PSI-MOS-DNET CAN/FO 660/BM - FO converters

2708054

https://www.phoenixcontact.com/us/products/2708054

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FO converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 800 kbps, basic module, interfaces: 1 x CAN, 1 x alarm, 1 x FO (FSMA), 660 nm, for polymer/PCF fiberglass cable

Product description

The PSI-MOS-DNET... fiber optic transmission system enables DeviceNet™ and CANopen® users to benefit from simple and interference-free networking based on fiber optics. In addition, bus cable short circuits only affect the specific potential segment concerned. This increases overall availability, and improves flexibility when designing the bus topology. The use of fiber optic technology enables branch lines and star and tree structures to be created. The 22.5 mm space-saving devices from the PSI-MOS-DNET CAN/FO... series feature an internal backplane. The maximum network expansion that can be achieved (sum total of copper and fiber optic cables) essentially depends on the data rate used.

Your advantages

- Supply voltage routed through via DIN rail connectors
- Connections can be plugged in via a COMBICON screw terminal block
- 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
- Data rates of up to 800 kbps, set via DIP switches

Commercial data

Item number	2708054
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN06
Product key	DNC213
GTIN	4017918943226
Weight per piece (including packing)	197.29 g
Weight per piece (excluding packing)	166.8 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use

Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.

Product properties

Product type	Media converter
Product family	PSI-MOS
Application	Base module
MTBF	409 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	82 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Electrical properties

Electrical isolation	VCC // CAN
Maximum power dissipation for nominal condition	2 W
Test voltage data interface/power supply	1.5 kV_{rms} (50 Hz, 1 min.)

Supply

Supply voltage range	10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
Nominal supply voltage	24 V DC (in acc. with UL)
Typical current consumption	100 mA (24 V DC)
Max. current consumption	100 mA

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

Connection data

Supply

Connection method	Pluggable COMBICON screw terminal block through basic module
Tightening torque	0.56 Nm ... 0.79 Nm

Interfaces

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Signal	CAN
	CANopen®
	DeviceNet™

Data: optical FO

Transmit capacity, minimum	-6.2 dBm (980/1000 µm)
	-16.9 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)
Connection method	F-SMA
Wavelength	660 nm
Minimum receiver sensitivity	-30.2 dBm
Transmission medium	Polymer fiber
	PCF fiber

Data: CAN interface, in accordance with ISO/IS 11898 for DeviceNet™, CAN, CANopen®

Serial transmission speed	≤ 800 kbps
Connection method	Pluggable screw connection
Transmission length	≤ 5000 m (Dependent on the data rate and the protocol used)
Termination resistor	120 Ω (Can be connected)
Transmission medium	Copper
File format/coding	Bit stuffing, NRZ

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

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

Cable/line

FO cable

Fiber types	200/230 µm
	980/1000 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, Div. 2, Groups A, B, C, D

Corrosive gas test

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

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 (5 kHz)
Signal	2 kV (5 kHz)
Comments	Criterion B

Surge current load (surge)

Input	0.5 kV (42 Ω)
Signal	1 kV (2 Ω)
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

