

# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

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 diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, termination device with an FO interface (FSMA), 660 nm, for polymer/HCS fiber cable

## Product Features

- 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
- Connections can be plugged in using a COMBICON screw terminal block
- 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 (PROFIBUS // 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 all data rates up to 12 Mbps
- Bit retiming for any cascading depth



## Key commercial data

|                         |               |
|-------------------------|---------------|
| <b>package_quantity</b> | 1             |
| <b>GTIN</b>             | 4017918973995 |

## Technical data

Note:

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

### Dimensions

|               |        |
|---------------|--------|
| <b>Width</b>  | 35 mm  |
| <b>Height</b> | 99 mm  |
| <b>Depth</b>  | 106 mm |

### Ambient conditions

|  |                  |
|--|------------------|
| <b>Ambient temperature (operation)</b>         | -20 °C ... 60 °C |
| <b>Ambient temperature (storage/transport)</b> | -40 °C ... 85 °C |

# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

## Technical data

### Ambient conditions

|   |  |
|---|--|
| <b>Permissible humidity (operation)</b> | 30 % ... 95 % (no condensation)                          |
| <b>Altitude</b>                         | 5000 m (For restrictions see manufacturer's declaration) |
| <b>Degree of protection</b>             | IP20   |
| <b>Noise immunity</b>                   | EN 61000-6-2:2005  |

### Serial interface

|   |   |
|---|---|
| <b>Interface 1</b>                            | PROFIBUS acc. to IEC 61158, RS-485 2-wire, half duplex, automatic control     |
| <b>Operating mode</b>                         | Semi-duplex   |
| <b>Connection method</b>                      | D-SUB-9 female connector  |
| <b>File format/coding</b>                     | UART (11 Bit, NRZ)  |
| <b>Data direction switching</b>               | Automatic control   |
| <b>Transmission medium</b>                    | Copper  |
| <b>Transmission length</b>                    | ≤ 1200 m (depending on the data rate, with shielded, twisted pair data cable) |
| <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>              | ≤ 12 Mbps   |

### Optical interface FO

|  |  |
|--|--|
| <b>Transmit capacity, minimum</b>                    | -3 dBm (980/1000 μm)   |
| <b>Transmit capacity, minimum</b>                    | -15.4 dBm (200/230 μm)   |
| <b>Minimum receiver sensitivity</b>                  | -30 dBm  |
| <b>Maximum receiver sensitivity</b>                  | -3 dBm (980/1000 μm)   |
| <b>Wavelength</b>                                    | 660 nm   |
| <b>Transmission length incl. 3 dB system reserve</b> | 70 m (With F-P 980/1000 230 dB/km with quick mounting connector) |
| <b>Transmission length incl. 3 dB system reserve</b> | 400 m (With F-K 200/230 10 dB/km with quick mounting connector)  |
| <b>Transmission medium</b>                           | Polymer fiber  |
| <b>Transmission protocol</b>                         | Protocol-transparent to the RS-485 interface                     |
| <b>Connection method</b>                             | F-SMA  |

### 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>Nominal supply voltage</b> | 24 V DC             |
| <b>Supply voltage range</b>   | 18 V DC ... 30 V DC |

# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

## Technical data

### Power supply

|                                    |                                       |
|------------------------------------|---------------------------------------|
| <b>Max. current consumption</b>    | 130 mA                                |
| <b>Typical current consumption</b> | 100 mA (24 V DC)                      |
| <b>Connection method</b>           | COMBICON plug-in screw terminal block |

### General

|   |   |
|---|---|
| <b>Bit delay</b>                                | ≤ 1 Bit   |
| <b>Bit distortion, input</b>                    | ± 35 % (permitted)  |
| <b>Bit distortion, output</b>                   | < 6.25 %  |
| <b>Electrical isolation</b>                     | (VCC // RS-485)   |
| <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>                               | 175 g   |
| <b>Housing material</b>                         | PA 6.6-FR   |
| <b>Color</b>                                    | green   |
| <b>MTBF</b>                                     | 324 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))    |
| <b>MTBF</b>                                     | 70 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

# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

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

### Approval details

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

|           |
|-----------|
| UL Listed |
|-----------|

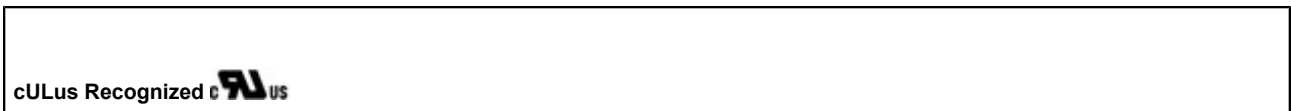
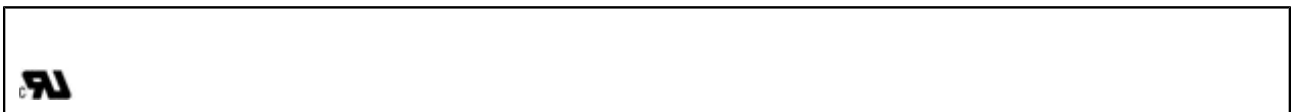
|            |
|------------|
| cUL Listed |
|------------|

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

|  |
|--|
|  |
|--|

# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

approvals



accessories

**Connector set**

PSM-SET-FSMA/4-KT - 2799720



## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

accessories

PSM-SET-FSMA/4-HCS - 2799487



---

### Data cable by the meter

PSM-LWL-KDHEAVY-980/1000 - 2744319



---

PSM-LWL-RUGGED-980/1000 - 2744322



---

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



---

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



## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

### accessories

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

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



---

### Assembly tool

PSM-POF-KONFTOOL - 2744131



## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

### accessories

PSM-HCS-KONFTOOL - 2799526



---

PSM-SET-FSMA-POLISH - 2799348



### Measuring tools

PSM-FO-POWERMETER - 2799539



### Adapter

PSM-SET-FSMA-LINK/2 - 2799416



---

PSM PTK - 2760623





## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

### accessories

PSM PTK-4 - 2799364



---

### Data plug

SUBCON-PLUS-PROFIB/SC2 - 2708232



SUBCON-PLUS-PROFIB/PG/SC2 - 2708245



SUBCON-PLUS-PROFIB/AX/SC - 2744380



SUBCON-PLUS-PROFIB/90/PG/SC - 2313708



## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

accessories

SUBCON-PLUS-PROFIB/90/PG/IDC - 2313685



---

### Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



---

### Stripping tool

PSM-STRIP-FC/PROFIB - 2744623



---

### Interface converter

PSI-REP-PROFIBUS/12MB - 2708863



PSM-ME-RS485/RS485-P - 2744429



## FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

accessories

**Terminal resistor**

PSI-TERMINATOR-PB - 2313944



---

accessories

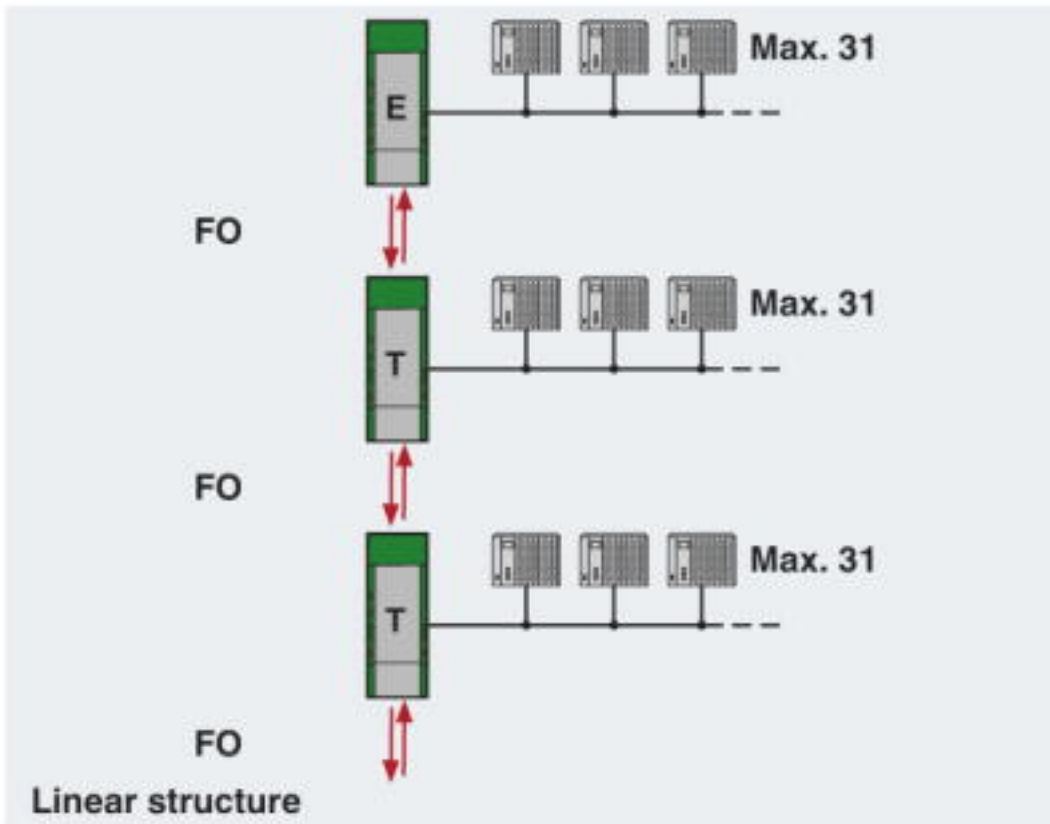
ME 17,5 TBUS 1,5/PP000-3,81 BK - 2890014

