

PSI-MOS-RS422/FO 660 E - FO converters



2708342

<https://www.phoenixcontact.com/us/products/2708342>

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 documentation. Our general terms of use for downloads are valid.



FO converter with integrated optical diagnostics, alarm contact, for RS-422/RS-485 4-wire/INTERBUS up to 2 Mbps, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable

Your advantages

- Supply voltage routed through via DIN rail connectors
- Connections can be plugged in via a COMBICON screw terminal block
- Redundant power supply possible by means of optional system power supply unit
- High-quality electrical isolation between all interfaces (INTERBUS // FO ports // supply // DIN rail connector)
- Approved for use in zone 2
- Floating switch contact for advance warning of critical FO paths
- Integrated optical diagnostics for continuous monitoring of FO paths
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Automatic data rate detection for all data rates up to 2 Mbps
- Shipbuilding approval in accordance with DNV GL

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2708342 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DN06 |
| Product key | DNC216 |
| GTIN | 4017918974046 |
| Weight per piece (including packing) | 245.1 g |
| Weight per piece (excluding packing) | 182.48 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Technical data

Notes

Note on application

| | |
|-------------------------|-------------------------|
| Note on application | Only for industrial use |
| Utilization restriction | |

CCCxex note

Use in potentially explosive areas is not permitted in China.

Product properties

| | |
|----------------|---|
| Product type | Media converter |
| Product family | PSI-MOS |
| MTTF | 1025 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) 442 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) 184 Years (SN 29500 standard, temperature 40°C, operating cycle 100%) |
| MTBF | 493 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) 92 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day)) |

Electrical properties

| | |
|---|---------------------------------------|
| Electrical isolation | VCC // RS-422 |
| Maximum power dissipation for nominal condition | 2.4 W |
| Test voltage data interface/power supply | 1.5 kV _{rms} (50 Hz, 1 min.) |

Supply

| | |
|-----------------------------|--|
| Supply voltage range | 18 V DC ... 30 V DC |
| Nominal supply voltage | 24 V DC (in acc. with UL) |
| Typical current consumption | 100 mA (24 V DC) |
| Max. current consumption | 130 mA |
| | ≤ 2 A (For operation in a joining station, via the DIN rail connector) |

Output data

Switching

| | |
|-----------------------------|--------------|
| Output name | Relay output |
| Output description | Alarm output |
| Number of outputs | 1 |
| Maximum switching voltage | 60 V DC |
| | 42 V AC |
| Limiting continuous current | 0.46 A |

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Connection data

Supply

| | |
|-------------------|---------------------------------------|
| Connection method | COMBICON plug-in screw terminal block |
| Tightening torque | 0.56 Nm ... 0.79 Nm |

Interfaces

| | |
|------------------------|-----------------------------|
| Bit distortion, input | ± 35 % (permitted) |
| Bit distortion, output | < 6.25 % |
| Signal | INTERBUS |
| Transmission channels | 2 (1/1) RD, TD, full duplex |

Data: optical FO

| | |
|---|--|
| No. of channels | 1 |
| Transmit capacity, minimum | -4.6 dBm (980/1000 µm) |
| | -16.6 dBm (200/230 µm) |
| Transmission length incl. 3 dB system reserve | 100 m (F-P 980/1000 230 dB/km with quick mounting connector) |
| | 800 m (F-K 200/230 10 dB/km with quick mounting connector) |
| Transmission protocol | Transparent to protocol for RS-422 interface |
| Connection method | F-SMA |
| Wavelength | 660 nm |
| Minimum receiver sensitivity | -31.2 dBm |
| Transmission medium | Polymer fiber |
| | PCF fiber |

Data: RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1

| | |
|--|--|
| Serial transmission speed | ≤ 2 Mbps |
| Connection method | Pluggable screw connection |
| Transmission length | ≤ 1000 m (depending on the data rate, with shielded, twisted data cable) |
| Termination resistor | 220 Ω |
| | 100 Ω |
| | 220 Ω |
| Single conductor/terminal point, rigid | 0.2 mm² ... 2.5 mm² |
| Single-wire/terminal point, flexible | 0.2 mm² ... 2.5 mm² |
| Max. AWG conductor cross-section, flexible | 14 |
| Min. AWG conductor cross-section, flexible | 24 |
| Single-wire/terminal point, rigid AWG max. | 14 |
| Single-wire/terminal point, rigid AWG min. | 24 |
| Transmission medium | Copper |
| File format/coding | UART (11 Bit, NRZ) |

