

# FO converters - PSI-MOS-DNET/FO 850 T - 2313986

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Fiber optic converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 1000 kbps, T-coupler, interfaces: 1 x CAN, 1 x Alarm, 2 x FO (B-FOC), 850 nm, for HCS/fiberglass (multi-mode)

## Product Features

- Data rates of up to 1000 kbps
- Supply voltage and data signals routed through via DIN rail connectors
- 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
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- High-quality electrical isolation between all interfaces (DeviceNet // fiber optic ports // power supply // DIN rail connector)
- Connections can be plugged in using a COMBICON screw terminal block
- 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
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths



## Key commercial data

<b>package_quantity</b>	1
<b>GTIN</b>	4046356513814

## Technical data

Note:

<b>Utilization restriction</b>	EMC: class A product, see manufacturer's declaration in the download area
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## Dimensions

<b>Width</b>	35 mm
<b>Height</b>	102 mm
<b>Depth</b>	119 mm

## Ambient conditions

<b>Ambient temperature (operation)</b>	-20 °C ... 60 °C
<b>Ambient temperature (storage/transport)</b>	-40 °C ... 85 °C
<b>Permissible humidity (operation)</b>	30 % ... 95 % (no condensation)

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## Technical data

### Ambient conditions

<b>Altitude</b>	5000 m (For restrictions see manufacturer's declaration)
<b>Degree of protection</b>	IP20
<b>Noise immunity</b>	EN 61000-6-2

### Serial interface

<b>Interface 1</b>	CAN interface, in accordance with ISO/IS 11898 for DeviceNet, CAN, CANopen
<b>Operating mode</b>	Semi-duplex
<b>No. of channels</b>	2 (CAN_High / CAN_Low)
<b>Connection method</b>	COMBICON plug-in screw terminal block
<b>File format/coding</b>	Bit stuffing, NRZ
<b>Transmission medium</b>	2-wire twisted pair, shielded
<b>Transmission method</b>	CSMA/CA
<b>Transmission length</b>	≤ 5000 m (Dependent on the data rate and the protocol used)
<b>Number of INTERBUS devices</b>	≤ 64 (per potential segment)
<b>Number of INTERBUS devices</b>	≤ 63 (DeviceNet™, can be addressed logically)
<b>Number of INTERBUS devices</b>	≤ 128 (CANopen®, can be addressed logically)
<b>Termination resistor</b>	124 Ω (Integrated and ready to be switched)
<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

### Optical interface FO

<b>Transmit capacity, minimum</b>	-13.5 dBm (50/125 μm)
<b>Transmit capacity, minimum</b>	-12.3 dBm (62,5/125 μm)
<b>Transmit capacity, minimum</b>	-10.2 dBm (200/230 μm)
<b>Minimum receiver sensitivity</b>	-28.1 dBm (50/125 μm)
<b>Minimum receiver sensitivity</b>	-28.1 dBm (62,5/125 μm)
<b>Minimum receiver sensitivity</b>	-28.1 dBm (200/230 μm)
<b>Wavelength</b>	850 nm
<b>Transmission length incl. 3 dB system reserve</b>	1800 m (with F-K 200/230 8 dB/km with quick mounting connector)
<b>Transmission length incl. 3 dB system reserve</b>	4600 m (with F-G 50/125 2.5 dB/km)
<b>Transmission length incl. 3 dB system reserve</b>	4200 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>	Protocol transparent for CAN interface
<b>Connection method</b>	B-FOC (ST®)

### Switching output ODL

<b>Minimum switching voltage</b>	11 V DC
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## Technical data

### Switching output ODL

Maximum switching voltage	30 V DC
Limiting continuous current	500 mA

### Power supply

Nominal supply voltage	24 V DC
Supply voltage range	11 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
Typical current consumption	150 mA (24 V DC)

