



PROFIBUS Fiber Optic Link Coupler and Repeater

Features

- For any PROFIBUS interface, e.g. Remote I/O, valves, drives, inverters, motors, controllers etc.
- Full galvanic isolation between field and control room
- No sparks capable of ignition or hot surfaces due to low light energies
- Automatic baud rate detection
- Star, ring, or line topology selectable
- Bridging of great distances while maintaining high transmission rates

Function

The Profibus-Fibre Optic Coupler and Repeater FOL 7250 converts Profibus into fibre optic signals and vice versa. Thus, great distances can be bridged even at high transmission rates (1,000 m at 1.5 Mbit/s) while complete galvanic isolation between field and control room is guaranteed.

The FOL 7250 can be used both as a point-to-point coupler and in a redundant ring. It automatically adapts to the Profibus transmission rate, detects line faults and performs an automatic redundancy switchover.

Technical data

Supply	
Connection	redundant
Rated voltage	U_r 18 ... 32 V , typical: 24 V
Rated current	I_r approx. 200 mA
Power consumption	4.8 W
Fieldbus interface	
Fieldbus type	PROFIBUS DP, DP V1, DP V2, FMS
Terminating resistor	integrated, switchable on
Electrical specifications	
Signal delay	< 6.5 bit times
Signal contact (safety extra-low voltage)	max. DC 60 V, AC 24 V, 1 A (Ex e)
Interface	
Interface type	RS-485
Transfer rate	9.6; 19.2; 93.75; 187.5; 500; 1500 kBit/s 3; 6; 12 Mbit/s self-synchronizing
External bus	
Connection	spring terminals, max. 1.5 mm ²
Redundancy	HIPER ring
Fiber optics	
Wave length	860 nm
Optical input power	min. -28 dBm, max. -3 dBm
Launchable optical power	in multi-mode fiber (50/125): (50/125): -15 dBm (62,5/125): -13 dBm
Cable length	Multi-mode fiber (MM) 50/125: 3000 m, 13 dB link budget at 860 nm; A = 3 dB/km; 3 dB buffer Multi-mode fiber (MM) 62,5/125: 3000 m, 15 dB link budget at 860 nm; A = 3,5 dB/km; 3 dB buffer
Connector type	BFOC/2.5
Galvanic isolation	
PROFIBUS DP/Supply	functional insulation acc. to DIN EN 50178
Indicators/settings	
LED indicator	LED System (red/green): Operating voltage and bitrate, LED CH1 (red/yellow): electric channel, LED CH2, CH3 (red/yellow): optic channel
Standard conformity	
Electromagnetic compatibility	EN 61000-4-2/3/4/5/6, EN 55022, NE 21
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	max. 100 % , moisture condensation allowable
Vibration resistance	1 g , 58 ... 150 Hz according to IEC 60068-2-6
Mechanical specifications	
Degree of protection	IP20
Cable	
Length	L 200 m ... 1000 m, depending on baud rate
Mass	1500 g
Dimensions	156 x 125 x 75 mm
Mounting	DIN rail mounting
Data for application in connection with hazardous areas	
EU-Type Examination Certificate	PTB 07 ATEX 2021 X
Marking	Ex II 2 G Ex e mb [ib] op is IIC T4
Directive conformity	
Directive 94/9/EC	EN 60079-0:2006 EN 60079-7:2007 EN 60079-11:2007 EN 60079-18:2004 EN 60079-28:2007
International approvals	
ATEX approval	PTB 07 ATEX 2021X
GOST-R approval	RU C-IT.MIII06.B.00129
INMETRO	Brazil: TÜV 14.1594X
Marine approval	
Lloyd Register	c15-20021
General information	

Release date 2018-04-20 11:34 Date of issue 2018-04-20 542408_eng.xml

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Supplementary information

Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

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