Dimensions

| | |
|--------|-------|
| Width | 35 mm |
| Height | 99 mm |

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



| | |
|-------|--------|
| Depth | 103 mm |
|-------|--------|

Material specifications

| | |
|--------------------|------------------|
| Color (Housing) | green (RAL 6021) |
| Material (Housing) | PA 6.6-FR |

Cable/line

| | |
|-------------|---------------|
| FO cable | |
| Fiber types | 980/1000 µm |
| | 200/230 µm |
| | Polymer fiber |
| | PCF fiber |

Mechanical tests

| | |
|--|---|
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | Vibration (operation): 5g, 10...150 Hz, 2.5 h, in XYZ direction |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27 | Shock (operation): 15g, 11 ms period, half-sine shock pulse |

Environmental and real-life conditions

| | |
|---|--|
| Ambient conditions | |
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation) |
| Permissible humidity (operation) | 30 % ... 95 % (non-condensing) |

Approvals

| | |
|-------------|--------------|
| CE | |
| Certificate | CE-compliant |

| | |
|----------------|---|
| ATEX | |
| Identification | Ex II 3 G Ex nA nC IIC T4 Gc X |
| Note | Please follow the special installation instructions in the documentation! |

| | |
|--------------------|---|
| ATEX, FO interface | |
| Identification | Ex II (2) G [Ex op is Gb] IIC |
| | Ex II (2) D [Ex op is Db] IIIC |
| Certificate | PTB 06 ATEX 2042 U |
| Note | Please follow the special installation instructions in the documentation! |

| | |
|----------------|------------------------------------|
| UL, USA/Canada | |
| Identification | Class I, Zone 2, AEx nc IIC T5 |
| | Class I, Zone 2, Ex nC nL IIC T5 X |

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Class I, Div. 2, Groups A, B, C, D

Corrosive gas test

| | |
|----------------|----------------------------------|
| Identification | ISA-S71.04-1985 G3 Harsh Group A |
|----------------|----------------------------------|

Shipbuilding

| | |
|----------------|--------|
| Identification | DNV GL |
|----------------|--------|

Shipbuilding data

| | |
|-------------|---|
| Temperature | B |
| Humidity | A |
| Vibration | A |
| EMC | B |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

EMC data

| | |
|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | EN 61000-6-2:2005 |

Noise emission

| | |
|-----------------------|----------|
| Standards/regulations | EN 55011 |
|-----------------------|----------|

Electrostatic discharge

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

| | |
|-------------------|-------------|
| Contact discharge | ± 6 kV |
| Discharge in air | ± 8 kV |
| Comments | Criterion B |

Electromagnetic HF field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-3 |
|-----------------------|--------------|

Electromagnetic HF field

| | |
|-----------------|-------------|
| Field intensity | 10 V/m |
| Comments | Criterion A |

Fast transients (burst)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-4 |
|-----------------------|--------------|

Fast transients (burst)

| | |
|----------|-------------|
| Input | ± 2 kV |
| Signal | ± 2 kV |
| Comments | Criterion B |

Surge current load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Surge current load (surge)

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



| | |
|----------|--------------|
| Input | ± 0.5 kV |
| Signal | ± 1 kV |
| Comments | Criterion B |

Conducted interference

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-6 |
|-----------------------|--------------|

Conducted interference

| | |
|----------|-------------|
| Comments | Criterion A |
| Voltage | 10 V |

Emitted interference

| | |
|-----------------------|----------------------------------|
| Standards/regulations | EN 55011 |
| Comments | Class A, industrial applications |

Criteria

| | |
|-------------|--|
| Criterion A | Normal operating behavior within the specified limits. |
| Criterion B | Temporary impairment to operational behavior that is corrected by the device itself. |