---

Drawings

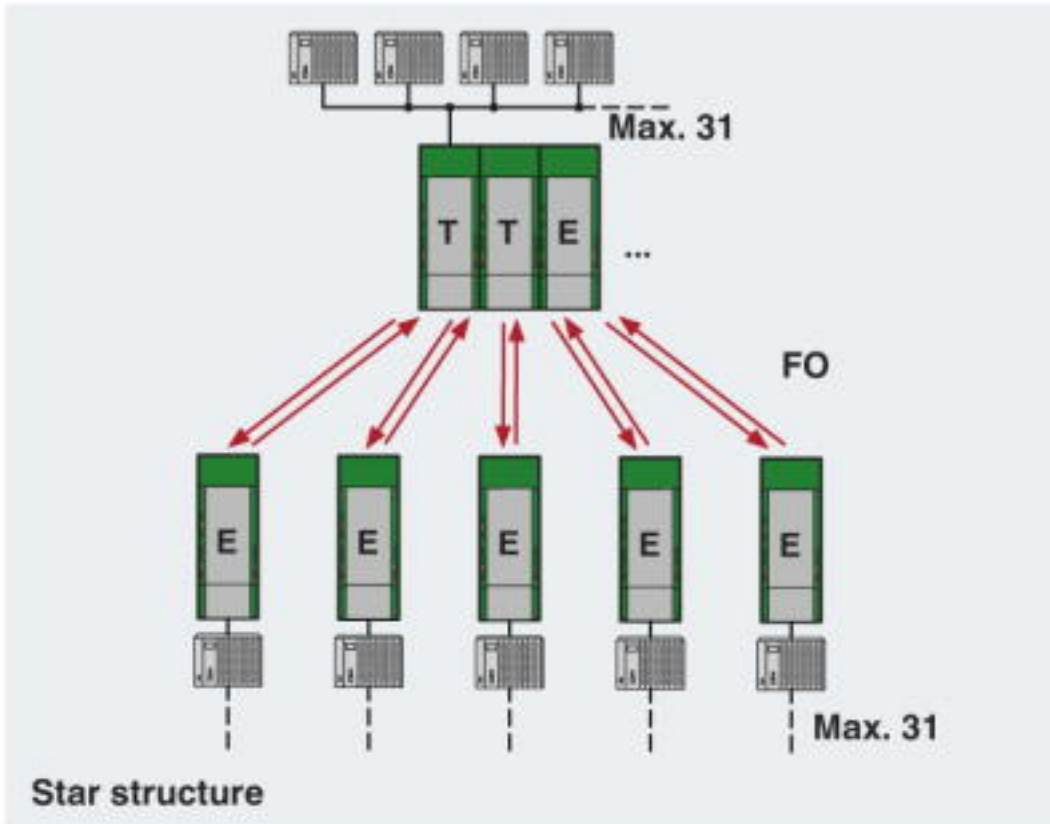
# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Application drawing



