



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX TUR 13.0014X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 1 Issue 0 (2013-12-18)  
Date of Issue: 2021-07-05  
Applicant: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany  
Equipment: **Converter FXopis/TX SC, Type 9721/13-11-14 and 9721/13-11-54**  
Optional accessory:  
Type of Protection: **ec and op is**  
Marking: Ex ec [op is T6 Ga] IIC T4 Gc  
[Ex op is Da] III C


Approved for issue on behalf of the IECEx  
Certification Body:

**Christian Mehrhoff**

Position:

**Assigned certifier**

Signature:  
(for printed version)

  
\_\_\_\_\_

Date:

2021-07-05



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Certificate issued by:

**TUV Rheinland Industrie Service GmbH**  
Am Grauen Stein  
51105 Cologne  
Germany





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Certificate No.: **IECEX TUR 13.0014X**

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Date of issue: 2021-07-05

Issue No: 1

Manufacturer: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/TUR/ExTR13.0014/01](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/16](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Converter FXopis/TX SC Type 9721/13-11-14 and 9721/13-11-54.

A fiber optic media converter for Industrial Ethernet converts signals directly between copper and fiber optic cables. Thus, fiber optic media converters offer the possibility to enlarge the range of an already existing network.

The Converter FXopis/TX SC converts signals between standard copper cable based Ethernet signals and Ex op is fiber optic signals.

Therefore the Converter FXopis/TX SC maybe installed in Zone 2 or Zone 22 or outside explosive atmospheres. The Ex op is interface is certified as per [Ex op is T6 Ga] or [Ex op is Da] and can be connected to devices in Zone 0 or Zone 20.

- For operation in Zone 2 hazard areas a housing of at least IP 54 is required.
- For operation in Zone 22 hazard areas a housing of at least IP 64 is required.

The Converter FXopis/TX SC is equipped with a singlemode (SM) or multimode (MM) transceiver.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.

For installations in Zone 2 or Zone 22 the Converter FXopis/TX SC \*\* shall be mounted in a protective housing or cabinet according to IEC 60079-0 which provides an appropriate type of protection.

For installations in Non-Ex area and in Zone 2 a housing of at least IP54 is required.

For installations in Zone 22 a housing of at least IP64 is required.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Standard update to IEC 60079-0 ed. 7.0, IEC 60079-28 ed. 2.0 and transfer of IEC 60079-15 ed.4.0 to IEC 60079-7 ed. 5.1.
- The marking changed from nA to ec.
- Editorial changes to the circuit diagram.

## Annex:

[DE-IECEX\\_TUR\\_13.0014\\_X\\_01\\_Attachment\\_1.pdf](#)



**Device:** Converter FXopis/TX SC  
**Type:** 9721/13-11-14 and 9721/13-11-54

**Manufacturer:** R. STAHL Schaltgeräte GmbH

**Address:** Am Bahnhof 30  
74638 Waldenburg, Germany

Type designation:

| Converter FXopis/TX SC               | 9721 / | * | * | - | * | * | - | * | * |
|--------------------------------------|--------|---|---|---|---|---|---|---|---|
|                                      |        | a | b |   | c | d |   | e | f |
| Hardware-Version:                    |        |   |   |   |   |   |   |   |   |
| 1                                    | 1      |   |   |   |   |   |   |   |   |
| 2                                    | 2      |   |   |   |   |   |   |   |   |
| Hazardous area:                      |        |   |   |   |   |   |   |   |   |
| Zone 1                               | 2      |   |   |   |   |   |   |   |   |
| Zone 2                               | 3      |   |   |   |   |   |   |   |   |
| Number of ports op is                |        |   |   |   |   |   |   |   |   |
| 1 Port                               | 1      |   |   |   |   |   |   |   |   |
| 2 Ports                              | 2      |   |   |   |   |   |   |   |   |
| Number of ports non-Ex               |        |   |   |   |   |   |   |   |   |
| 1 Port                               | 1      |   |   |   |   |   |   |   |   |
| 2 Ports                              | 2      |   |   |   |   |   |   |   |   |
| Design of Ex op is ports             |        |   |   |   |   |   |   |   |   |
| 100Base FX Multimode, SC             | 1      |   |   |   |   |   |   |   |   |
| 100Base FX Multimode, LC             | 2      |   |   |   |   |   |   |   |   |
| 100Base FX Singlemode, SC            | 5      |   |   |   |   |   |   |   |   |
| 100Base FX Singlemode, LC            | 6      |   |   |   |   |   |   |   |   |
| Design of non-Ex ports               |        |   |   |   |   |   |   |   |   |
| 100Base FX Multimode, SC             | 1      |   |   |   |   |   |   |   |   |
| 100Base FX Multimode, LC             | 2      |   |   |   |   |   |   |   |   |
| 100Base TX Copper 4-w ire Cat5, M12  | 3      |   |   |   |   |   |   |   |   |
| 100Base TX Copper 4-w ire Cat5, RJ45 | 4      |   |   |   |   |   |   |   |   |
| 100Base FX Singlemode, SC            | 5      |   |   |   |   |   |   |   |   |
| 100Base FX Singlemode, LC            | 6      |   |   |   |   |   |   |   |   |

**Electrical data:**

Nominal voltage: 12 ... 24 V DC  
Nominal power consumption: < 2,5 W

**Environmental data:**

Operating temperature range : -30°C ≤ Ta ≤ + 75°C

IP Code : enclosure: IP 30;  
connection terminals: IP 20

must be installed inside housing or cabinet which complies with the requirements of IEC 60079-0 with IP 54 at minimum and IP 64 for use in Zone 22

**Safety data:**

Optical Ethernet interface and status LED  
As per. IEC 60079-28, „op is“-protected  
max. optical output power: < 15 mW