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

PSI-MOS-RS422/FO 660 E - FO converters

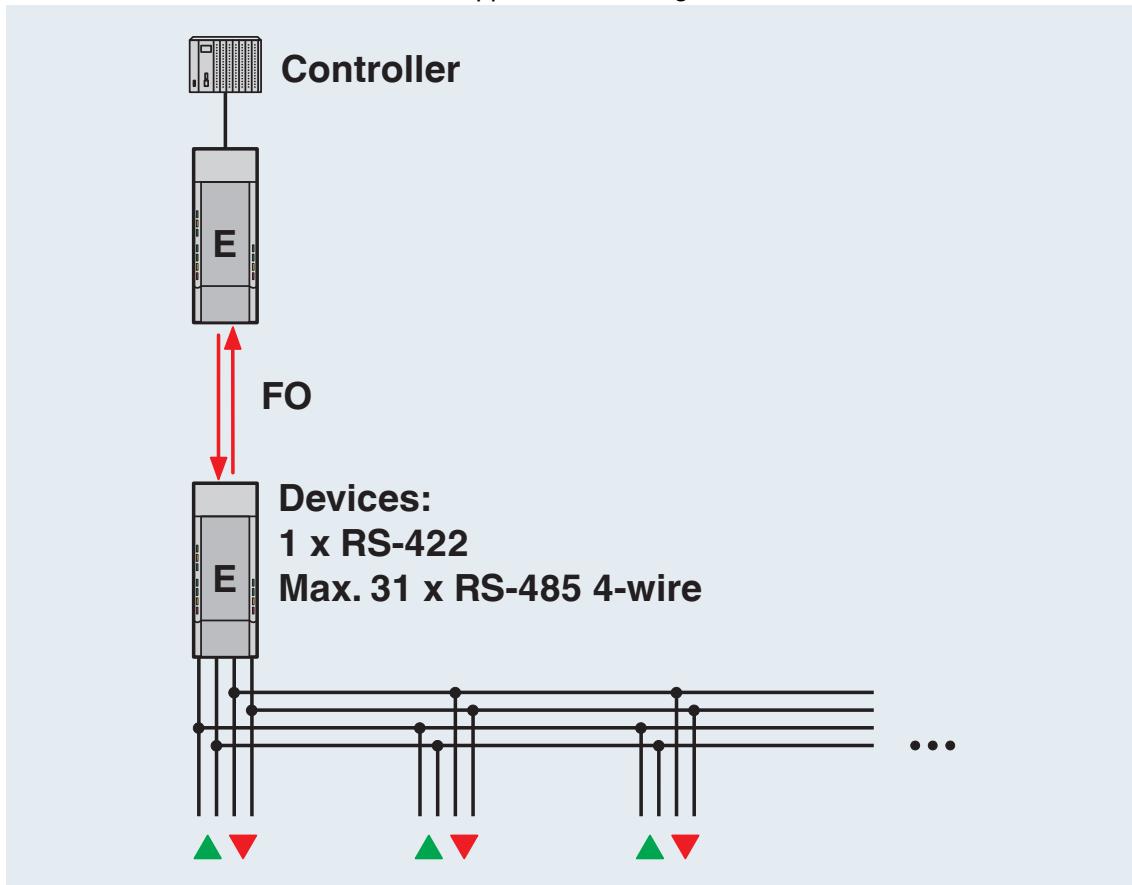


2708342

<https://www.phoenixcontact.com/us/products/2708342>

Drawings

Application drawing



Point-to-point connection