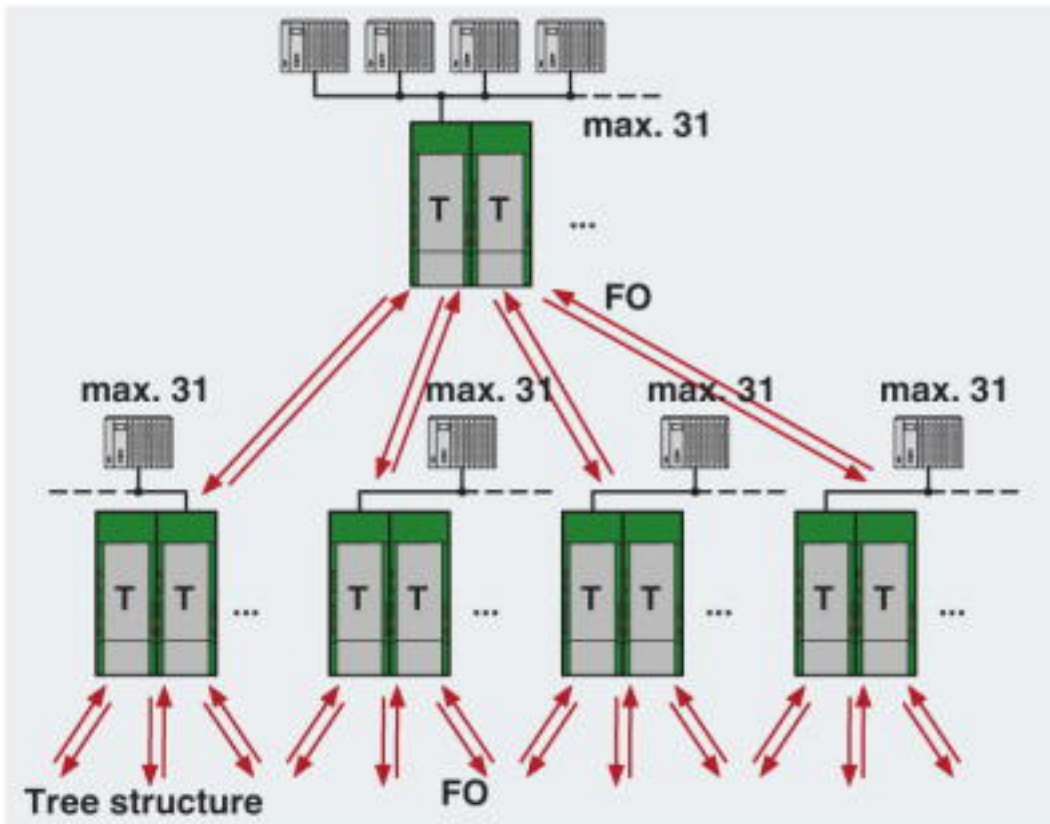
# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Application drawing



