Network technology

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.

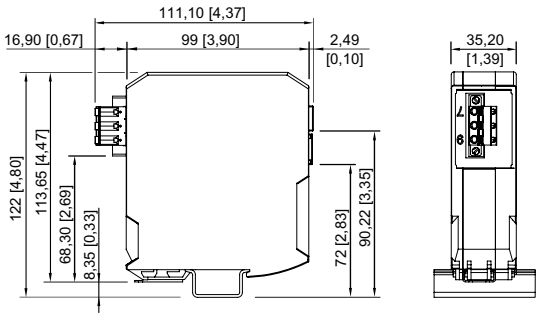
Technical Data

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 µF
Max. permissible external inductance L_o for IIC	12.8 µH
Max. permissible external capacity C_o for IIB	46 µF

Safety Data							
Max. permissible external inductance L_o for IIB		48.8 µH					
Max. perm. ext. capacit. IIIC		14 µF					
Max. permis. ext. induct. IIIC		48.8 µH					
Internal capacitance		0 µF					
Internal inductance		200 nH					
Max. voltage Ui (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 µH	9.800 µH	4.800 µH	1.800 µH	0.800 µH	
	C_o [µF]	3.600 µF	4.200 µF	5.500 µF	5.500 µF	5.500 µF	
IIB	L_o [mH]	48.800 µH	19.800 µH	9.800 µH	4.800 µH	1.80 µH	0.80 µH
	C_o [µF]	14 µF	23 µF	35 µF	46 µF	46.000 µF	46.00 µF
IIIC	L_o [mH]	19.800 µH	9.800 µH	4.800 µH	1.800 µH	0.80 µH	
	C_o [µF]	23 µF	35 µF	46 µF	46 µF	46.000 µF	
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 µm [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 In output		204 mA					
Ambient Conditions							
Ambient temperature		-40 °C ... +75 °C					
Maximum relative humidity		< 95% (no condensation)					

Ambient Conditions	
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 mm²
Weight	450 g
Weight	0.99 lb
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



We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.