



- For operation of up to four inherently safe fiber optic cables "op is" according to IEC 60079-28
- For 100 Mbit/s Industrial Ethernet
- Transmission range up to 3.1 mi / 5 km (multi-mode) or up to 18.6 mi / 30 km (single-mode)
- Extended temperature range -22 ... +158 °F / -30 ...+70 °C
- Redundant supply
- Installation in Cl. I, Div. 2, Zone 2 or in the safe area

WebCode **9721B**



The 9721 unmanaged switch is designed for linking electrical Ethernet networks (TX) and fiber optic (FX) based networks. The fiber optics are used for operation in hazardous areas of Cl. I, II, III, Div. 1 and Zone 0, 1, 2, 20, 21 and 22 with the type of protection "Ex op is" (IEC/EN 60079-28). Therefore, conventional fiber optic cables can also be used in hazardous areas and may be connected and disconnected during operation (hot swap). The unmanaged switch has 2 TX ports and 4 FX op is ports. Redundant supply can be provided. Compatible with: Remote I/O IS1+, HMI Series ET/MT-xx6-A-FX and ET/MT-4x8, as well as for IP network cameras.

Technical Data

Explosion Protection

Application range (Zones)	2
Ex interface zone	0 1 2 20 21 22
IECEX gas certificate	IECEX TUR 16.0002 X
IECEX gas explosion protection	Ex ec [op is T6 Ga] IIC T4 Gc
IECEX dust certificate	IECEX TUR 16.0002 X
IECEX dust explosion protection	[Ex op is Da] IIIC
ATEX gas certificate	TÜV 16 ATEX 7742 X
ATEX gas explosion protection	⊕ II 3 (1) G Ex ec [op is T6 Ga] IIC T4 Gc
ATEX dust certificate	TÜV 16 ATEX 7742 X
ATEX dust explosion protection	⊕ II (1) D [Ex op is Da] IIIC
FMus certificate	FM17US0054X
cFM certificate	FM17CA0030X
Marking cFMus	Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex nA [op is] Group IIC T4 Gc Ta = -30 °C to +70 °C See Doc. 9721 6 031 001 1
EAC certificate	TS RU S-DE.ME92.B.00915
EAC gas explosion protection	⊕ 2 Ex e [op is T6 Ga] IIC T4 Gc X
EAC dust explosion protection	⊕ [Ex op is Da] IIIC X
Certificates	ATEX (TUR), Canada (FM), China (NEPSI), EAC (Sertium), IECEX (TUR), India (PESO), USA (FM)

Network and Wireless Solutions

Unmanaged switch FX op is / TX SC for Zone 2

Single mode

9721/13-42-54 Art. No. 243428



Explosion Protection

Ship approval	ABS, EU RO MR (DNV)
Installation	Zone 2

Safety Data

Max. FO radiant power	≤ 15 mW
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Electrical Data

Transfer rate	10/100 Mbps Auto-negotiation
Voltage range DC	12 to 30 V DC
Ethernet interface connection	RJ 45 plug connector
Redundant supply	Yes
Interface 1	4 port, 100BASE-FX SM SC
FO wavelength	1310 nm
FO fiber type	Single-mode
FO attenuation	0.3 dB / km
FO bandwidth	3.5 ps / nm * km
FO connection type	SC plug connector
FO fiber cross-section	9/125 μm [OS1, OS2]
FO optical budget	16 dB
FO transmission distance	18.6 mi / 30 km [OS1, OS2]
Interface 2	2 Port, 100BASE-TX, RJ45
Transmission distance	Up to 100 m (Cat5e or better)
Operating mode	Half duplex, Full duplex Auto-MDI(X)

Auxiliary Power

Nominal voltage V_{nom}	24 V DC
Power supply	4-pole screw terminal
Max. current consumption	500 mA
Max. power consumption	6.4 W
Polarity reversal protection	Yes

Ambient Conditions

Ambient temperature °C	-30 °C ... +70 °C
Ambient temperature °F	-22°F ... +158°F
Storage temperature °C	-40 °C ... +85 °C
Storage temperature °F	-40°F ... +176°F
Max. relative humidity	< 95% (no condensation)
Use at the height of	< 2000 m

Mechanical Data

Degree of protection (IP)	IP20
Pollutant class	Corresponds to G3
Enclosure material	Stainless steel, powder-coated
Min. connection cross section	0.08 mm ²
Max. connection cross-section	2.5 mm ²
Stripping length	7 mm
Weight	0.5 kg
Weight	1.1 lb

Network and Wireless Solutions



Unmanaged switch FX op is / TX SC for Zone 2

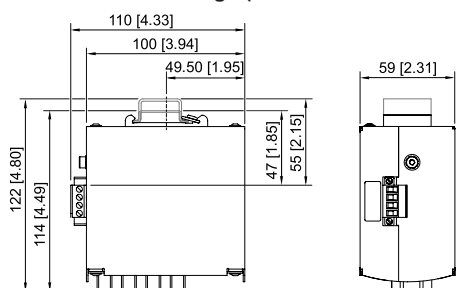
Single mode

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Mounting / Installation

Mounting type	On 35 mm DIN rail
Tightening torque	0.5 Nm
Mounting orientation	any

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



Accessories

FO patch cable



Patch cable for connection of IS1+ Ethernet CPU 9441 with media converter 9721; plug LC / SC; length 3.8 ft / 3 m

Art. No.

220911

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.