### General

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	(VCC // CAN)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Net weight	161 g
Housing material	PA 6.6-FR
Color	green
MTBF	400 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	64 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	543 Years (SN 29500 standard, temperature 25°C, operating cycle 21% (5 days a week, 8 hours a day))
MTTF	247 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25% (5 days a week, 12 hours a day))
MTTF	102 Years (SN 29500 standard, temperature 40°C, operating cycle 100% (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II (2) D [Ex op is Db] IIIC (PTB 06 ATEX 2042 U)
ATEX	# II (2) G [Ex op is Gb] IIC (PTB 06 ATEX 2042 U)
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	508 listed

## 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

<b>ETIM 3.0</b>	EC000236
<b>ETIM 4.0</b>	EC000236
<b>ETIM 5.0</b>	EC001467


### UNSPSC

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

### Approval details

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

<b>UL Listed</b> 
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<b>cUL Listed</b> 
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<b>cULus Listed</b> 
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## accessories

### Media converter

## FO converters - PSI-MOS-DNET/FO 850 T - 2313986

accessories

PSI-MOS-DNET/FO 850 E - 2313999



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### Data cable by the meter

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



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PSM-LWL-HCSO-200/230 - 2799445



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



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PSM-LWL-GDO- 50/125 - 2799432



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### accessories

SAC-5P-920/... - 1511504



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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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### Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



## FO converters - PSI-MOS-DNET/FO 850 T - 2313986

accessories

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### Connector set

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



### 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



### Data cable preassembled

FL MM PATCH 1,0 LC-ST - 2989174



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### accessories

FL MM PATCH 2,0 LC-ST - 2989271



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FL MM PATCH 5,0 LC-ST - 2901801



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FL MM PATCH 1,0 SC-ST - 2901809



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FL MM PATCH 5,0 SC-ST - 2901811



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FL MM PATCH 1,0 ST-ST - 2901815



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FL MM PATCH 2,0 ST-ST - 2901816





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### accessories

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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



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### Data plug

SUBCON-PLUS-CAN/90/PG/M12 - 2902322

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## FO converters - PSI-MOS-DNET/FO 850 T - 2313986

### accessories

SUBCON-PLUS-CAN/90/M12 - 2902323

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SUBCON-PLUS-CAN/35/PG/M12 - 2902324

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SUBCON-PLUS-CAN/35/M12 - 2902325

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SUBCON-PLUS-CAN/AX/M12 - 2902326

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SUBCON-PLUS-CAN - 2744694



SUBCON-PLUS-CAN/PG - 2708119



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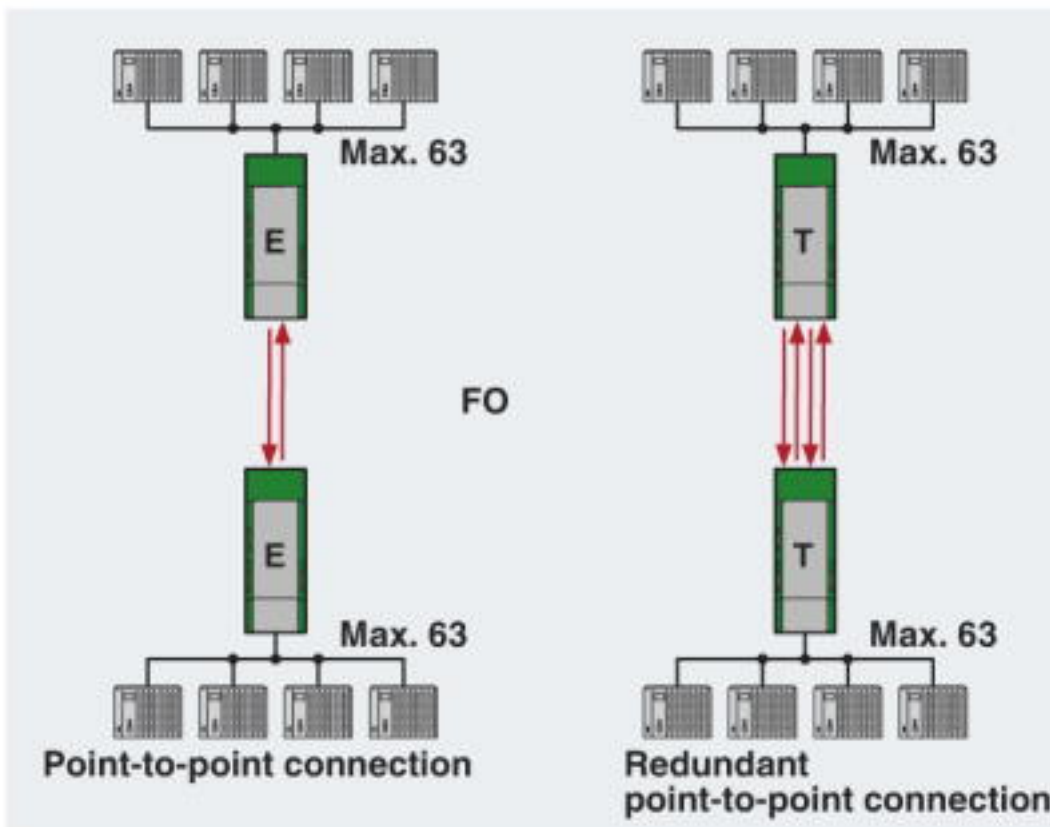
accessories

