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

Certificate No.:	**IECEx TUN 17.0012X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2017-05-23)
Date of Issue:	2022-11-07		
Applicant:	**Hans Turck GmbH & Co KG** Witzlebenstraße 7, 45472 Mülheim an der Ruhr **Germany**		
Equipment:	**Isolating amplifier without auxiliary energy**		
Optional accessory:	IMC-AI-11Ex-i/L		
Type of Protection:	**Intrinsic safety „i“, Protection by enclosure „t“, protection by increased safety “e”**		
Marking:	[Ex ia Ga] IIC [Ex ia Da] IIIC Ex ec [ia Ga] IIC T4 Gc Ex tc [ia Da] IIIB T80°C Dc		

Approved for issue on behalf of the IECEx Certification Body: **Andreas Meyer**

Position: **Head of IECEx Certification Body**

Signature: (for printed version)

Date: (for printed version)

TÜV NORD

Digital unterschrieben von Meyer Andreas
Datum: 2022.11.07 17:17:56 +01'00'

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany

TÜV NORD

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Manufacturer: **Hans Turck GmbH & Co KG**
Witzlebenstraße 7, 45472 Mülheim an der Ruhr
Germany

Manufacturing locations:

Hans Turck GmbH & Co KG
Witzlebenstraße 7, 45472 Mülheim an der Ruhr
Germany

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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
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/TUN/ExTR16.0061/01

Quality Assessment Reports:

DE/PTB/QAR06.0012/05 DE/PTB/QAR06.0013/09

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Description:

The isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L is used as an input isolator for the safe galvanic separation between intrinsically safe measuring signals and non-intrinsically safe output signals.

Electrical and thermal data:

See Attachment to IECEx TUN 17.0012X issue No.1

SPECIFIC CONDITIONS OF USE: YES as shown below:
1.For applications that require devices of EPL Gc and EPL Dc: The connecting and disconnecting of energised non energy limited circuits is not permitted (see warning label).

2.For applications that require devices of EPL Gc and EPL Dc: The protective housing has to be safely screwed to a solid basement with the provided screws resp. with screws according to the manufacturer's manual.

3.For applications that require devices of EPL Dc: The value for the surface temperature was measured without dust layer.

4.For applications that require devices of EPL Dc: The dust is only allowed to be non-conductive.

5.For applications that require devices of EPL Dc: The isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L has to be protected from prolific charge generating mechanisms.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Proof of conformity of the isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L to the current versions of the standards IEC 60079-0:2017; IEC 60079-7:2017; IEC 60079-11:2011 and IEC 60079-31:2013.

Annex:

Attachment to IECEx TUN 17.0012X issue No.1 .pdf

TÜV NORD CERT GmbH
Hannover Office
Am TÜV 1
30519 Hannover
Germany

Attachment to IECEx TUN 17.0012X issue No.: 1

Description:
The isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L is used as an input isolator for the safe galvanic separation between intrinsically safe measuring signals and non-intrinsically safe output signals.

Type code and Marking:

IMC-AI-11Ex-i/L	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex ec [ia Ga] IIC T4 Gc
	Ex tc [ia Da] IIIB T80 °C Dc

Electrical data:

Output circuit (Connections X2: Pins 2[+], 4[-])	For connection to non-intrinsically safe circuits with the following maximum values: U_N = 13.3 V d.c., I = 0…20 mA U_m = 253 V a.c.
Input circuit (Connections X1: Socket 2[+], 4[-])	In type of protection intrinsic safety Ex ia IIB/IIC/IIIB/IIIC Only for connection to certified intrinsically safe circuits. Maximum values: U_i = 27 V I_i = 150 mA P_i = 1 W The effective internal capacitance C_i is negligibly small. The effective internal inductance L_i is negligibly small.

For safety reasons, the input circuit has to be considered as passive.
The maximum values for L_o und C_o, which are permissible in the input circuit, have to be taken from the certificate of the connected apparatus.
The intrinsically safe input circuit is safely galvanically separated from the non-intrinsically safe output circuit up to the peak crest value of the voltage of 375 V.

Thermal data:
Permissible ambient temperature range during operation : -25 °C ≤ Ta ≤ +70 °C

Details of change:
Proof of conformity of the isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L to the current versions of the standards IEC 60079-0:2017; IEC 60079-7:2017; IEC 60079-11:2011 and IEC 60079-31:2013.

Specific Conditions of Use:
1. For applications that require devices of EPL Gc and EPL Dc: The connecting and disconnecting of energised non energy limited circuits is not permitted (see warning label)
2. For applications that require devices of EPL Gc and EPL Dc: The protective housing has to be safely screwed to a solid basement with the provided screws resp. with screws according to the manufacturer's manual.
3. For applications that require devices of EPL Dc: The value for the surface temperature was measured without dust layer.
4. For applications that require devices of EPL Dc: The dust is only allowed to be non-conductive.
5. For applications that require devices of EPL Dc: The isolating amplifier without auxiliary energy type IMC-AI-11Ex-i/L has to be protected from prolific charge generating mechanisms.