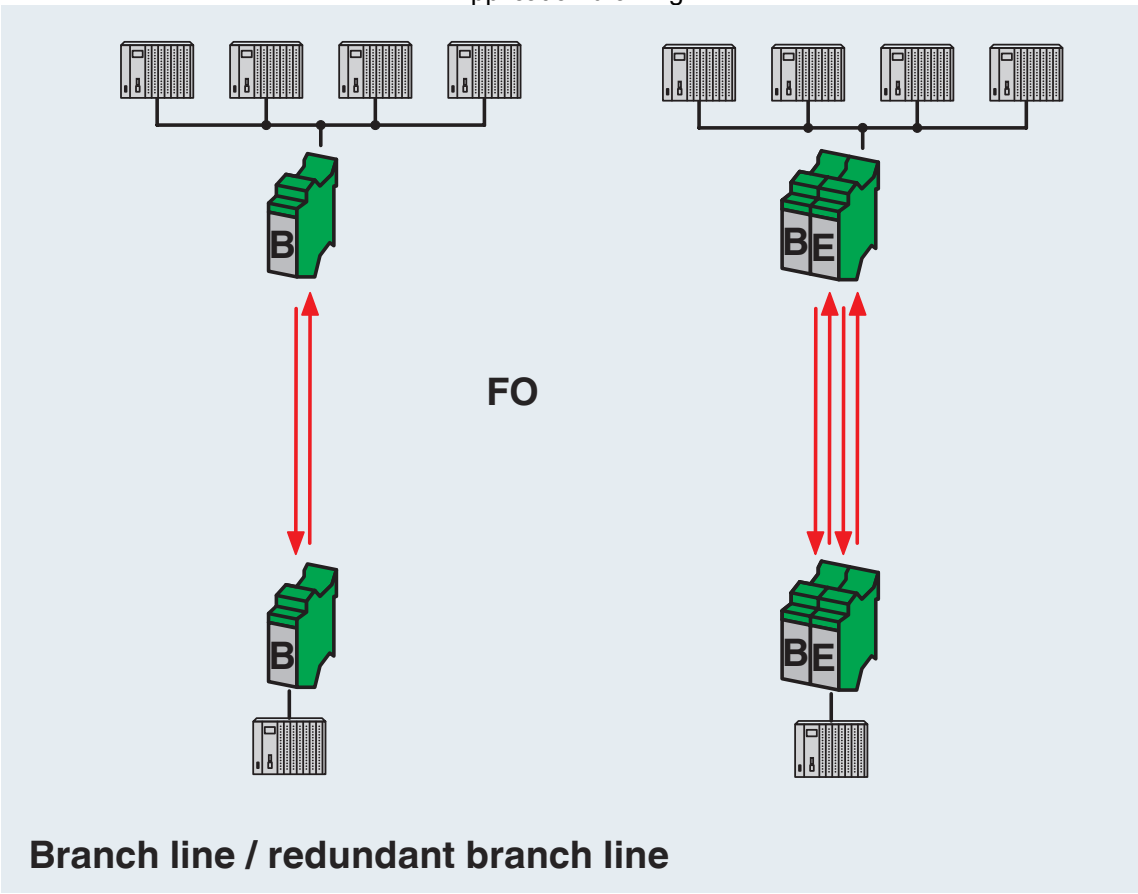
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Mounting

