

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



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 (BFOC), 850 nm, for HCS/fiber glass cable

Product Features

- Can be combined with the PSI copper repeater in a modular way using DIN rail connectors
- Connections can be plugged in using a COMBICON screw terminal block
- 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 (RS-485 // 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
- Suitable for data rates up to 500 kbps



Key commercial data

package_quantity	1
GTIN	4017918974039

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)

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

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 dBm (200/230 μm)
Transmit capacity, minimum	-17.6 dBm (50/125 μm)
Transmit capacity, minimum	-14 dBm (62,5/125 μm)
Minimum receiver sensitivity	-32.5 dBm (50/125 μm)
Minimum receiver sensitivity	-32.5 dBm (62,5/125 μm)
Minimum receiver sensitivity	-32.1 dBm (200/230 μm)
Maximum receiver sensitivity	-3 dBm (200/230 μm)
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2800 m (with F-K 200/230 8 dB/km with quick mounting connector)
Transmission length incl. 3 dB system reserve	4200 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 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
----------------------------------	---------

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Technical data

Fault warning output

Maximum switching voltage	42 V AC
Limiting continuous current	0.46 A

Power supply

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	190 g
Housing material	PA 6.6-FR
Color	green
MTBF	272 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	44 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
----------	----------

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

classifications

ETIM

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

Approval details

