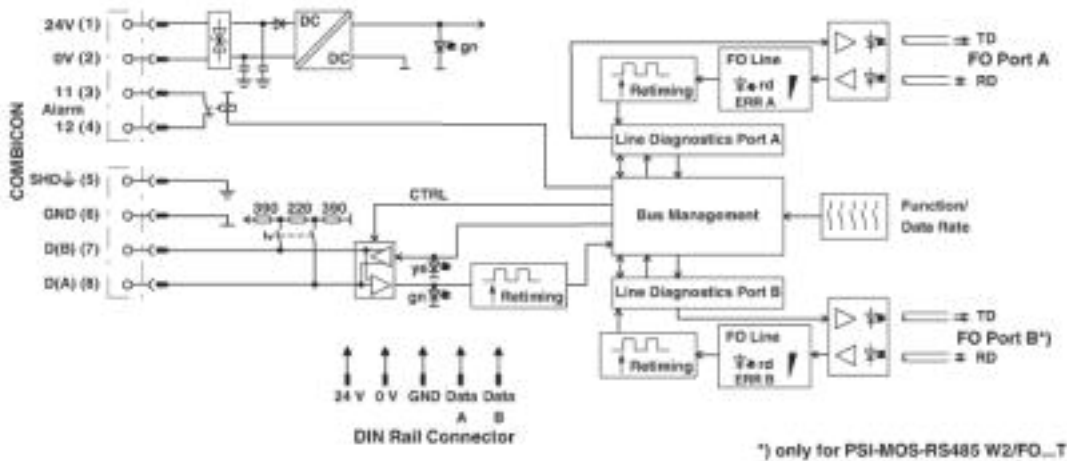


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Application drawing



Block diagram



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