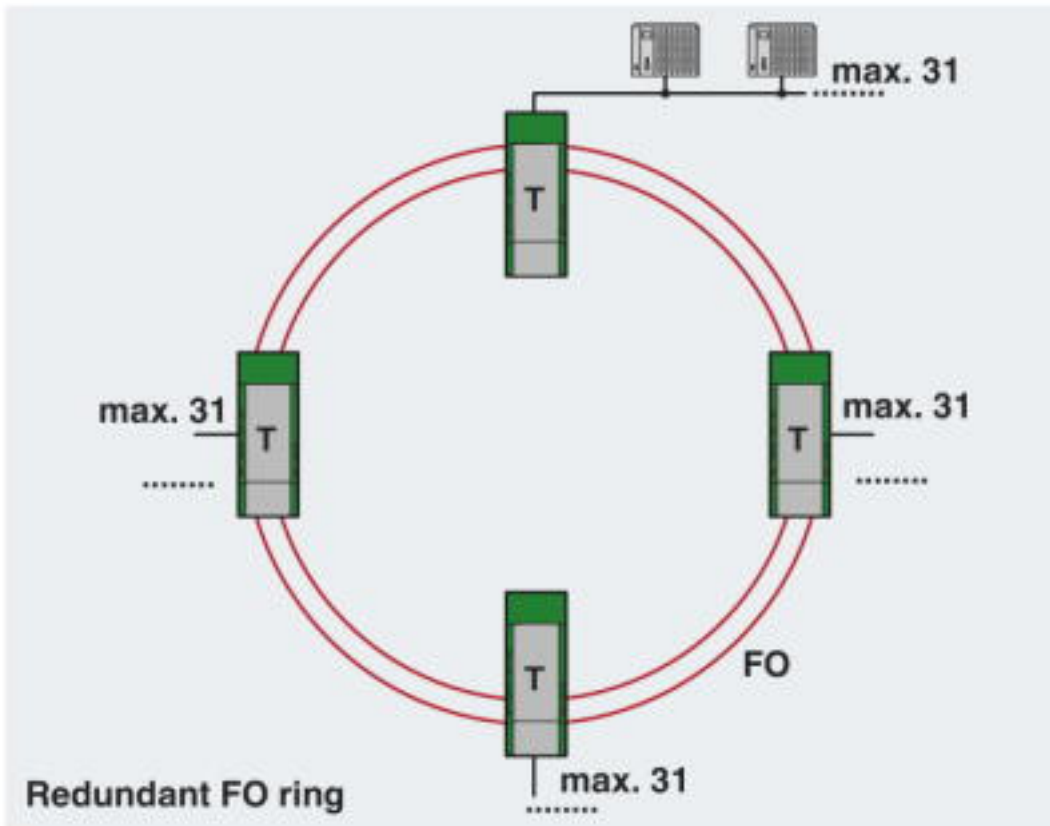
# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Application drawing



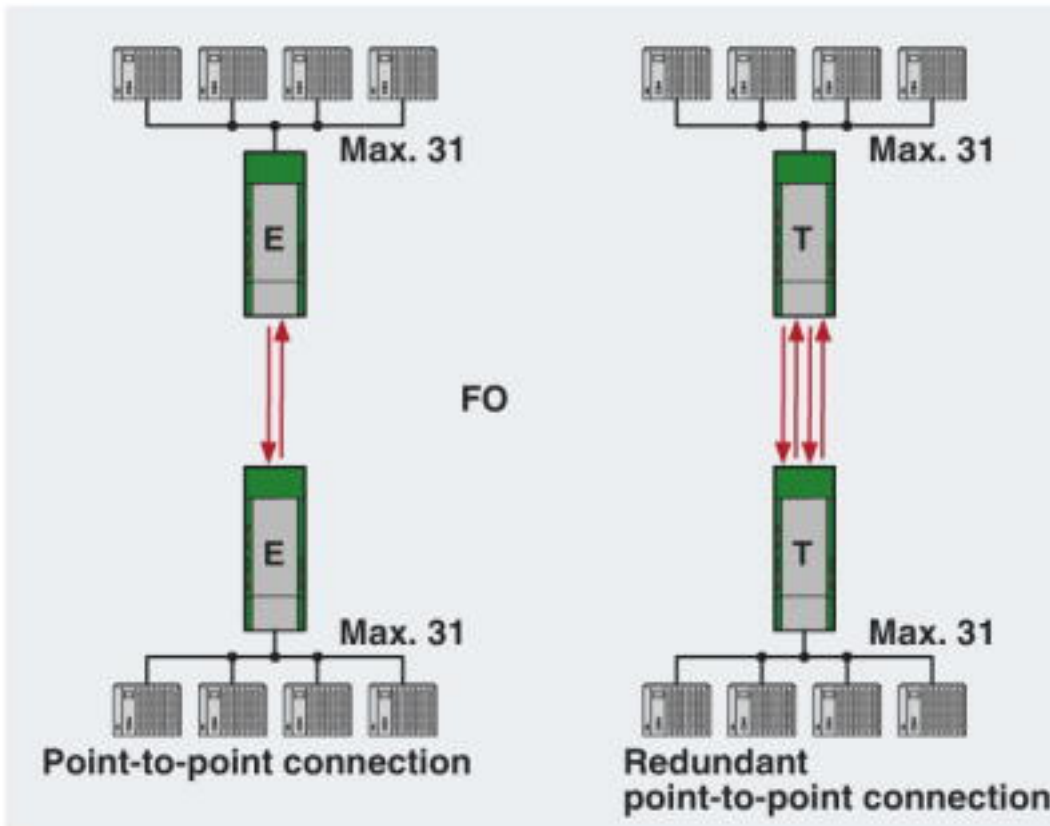
# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Application drawing

