

# EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS09ATEX16835X**

4. **Product:** Electrically operating solenoid valve type 018Z659X

5. **Manufacturer:** Danfoss A/S **Applicant:** Danfoss A/S

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

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

8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 103839044LHD-001 dated 20th March 2019 and 104598180CHE-001 dated 25 February 2021.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-18:2015+A1:2017 except in respect of those requirements referred to at item 16 of the Schedule.

10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.

11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12. The marking of the product shall include the following:



II 2 G Ex mb IIC T4 Gb  
-40°C ≤ Ta ≤ +60°C

**Certificate issue date**

16 March 2021



**Fabrizio Massei**  
Certification Officer  
Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

**Intertek Italia S.p.A.** Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy



## SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS09ATEX16835X

### 13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

Solenoid Type 018Z659X are solenoids intended for operating valves. The 'X' signifies the ratings shown below when replaced by the corresponding number:

- 1: 240VAC (+/-10%), 0.047A
- 2 & 7: 230VAC (+/-10%), 0.053A
- 3 & 9: 110VAC (+/-10%), 0.102A
- 4: 48VAC (+/-10%), 0.24A
- 5: 24VAC (+/-10%), 0.48A
- 6 & 8: 24VDC (+/-10%), 0.46A

Cable length for all variants is 15m max.

Production site:

SITE NUMBER	ADDRESS
1	Danfoss Tianjin Ltd No 9 Quanhui Road, Wuqing Development Area, 301700 Tianjin, China

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

### 14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
*ATEX Approval drawing, Assembly, BOM, Marking (Sheets 1 to 2)	032M0796	07	2021-01-29
Coil Assembly	018Z6500	06	2013-10-28
Coil form	018Z0354	02	2007-12-19
Rectifier – part	018Z0026	04	2013-05-28
Etching drawing	018Z0312	04	2019-01-31
Drilling plan	018Z0316	03	2012-06-06
Cliché Drwg	018Z0318	02	2012-06-06
*Installation Guide	AN196386442447en-000501	-	2020.06

Note: An \* is included before the title of documents that are new or revised.  
Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.



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### 15. SPECIAL CONDITIONS FOR SAFE USE

- For Solenoid in use under -30°C the cable must be protected from impact.
- The Solenoid is manufactured with a permanently connected cable. The connection of this cable supplying the solenoid must be done in accordance with the appropriate electrical code and good engineering practice.
- The product is provided with a Y/G coloured earth wire for internal earthing. This internal earth connection shall not be used if the external earth connection is connected to the earth or bonding system and must be cut off, isolated and not connected.
- The solenoid must not be removed from the valve when energized. This would otherwise impair the surface temperature specifications.
- Enclosures or parts of enclosure are non-conducting and may generate an ignition capable level of discharge under certain extreme conditions. The user shall ensure that the equipment is not installed or used in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge or non-conducting surfaces. Additionally, cleaning of the equipment shall only be done with a damp cloth.
- The solenoid must be protected against direct sunlight and ultraviolet sources.
- The power supplying the solenoid must be limited to a prospective short circuit current of 1500A according to EN 60079-18:2015 clause 7.9.2.1.

### 16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek 103839044LHD-001 dated 20th March 2019.

### 17. ROUTINE (FACTORY) TESTS

- Each product shall be subjected to a visual inspection according to EN 60079-18:2015 clause 9.1.
- Each product shall be subjected to a Dielectric strength test according to EN 60079-18:2015 clause 9.2.

### 18. DETAIL OF CERTIFICATE CHANGES

#### 16 March 2021 (R.0):

- Initial release by Intertek Italia S.p.A. NB 2575 based on the assessment performed in February 2021 and on the certificate legal ownership transferred from Intertek Testing & Certification Ltd. (NB 0359); the same issued original certificate number is used.
- Change of tape details (Item 20 of drawing 032M0796 Sheet 1).
- Update of drawing 032M0796 Sheet 2 to add additional valve designations.
- Update to product description to correct ratings list.
- Removal of the DK-6000 Kolding address from the certificate.
- Installation Guide added to controlled documents list.