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

UL Listed

cUL Listed

cULus Listed

UL Recognized

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

approvals

cUL Recognized 

cULus Recognized 

accessories

Connector set

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



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



FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

accessories

PSM-LWL-GDO- 50/125 - 2799432



PSM-CABLE-PROFIB/FC - 2744652



Power supply

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



FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

accessories

Measuring tools

PSM-FO-POWERMETER - 2799539



Adapter

PSM-SET-BFOC-LINK/2 - 2799429



PSM PTK - 2760623



PSM PTK-4 - 2799364



Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

accessories

Stripping tool

PSM-STRIP-FC/PROFIB - 2744623



Interface converter

PSI-REP-RS485W2 - 2313096



PSM-ME-RS485/RS485-P - 2744429



Data plug

SUBCON-PLUS M1 - 2761826



SUBCON-PLUS F1 - 2744267



FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

accessories

SUBCON-PLUS M2 - 2761839



SUBCON-PLUS F2 - 2799490



SUBCON-PLUS F5 - 2744102



SUBCON-PLUS 9/M - 2744018



SUBCON-PLUS 9/F - 2744241



Data cable preassembled

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

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-RS485W2/FO 850 E - 2708339

accessories

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



FL MM PATCH 5,0 ST-SCRJ - 2901822



Terminal resistor

FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

accessories

PSI-TERMINATOR-PB - 2313944



Media converter

PSI-MOS-RS485W2/FO 850 T - 2708326



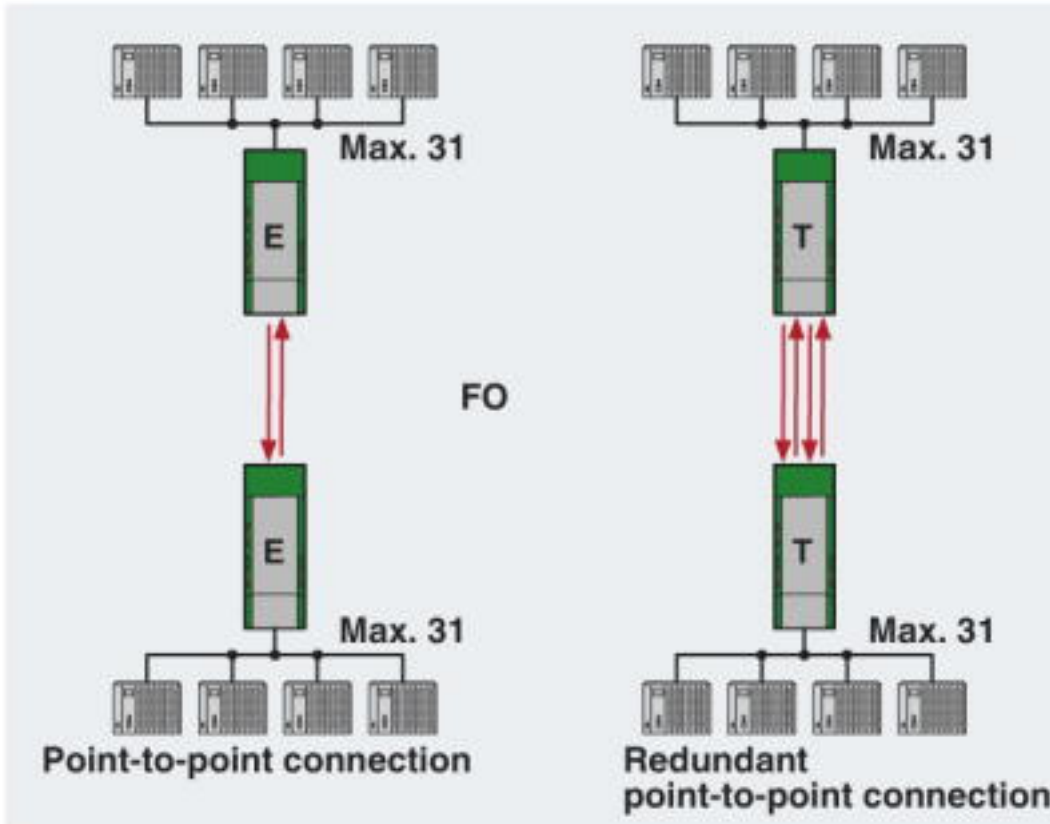
accessories

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

Drawings

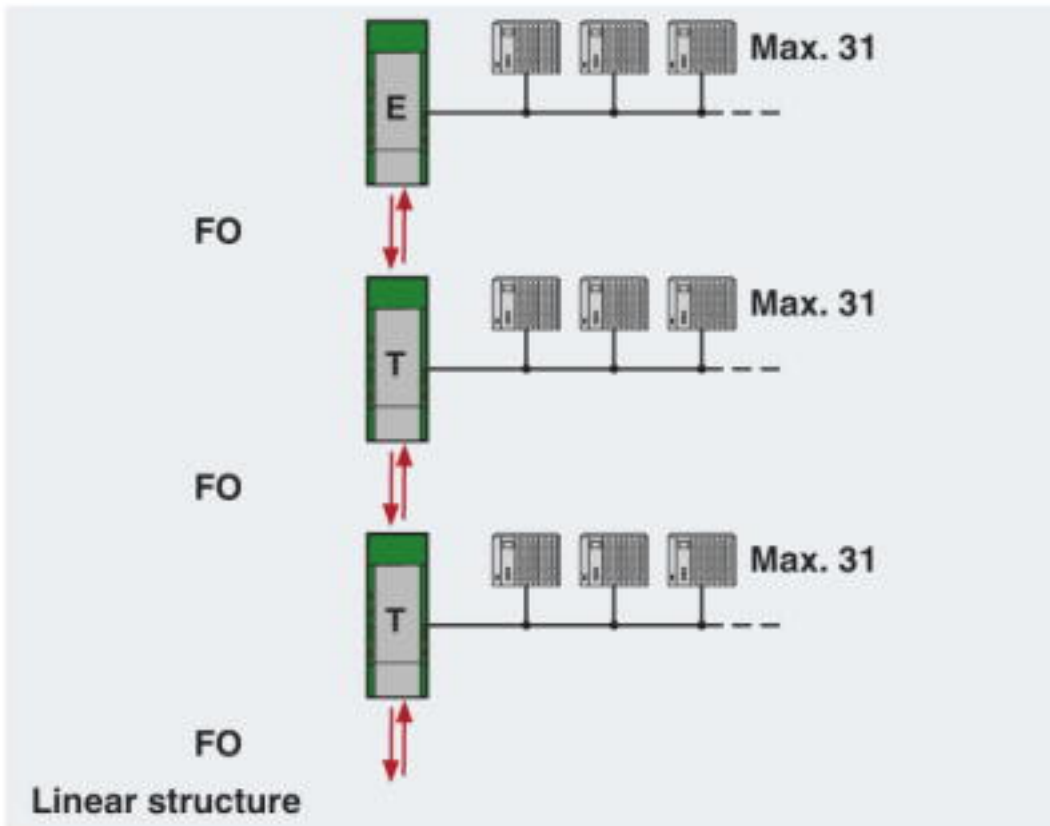
FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Application drawing



