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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 Features

- Data rates of up to 800 kbps, set via DIP switches
- 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
- High-quality electrical isolation between all interfaces (DeviceNet // fiber optic port // power supply // backplane)
- Integrated bus termination resistor can be connected internally
- Integrated backplane for routing through the supply voltage and data signals
- Connections can be plugged in using a COMBICON screw terminal block
- Floating switch contact in the basic module for leading alarm generation in relation to critical fiber optic paths



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	173.3 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	22.5 mm



Technical data

Dimensions

Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C 60 °C
Ambient temperature (storage/transport)	-40 °C 85 °C
Permissible humidity (operation)	30 % 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

Serial interface

Interface 1	CAN interface, in accordance with ISO/IS 11898 for DeviceNet, CAN, CANopen
Connection method	Pluggable screw connection
File format/coding	Bit stuffing, NRZ
Transmission medium	Copper
Transmission length	≤ 5000 m (Dependent on the data rate and the protocol used)
Termination resistor	120 Ω (Can be connected)
Serial transmission speed	≤ 800 kbps

Optical interface FO

Transmit capacity, minimum	-6.2 dBm (980/1000 μm)
	-16.9 dBm (200/230 μm)
Minimum receiver sensitivity	-30.2 dBm
Wavelength	660 nm
Transmission length incl. 3 dB system reserve	100 m (With F-P 980/1000 230 dB/km with quick mounting connector)
	800 m (With F-K 200/230 10 dB/km with quick mounting connector)
Transmission medium	Polymer fiber
	PCF fiber
Connection method	F-SMA

Digital outputs

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



Technical data

Power supply

Nominal supply voltage	24 V DC (With UL approval)
Supply voltage range	10 V DC 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	100 mA
Typical current consumption	100 mA (24 V DC)
Connection method	Pluggable COMBICON screw terminal block through basic module

General

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // CAN
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Noise emission	EN 55011
Net weight	166.8 g
Housing material	PA 6.6-FR
Color	green
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))
Conformance	CE-compliant
ATEX	# II 3 G Ex nAC IIC T4 X (Please follow the special installation instructions in the documentation!)
	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U) (Please follow the special installation instructions in the documentation!)
UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
	Class I, Div. 2, Groups A, B, C, D

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Shock	15g in all directions in acc. with IEC 60068-2-27
Noise emission	EN 55011
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Vibration (operation)	In acc. with IEC 60068-2-6: 5g, 150 Hz
Conformance	CE-compliant
ATEX	# II 3 G Ex nAC IIC T4 X
	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)



Technical data

Standards and Regulations

UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
	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	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC000310

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / EAC / cULus Recognized

Ex Approvals

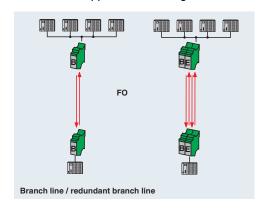
ATEX / UL Listed / ATEX



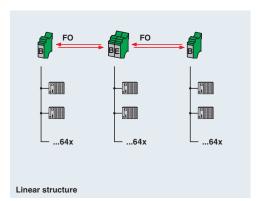
Approvals Approval details UL Recognized CUL Recognized EAC EAC CULUS Recognized CULUS Recognized

Drawings

Application drawing

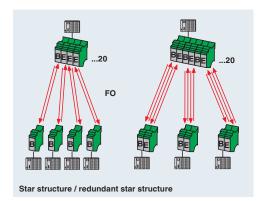


Application drawing

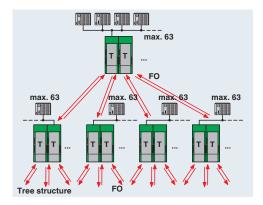




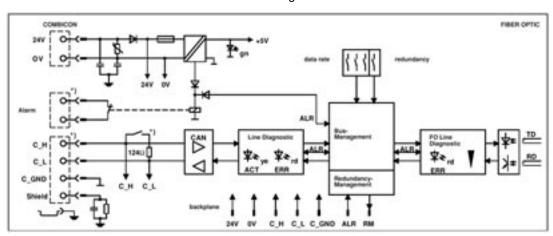
Application drawing



Application drawing



Block diagram



*) Only in the basic module

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