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

Certificate No.: **IECEx BAS 11.0033X**

Page 1 of 5

Certificate history:

Status: **Current**

Issue No: 4

Issue 3 (2019-04-30)
Issue 2 (2019-02-11)
Issue 1 (2013-04-11)
Issue 0 (2012-01-26)

Date of Issue: 2024-09-18

Applicant: **nVent Thermal Belgium NV**
Research Park Haasrode - Zone 2
Romeinsestraat 14
B-3001 Leuven
Belgium

Equipment: **A Moni PT100–Ex e Sensor Assembly**

Optional accessory:

Type of Protection: **Intrinsic Safety, Dust Protection by Enclosure, Increased Safety**

Marking:

Ex eb IIC T6 Gb (-50°C ≤ Ta ≤ +60°C)
Ex tb IIIC T85°C Db IP66 (-50°C ≤ Ta ≤ +60°C)
or
Ex ia IIC T6…T4 Ga (for ambient temperature range see schedule)
Ex ia IIIC T85°C Db (-40°C ≤ Ta ≤ +60°C)

Approved for issue on behalf of the IECEx Certification Body: **P Oates**

Position: **Certification Manager**

Signature: (for printed version)

Date: (for printed version) 18/09/2024

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 or use of this QR Code.

Certificate issued by:

SGS UK Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

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Manufacturer: **nVent Thermal Belgium NV**
Research Park Haasrode - Zone 2
Romeinsestraat 14
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Manufacturing locations: **nVent Thermal Belgium NV**
Research Park Haasrode - Zone 2
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Belgium

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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Reports:

GB/BAS/ExTR12.0010/00 GB/BAS/ExTR18.0124/00 GB/BAS/ExTR20.0051/00
GB/SGS/ExTR23.0100/00

Quality Assessment Report:

GB/BAS/QAR07.0053/10

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Type MONI-PT100-Ex e Sensor Assembly comprises an assembly of the following certified items:

1. A Rose Type 26 08 08 06 GRP Enclosure afforded IECEx PTB 08.0003U or Raychem RPG GRJ 807555 enclosure afforded IECEx SIR 18.0070U.
2. A WAGO terminal strip type 264-***/*/* afforded IECEx PTB 04.0003U or 2-wire Programmable Transmitter type 5333D afforded IECEx DEK 20.0062X.
3. Type RTL 671T Temperature Sensor afforded IECEx BAS 11.0035X.
4. An M16 brass M.I cable gland afforded IECEx BAS 11.0034X.

An M20 threaded hole is provided to facilitate the connection of external cables, via a suitably certified Ex e or Ex d cable gland to maintain the IP66 ingress protection of the enclosure.

The Moni PT100–Ex e Sensor Assembly may be marked with the certification code:

Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	-50°C ≤ Ta ≤ +60°C
or when the Type MONI-PT100-Ex e Sensor Assembly contains a Transmitter Type 5333D:	
Ex ia IIC T6…T4 Ga	Ambient temperature range see below
Ex ia IIIC T85°C Db	-40°C ≤ Ta ≤ +60°C

The relation between ambient temperature range and temperature class:

Temperature class	P_i = 0.84W	P_i = 0.75W
	Ambient temperature range	Ambient temperature range
T6	-40°C ≤ Ta ≤ +47°C	-40°C ≤ Ta ≤ +50°C
T5	-40°C ≤ Ta ≤ +62°C	-40°C ≤ Ta ≤ +65°C
T4	-40°C ≤ Ta ≤ +80°C	-40°C ≤ Ta ≤ +80°C

Continued on Page 4.

SPECIFIC CONDITIONS OF USE: YES as shown below:
1. Not more than one single or multiple strand lead shall be connected to either side of the terminals, unless the conductors have been joined in a suitable manner, e.g two conductors into a single insulated boot lace ferrule.

2. Leads connected to the terminals shall be insulated suitable for 255V and this insulation shall extend to 1mm of the terminal throat.

3. All terminal screws, used or unused, shall be tightened to between 0.5 Nm and 0.7 Nm.

4. The temperature at the sensor bulb shall not exceed 585°C.

5. The temperature at the cable gland shall not exceed 60°C.

6. The minimum bend radius is 6 times the diameter of the probe.

7. The minimum installation temperature of the probe is –50 °C .

8. The probe gland must be tightened to a torque of 8Nm.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 4.1

To confirm that the equipment covered by this certificate meets the requirements of IEC 60079-7:2017 Edition 5.1.

Variation 4.2

To permit the addition of the 2-wire Programmable Transmitter Type 5333D (IECEx DEK 20.0062X) to the design of the Type MONI-PT100-Ex e Sensor Assembly.

ExTR: **GB/SGS/ExTR23.0100/00**	File Reference: **23/0201**

IECEx Certificate of Conformity

Additional information:

Electrical data:

Supply / output circuit (terminals 1 and 2):

Only for connection to a certified intrinsically safe circuit:

Ui = 30 V; Ii = 120 mA; Pi = 0.84 W or Pi = 0.75 W; Ci = 1 nF; Li = 10 µH.

Sensor circuit (terminals 3, 4 and 6):

Uo = 30 V; Io = 8 mA; Po = 60 mW; Co = 66 nF; Lo = 35 mH.