



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX PRE 20.0022U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-09-03

Applicant: **Raviraj Process Controls**  
RAVIRAJ HOUSE,  
Plot No. A-677, Khairne MIDC,  
Koparkhairne,  
Navi Mumbai 400 709  
**India**

Ex Component: Slot Wire Wound RTD Pt-100 Sensor (Simplex/Duplex) Kapton Sheath

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Ex eb, Ex ia**

Marking: **Ex eb IIC Gb, Ex ia IIC Gb, Ex ia IIIC Db**  
**Temperature range: -30°C to +180°C**

Approved for issue on behalf of the IECEx  
Certification Body:

**Bjørn Spongsveen**

Position:

**Certification Manager**

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**DNV GL Presafe AS**  
**Veritasveien 3**  
**1363 Høvik**  
**Norway**





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Manufacturer: **Raviraj Process Controls**  
RAVIRAJ HOUSE,  
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Koparkhairne,  
Navi Mumbai 400 709  
**India**

Additional  
manufacturing  
locations:

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 equipment 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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

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

[NO/PRE/ExTR20.0030/00](#)

Quality Assessment Report:

[NO/PRE/QAR19.0022/00](#)



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## Ex Component(s) covered by this certificate is described below:

Slot wire wound RTD Pt-100 Simplex/Duplex Kapton Sheath Model: RSWWT4 are used to measure winding temperature of the motor/generator. These sensors are sandwich between the winding of motor/generator to continues measurement of the temperature.

Bifilar element wound around the Kapton strip and overall insulated with Kapton tape. The sensor is highly flexible and available in thickness 0.7 to 1.2mm.

Electrical Ratings & Type Designation are detailed in Annex of this Certificate

## SCHEDULE OF LIMITATIONS:

- The mounting of the Slot wire wound RTD has to be assessed in the context of the certification of the equipment.
- The Slot wire wound RTD has to be installed protected against mechanical load, Sharp bending as well as mechanical stress.
- The flying lead of the Slot wire wound RTD shall be connected to appropriate Ex certified terminal box as a fixed installation.
- Slot wire wound RTD shall be impregnated or sealed with the winding by the motor/generator manufacturer.
- The dielectric strength test with the motor winding according to IEC 60079-7 has to be carried out by the motor/generator manufacturer.
- The Slot wire wound RTD shall be installed in appropriately certified Ex eb / Ex ec /Ex nA / Ex db certified Ex motor/generator enclosure.
- The Slot wire wound RTD shall be connected through appropriately certified Ex ia barrier as per IEC 60079-11

## Annex:

[Annex to certificate IECEx PRE 20.0022U\\_1.pdf](#)

**Annex to certificate: IECEx PRE 20.0022U**

**Type designation**

RSWWT 4 (Ordering Code: Model-Pt100-C-X-L-W-H-N-G-CC-LL)

Model	E (Pt100)	C	X	L	W	H	N	G	CC	LL
										100 – 20000
									Types of Cable C1 : PTFE single/Twisted leads C2 : PTFE Flat Leads with PTFE jacketed C3 : PTFE Twisted Leads with PTFE jacketed C4 : PTFE twisted Leads with PTFE /Shielded/ PTFE	
									Cable Size AWG 24 / 26	
									Number of wire Simplex - 2/3/4 Duplex - 4/6/8	
									Slot Height RSWWT4 : 0.7 to 1.2	
									Slot Width SIMPLEX: 8,10,11,12,15,18,20 DUPLEX: 12,15,18	
									Slot Length RSWWT4 : 80 to 300	
									Accuracy class A-Class A B-Class B	
									Type S-Simplex D-Duplex	
	Element PT100									
Model Series No RSWWT4 - Woven FG sheet/Kapton base with overall Kapton insulation										

**Electrical Data (Maximum)**

For Ex eb: 10 V, 25 mA and 25 mW  
 For Ex ia: Ui: 10 V, Ii: 25 mA, Pi: 25 mW  
 Ci: Only Cable capacitance, Li: Only Cable Inductance

**Degrees of protection (IP Code)**

N/ A

**Temperature range:**

-30°C to +180°C

**Routine tests**

Manufacturer shall carry out the dielectric strength test at 2500 Volts for duration of 60 second.  
 No electrical breakdown shall occur.