



# 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)

Certificate No.: **IECEx ULD 14.0013X**

Page 1 of 4

Status: **Current**

Issue No: 4

Date of Issue: 2021-08-26

Applicant: **Danfoss A/S**  
Nordborgvej 81  
6430 Nordborg  
Denmark

Equipment: **Temperature and Pressure Switches, RT\*E Series**

Optional accessory:

Type of Protection: **Intrinsic safety "ia"**

Marking: Ex ia IIC T6...T1 Gb -20 °C ≤ Ta ≤ +65 °C

Certificate history:

Issue 3 (2018-01-24)

Issue 2 (2016-09-13)

Issue 1 (2015-04-01)

Issue 0 (2015-02-03)

Approved for issue on behalf of the IECEx  
Certification Body:

**Katy A. Holdredge**

Position:

**Senior Staff Engineer**

Signature:  
(for printed version)

Date:

2021-08-26

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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:

**UL International DEMKO A/S**  
Borupvang 5A  
DK-2750 Ballerup  
Denmark





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Certificate No.: **IECEx ULD 14.0013X**

Page 2 of 4

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Manufacturer: **Danfoss A/S**  
Nordborgvej 81  
6430 Nordborg  
**Denmark**

Additional manufacturing locations: **Danfoss Sp z.o.o.**  
Ul. Chrzanowska 5  
05-825 Grodzisk Mazowiecki  
**Poland**

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

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:

[DK/ULD/ExTR14.0014/00](#)  
[DK/ULD/ExTR14.0014/03](#)

[DK/ULD/ExTR14.0014/01](#)  
[DK/ULD/ExTR14.0014/04](#)

[DK/ULD/ExTR14.0014/02](#)

### Quality Assessment Report:

[DK/ULD/QAR12.0002/06](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx ULD 14.0013X**

Page 3 of 4

Date of issue: 2021-08-26

Issue No: 4

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The RT\*E series consists of pressure and differential pressure switches as well as temperature switch types. All variants have a single changeover contact (SPDT) and all actuation systems are mechanical.

The units are designated for industrial refrigeration and general industrial applications in hazardous areas. It includes usage in refrigeration systems with ammonia, hydrocarbons and other applications where the presence of flammable gases, vapours and mists are likely to occur.

Enclosures are Phenolic Resin with a stainless steel outer cover. The fascia has a conductive sputtered stainless steel / Polyester coating providing a low surface resistance.

The fascia connects to earth through a contact with a metallic shroud and is bonded to an earthed part of the enclosure by the manufacturer Danfoss.

**Please see Annex for additional information.**

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

The enclosure fascia has been coated with a layer of stainless steel to prevent the accumulation of electrostatic charge. In order to ensure that there is no accumulation of electrostatic charge on the enclosure, the end user shall ensure that the external metal work of the enclosure is locally bonded to earth. Information on the durability of the coating with regards to use of the equipment is contained within the instruction manual.



# IECEx Certificate of Conformity

Certificate No.: **IECEx ULD 14.0013X**

Page 4 of 4

Date of issue: 2021-08-26

Issue No: 4

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

Issue 1: Correction of additional manufacturing address to include "Poland" in the name and updating drawing schedule in ExTR package.

Issue 2: Inclusion of the additional RT9E Temperature Sensor to the permissible sensors covered by the certificate.

Issue 3: Addition of model RT 121E pressure switch.

Issue 4: Update to latest standards. Revision of markings and instructions.

## Annex:

[Annex for IECEx ULD 14.0013X Issue 4.pdf](#)



# IECEx Certificate of Conformity

Certificate No.:

IECEx ULD 14.0013X

Issue No.: 4

Page 1 of 3

## TYPE DESIGNATION

### Nomenclature

The following tables contain the variants that are covered by this certification. Information shows how each model differs between each variant.

Pressure Switch	
Variant	Maximum Working Pressure (bar)
RT113E	0.4
RT112E	7
RT1AE	22
RT116E	22
RT5E	22
RT6AEW	34
RT6AEB	34
RT6AES	34
RT117E	42
RT121E	7
RT260AE	22
RT262AE	11

Temperature Switch		
Variant	Range (°C)	Max permissible Bulb Temperature (°C)
RT9E	-45 °C to -15 °C	+150
RT14E	-5 °C to +30 °C	+150
RT101E	+25 °C to +90 °C	+300
RT107E	+70 °C to +150 °C	+215
RT123E	+150 °C to +250 °C	+300



# IECEx Certificate of Conformity

Certificate No.:

IECEx ULD 14.0013X

Issue No.: 4

Page 2 of 3

Permitted process temperatures for RT\*E temperature sensing variant.

Temperature Classification	Process Temperature Limit (°C)
T1	300
T2	289
T3	194
T4	129
T5	94
T6	79

Permitted process temperatures for RT\*E pressure sensing variant.

Temperature Classification	Process Temperature Limit (°C)
T4... T1	100
T5	94
T6	79

## PARAMETERS RELATING TO THE SAFETY

Ui: 29 V, Ii: 500 mA, Pi: 1 W, Li: 0.2 µH, Ci: 0.5 nF

# IECEx Certificate of Conformity

Certificate No.:

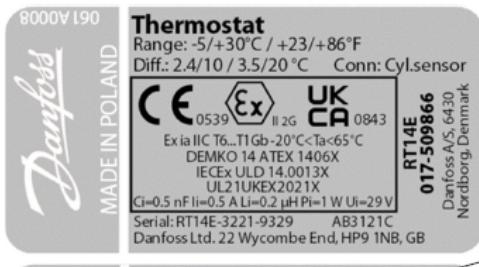
IECEx ULD 14.0013X

Issue No.: 4

Page 3 of 3

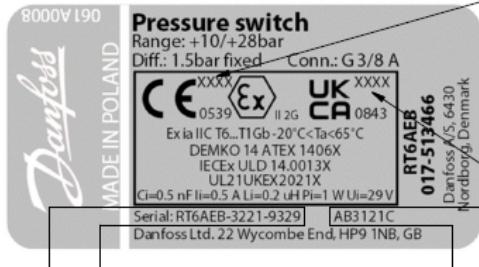
## MARKING

Marking has to be readable and indelible; it has to include the following indications:



Temperature Switch

PED Notified Body No.  
will be added in real  
product labels



Pressure Switch

Pressure equipment  
safety Regulation UK  
Approved Body No.  
will be added in  
real product labels

Consists of:  
- Product Type  
- Prod. date: Week & Year  
- Counter

Code A2  
see 500B0276