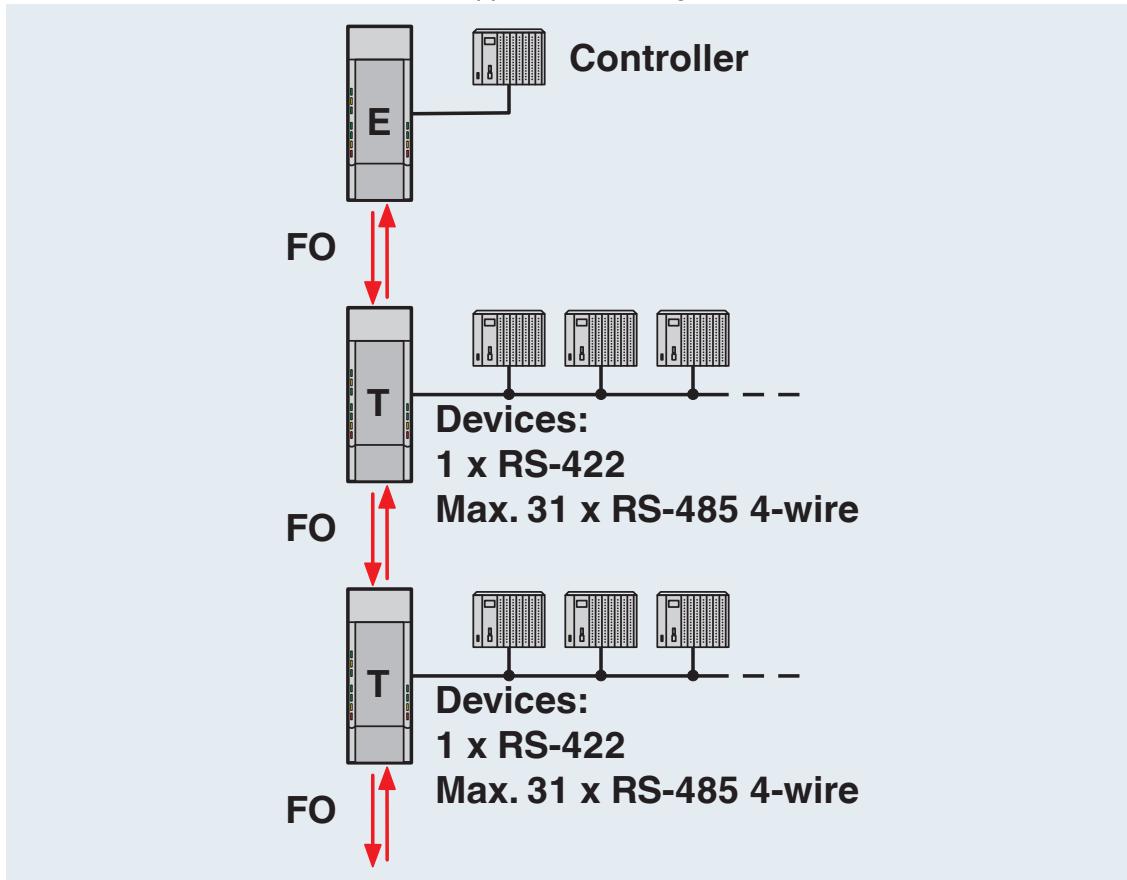
PSI-MOS-RS422/FO 660 E - FO converters



2708342

<https://www.phoenixcontact.com/us/products/2708342>

Application drawing



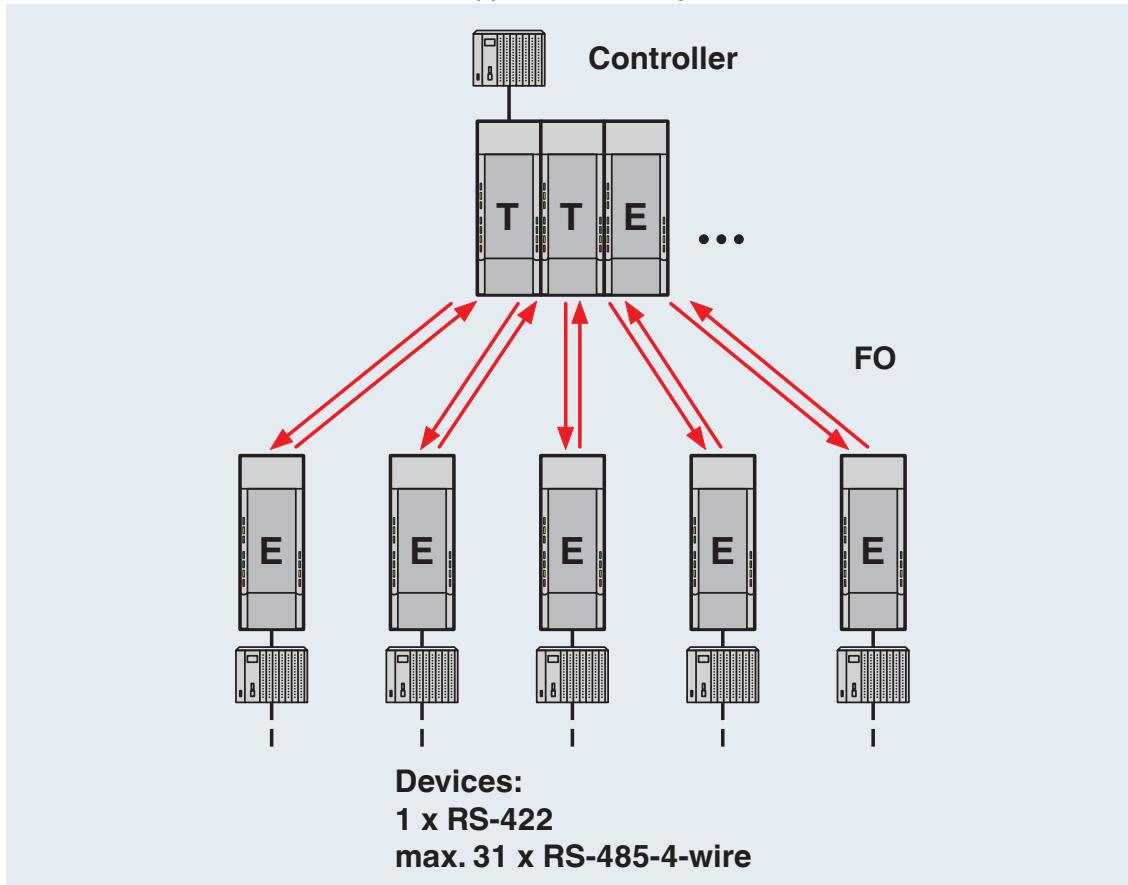
PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Application drawing



