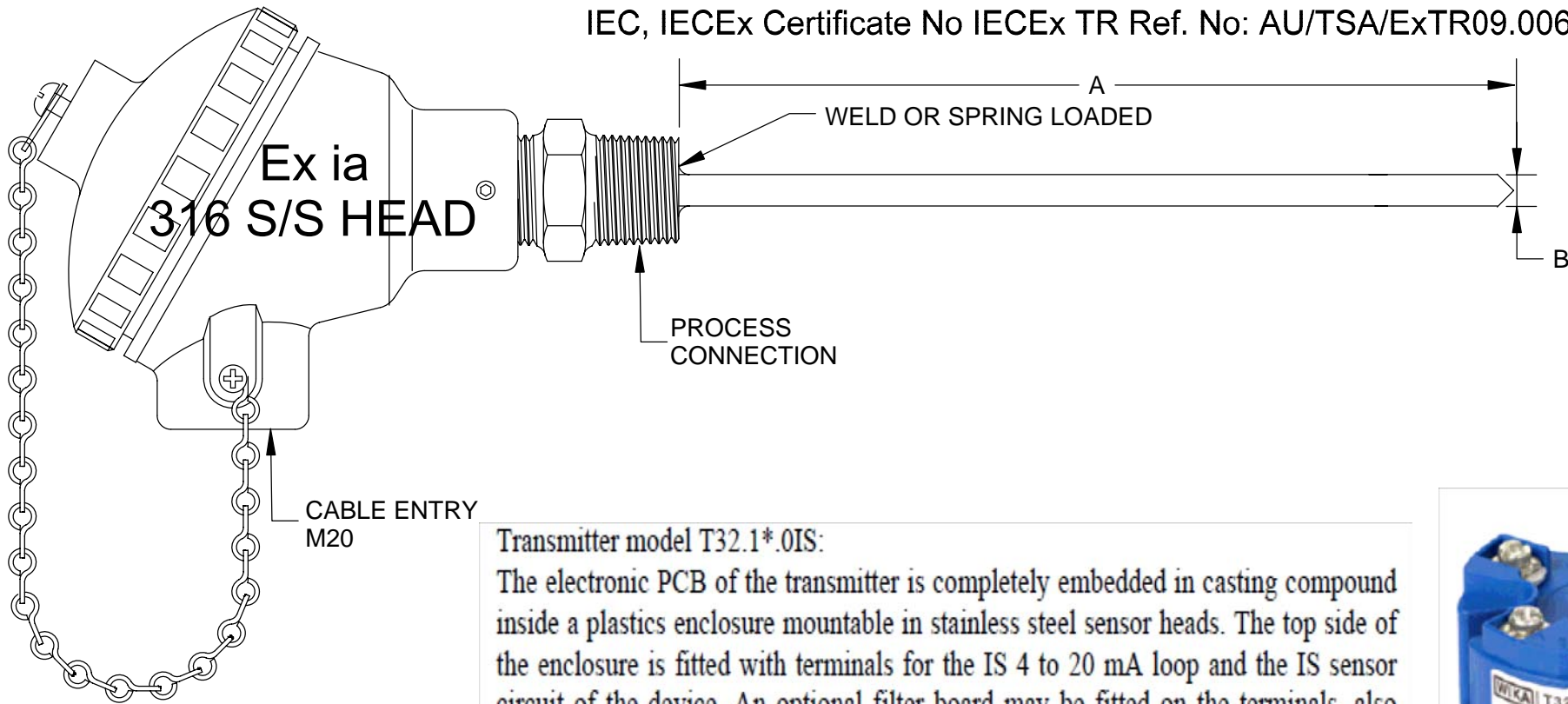


IEC, IECEX, Certified for group 1  
 Suitable for use in underground mines - Methane

IEC, IECEX Certificate No IECEX TR Ref. No: AU/TSA/ExTR09.0066/00



Transmitter model T32.1\*.0IS:

The electronic PCB of the transmitter is completely embedded in casting compound inside a plastics enclosure mountable in stainless steel sensor heads. The top side of the enclosure is fitted with terminals for the IS 4 to 20 mA loop and the IS sensor circuit of the device. An optional filter board may be fitted on the terminals, also embedded. This model can be used for Group I or Group IIC.