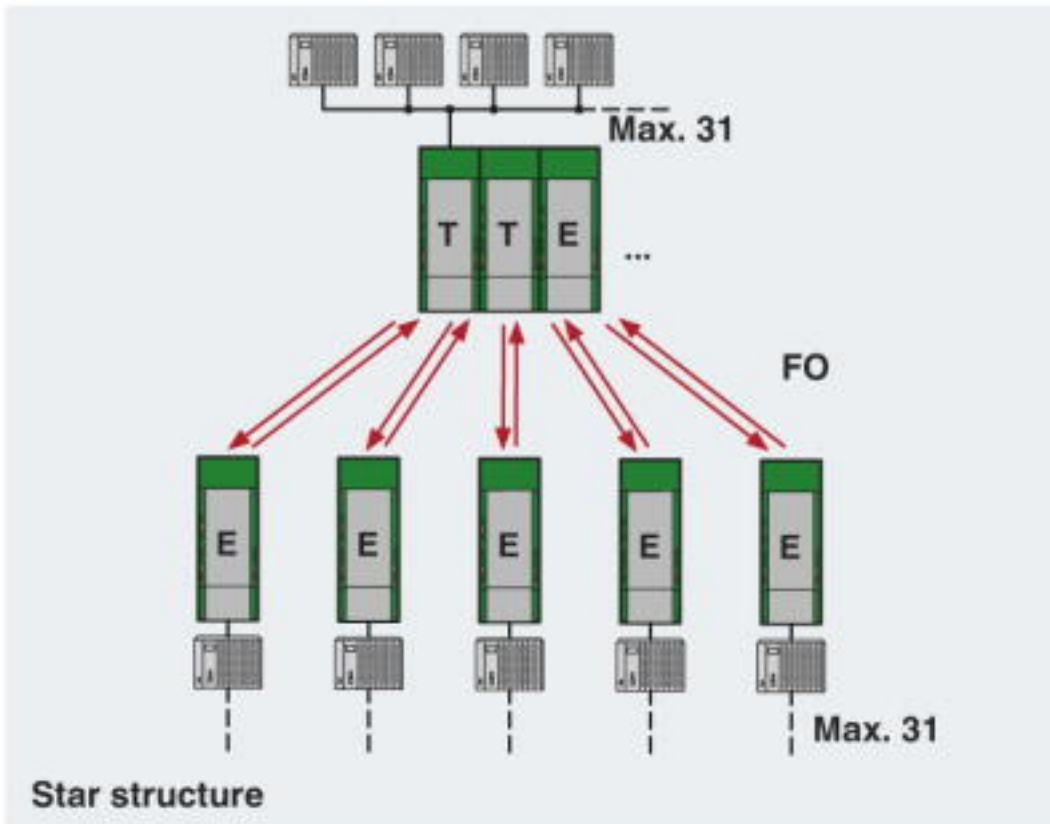
FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Application drawing



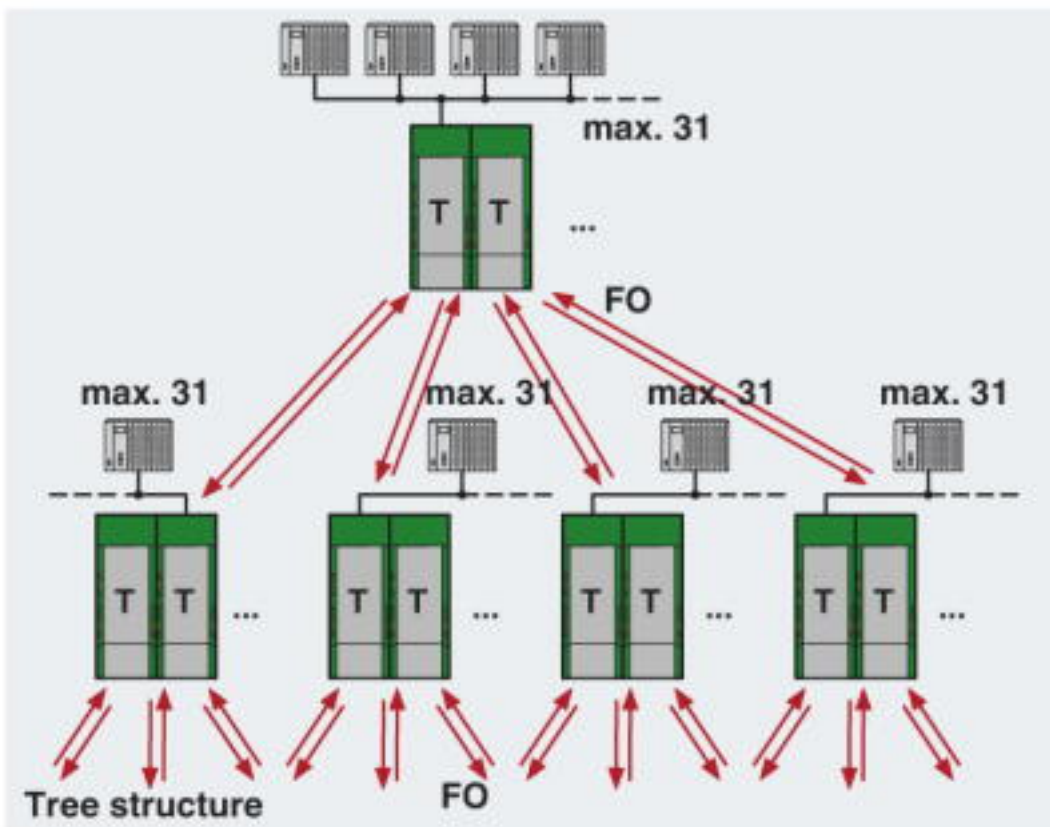
FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Application drawing



