



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 16.0022X	Issue No: 0	Certificate history: Issue No. 0 (2016-07-11)
Status:	Current	Page 1 of 4	
Date of Issue:	2016-07-11		
Applicant:	Temperaturmesstechnik Geraberg GmbH Heydaer Strasse 39 98639 Martinroda Germany		
Equipment:	Cable resistance temperature sensor type V* **.c***		
Optional accessory:			
Type of Protection:	Intrinsic safety "I", Protection Level (EPL) Ga		
Marking:	Ex ia IIC T6-T1 Ga, Ex ia IIC T6-T1 Ga/Gb Ex ia IIIC TX Da, Ex ia IIIC TX Da/Db		

Approved for issue on behalf of the IECEx
Certification Body:

Prof. Dr. Tammo Redeker

Position:

Head of Certification Body

Signature:
(for printed version)

Date:

2016-07-11

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:

IBExU Institut für Sicherheitstechnik GmbH
Certification Body
Fuchsmühlenweg 7
09599 Freiberg
Germany



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Manufacturer: **Temperaturmesstechnik Geraberg GmbH**
Heydaer Strasse 39
98639 Martinroda
Germany

Additional 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:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements

Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:6.0

IEC 60079-26 : 2014-10 Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

Edition:3.0

*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/ExTR16.0030/00

Quality Assessment Report:

DE/IBE/QAR14.0004/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The temperature sensors of the type V* **.c*** are used for temperature detection in industrial plants, aggregates, equipment or premises for temperature measurement in the range of -40 °C ... +200 °C.

They are equipped with temperature measuring resistors according to EN 60751. Installation is carried out by inserting the probe tip in fasteners or bores (provided by the user) or using diverse process connections.

Optionally there are versions with oil barrier for detecting temperatures in pressure-loaded systems with an oily medium (max. pressure 10 bar), with a tensile crossing point for the thermometer in the media room. Instead of oil-containing medium also pressure and dust-laden media can occur.

Likewise, with use of additional protective tubes that meet the requirements of IEC 60079-26 as zone separating element, the use of the thermometer in zone 0 with Ex ib IIC source is possible.

On the connection side, the thermometer may be equipped with free ends, connector, junction box with intrinsically safe terminals or a certified transmitter.

Type designations:

VA **.c***, VK **.c***, VB **.c***, VD **.c***, VE **.c***,
VF **.c***, VO **.c***, VR **.c***, VU **.c***, VW **.c***

Maximum permissible temperatures

The cable temperature sensors type V* **.c*** have a max. resistance of heat transfer of

160 K/W ($\varnothing > 2.5$ mm), 80 K/W ($\varnothing > 4$ mm) or 50 K/W ($\varnothing > 6$ mm) from the surface of the thermometer to the environment in air.

The manufacturer describes in the operation manual a procedure for the determination of the maximum permissible medium temperature, depending on the design, temperature class and electricity supply available.

The allowed ambient temperature is restricted by the type of sensor:

Free cable ends:

-40 °C to +110 °C

Connection box with silicon gasket:

-40 °C to +135 °C

Connection box with transmitter:

according to transmitter values

Plug in connector:

-40 °C to +85 °C

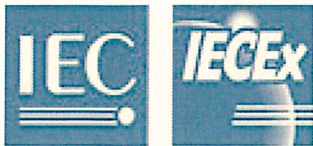
Electrical data

$U_i = 30$ V

$I_i = 101$ mA

$P_i = 750$ mW

C_i, L_i negligible



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The electrical circuits are galvanically isolated from earth.
Further details are specified in the test documents.

CONDITIONS OF CERTIFICATION: YES as shown below:

The installation and the operation of the temperature sensors has to be carried out according to the requirements of the operating instructions.

The maximum permissible temperature of the medium within a temperature class depends on the electric power supplied.

It is also limited depending on the cable material used and the equipment on the connection side.