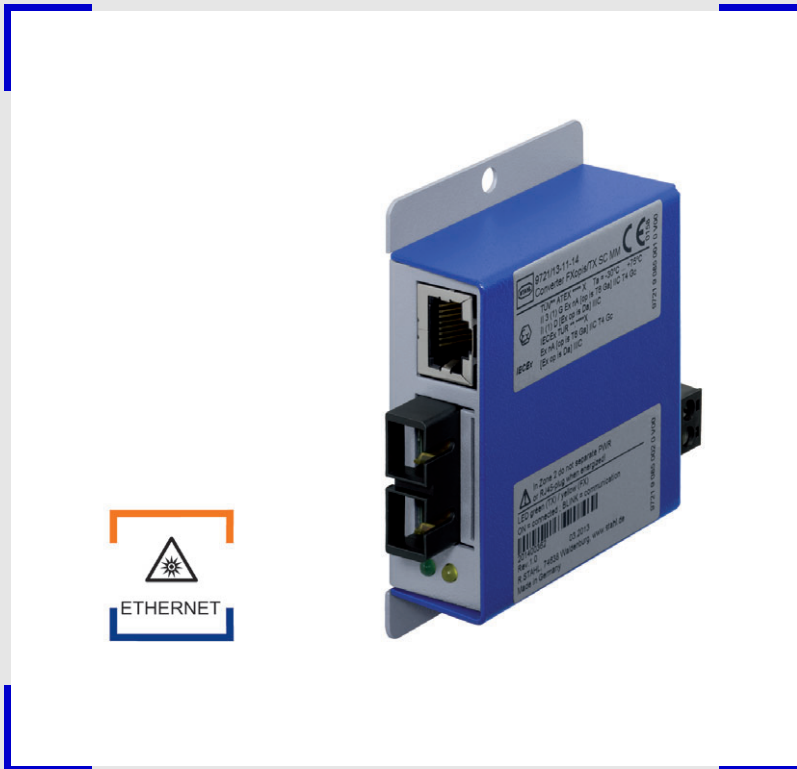


# Media Converter FX op is / TX SC for Zone 2

## Series 9721/13-11-xx



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16295E00

- > For operation of an inherently safe fibre optic cable „op is“ according to IEC 60079-28
- > For 100 MBit/s Industrial Ethernet
- > Transmission range up to 5 km (multi mode) or up to 30 km (single mode)
- > Extended temperature range -30 ... +75 °C
- > Easy commissioning, no configuration required
- > Installation in Zone 2 or in the safe area

A4



The Media Converter is used to convert electrical Ethernet signals (TX) into optical Ethernet signals (FX).

The optical Ethernet signals are used for operation in hazardous areas of Zone 0, 1 and 2 with the type of protection Ex op is. Therefore, conventional fibre optic cables can also be used in hazardous areas and may be connected and disconnected during operation (hot-swap).

The Media Converter (multi mode) is particularly suitable for the operation of the remote I/O systems IS1+ in Zone 1.

The Media Converter must be installed in the Ex-Zone into a suitable enclosure according to IEC/EN 60079-0.

Zone	ATEX / IECEx					
	0	1	2	20	21	22
Ex interface	x	x	x	x	x	x
Installation in			x			x

**WebCode 9721A**

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### Explosion Protection

#### Global (IECEX)

Gas and dust	IECEX TUR 13.0014X Ex nA [op is T6 Ga] IIC T4 Gc [Ex op is Da] IIIC
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#### Europe (ATEX)

Gas and dust	TÜV 13 ATEX 7316 X ⊕ II 3 (1) G Ex nA [op is T6 Ga] IIC T4 Gc ⊕ II (1) D [Ex op is Da] IIIC
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#### Certifications and certificates

Certificates	IECEX, ATEX, Belarus (operation authorisation)
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#### Further parameters

Installation	Zone 2, Zone 22 or in the safe area
Further information	see operating instructions and certificate

