



1. **EC-TYPE EXAMINATION CERTIFICATE**

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3. EC-Type Examination Certificate Number: **ITS09ATEX16835X**

4. Equipment or Protective System: **Electrically Solenoids Operating Valves:  
Solenoid Type 042N55XX, 042N56XX and Solenoid Type 018Z659X**

5. Manufacturer: **Danfoss Kolding**                      **Danfoss (Tiajin) Ltd**

6. Address:                                      Albuen 29                                      No.9 Quanhui Road,  
DK-6000 Kolding                                      Wuqing Development Area  
Denmark    301700 Tianjin, China

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

8. Intertek Testing and Certification Limited, notified body number 0359 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 the 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 Intertek Report RETS(A)2760/A/1 dated 10<sup>th</sup> January 2008

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN60079-0: 2006, EN 60079-18: 2004 except in respect of those requirements referred to at item 18 of the Schedule.

10. 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.

11. This EC-Type examination certificate relates only to the design and construction 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 this certificate.

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



**II 2 G Ex mb II T4 -40°C ≤ Tamb ≤ +60°C**



**Peter T. Lauritzen**  
**Deputy Certification Officer**  
**Date: 02 November 2009**

**Intertek Testing & Certification Limited**  
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13. SCHEDULE

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS09ATEX16835X

15. Description of Equipment or Protective System

Both models Solenoid Type 042N55XX and 042N56XX and Solenoid Type 018Z659X are solenoids intended for operating valves.

**Type 018Z659X:**

1	240VAC	(±10%) (0.46A)
2	230VAC	(±10%) (0.053A)
3	110VAC	(±10%) (0.102A)
4	48VAC	(±10%) (0.24A)
5	24VAC	(±10%) (0.48A)
6	24VDC	(±10%) (0.047A)

**Type 042N55XX: (Solenoid Ø9 system)**

0-9	Cable length (Designated length of integrated cable to a maximum of 5.6 meter)	
0	24VDC	(±10%) (0.28A)
1	24VDC	(±10%) (0.2A)
2	24VAC	(±10%) (0.416A)
3	230VAC	(±10%) (0.048A)

**Type 042N56XX: (Solenoid Ø8 system)**

0-9	Cable length (Designated length of integrated cable to a maximum of 5.6 meter)	
0	24VDC	(±10%) (0.28A)
1	24VDC	(±10%) (0.2A)
2	24VAC	(±10%) (0.322A)
3	230VAC	(±10%) (0.033A)

16. Report Number:

RETS(A)2760/A/1 dated 10<sup>th</sup>. January 2008

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13. SCHEDULE

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17. CONDITIONS OF CERTIFICATION:

(a). Special Conditions for safe use

- For Solenoid in use under -30°C the cable must be protected for 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 as well as an external earth terminal. These shall not be used simultaneously. If the external earth connection is connected to earth or bonding system the Y/G earth wire must be cut of, isolated and not connected. If the Y/G wire is connected to earth, the external earth terminal must not be connected.
- The solenoid must not be removed from the valve when energised. This would otherwise impair the surface temperature specifications.
- In order to prevent electrostatic charges the solenoid must be cleaned with a moist cloth.
- The solenoid must be protected against direct sunlight and ultraviolet light sources.
- The power supplying the solenoid must be limited to a prospective short circuit current of a maximum of 1500A according to EN 60079-18: 2004 clause 7.9.2.1.

(b). Conditions For Use (Routine Tests)

- Each product shall be subjected to a visual inspection according to EN 60079-18: 2004 clause 9.1
- Each product shall be subjected to Dielectric strength test according to EN 60079-18: 2004 clause 9.2

18. Essential Health and Safety Requirements (EHSR's)

The relevant EHSR's have been identified and assessed in Intertek Report RETS(A)2760/A/1 dated 10<sup>th</sup>. January 2008

19. Drawings and Documents

018Z65XX			
Number	Date	Issue	Description
032M0784	20 Dec. 2007	00	Approval Drawing 018Z65XX
032M0785	20 Dec. 2007	00	Description 018Z65XX
018Z6500	25 Jan. 2008	04	Assembly Drawing
018Z0354	19 Dec. 2007	02	Coil form
018Z0026	19 Dec. 2007	02	Rectifier - part

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018Z0312	16 Jun. 1976	01	Etching drwg.
018Z0316	15 Jun. 1976	01	Drilling plan
018Z0318	16 Jun. 1976	01	Cliché Drwg.
032A1382	19 Dec. 2007	00	Marking plates
032A1384			
032A1385			
032A1386			
032A1387			
032A1388			
032A1389			
<b>042N55XX / 56XX</b>			
<b>Number</b>	<b>Date</b>	<b>Issue</b>	<b>Description</b>
032M0642	20 Dec. 2007	01	Encapsulation drawing, coil
032M0643	20 Dec. 2007	01	Description
042N1150	19 Dec. 2007	02	Encapsulation drawing, coil
042N0008	19 Dec. 2007	03	Coil w/Terminal
042N0296	19 Dec. 2007	04	Coil form
042N0309	19 Dec. 2007	03	Temperature fuse
032A1372	19 Dec. 2007	00	Marking plates
032A1369			
032A1353			
032A1354			
032A1371			
032A1352			
032A1370			
032A1453			
032A1427			
032A1431			
032A1430			
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032A1428			

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