



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 14.0011U

Issue No: 1

Certificate history:

Issue No. 1 (2018-03-02)

Issue No. 0 (2014-09-23)

Status: **Current**

Page 1 of 4

Date of Issue: **2018-03-02**

Applicant: **Paul Rüster & Co. GmbH**
Dorfplatz 11
14532 Stahnsdorf
Germany

Equipment: **Slot-Resistance-Thermometer and Slot-Thermocouples**

Optional accessory: *Rüster System V...f and System K...f*

Type of Protection: **Increased safety 'e'**

Marking:

Ex eb IIC Gb

Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Alexander Henker

Position:

Deputy Head of Certification Body

Signature:
(for printed version)

Date:

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





IECEX Certificate of Conformity

Certificate No: IECEx IBE 14.0011U

Issue No: 1

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Page 2 of 4

Manufacturer: **Paul Ruster & Co. GmbH**
Dorfplatz 11
14532 Stahnsdorf
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 60079-7 : 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

*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/ExTR14.0005/00](#) [DE/IBE/ExTR14.0005/01](#)

Quality Assessment Report:

[DE/IBE/QAR14.0003/01](#)



IECEX Certificate of Conformity

Certificate No: IECEx IBE 14.0011U

Issue No: 1

Date of Issue: 2018-03-02

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The slot resistance-thermometers and slot thermocouples system V...f used as push-in sensors for thermal control of winding slots of electric motors, generators or transformers. The temperature sensors consist of insulated coiled resistance wire or of a solitary sensor(s) (example: thin film or SMD) or thermocouple(s).

The resistance-thermometers and thermocouples system K...f used as push-in or screw-in sensors for thermal control of various industrial applications. The temperature sensors consist of insulated solitary sensor(s) (example: thin film or SMD) or thermocouple(s).

See the Annex for detailed data.

Schedule of limitations:

The temperature sensor must be fitted with care so as to not damage the cable or insulation.

The connecting cable must be relieved.

The temperature sensor must be declared in the Certificate of the machine to which it is fitted.

The permissible service temperature range is -55 °C up to +180 °C.

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No: IECEX IBE 14.0011U

Issue No: 1

Date of Issue: 2018-03-02

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

A new type System K...f has been added.

The Sensors comply with the requirements of IEC 60079-7, Ed. 5.

Annex:

[Annex2IBE14.0011U_01.pdf](#)



IECEX Certificate of Conformity - Annex



Certificate No: IECEx IBE 14.0011U

Issue No: 1

Date of Issue: 2018-03-02

Page 1 of 1

Description of component

The slot resistance-thermometer and slot-thermocouples system V...f are used as push-in sensors for thermal control of winding slots of electric motors, generators or transformers. The temperature sensor consists of an insulated coiled resistance wire or of a solitary sensor (thin film or SMD).

The resistance-thermometers and thermocouples system K...f used as push-in or screw-in sensors for thermal control of various industrial applications. The temperature sensors consist of insulated solitary sensor(s) (example: thin film or SMD) or thermocouple(s).

The temperature sensor must be declared in the Certificate of the machine to which it is fitted. The temperature sensor must be fitted with care so as to not damage the cable or insulation. The connecting cable must be relieved.

Technical data

Environment data		
Service temperature range	T_M	-55 °C ... +180 °C
Electrical data		
Operating voltage	U_N	≤ 30 V
Measuring current	I_M	≤ 10 mA
Resistance thermometer	Type	Pt100, Pt1000, Ni100, Ni1000, Tk5000, PTC, NTC
Thermocouples	Type	K, L, J, N S, R, B, T
Electrical strength	U_{ss}	2U+1000V (U= rated voltage of machine)
Circuit mode of resistance thermometer		2-, 3- or 4-core