SUBCON-PLUS-CAN/AX - 2306566



## Drawings

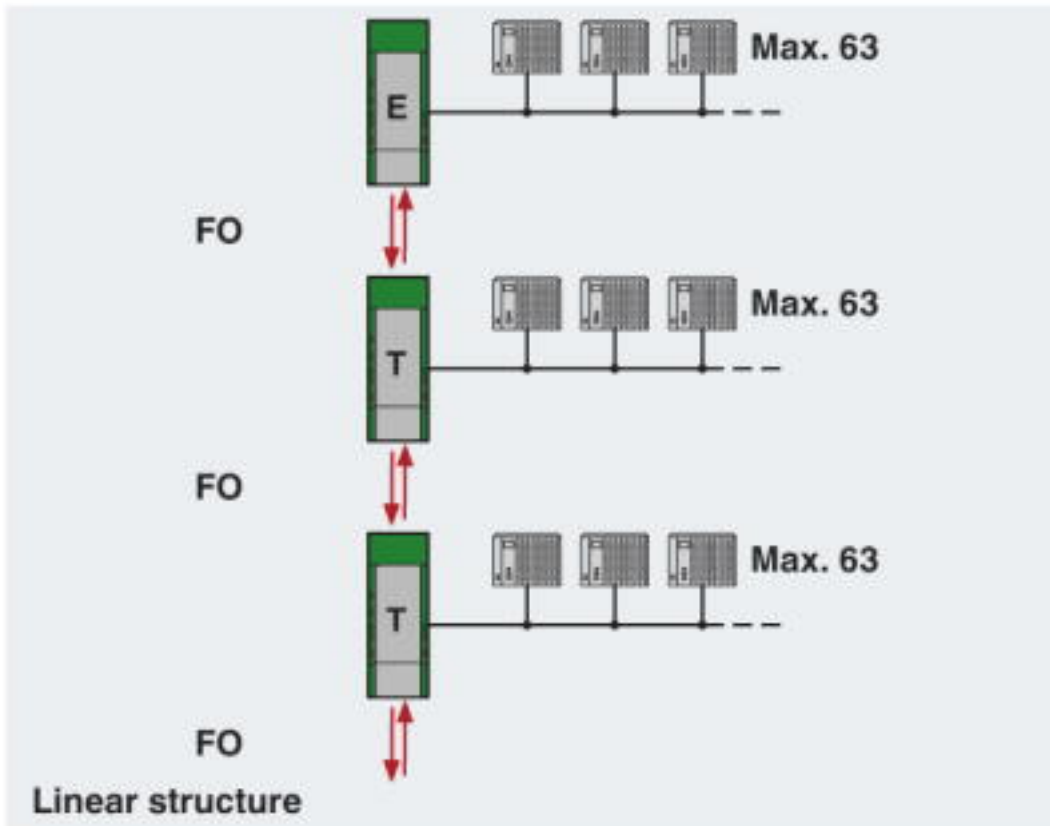
Application drawing



Point-to-point connection

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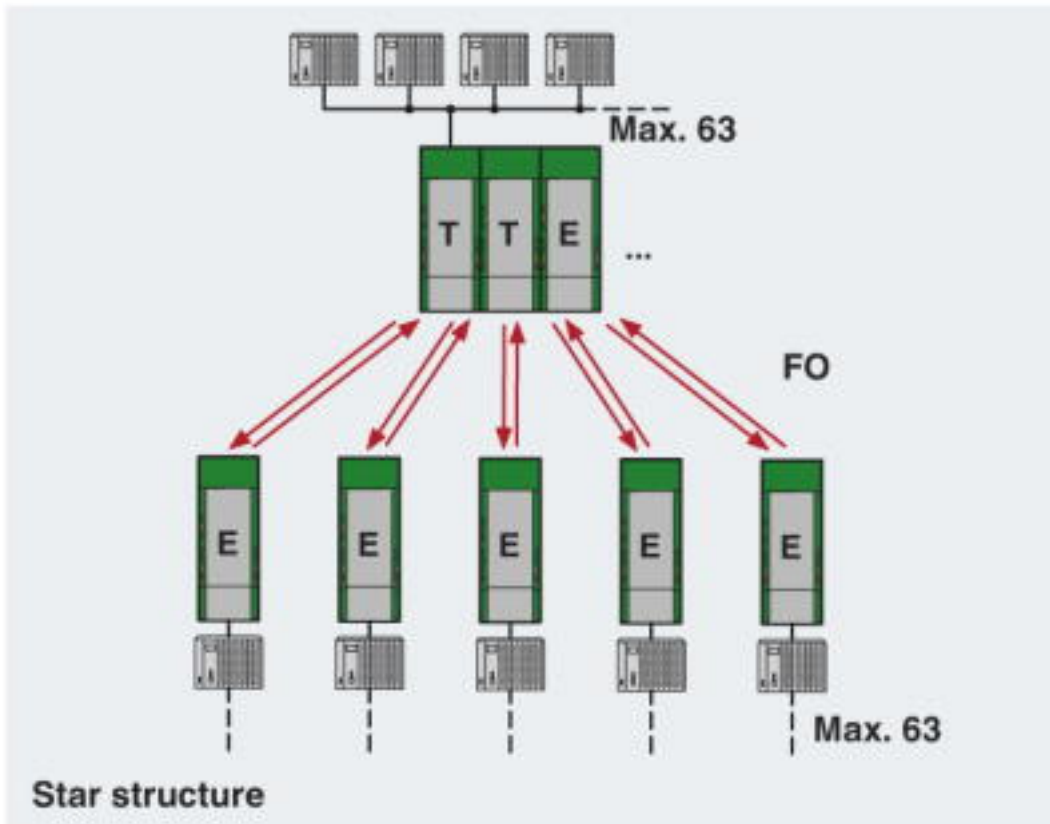
Application drawing



