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 PTB 08.0051X**

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Certificate history:
Issue 2 (2017-10-20)
Issue 1 (2014-08-19)
Issue 0 (2008-10-29)

Status: **Current**

Issue No: 3

Date of Issue: 2020-04-30

Applicant: **nVent Thermal Belgium N.V**
Research Park Haasrode - Zone 2
Romeinse Straat 14
B-3001 Leuven
Belgium

Equipment: **Trace Heating System Type PI/*-*-*-*-***

Optional accessory:

Type of Protection: **Increased safety 'eb', Protection by Enclosure 'tb'**

Marking: Ex eb 60079-30-1 IIC T2...T6 Gb
Ex tb 60079-30-1 IIIC T260...T90°C Db

Approved for issue on behalf of the IECEx Certification Body: **Dr.-Ing. Detlev Markus**

Position: **Head of Department "Explosion Protection in Energy Technology"**

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 or use of this QR Code.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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Manufacturer: **nVent Thermal Belgium N.V**
Research Park Haasrode - Zone 2
Romeinse Straat 14
B-3001 Leuven
Belgium

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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC/IEEE 60079-30-1:2015 Edition:1.0	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements

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:

DE/PTB/ExTR08.0063/03

Quality Assessment Report:

GB/BAS/QAR07.0053/08

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

Description of equipment
XPI polymer insulated (PI) series resistance trace heating cables of protection type increased safety “eb” are suitable for installation in hazardous area Zone 1. Typical use is in the freeze protection and temperature maintenance of pipelines, vessels, tanks, etc. especially when long circuit lengths are required.
Polymer insulated (PI) trace heating cables can easily be terminated in the field using the pre-certified XPI components. The system includes a XPI, XPI-S, or XPI-F polymer insulated (PI) resistance trace heating cable and the splice and connection kit for XPI heating cables (Type CS-150-UNI-PI or
CS-150-xx-PI).

Technical Data and Nomenclature see Attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Special conditions for safe use
The XPI- and XPI-F- cable is for use in areas with low risk of mechanical damage (4 Joule), therefore appropriate installation consideration shall be taken. The XPI-S - cable is for use in areas with normal risk of mechanical damage (7 Joule).

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Update to the current status of the standard

Annex:

COCA080051X_03.pdf

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

Applicant: nVent Thermal Belgium NV
Romeinse straat 14
3001 Leuven
Belgium

Electrical Apparatus: Trace heating system Type PI/*-*-*-*-*

Description

XPI polymer insulated (PI) series resistance trace heating cables of protection type increased safety “eb” are suitable for installation in hazardous area Zone 1. Typical use is in the freeze protection and temperature maintenance of pipelines, vessels, tanks, etc. especially when long circuit lengths are required.
Polymer insulated (PI) trace heating cables can easily be terminated in the field using the pre-certified XPI components. The system includes a XPI, XPI-S, or XPI-F polymer insulated (PI) resistance trace heating cable and the splice and connection kit for XPI heating cables (Type CS-150-UNI-PI or CS-150-xx-PI).

Technical and electrical information for trace heating cables

The XPI, XPI-S and XPI-F cables consist of a heating conductor core, a primary insulation, a protective metallic braid and a non-metallic outer jacket.

Component	Minimum ambient temperature for installation	Maximum continuous withstand temperature	Resistance at 20 °C
XPI	-70 °C	+260 °C	0.8 – 8000 Ω/km
XPI-S	-70 °C	+260 °C	0.8 – 8000 Ω/km
XPI-F	-60 °C	+90 °C	1.8 – 200 Ω/km
CS-150-UNI-PI	-50 °C	+180 °C	-
CS-150-xx-PI	-50 °C	+200 °C	-

Nomenclature

The nomenclature of the system results from the nomenclature of the resistance trace heating cables. The marking includes the variable information as follows:

Type PI	/	*	-	*	-	*	-	*	-	*
a		b		c		d		e		f

a Trace Heating System Type PI
b Brand
c Product Description
d Resistance at +20°C
e Batch Number
f Year of Manufacture

List of trace heating system Type PI component certificates

Product Name	ATEX & IECEx Approval Number
XPI	Baseefa15ATEX0158U IECEx BAS 15.0105U
XPI-S	Baseefa15ATEX0158U IECEx BAS 15.0105U
XPI-F	Baseefa15ATEX0158U IECEx BAS 15.0105U
CS-150-UNI-PI	PTB 09 ATEX 1067U IECEx PTB 09.0042U
CS-150-xx-PI	PTB 08 ATEX 1101U IECEx PTB 08.0050U

Protection principle to ensure that limiting temperatures will not be exceeded

The protection principle of the trace heating system is “Stabilizing design” (appropriate construction of the system under specified conditions) and/or “Controlled design” (use of a protection equipment to deactivate the system in case of prohibited service conditions).

Notes for design, selection and erection

1. The design of the trace heating system and the definition of the temperature class is carried out by the manufacturer respectively under its responsibility.
2. The manufacturer defines the separate certified system components to be used.
3. Temperature control systems must be certified to the appropriate regulations.
4. The power supply has to be carried out by using separate certified junction boxes (e.g. nVent JB-EX-xx) and separate certified cable glands (e.g. nVent C20-PI-xx-KIT).
5. The instructions of the manufacturer have to be followed.

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