Star structure

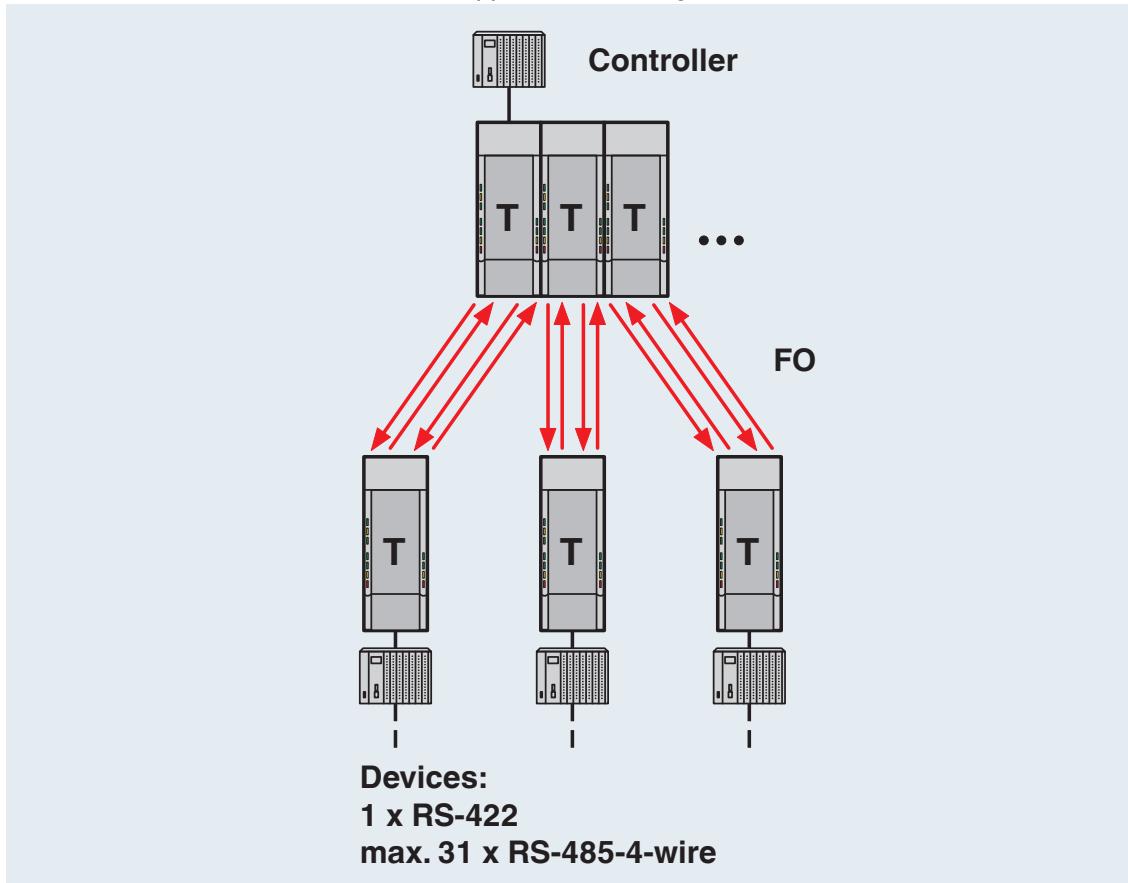
PSI-MOS-RS422/FO 660 E - FO converters



2708342

<https://www.phoenixcontact.com/us/products/2708342>

Application drawing



Redundant structure

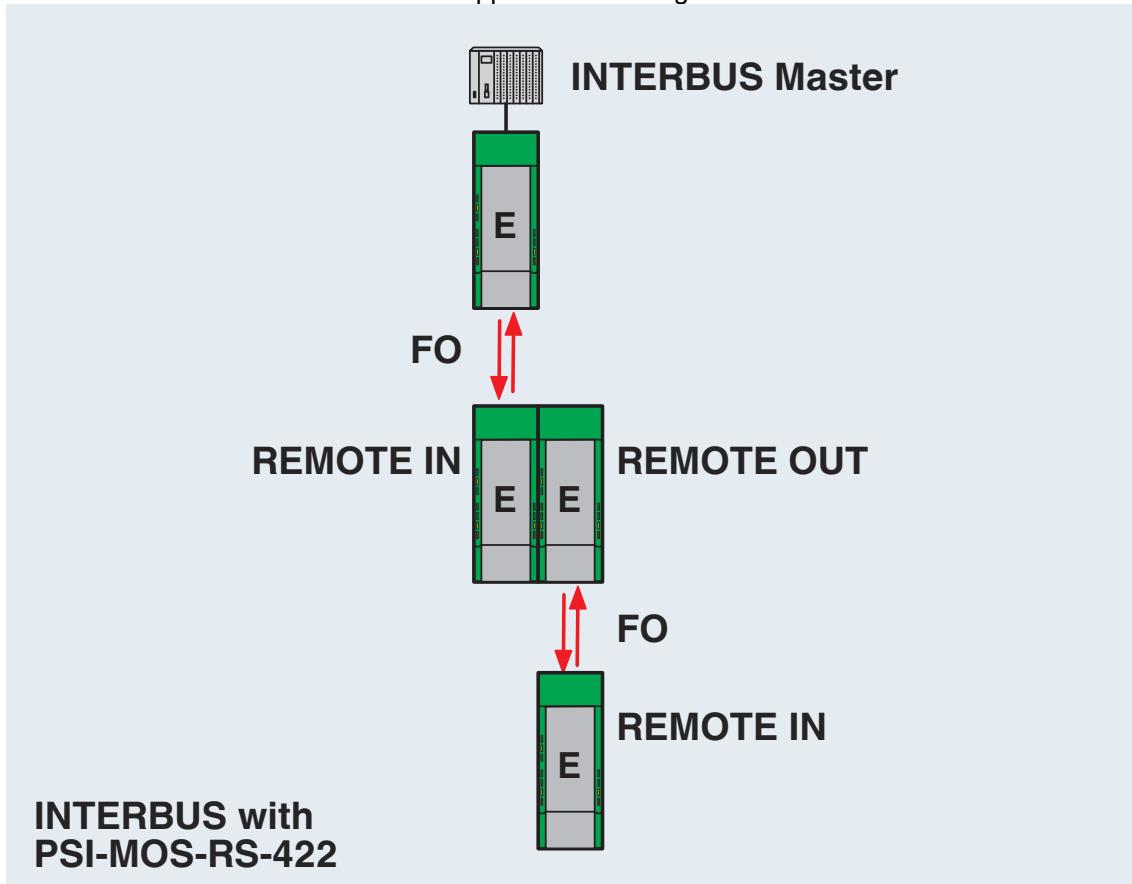
PSI-MOS-RS422/FO 660 E - FO converters

2708342

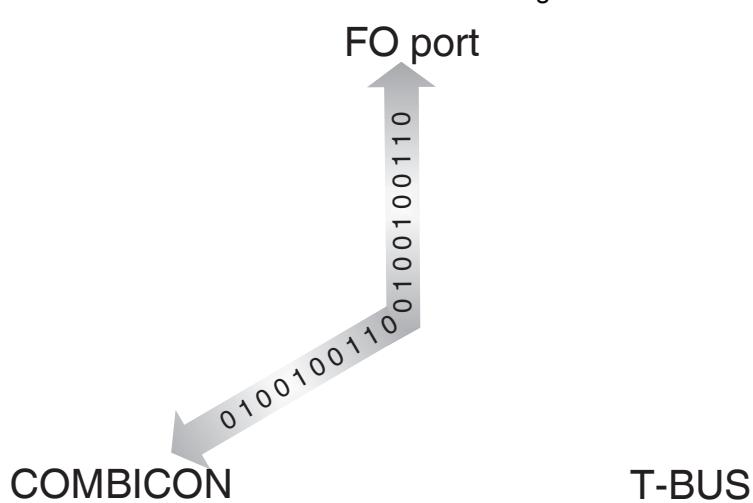
<https://www.phoenixcontact.com/us/products/2708342>



Application drawing



Schematic diagram



Port assignment for point-to-point connections

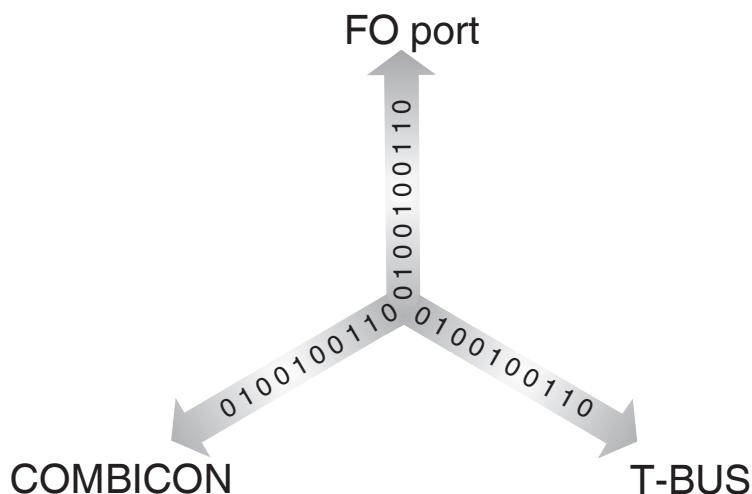
PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>