Line structure

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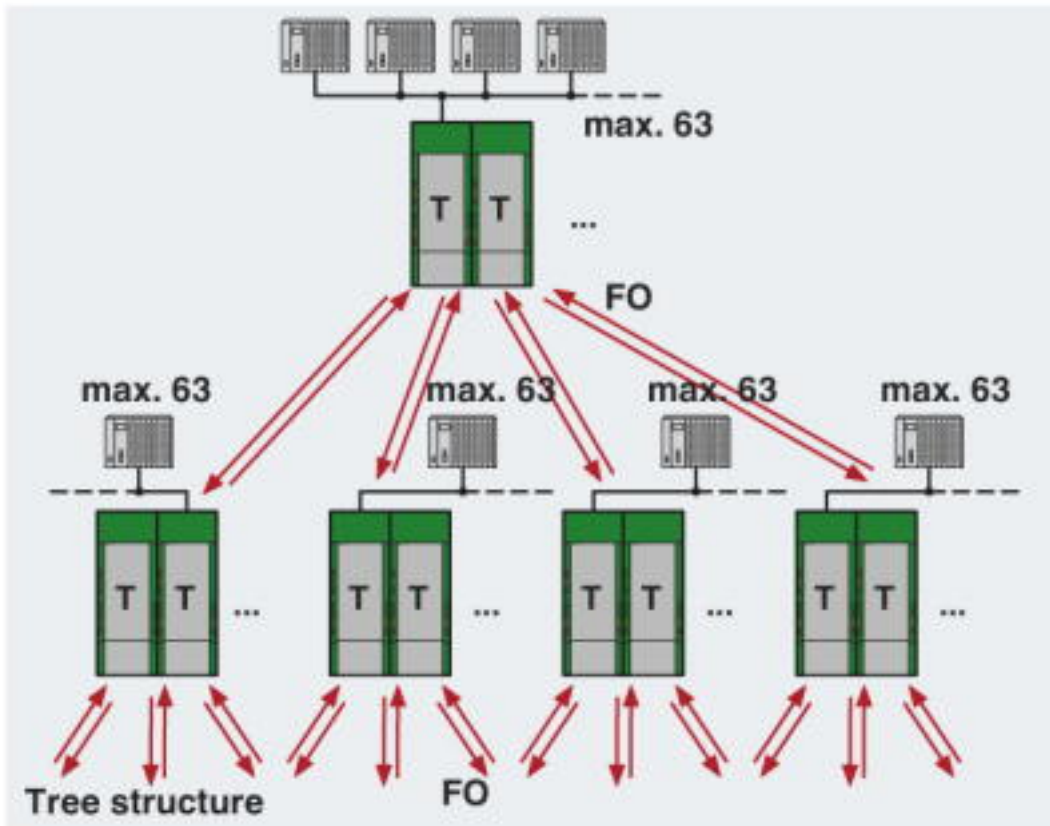
Application drawing