Mounting type	DIN rail mounting

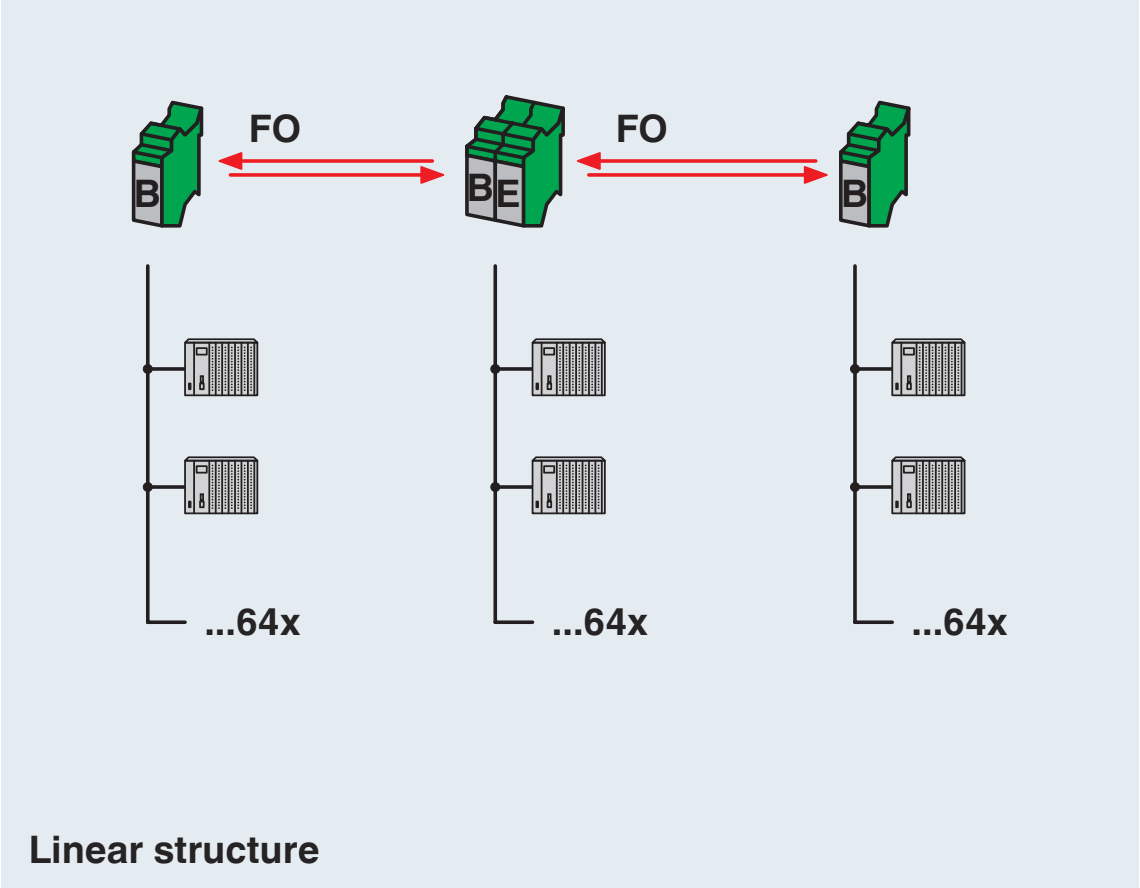
Drawings

Application drawing



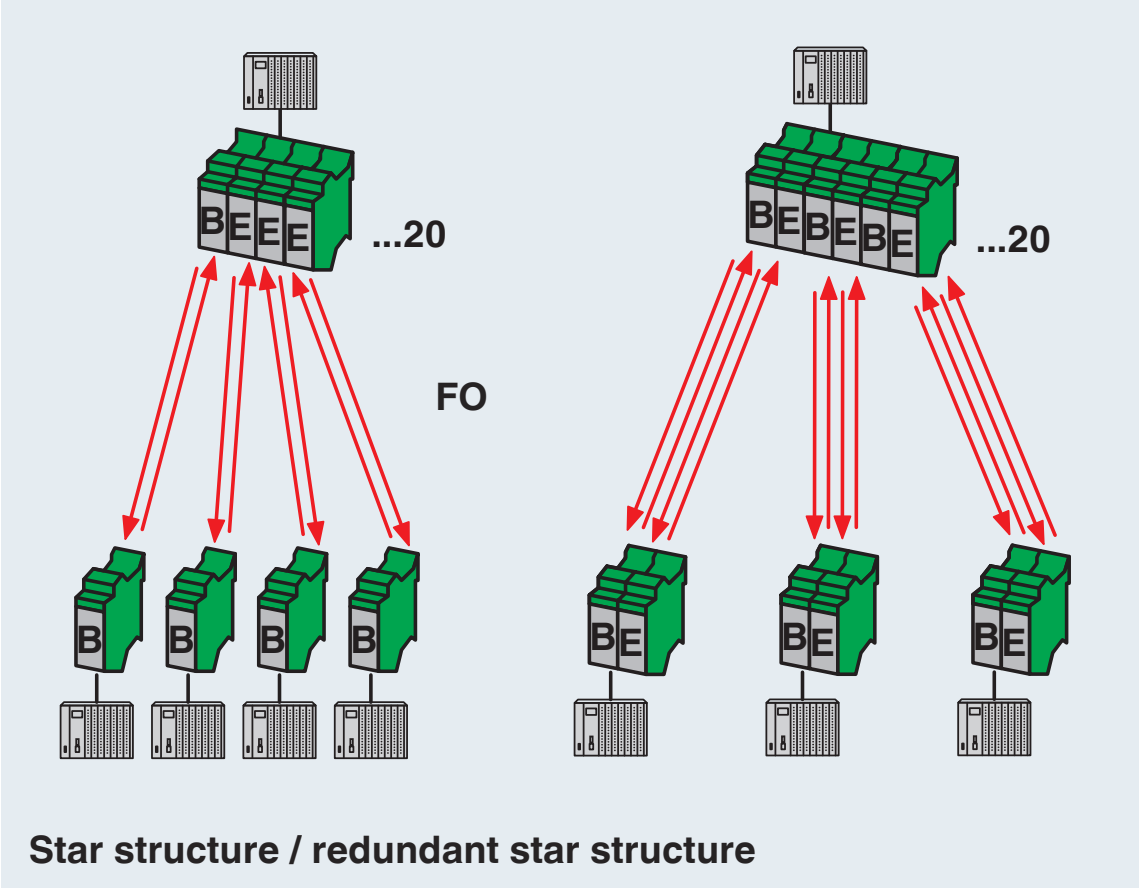
Branch line / redundant branch line

Application drawing



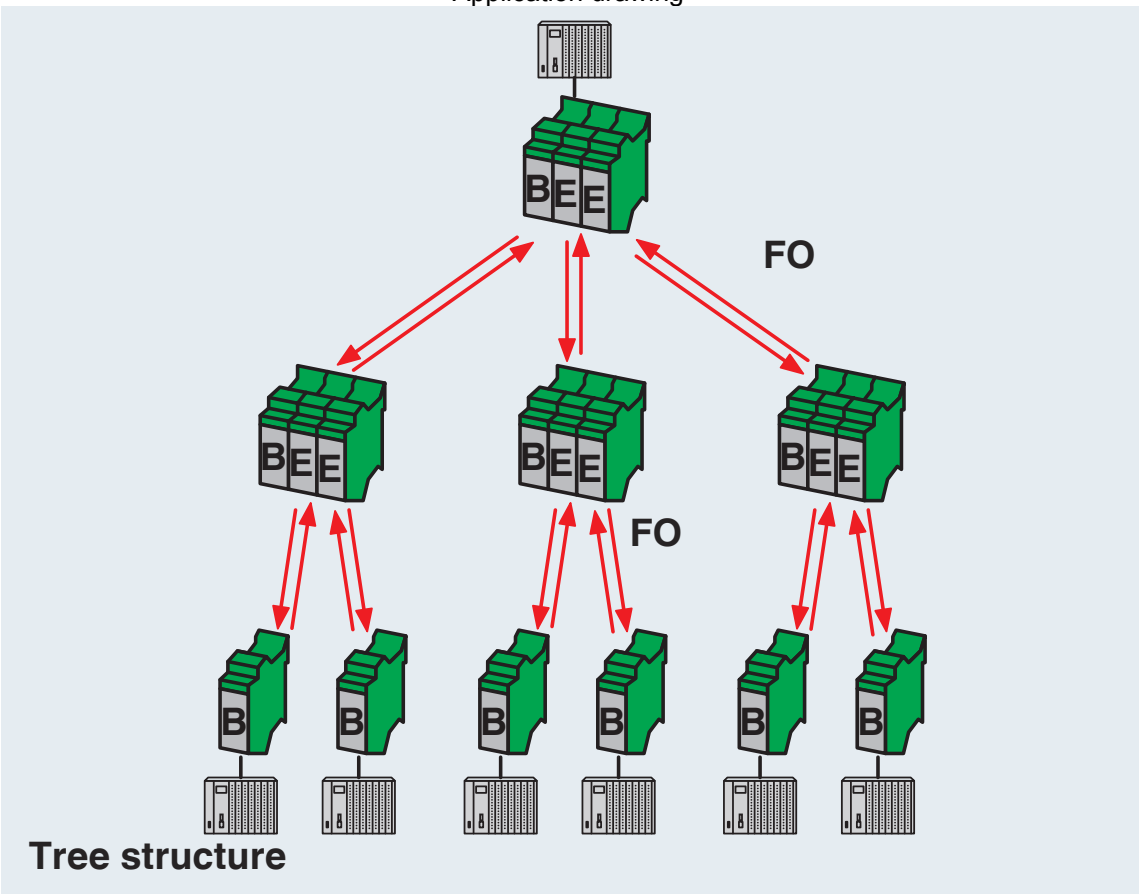
Line structure

Application drawing



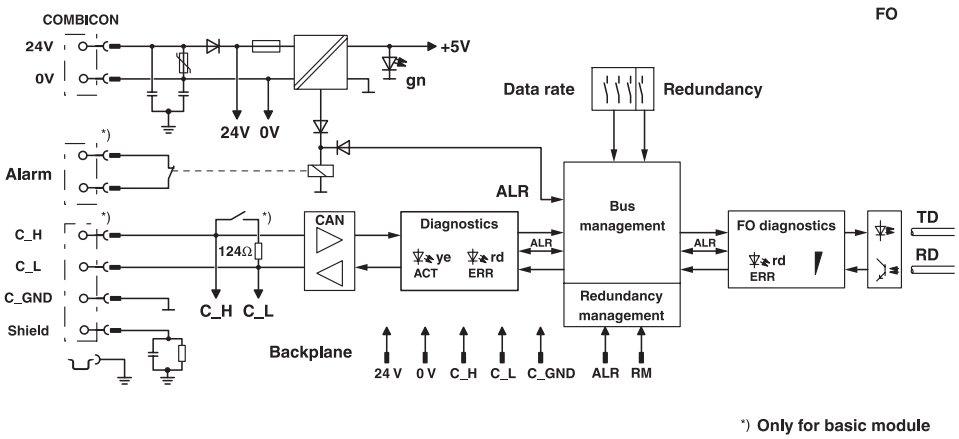
Star structure / redundant star structure

Application drawing



Tree structure

Block diagram



*) Only in the basic module

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2708054

cULus Recognized
Approval ID: E238705

UL Listed
Approval ID: E199827

Classifications

ECLASS

ECLASS-13.0	19170411
ECLASS-15.0	19170411

ETIM

ETIM 9.0	EC001467

UNSPSC

UNSPSC 21.0	43223323

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 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	a45738db-6e43-44d4-9632-0193e6d1a84a

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