

# EC-TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use  
in Potentially Explosive Atmospheres  
Directive 94/9/EC

EC-Type Examination Certificate Number: DEMKO 02 ATEX 132025X

Equipment or Protective System: Junction Box

Type 1: JB-K-EX

Type 2: JB-K-0-EX

Manufacturer: Thermon Europe B.V.

Address: Boezemweg 25, 2641 KG Pijnacker, The Netherlands

This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report No. 132025

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
EN 50014: 1997 E incl. A1+A2      EN 50019: 2000 E

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.


This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

The marking of the equipment or protective system shall include the following:

⊕ II 2G      EEx e II T4/T6

On behalf of UL International Demko A/S

Herlev, 2002-10-21

  
Steen Lumby  
Certification Manager

**UL International Demko A/S**

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Certificate: 02 ATEX 132025X

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P1

## Schedule

### EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 02 ATEX 132025X

[15] Description of Equipment or protective system

The JB-K-(0)-EX is to be used as a junction box for electrical heat tracing cables. The enclosure is manufactured using conductive reinforced polyester with glassfiber suitable for severe industrial conditions. The JB-K-EX is to be used in conjunction with Thermon expediter XP-Plus for connection up to three heating cables to power and may also be used for inline or T-splice connections.

The JB-K-0-EX shall be used as wall mounted for connection up to three heating cables to power.

Type 1: JB-K-EX

Type 2: JB-K-0-EX

IP rating:

IP 66 for wall mounting

IP 65 with expediter XP Plus

Terminals:

6 terminals of 4mm<sup>2</sup> + 3 earthing terminals of 6mm<sup>2</sup>

4 terminals of 6mm<sup>2</sup> + 2 earthing terminals of 6mm<sup>2</sup>

Temperature range:

The ambient temperature range is -30 °C to +40 °C.

The relation between ambient temperature and the assigned temperature class is as follows:

Terminal - Maximum current	Temperature class
4mm <sup>2</sup> terminal max. 17A	T6
6mm <sup>2</sup> terminal max. 22A	T6
4mm <sup>2</sup> terminal max. 35A	T4
6mm <sup>2</sup> terminal max. 46A	T4

The ambient temperature range can be extended to -30 °C to +55 °C. Doing that the temperature class will be de-rated to T3 with the following relations between ambient temperature and the assigned temperature class:

Terminal - Maximum current	Temperature class
4mm <sup>2</sup> terminal max. 35A	T3
6mm <sup>2</sup> terminal max. 46A	T3

Please note that the temperature classification is depending on the current and size of the terminals and on the heating cables mounted. If cables used in the Junction Box have a lower temperature class (T5, T4, T3 etc.) the temperature class for the Junction Box shall be de-rated in accordance with the temperature class of the cable.

[16] Report No.

Project Report No.: 132025-01

132025-02

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Certificate: 02 ATEX 132025X

Report: 132025-02

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P2 / 4

## Schedule

### EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 02 ATEX 132025X

#### Drawings:

Number	Date	Description
A1013-01 Rev. 5	2002-07-24	Junction Box
A1014-01 Rev. 5	2002-07-24	Junction Box
A0683-01 Rev. 2	2002-06-26	Earth plate
A1277-01 Rev. <b>X3</b>	2002-06-26	Earth plate
A1280-01 Rev. 3	2002-09-30	Marking label

#### [17] Special conditions for safe use:

Due to the material of the Junction Box the maximum exposure temperature shall be limited to 90°C. The temperature classification is depending on the current and size of the terminals and on the heating cables mounted. If cables used in the Junction Box have a lower temperature class (T5, T4, T3 etc.) the temperature class for the Junction Box shall be de-rated in accordance with the temperature class of the cable.

An electrical strength test shall be carried out on every Junction Box as described in EN 50019: 2000 § 7.1.

All cable entry devices and blanking elements shall be certified in type of explosion protection Increased safety "e", suitable for the conditions of use and correctly installed.  
Unused entries shall be closed with suitable blanking elements.

Direct connection of maximum 3 times 175mm Series Resistance Heating Cable in the JB-K/XP Plus or JB-K-0 junction boxes is possible either via a gland or an expediter XP Plus. Following criteria are applicable to this practise:

T-Class	Maintenance temperature	Maximum allowed heating cable output
T5	Up to +100°C	8 W/m
T4	Up to +100°C	11 W/m
-	+101°C up to 125°C	10 W/m
-	+126°C up to 135°C	8 W/m
T3	Up to +75°C	16 W/m
-	+76°C up to 100°C	12 W/m
-	+101°C up to 125°C	10 W/m
-	+126°C up to 150°C	8 W/m
-	+151°C up to 200°C	5 W/m

Higher cable output direct connection of Series Resistance Heating Cable in junction box is not allowed. A cold lead cable utilizing an EEx e certified connector shall be applied to the heating cable. The cold lead cable can be connected in the junction box.

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Report: 132025-02

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P3/4

## Schedule

### EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 02 ATEX 132025X

(18) Essential Health and Safety Requirements


Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

The certificate entitles the licensee to provide the product with the registered mark ® and the Epsilon-x mark ⓧ.

On behalf of UL International Demko A/S

Herlev, 2002-12-02

  
Karina Christiansen  
Certification Manager

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P4/4