Star structure

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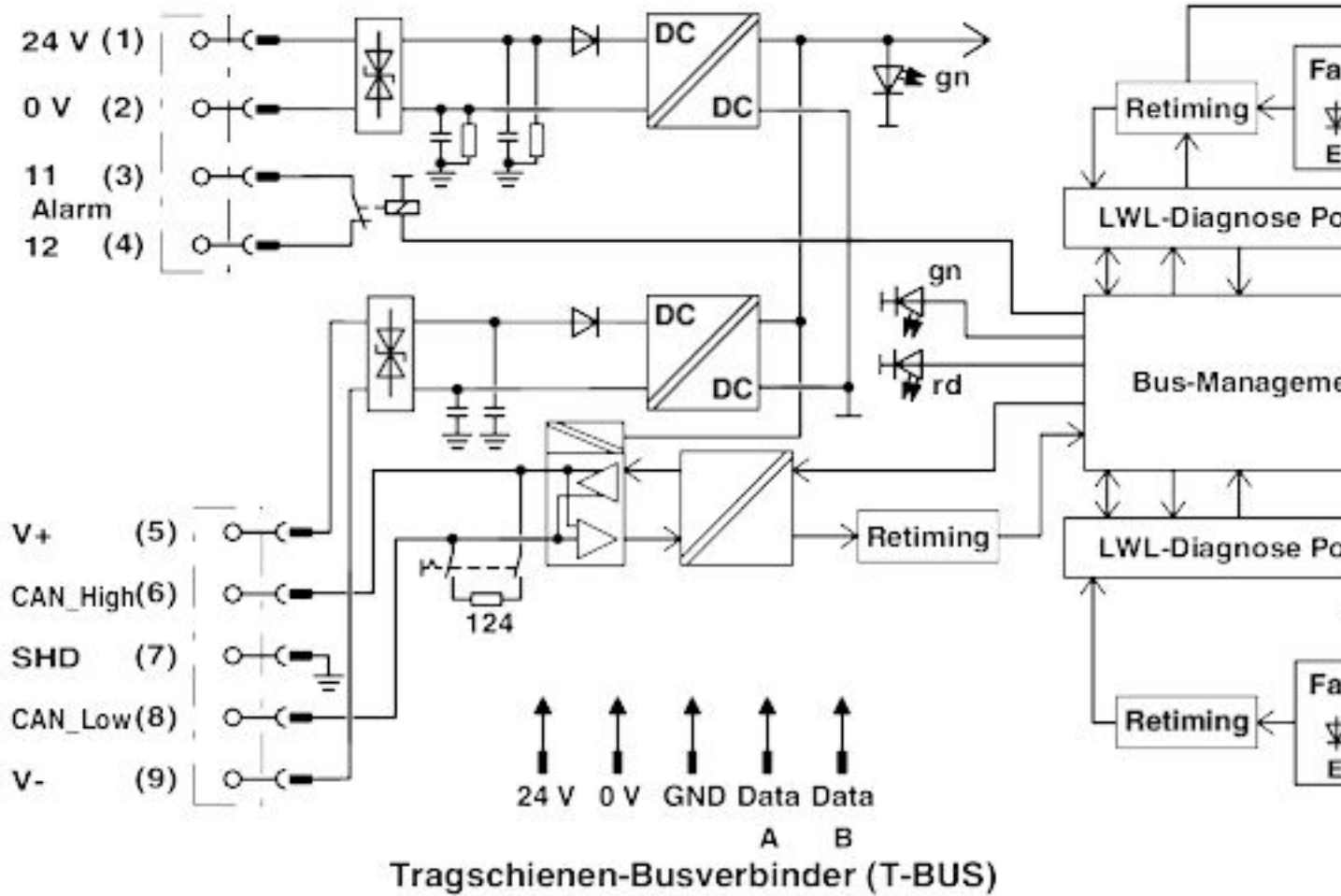
Application drawing