Ex ia  
 Compliance with ANSI AS/NZS 60079. 11.2006 Explosive Atmospheres,  
 Intrinsic safety Ex ia (1047 RTD & TC)

**LARGE STAINLESS STEEL  
 TERMINAL HEAD IP65  
 CW FIXED STAINLESS  
 STEEL FITTING**

3 WIRE RTD PT100

**TEMPERATURE CONTROLS PTY LTD**

Certificate No: QEC 14412  
 ISO 9001:2008

**CONDITIONS**

THIS DRAWING IS OUR EXCLUSIVE PROPERTY AND MUST NOT BE COPIED OR HANDED TO ANY OTHER PARTIES WITHOUT WRITTEN PERMISSION. IT SHALL BE RETURNED UPON REQUEST

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 YARRAVILLE VIC 3013  
 PHONE : (03) 9687 0000 FAX : (03) 9687 1900  
 EMAIL : sales@temperature.com.au



TITLE

SIZE : A4	DATE : 04/06/10	DWG NO : SD794 Ex ia
SCALE : NTS	DRAWING BY R.B	REV : 00



# 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](http://www.iecex.com)

Certificate No.: IECEx BVS 08.0018X issue No.:0 Certificate history:

Status: Current

Date of Issue: 2008-05-14 Page 1 of 5

Applicant: **WIKA Alexander Wiegand GmbH & Co. KG**  
Alexander-Wiegand-Straße  
63911 Klingenberg/Main  
Germany

Electrical Apparatus: Transmitter type T32.1\*.0IS / T32.3\*.0IS  
*Optional accessory:*


Type of Protection: Intrinsic safety "i" and "iD"; Protection level (EPL) "Ga " and "Da"

Marking: Ex ia Ga IIC T4/T5/T6 (model T32.1\*.0IS)  
Ex ia Da IIIC T120 °C (model T32.1\*.0IS)  
Ex ia Gb [ia Ga] IIC T4/T5/T6 (model T32.3\*.0IS)  
Ex ia Db [ia Da] IIIC T120 °C (model T32.3\*.0IS)

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:  
(for printed version)

  
\_\_\_\_\_

Date:

29.05.2008

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](http://www.iecex.com).

Certificate issued by:

DEKRA EXAM GmbH  
Dinnendahlstrasse 9  
44809 Bochum  
Germany





# IECEX Certificate of Conformity

Certificate No.: IECEx BVS 08.0018X

Date of Issue: 2008-05-14

Issue No.: 0

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Manufacturer: **WIKA Alexander Wiegand GmbH & Co. KG**  
Alexander-Wiegand-Straße  
63911 Klingenberg/Main  
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 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:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-11 : 2006</b> Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-26 : 2006</b> Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
<b>IEC 61241-11 : 2005</b> 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/BVS/ExTR08.0021/00

Quality Assessment Report:

DE/BVS/QAR07.0010/00





# IECEX Certificate of Conformity

Certificate No.: IECEx BVS 08.0018X

Date of Issue: 2008-05-14

Issue No.: 0

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## Schedule

### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

#### Type Code

Transmitter model T32 . \* \* . 0IS  
First Asterix: 1=Head mounting or 3=DIN rail mounting  
Second Asterix: Model code not relevant for Ex application

#### Description

Transmitter model T32.1\*.0IS:

The printed circuit boards of the transmitter are completely embedded in casting compound inside a plastics enclosure mountable in connection heads.

The top side of the enclosure is fitted with terminals for the IS supply- and signal-circuit and the IS sensor circuit of the device.

Transmitter model T32.3\*.0IS:

The printed circuit boards of the transmitter are completely embedded in casting compound inside a plastics enclosure mountable on DIN Rails.

The front side of the enclosure is fitted with terminals for the IS supply- and signal-circuit and the IS sensor circuit of the device.

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

#### Special conditions for safe use

Transmitter model T32.1\*.0IS

Installation in Zone 1, Zone 0: due to application, the transmitter shall be mounted inside a housing, suitable for installation in Zone 1 or Zone 0 and wherein electrostatic charge effects are excluded.