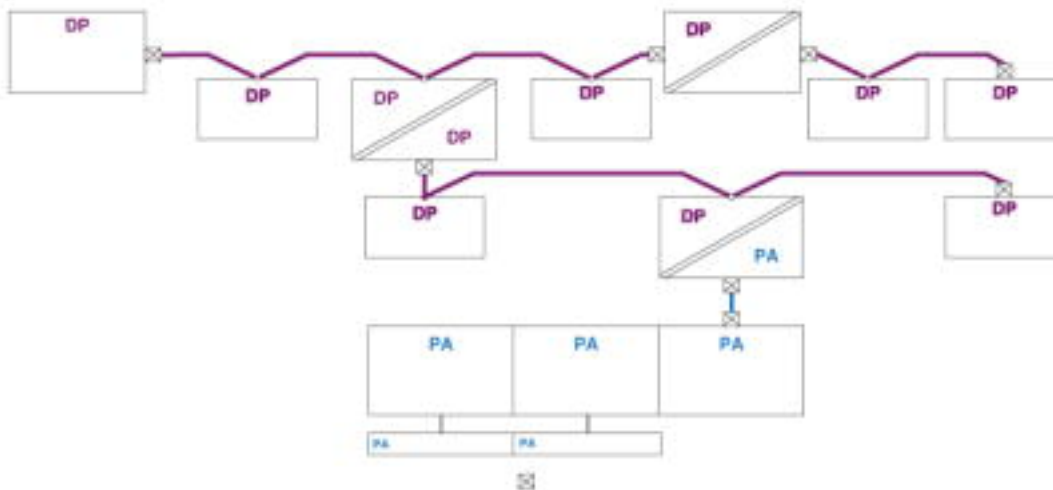


# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Application drawing



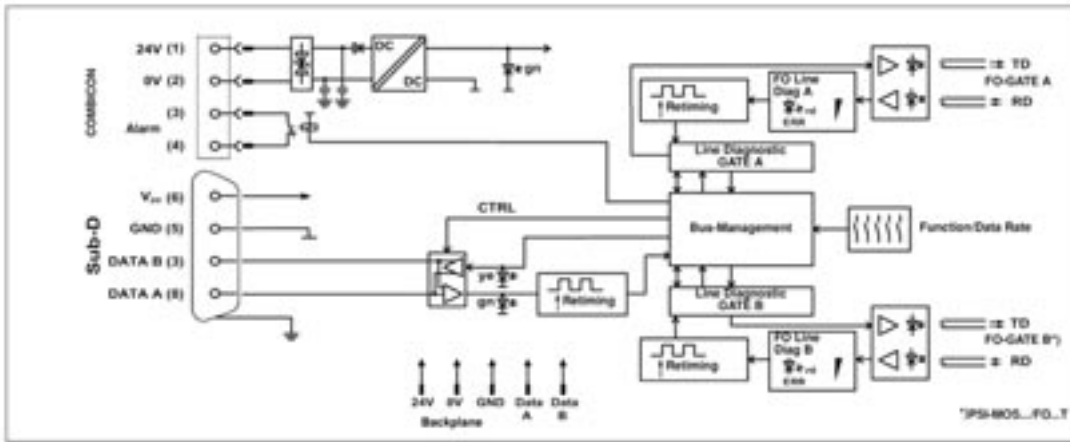
Application drawing





# FO converters - PSI-MOS-PROFIB/FO 660 E - 2708290

Block diagram



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

© Phoenix Contact 2013 - all rights reserved  
<http://www.phoenixcontact.com>