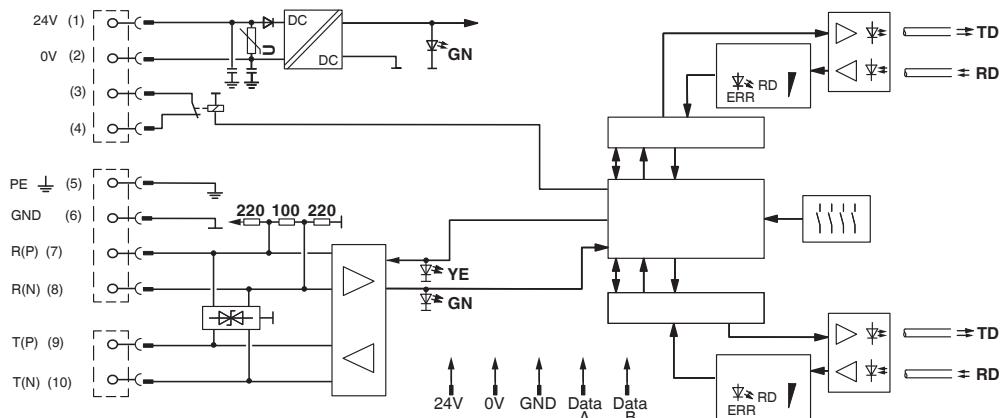
PHÖNIX CONTACT

Schematic diagram



Port assignment in star structures

Block diagram



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

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2708342>



DNV GL

Approval ID: TAA00001KR



cULus Recognized

Approval ID: E238705



ATEX

Approval ID: PxClF06ATEX2708261X



cUL Listed

Approval ID: E199827



UL Listed

Approval ID: E199827

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 19170411 |
| ECLASS-15.0 | 19170411 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001467 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 43201500 |
|-------------|----------|

PSI-MOS-RS422/FO 660 E - FO converters

2708342

<https://www.phoenixcontact.com/us/products/2708342>



Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|---|---------|
| Environment friendly use period (EFUP) | EFUP-50 |
| An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. | |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | a4cb4a1b-0517-465b-93a7-310745de5550 |

Phoenix Contact 2025 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA

586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com