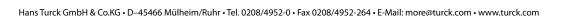


# **IECEx Certificate** of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

Certificate No.:	IECEx TUN 07.0010X	issue No.:0	Certificate history:
			LZ
Status:	Current		
late of Issue:	2007-09-05	Page 1 of 5	
applicant:	Hans Turck GmbH & Co. K Witzlebenstraße 7 D-45472 Mülheim an der Ruhr Germany	3	
Electrical Apparatus: Optional accessory:	Isolating amplifier without au	xiliary energy type IMC-AO-11Ex-i/L	
Type of Protection:	Intrinsic safety "i", type of pro	otection "n" electrical apparatus, protec	ction by enclosures "tD"
Marking:	[Ex ia] IIB/IIC Ex nA [nL] IIB/IIC T4 Ex tD A22 IP67 T80°C		
Approved for issue on be Certification Body:	half of the IECEx	Karl-Heinz Schwedt	
Position:		Head of ExCB	
Signature: for printed version)		Sheedt	
Date:		2007-02-05	
<ol><li>This certificate is not tr</li></ol>	nedule may only be reproduced in full. ransferable and remains the property of ticity of this certificate may be verified	f the issuing body. by visiting the Official IECEx Website.	
ertificate issued by:	en considerate de Lari comuni de Maria de Constante de Co	* Y Front Tay and the American Resolution State	
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Date of Issue:

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Manufacturer

Werner Turck GmbH & Co. KG

Goethestraße 7 D-58553 Halver Germany

#### Manufacturing location(s):

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 Exproducts 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

#### STANDARDS:

The electrical apparatus 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: 2004

Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

Edition: 4.0

IEC 60079-11: 1999 Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety "I"

Edition: 4 IEC 60079-15 : 2005-03

Electrical apparatus for explosive gas atmospheres Part 15: Contruction, test and Marking of Type of Protection

Edition: Ed 3 "n" electrical apparatus

Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements IEC 61241-0: 2004

Edition: 1

IEC 61241-1: 2004

Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

Edition: 1

This Certificate does not indicate compliance with electrical 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/ExTR07.0014/00

Quality Assessment Report: DE/PTB/QAR08.0012/00

2010-04-27



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The isolating amplifier without auxiliary energy type IMC-AO-11Ex-i/L is an associated electrical apparatus for installation outside of the explosion hazardous area according to IEC 60 079-11 resp. an apparatus for use in zone 2 explosion hazardous areas according to IEC 60 079-15.

It is also an apparatus according to IEC 61241-1 for use in zone 22 explosion hazardous areas.

It is used for the safe galvanic separation of the non intrinsically safe resp. non energy limited input circuit (measuring signal 0 ... 20mA) and the intrinsically safe resp. energy limited output circuit.

The marking as associated intrinsically safe apparatus outside the explosion hazardous area is

The marking for mounting in explosion hazardous areas of zone 2 is Ex nA [nL] IIC/IIB T4.

The marking for mounting in explosion hazardous areas of zone 22 is

Ex tD A22 IP67 T80°C.

The permissible ambient temperature range is -25°C ... 70°C.

#### CONDITIONS OF CERTIFICATION: YES as shown below:

- 1. For zone 2 and zone 22 applications: The connecting and disconnecting of energised non energy limited circuits is not permitted (see warning label).
- 2. Zone 2 and zone 22 applications: 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. Zone 22 applications: The value for the surface temperature was measured without dust layer.
- 4. Zone 22 applications: The dust is only allowed to be non conductive.





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EQUIPMENT(continued):

Electrical Data

Input circuit

(Connections X1;pins 1[+] and 3[-]

U = 24 V d. c. (max. 30 V d. c.)

For applications of the isolating amplifier without auxiliary

energy with marking

[Ex ia] IIC/IIB:Um = 250 V

Output circuit

(Connections X2; bushings 1 [+], 3 [-]

Maximum values:

 $U_{a} = 13.3 \text{ V}$  $I_a = 97 \text{ mA}$ 

 $P_n = 322 \text{ mW}$ 

Characteristic line: linear

The effective internal capacitances and inductances are

negligibly small.



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#### Additional information:

For applications with marking [Ex ia] IIC/IIB:

Ex ia	IIC		IIB	
max. permissible external inductance	2 mH	0.2 mH	2 mH	0.2 mH
max. permissible external capacitance	420 nF	910 nF	2700 nF	5500 nF

For applications with marking Ex nA [nL] IIC/IIB T4:

Ex nL	IIC		IIB	
max. permissible external inductance	5 mH	0.5mH	10 mH	1 mH
max. permissible external capacitance	510 nF	1200 nF	2900 nF	5800 nF

The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The intrinsically safe resp. energy limited circuits are safely galvanically separated from the non intrinsically safe resp. non energy limited circuits up to the peak crest value of the voltage of 375 V.