



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
 for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx IBE 09.0011X issue No.: 0 Certificate history:

Status: **Current**

Date of Issue: **2009-08-14** Page 1 of 4


Applicant: **Hans Turck GmbH & Co. KG**
 Witzlebenstrasse 7
 45472 Mülheim an der Ruhr
 Germany

Electrical Apparatus: **Transmitter Power Supply IM33-14Ex-CDRI**
 Optional accessory:

Type of Protection: **Intrinsic Safety; Type 'n'**

Marking: **[Ex ia] IIC/IIIB**
[Ex iaD]
Ex nA nC [nL] IIC/IIIB T4

Approved for issue on behalf of the IECEx Certification Body: Prof. Dr. Tammo Redeker
 Position: Head of Certification Body

Signature: *(for printed version)* 

Date: 2009-08-14

1. This certificate and schedule may only be reproduced in full.
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 the Official IECEx Website.

Certificate issued by:
IBExU Institut für Sicherheitstechnik GmbH
 Certification Body
 Fuchsmühlenweg 7
 09599 Freiberg
 Germany



IECEX Certificate of Conformity

Certificate No.: IECEx IBE 09.0011X
 Date of Issue: **2009-08-14** Issue No.: 0
 Page 2 of 4

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

Manufacturing location(s):
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 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 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'ID'

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/IBE/EXTR09.0010/00

Quality Assessment Report:
 DE/PTB/QAR06.0012/01



IECEx Certificate of Conformity

Certificate No.: IECEx IBE 09.0011X
 Date of Issue: 2009-08-14 Issue No.: 0
 Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The single-channel transmitter power supply type IM33-14Ex-CDRi is an associated electrical apparatus for installation outside of the explosion hazardous area (acc. IEC 60079-11 and IEC 61241-11) resp. an apparatus for use in zone 2 explosion hazardous areas (acc. IEC 60079-15).
 The equipment is used to operate intrinsically safe 2-wire transducers in explosive gas atmospheres or in the presence of combustible dust and to transfer the measuring signal to the safe area. The intrinsically safe input circuits, output circuits and the supply circuit are each galvanic isolated.

Technical data:

Ambient temperature T_a -25 ... +70 °C
 Type of ingress protection \geq IP 20
Supply circuit (Terminal: 19; 20):
 Nominal voltage U_N 20...250 V AC / 20...125 V DC
 Rated Power P_N \leq 4.5 W
 Maximum r.m.s or d.c. voltage U_m 250 V AC / 125 V DC

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use in zone 2:

At the installation within the hazardous area of zone 2, the transmitter power supply IM33-14Ex-CDRi must be built in into enclosures which meet the requirements of the IEC 60079-15 (at least IP 54).
 Connecting and disconnecting of the connections of not energy-limited electrical circuits under voltage is only permitted at installation and for maintenance and repair purposes.



IECEx Certificate of Conformity

Certificate No.: IECEx IBE 09.0011X
 Date of Issue: 2009-08-14 Issue No.: 0
 Page 4 of 4

EQUIPMENT(continued):

Intrinsically safe input circuits (Terminal: 1 ... 4):

Level of protection ia and nL
 Maximum output voltage U_o 21.6 V
 Maximum output current I_o 85 mA
 Maximum output power P_o 459 mW
 C_i, L_i negligible
 Characteristic trapezoidal, $R_i = 408 \Omega$
 Galvanic separated up to a peak voltage 375 V
 The following maximum external values apply for the IS circuit if there are C and L:

Ex ia IIC			
C_o	30 nF	50 nF	
L_o	0.3 mH	0.15 mH	
Ex ia IIB			
C_o	630 nF	680 nF	950 nF
L_o	5 mH	1 mH	0.15 mH
Ex nL IIC			
C_o	170 nF	210 nF	255 nF
L_o	4 mH	0.5 mH	0.15 mH
Ex nL IIB			
C_o	1000 nF	1200 nF	1400 nF
L_o	5 mH	1 mH	0.15 mH

Output circuit (Terminal: 11+; 16-):

Level of protection nA
 Voltage U 13.5 V
 Current I 22.5 mA
 Maximum r.m.s or d.c. voltage U_m 250 V AC / 125 V DC

Relay contact circuits (Terminal: 12 and 13; 14 and 15; 17 and 18)

Level of protection nA, nC
 Breaking capacity 250 V AC / 2 A
 120 V DC / 0.5 A
 30 V DC / 2 A
 500 VA / 60 W

Configuration interface RS 232C (Terminal: jack socket at front panel):

Level of protection nA
 Nominal voltage U_N 3.3 V
 Maximum r.m.s or d.c. voltage U_m 250 V AC / 125 V DC