

[1]

# EU-TYPE EXAMINATION CERTIFICATE



[2]

## Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3] EU-Type Examination Certificate Number: **UL 21 ATEX 2606X Rev. 2**

[4] Product: **Solenoid Coils, BI Series**

[5] Manufacturer: **Danfoss A/S**

[6] Address: **Nordborgvej 81, DK-6430 Nordborg, Denmark**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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. **DK/ULD/ExTR21.0023/02**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018**

**EN 60079-18:2015/A1:2017**

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

[11] This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

**Ex II 2 G Ex mb IIC T4 Gb**

**Certification Manager**  
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2022-05-27

**Re-issued:** 2024-01-24

**Notified Body**

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
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**Schedule**  
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**Description of Product**

These are solenoid coils for use with compatible Danfoss valves. They are intended for permanent installation in a specific orientation as described in the instructions.

The coils consist of an encapsulated winding with a separated encapsulated section containing a rectifier/transient protection PCB. A stainless steel outer guard provides protection against impact. Type A coils have an outer guard which fully surrounds the coil. Type B coils have an open bottom. Type A and Type B coils are intended to provide compatibility with different sized valves.

Process medium temperature range: -40°C to +90°C.

The model numbering and ratings are as follows:

Rating (Voltage: -10%, +6%)	Type A Coil with cover & bottom	Type B Coil with cover & Frame
240V; 50/60Hz; 0.047A	018Z85*5	018Z85*1
230V; 50/60Hz; 0.053A	018Z85*6	018Z85*2
110V; 50/60Hz; 0.102A	018Z85*7	018Z85*3
24V; 50/60Hz; 0.48A	018Z85*8	018Z8574 018Z8595
24Vdc; 0.46A	018Z85*9	018Z8575 018Z8596

Type A:

\* Denotes integral cable length in metres: 6 = 10m; 8 = 5m.

Type B:

\* Denotes integral cable length in metres: 7 = 10m; 9 = 5m.

Temperature range

The ambient temperature range is -40°C ≤ Tamb ≤ +40°C (fixed cable) and 0°C ≤ Tamb ≤ +40°C (flexed cable).

Electrical data

See table above.

Routine tests

Each product shall be subjected to a visual inspection according to EN 60079-18 clause 9.1. No damage shall be evident, such as cracks in the compound, exposure of encapsulated parts, flaking, shrinkage, swelling, decomposition, failure of adhesion or softening.

Each product shall be subjected to a dielectric strength test according to EN 60079-18 clause 9.2 between external connections and earth/case, at 1500 Vrms for 1 s minimum, with no breakdown.

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Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this EU-Type Examination Certificate.

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Specific conditions of use:

- The coils must be installed in the orientation shown in the instructions.
- The permitted process medium temperature range is -40 °C to +90 °C.
- The solenoid coil shall be protected against impact during use.
- Protect the coil against direct sunlight and other ultraviolet sources.
- The capacitance of exposed, isolated, metallic parts is 7pF.
- The cable supplied with the solenoids must not be handled or flexed and protected against impact if the ambient temperature is below 0 °C.

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Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.



The trademark  will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.



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