



# 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 EPS 21.0017X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-07-01

Applicant: **Hans Turck GmbH & CO KG**  
Witzlebenstraße 7  
D-45472 Mülheim  
Germany  
**Germany**

Equipment: **Media Converter types FOC12Ex-2G, FOC11Ex-2G, FOC12-3G and FOC11-3G**

Optional accessory: -

Type of Protection: **Intrinsic Safety "i", increased Safety "e", moulding "m", optical radiation "op is"**

Marking: **FOC12Ex-2G and FOC11Ex-2G:**  
Ex eb mb ib [op is Ga] IIC T4 Gb and  
[Ex ib Db] [Ex op is Da] IIIC  
**FOC12-3G and FOC11-3G**  
Ex ec mc ic [op is Ga] IIC T4 Gc and  
[Ex op is Da] IIIC

Approved for issue on behalf of the IECEx  
Certification Body:

**H. Schaffer**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

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Certificate issued by:

**Bureau Veritas Consumer Products Services Germany GmbH**  
Businesspark A96  
86842 Türkheim  
Germany





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Manufacturer: **Hans Turck GmbH**  
Witzlebenstraße 7  
45472 Mülheim an der Ruhr  
**Germany**

Manufacturing  
locations: **Werner TURCK GmbH & Co. KG**  
Goethestraße 7  
58553 Halver  
**Germany**

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

[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/EPS/ExTR21.0016/00](#)

Quality Assessment Report:

[DE/PTB/QAR06.0013/06](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The media converter types FOC12Ex-2G, FOC11Ex-2G, FOC12-3G and FOC11-3G converts signals from an RS485-interface into intrinsically safe optical signals or signals of the intrinsically safe optical interfaces into signals for the RS485 interface.

The media converters have one RS485-IS-interface (...-2G) respective one RS485-interface (...-3G) and one (FOC11..) respective two (FOC12..) inherently safe optical interfaces (each transmitter and receiver).

The permissible ambient temperature range conducts to -40°C to +70°C for all versions.

## Electrical data:

Supply: 24VDC (18...32VDC),  $I \leq 100$  mA,  $P \leq 3,2$  W - maximum voltage  $U_m = 40$ VDC

Optical interface: in kind of protection inherently safe optical radiation „op is“

RS485-IS-Interface: Types FOC11Ex-2G and FOC12Ex-2G

in kind of protection intrinsically safety Ex ib IIC resp. Ex ib IIIC

Maximum values:  $U_i = 4,2$  V

$U_o = 4,2$  V

$I_o = 131$  mA

$P_o = 124$  mW

Linear output characteristic

Maximum effective internal capacitance  $C_i = 35,7$  µF

The effective internal inductance is negligible small

resp.

RS485-Interface: Types FOC11-3G and FOC12-3G

$U_{nom} = 5$  V - maximum voltage  $U_m = 40$ VDC

Fault signal output: Types FOC11Ex-2G and FOC12Ex-2G

in kind of protection intrinsically safety Ex ib IIC resp. Ex ib IIIC

Maximum values:  $U_i = 10$  V

Maximum effective internal capacitance  $C_i = 0,03$  µF

The effective internal inductance is negligible small

resp.

Types FOC11-3G and FOC12-3G

$U_{nom} = 24$  V - maximum voltage  $U_m = 40$ VDC

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

The manual has to be recognized, especially in regard of the installation references and the data of the appropriate versions.

When used in potentially explosive gas atmospheres according the category given in the marking of the device, the media converters shall only be installed in an enclosure that provides a minimum protection of IP54 in accordance to IEC 60079-0 and where applicable in accordance to the IEC 60079-7.

When used in potentially explosive dust atmospheres according the category given in the marking of the device, the media converters shall only be installed in an enclosure in accordance to IEC 60079-31.