#### Safety data

Optical interface	
Max. radiation power P <sub>o</sub>	≤ 15 mW

### Selection Table

Version	Installation	Fibre optic cable	Description	Order number	Weight kg
Media Converter FX op is / TX SC	Zone 2 / 22	Single mode (SM) <sup>1</sup>	Media Converter Fx op is to TX, SC plug connector	<b>9721/13-11-54</b>	0.240
		Multi mode (MM)	Media Converter Fx op is to TX, SC plug connector	<b>9721/13-11-14</b>	0.240

Note 1 single mode version is not suitable for direct connection to Remote I/O IS1+.  
Clip for horizontal and vertical DIN rail mounting is included in the delivery.

### Technical Data

#### Electrical data

Auxiliary power	
Nominal voltage U <sub>N</sub>	12 ... 24 VDC
Voltage range	10.8 ... 26.4 VDC
Max. current consumption	200 mA
Max. power consumption	2.5 W
Polarity reversal protection	Yes

#### Connection cross-section

Supply voltage	2-pole screw-type terminal VDC 1 and GND	
	single-wire connection	pluggable screw terminals
	rigid	0.2 ... 2.5 mm <sup>2</sup>
	flexible	0.2 ... 2.5 mm <sup>2</sup>
	flexible with core end sleeves (with/without plastic sleeve)	0.25 ... 2.5 mm <sup>2</sup>
	two-wire connection	pluggable screw-type terminals
	rigid	0.2 ... 1 mm <sup>2</sup>
	flexible	0.2 ... 1.5 mm <sup>2</sup>
Main terminals	flexible with core end sleeves	0.25 ... 1 mm <sup>2</sup>
	tightening torque: 0.5 - 0.6 Nm	
Stripping length	7 mm	

#### Ethernet interface

Version	100Base TX (copper cable)
Connection type	RJ 45 plug connector
Transfer rate	10/100 Mbit/s, auto-negotiation
Operating mode	half duplex; full duplex Auto-MDI(X)
Transmission line length	up to 100m (Cat5e or better)

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### Technical Data

#### FO/Ethernet connection

Design	9721/13-11-54 Single mode (SM)	9721/13-11-14 Multi mode (MM)
Fibre cross-section	9 / 125 µm (OS1, OS2)	50 / 125 µm [OS3, OS4] (62.5 / 125 µm [OM1])
Transmission distance	max. 30 km	max. 5 (4) km
Attenuation	0.3 dB / km	1 dB / km
Optical budget	16 dB	12 (15) dB
Bandwidth	3.5 ps / nm * km	800 (500) MHz * km
Wavelength	1310 nm	1310 nm
Connection type	SC plug connector	SC plug connector

#### Ambient conditions

Ambient temperature	-30 ... +75 °C (observe operating instructions)
Storage temperature	-40 ... +80 °C
Relative humidity	< 95 % (without condensation)
Electromagnetic compatibility	tested under the following standards and regulations for the use in the industrial sector: EN 61326-1, IEC 61000-4-1 ... 6


#### Mechanical data

Installation conditions	
Mounting type	on 35 mm DIN rail NS 35/15 or wall mounting
Mounting orientation	horizontal or vertical, mounting clips are included in the delivery (observe operating instructions)
Enclosure material	Stainless steel, powder-coated
Degree of protection (IEC 60529)	IP20 (the Media Converter must be installed in the Ex-Zone into a suitable protective enclosure, see operating instructions)
Pollutant class	corresponds to G3

#### Diagnostics

Status LEDs	
Port connection	LED "RJ45", lit in green
Data traffic	LED "RJ45", flashing green
Port connection	LED "FO", lit in yellow
Data traffic	LED "FO", flashing yellow

#### Accessories and Spare Parts

Designation	Figure	Description	Art. no.	Weight kg
FO patch cable		Patch cable for connection of IS1+ Ethernet CPU 9441 with media converter 9721; plug LC / SC; length 3 m	220911	0,200

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

with FO socket contacts and auxiliary power connection as above with connected FO plug	Dimension X 81 [3.19]
	116 [4.57]

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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.