Installation in Zone 20, Zone 21: due to application, the transmitter shall be mounted inside a housing, suitable for installation in Zone 20 or Zone 21, providing degree of protection IP6X according to IEC 60529.

Transmitter model T32.3\*.0IS

Installation in Zone 1: the transmitter shall be mounted inside a housing providing as a minimum degree of protection IP20 according to IEC 60529 and wherein electrostatic charge effects are excluded.

Installation in Zone 21: due to application, the transmitter shall be mounted inside a housing, suitable for installation in Zone 21, providing degree of protection IP6X according to IEC 60529.

Transmitter model T32.\*\*.0IS

Installation in the safe area:

- the transmitter shall be mounted inside a housing providing as a minimum degree of protection IP20 according to IEC 60529.

- Wiring shall satisfy the conditions of clause 6.3.11 and clause 7.6.e of IEC 60079-11:2006.

- Terminals or connectors for the intrinsically safe circuits shall be arranged according to clause 6.2.1 or 6.2.2 of IEC 60079-11:2006 respectively.



# IECEx Certificate of Conformity

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## EQUIPMENT(continued):

### Ratings

#### 1 Intrinsically safe supply and signal circuit (4 -20 mA current loop)

Parameters	Transmitter model T32.**.0IS	
	gas application	dust application
Terminals	+ / -	+ / -
Voltage $U_i$	DC 30 V	DC 30 V
Current $I_i$	130 mA	130 mA
Power $P_i$	800 mW	750/650/550 mW
Effective internal capacitance $C_i$	7.8 nF	7.8 nF
Effective internal inductance $L_i$	100 $\mu$ H	100 $\mu$ H

#### 2 Intrinsically safe sensor circuit

Parameters	Transmitter model T32.**.0IS	
Terminals	1 - 4	
Voltage $U_o$	DC 6.5 V	
Current $I_o$	9.3 mA	
Power $P_o$	15.2 mW	
Voltage $U_i$	N / A	
Current $I_i$	N / A	
Power $P_i$	N / A	
Effective internal capacitance $C_i$	208 nF	
Effective internal inductance $L_i$	negligible	
Max. external capacitance $C_o$	IIC	24 $\mu$ F ) <sup>1</sup>
	IIB IIIC	570 $\mu$ F ) <sup>1</sup>
	IIA	1000 $\mu$ F ) <sup>1</sup>
Max. external inductance $L_o$	IIC	365 mH
	IIB IIIC	1644 mH
	IIA	3288 mH
Max. inductance / resistance ratio $L_o/R_o$	IIC	1.44 mH/ $\Omega$
	IIB IIIC	5.75 $\mu$ H/ $\Omega$
	IIA	11.5 $\mu$ H/ $\Omega$
Characteristics	linear	



# IECEx Certificate of Conformity

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**Additional information:**

**Remarks to 2:**

$U_o$ : maximum voltage of any wire versus the other three wires

$I_o$ : maximum current of three wires in parallel versus the fourth wire or any other combination

$P_o$ : maximum power of three wires in parallel versus the fourth wire or any other combination

Due to segregation requirements of the applied standards, IS supply- and signal-circuit and the IS sensor circuit shall be considered as being galvanically connected to each other.

)<sup>1</sup>  $C_i$  already taken into account

N / A = not applicable

**3 Ambient temperature range**

Application	Ambient temperature range	Temperature class	Power $P_i$
Group II	$-50\text{ °C} \leq T_a \leq +85\text{ °C}$	T4	800 mW
	$-50\text{ °C} \leq T_a \leq +75\text{ °C}$	T5	800 mW
	$-50\text{ °C} \leq T_a \leq +60\text{ °C}$	T6	800 mW
Group IIIC	$-50\text{ °C} \leq T_a \leq +40\text{ °C}$	N / A	750 mW
	$-50\text{ °C} \leq T_a \leq +75\text{ °C}$	N / A	650 mW
	$-50\text{ °C} \leq T_a \leq +75\text{ °C}$	N / A	550 mW
N / A = not applicable			