IEC Ex Certificate of Conformity	IEC 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 09.0003X Date of Issue: 2009-03-31 Issue No.: 0 Page 2 of 4
Certificate No.: IECEx IBE 09.0003X issue No.:0 Certificate history: Status: Current Date of Issue: 2009-03-31 Page 1 of 4 Applicant: Hans Turck GmbH & Co. KG Witzlebenstrasse 7 45472 Müheim an der Ruhr Germany Vitzlebenstrasse 7	Manufacturer: Werner Turck GmbH & Co. KG Goethestrasse 7 S5553 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 Ex produc 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.
Electrical Apparatus: Rotation Speed Monitor IM21-*4Ex-CDTRi Optional accessory: Intrinsic Safety; Type 'n' Type of Protection: Intrinsic Safety; Type 'n' Marking: [Ex ia] IIC/IIB [Ex iaD] Ex nA nC [nL] IIC/IIB T4 Approved for issue on behall of the IECEx Prof. Dr. Tammo Redeker Certification Body: Prof. Dr. Tammo Redeker Position: Head of Certification Body Signature: (for printed version) Juluu Date: Juluu 1. This certificate and schedule may only be reproduced in full. 2. This certificate and schedule may only be reproduced in full. 2. This certificate and authenticity of this certificate may be verified by visiting the Official IECEx Website.	STANDARDS: The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identific 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 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "T" Edition: 5 IEC 60079-15 : 2005- Electrical apparatus for explosive gas atmospheres Part 15: Contruction, test and Marking of Type of Protection "n" electrical apparatus Edition: 3 Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements IEC 61241-0 : 2004 Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements IEC 61241-11 : 2005 Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection 1 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:
Certificate issued by: IBExU Institut für Sicherheitstechnik GmbH Certification Body Fuchsmühlenweg 7 09599 Freiberg Germany	DE/IBE/ExTR09.0005/00 Quality Assessment Report: DE/PTB/QAR06.0012/00

Equipment and systems covered by this certificate are as follows: The Rotation Speed Monitor IM21-*4Ex-CDTRI is used for the galvanically isolated monitoring and evaluation of requencies, revolutions and impulse sequences. The equipment is provided for use in potentially hazardous areas of one 2, it can supply into areas which require zone 0 or 20-operating supplies. The amplifiers are single- or double-hannel types. Ype code: M21-*4 Ex-C D T R i a b c d e f g h i a Type designation for Rotation Speed Monitor b Number of channels (1 or 2) c Number of channels (1 or 4) d Equipment with Ex-approval e PC-connection (C) f Digital outputs (D) g Transistor outputs (T) h Relay outputs (R) i Kind of analog output (i for current and u for voltage output) i for current and u for voltage output) c: Nontitor Installation within the hazardous area of zone 2, the Rotation Speed Monitors IM21-*4Ex-CDTRi must be built i to enclosures which meet the requirements of the IEC 60079-15 (at least IP54).			IECEx Certificate of Conformity			
Page 3 of 4 Schedule CUIPMENT: Gaugement and systems covered by this certificate are as follows: The Rotation Speed Monitor IM21-*4Ex-CDTRI is used for the galvanically isolated monitoring and evaluation of requencies, revolutions and impulse sequences. The equipment is provided for use in potentially hazardous areas of crone 2. It can supply into areas which require zone 0 or 20-operating supplies. The amplifiers are single- or double- thannel types. Type code: M21-* 4 Ex-CDTRI a b c d e f g h i a Type designation for Rotation Speed Monitor b Number of channels (1 or 2) c Number of channels (1 or 2) c Number of outputs (1 to 4) d Equipment with Ex-approval e PC-connection (C) f Digital outputs (D) g Transistor outputs (T) h Relay outputs (R) i Kind of analog output (i for current and u for voltage output) 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 Rotation Speed Monitors IM21-*4Ex-CDTRI must be built in to enclosures which meet the requirements of the IEC 60079-15 (at least IF54).	Certificate No.:.	IECEx IBE 09.0003X				
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Page 4 of 4 Exchnical data: 1. Power supply Nominal voltage U_N 20250 V AC / 125 V DC Rated power P_N ≤ 4.5 W Maximum r.m.s. AC or DC voltage U_m 250 V AC / 125 V DC 2. Intrinsically safe sensor circuit (Terminal 1;2 6;7 or 9;10) Level of protection ia resp. nL Maximum output voltage U_o 9.6 V Maximum output voltage U_o 25 mW Internal capacitance, inductance $C_{\mu}L_{\mu}$ negligible Characteristic linear, Ri = 900 Ω The following maximum external values apply for the sensor circuit if there are capacitances and inductances: Level of Protection Ex Ia IIC Ex Ia IIB Co 50 nF 1840 nF 1.2 µF 3.6 µF 2.7 µF 4.4 µF 6.3 µF 20 Level of Protection Ex Ia IIC Ex Ia IIB Ex	Date of Issue:	2009-03-3	H			Issue No	0	
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Co 765 nF 1.2 μF 1.8 μF 5.4 μF 4.0 μF 6.6 μF 9.4 μF 38 Lo 100 mH 5 mH 1 mH 10 μH 100 mH 5 mH 1 mH 10 μH 100 mH 5 mH 1 mH 10 1. Intrinsically safe digital output Level of protection (passive, Terminal 6;7) ia resp. nL ia resp.			1 mH	10 µH		5 mH	1 mH	10 µH
L _o 100 mH 5 mH 1 mH 10 µH 100 mH 5 mH 1 mH 10 h. Intrinsically safe digital output (passive, Terminal 6;7) Level of protection ia resp. nL Maximum input voltage U _i 20 V		and the second se	1.8 uF	54 uE	and the second se	6.6 uE	94.uE	39 µF
b. Intrinsically safe digital output (passive, Terminal 6;7) Level of protection ia resp. nL Maximum input voltage U _i 20 V		20.000	110 1 3 0 2 100					10 µH
Level of protection ia resp. nL Maximum input voltage U _i 20 V	0			1			1	
Maximum input voltage U _i 20 V		utput (passive, Ter					
Maximum input current I: 21.3 mA								
	Maximum input current	ı,		21.3 mA				
Maximum input power P _i 400 mW		Pi		400 mW				
Environmetal data								
		-	-25 %					
Degree of protection of the enclosure ≥ IP 20								
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