Tree structure

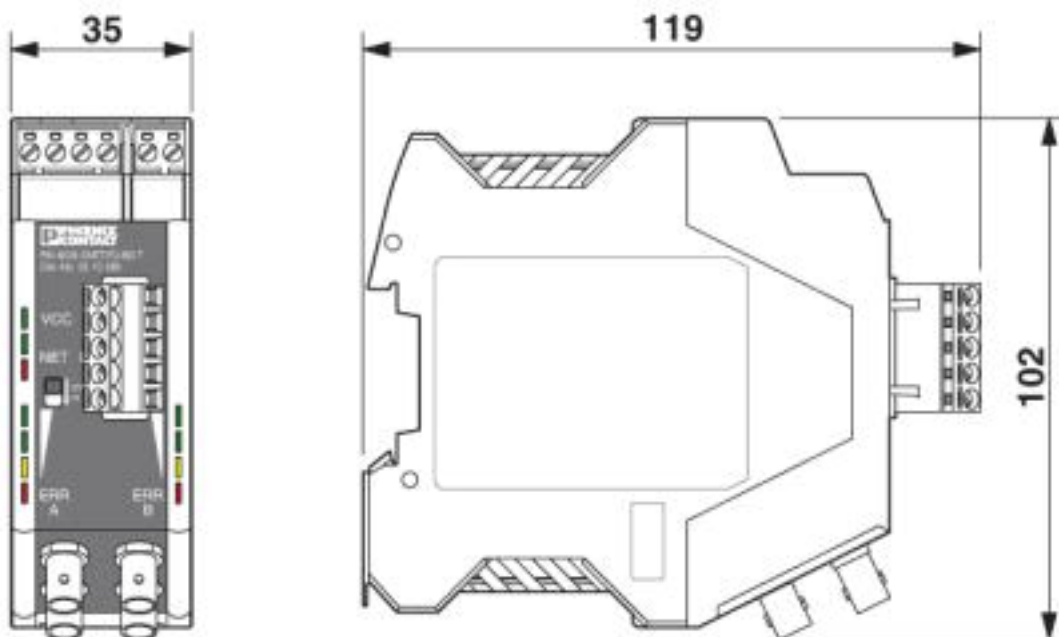
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Block diagram



# FO converters - PSI-MOS-DNET/FO 850 T - 2313986

Dimensioned drawing



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