

Media converter FX/TX-IS LC for Zone 1

Multi mode

9723/12-11-24 Art. No. 294420



- For intrinsically safe 4-wire Ethernet 100BASE-TX-IS in Zone 1
- For class 1 fibre optic cables (IEC 60825-1) in Zone 1
- Supports 100 Mbit/s Ethernet communication
- Transmission range up to 2 km (multi-mode)/30 km (single-mode)
- Easy commissioning, no configuration required
- Installation in Zones 1, 2 or in safe areas

MY R. STAHL 9723A



The Ethernet media converters for installation in Zone 1 are used for conversion and galvanic separation of intrinsically safe Ethernet via copper/CAT cable (TX) to optical Ethernet via fibre optic cables (FX).

The copper Ethernet signal is designed with "ia" inherent safety type of protection, while the optical Ethernet signal meets the requirements of class 1 according to IEC 60825-1. Both interfaces are suitable for operation in hazardous areas of Zones 1 and 2. This means that industrial Ethernet cables and fibre optic cables can also be used in hazardous areas and may be connected and disconnected during operation (i.e. hot plug).

Due to the limited cable length of copper Ethernet (max. 100 m), the media converter is ideal for operating the IS1+ Remote I/O system and enables transmission lengths to reach up to several kilometres.

Technical Data

Explosion Protection

Application range (zones)	1, 2
Ex interface zone	0, 1, 2
IECEX gas certificate	IECEX TUR 23.0049 X
IECEX gas explosion protection	Ex eb ib mb [ia Ga] IIC T4 Gb
IECEX dust certificate	IECEX TUR 23.0049 X
IECEX dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	TÜV 23 ATEX 9059 X
ATEX gas explosion protection	⊕ II 2 (1) G Ex eb ib mb [ia Ga] IIC T4 Gb
ATEX dust certificate	TÜV 23 ATEX 9059 X
ATEX dust explosion protection	⊕ II (1) D [Ex ia Da] IIIC
Certificates	ATEX (TUR), IECEX (TUR)
Declaration of conformity	ATEX (EUK)

Safety Data

Max. voltage U_o	3.75 V
Max. current I_o	2 A
Max. permissible external capacity C_o for IIC	5.5 μ F
Max. permissible external inductance L_o for IIC	12.8 μ H
Max. permissible external capacity C_o for IIB	46 μ F

Safety Data

Max. permissible external inductance L_o for IIB	48.8 μ H						
Max. perm. ext. capacit. IIIC	14 μ F						
Max. permis. ext. induct. IIIC	48.8 μ H						
Internal capacitance	0 μ F						
Internal inductance	200 nH						
Max. voltage U_i (input)	5 V						
Safety-related max. voltage	60 V						
Max. FO radiant power	15 mW (Class 1)						
FO interface zone	1, 2						
Intrinsically safe limiting values inductance L_o /capacitance C_o	Jointly connectable inductance L_o /capacitance C_o						
IIC	L_o [mH]	12.800 μ H	9.800 μ H	4.800 μ H	1.800 μ H	0.800 μ H	
	C_o [μ F]	3.600 μ F	4.200 μ F	5.500 μ F	5.500 μ F	5.500 μ F	
IIB	L_o [mH]	48.800 μ H	19.800 μ H	9.800 μ H	4.800 μ H	1.80 μ H	0.80 μ H
	C_o [μ F]	14 μ F	23 μ F	35 μ F	46 μ F	46.000 μ F	46.00 μ F
IIIC	L_o [mH]	19.800 μ H	9.800 μ H	4.800 μ H	1.800 μ H	0.80 μ H	
	C_o [μ F]	23 μ F	35 μ F	46 μ F	46 μ F	46.000 μ F	

Electrical Data

Transfer rate	100 Mbit/s
Interface 1	1 port, 100BASE-FX MM LC
Interface 1 version	Class 1 (IEC 60825-1)
FO wavelength	1310 nm
FO fibre type	Multi mode
FO attenuation	1 dB / km
FO bandwidth	800 MHz * km
FO connection type	LC plug connector
FO fibre cross section	50/125 μ m [min. OM2]
FO optical budget	12 dB
FO transmission distance	2 km
Interface 2	1 Port, 100BASE-TX-IS, RJ45
Interface 2 version	Ex ia (100BASE-TX-IS)
Ethernet interface connection	RJ45 (EIA/TIA 568B)
Transmission distance	Up to 100 m (Cat5e or better)
Operating mode	Half duplex, Full duplex Auto-MDI(X)

Auxiliary Power

Nominal voltage	24 V DC
Voltage range DC	19.2 ... 32 V DC
Power supply	3-pin spring clamp terminal
Max. current consumption	120 mA

Output

Max. nominal current I_n output	204 mA
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Ambient Conditions

Ambient temperature	-40 °C ... +75 °C
Storage temperature	-40 °C ... +80 °C

Ambient Conditions

Maximum relative humidity	< 95% (no condensation)
Use at the height of	< 2000 m

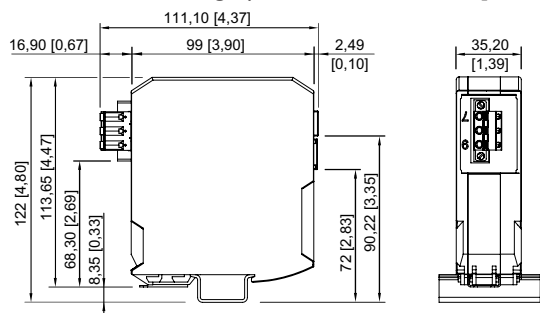
Mechanical Data

Degree of protection (IP)	IP30
Pollutant class	Corresponds to G3
Enclosure material	PA 6.6
Connection cross section	0.08 ... 2.5 mm ²
Weight	450 g

Mounting / Installation

Mounting type	On 35 mm DIN rail
Tightening torque	0.5 N · m
Mounting orientation	Horizontal Vertical

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



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