

## [1] EC-TYPE EXAMINATION CERTIFICATE

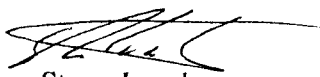
[2] **Equipment or Protective System Intended for use  
in Potentially explosive atmospheres  
Directive 94/9/EC**

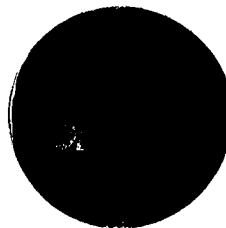


- [3] EC-Type Examination Certificate Number: **DEMKO 99 ATEX 125689X**
- [4] Equipment or Protective System: **Electrically Operated Valve. Solenoid Type 042N55XX**
- [5] Manufacturer: **Danfoss A/S, Albuen 29, 6400 Kolding, Denmark**
- [6] Applicant: **Danfoss A/S, Nordborgvej 18, 6430 Nordborg, Denmark**
- [7] This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] DEMKO, 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. 125689 Report
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014 December 1992**                      **EN50028 February 1987**
- [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. If applicable, further requirements of this Directive apply to the manufacture and supply of this requirement or protective system.
- [12] The marking of the equipment or protective system shall include the following:

**⊕ II 2G    EEx m II T4**

For and on behalf of DEMKO

  
Steen Lumby  
Certification manager



Herlev 99.08.17  
Revised: 00-05 04

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Notified body: DEMKO A/S Testing & Certification, P. O. Box 514, Lyskaer 8, DK-2730 Herlev, Denmark,  
Phone +45 44 85 65 65, Fax +45 44 85 65 00, E-mail: demko@demko.dk

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# Schedule

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## EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 99 ATEX 125689X

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### Description of Equipment or protective system:

The above mentioned product is a solenoid operating a valve.

Type variants comprised by the certificate:

Solenoid Ø9mm system:

Solenoid: Type 042N55XX

— Designates length of integrated cable to a maximum of 5,6 meter:

0 - 9: Cable length

— Designates rating of the solenoid:

0: 24V DC/0,28A

1: 24V DC/0,2A

2: 24V AC/0,42A

3: 230V AC/0,05A

Solenoid Ø8mm system:

Solenoid: Type 042N56XX

— Designates length of integrated cable to a maximum of 5,6 meter:

0 - 9: Cable length

— Designates rating of the solenoid:

0: 24V DC/0,28A

1: 24V DC/0,2A

2: 24V AC/0,325A

3: 230V AC/0,033A

Solenoid Ø8/Ø9mm system:

Valves: Type EV \_\_\_ A and EV \_\_\_ C.

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Report No.: 125689 Report EN50014+EN50028  
125689 Report 125689-03  
125689 Report 125689-04  
125689 Report 125689-05  
125689 Report 125689-06  
125689 Report 125689-07  
125689 Report 125689-08

### UL International Demko A/S

Lyskaer 8, P.O. Box 514  
DK-2730 Herlev, Denmark  
Telephone: +45 44856565  
Fax: +45 44856500

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Report: 125689-08

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Drawings:

Number	Date	Description
<b>Common to all types</b>		
032M0643	99-08-12	Description
891X0006 (sheet 1-4)	88-03 Ver. 2	Specification of copper wire
032M0642	99-08-12	Encapsulation 9-32 EEx
042N0296	00-07-02	Coil form
032A1373	02-03-20	Warning
042N0299	99-06-04	Welding of earth terminal
042N0008	00-11-17	Bobbin
042N0309	99-07-06	Thermal fuse
018Z0310	88-10-21	External earth terminal.
042N0308	99-07-29	Tape.
042N0293	98-11.12	Internal earth terminal. 9-32T

#### Individual

042N55XX (sheet 1-5)	99-02-15	Description 24VDC/0,28A
032A1370	03-10-22	Marking of 042N5503 & 042N5603
032A1371	03-10-22	Marking of 042N5504 & 042N5604
032A1372	03-10-22	Marking of 042N5505 & 042N5605
042N55XX (sheet 1-5)	00-07-04	Description 24VDC/0,2A
032A1367	03-10-22	Marking of 042N5513 & 042N5613
032A1368	03-10-22	Marking of 042N5514 & 042N5614
032A1369	03-10-22	Marking of 042N5515 & 042N5615
042N55XX (sheet 1-5)	00-09-22	Description of 24VAC/0,42A
032A1352	03-10-22	Marking of 042N5523
032A1353	03-10-22	Marking of 042N5524
032A1354	03-10-22	Marking of 042N5525
042N55XX (sheet 1-5)	00-09-22	Description of 230VAC/0,05A
032A1355	03-10-22	Marking of 042N5533
032A1356	03-10-22	Marking of 042N5534
032A1357	03-10-22	Marking of 042N5535
042N56XX (sheet 1-5)	02-03-13	Description of 24VAC/0,322A
042N56XX (sheet 1-5)	02-03-13	Description of 230VAC/0,033A
032A1426	03-10-22	Marking of 042N5623
032A1427	03-10-22	Marking of 042N5624
032A1428	03-10-22	Marking of 042N5625
032A1429	03-10-22	Marking of 042N5633
032A1430	03-10-22	Marking of 042N5634
032A1431	03-10-22	Marking of 042N5635

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.

### UL International Demko A/S

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[17] Special conditions for safe use:

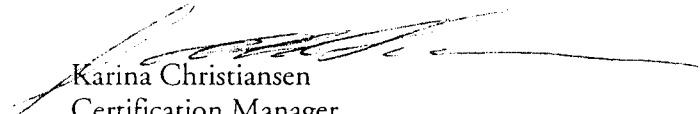
- The "X" in the certificate number refers to the following conditions:
- The ambient temperature must be within the range:  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ .
- For solenoid in use under temperature:  $-30^{\circ}\text{C}$  must the cable be protected for impact.
- The solenoid is manufactured with a permanently connected cable. The connection of the cable supplying the solenoid, has to 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 off, isolated, and not connected. If the Y/G wire is connected to earth, the external earth terminal must be left without any connection.
- If the valve contains magnesium this content shall be less than 6% by mass.
- The volume of the valve *external* to the solenoid must be greater than  $9,5\text{cm}^2$ . This would otherwise impair the surface temperature specification.
- The solenoid must not be removed from the valve when energised. This would otherwise impair the surface temperature specification.
- In case of cleaning the solenoid, this must be done with a moist cloth, in order to prevent build up of electrostatic charges.
- 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 4000A according to EN50028 §4.1.3.
- As this product is completely encapsulated, no repair is possible.

[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.

On behalf of UL International Demko A/S

Herlev, 2004-01-12

  
Karina Christiansen  
Certification Manager

**UL International Demko A/S**

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