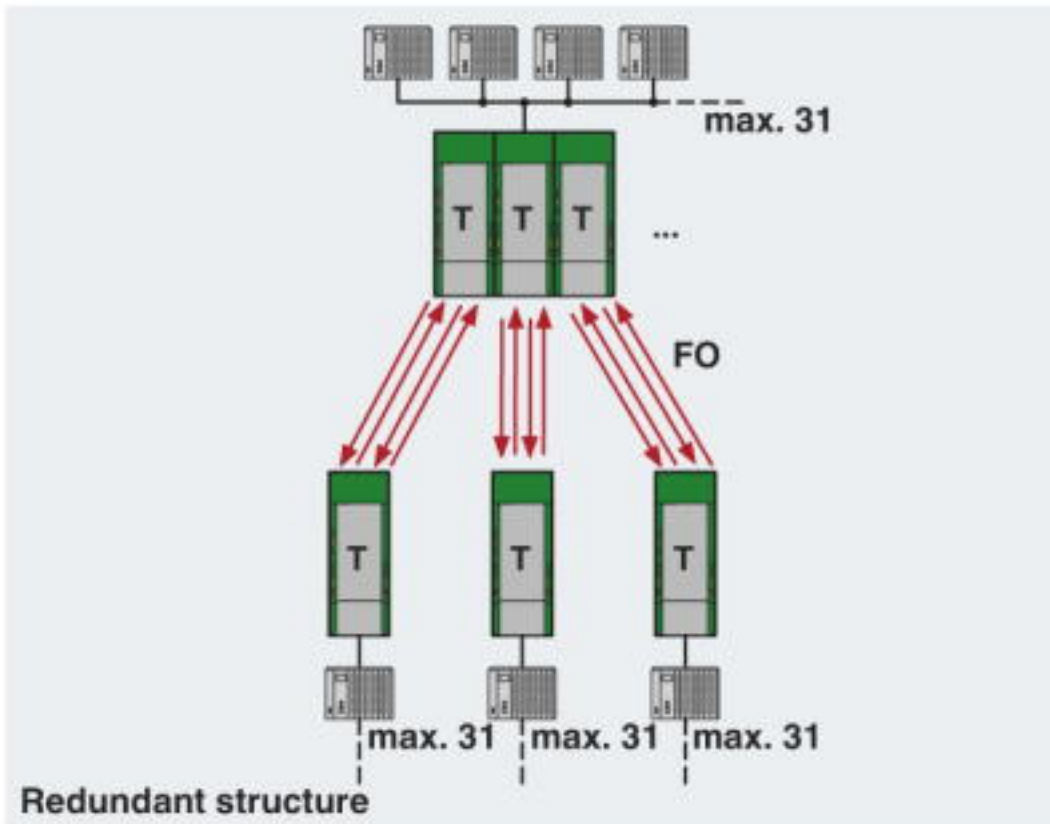
FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Application drawing

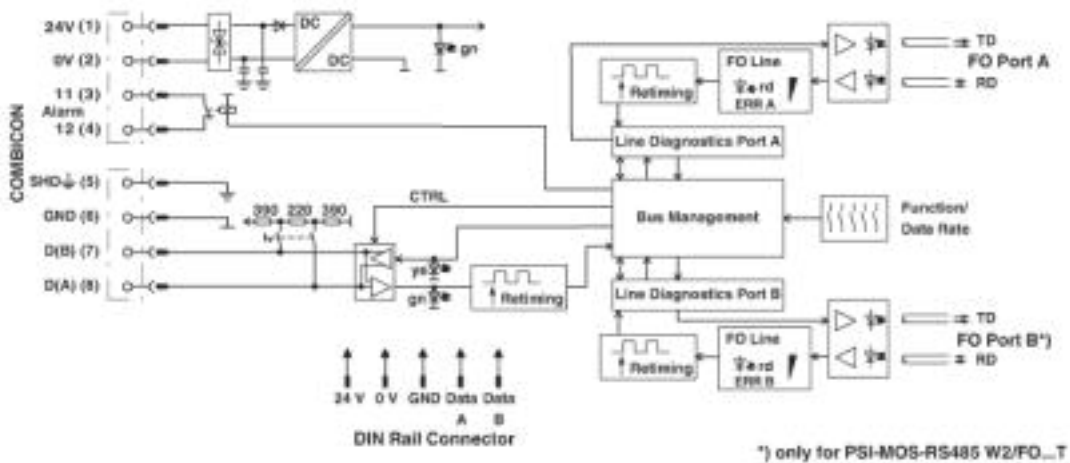


FO converters - PSI-MOS-RS485W2/FO 850 E - 2708339

Application drawing



Block diagram



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