

[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 01 ATEX 130640X**

[4] Equipment or Protective System: **Incremental Encoder, Type ME 01 - 02**

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

[6] Address: **Fabriksvej 6, DK-9490 Pandrup, Denmark**

[7] 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.

[8] 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. 130640

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 E incl. A1+A2 **EN 50028: 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, 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.

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

Ex II 2G EEx m II T6

On behalf of UL International Demko A/S

2004-9-28
Herlev, 2001-12-19
Revised 2003-03-03


Karine Christiansen
Certification Manager

UL International Demko A/S

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Certificate: 01 ATEX 130640X



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Schedule

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 01 ATEX 130640X

Description of Equipment or protective system:

The Eltomatic encoder Type 01 – 02 is a 2-channel Hall encoder consisting of a diecast – plastic impregnated aluminium housing and a galvanized steel acces cover, which is mounted in a recess on the side of the housing. As the encoder is designed as a module for linear integration onto the end of a twin-screw flow meter, O-rings are mounted in a recess in each end of the housing to ensure that no liquid can leak out to the access cover. A plastic code disc containing 4 button magnets assembled in an alternating north/south sequence is attached to the end of one of the screw shafts of the screw meter and resolves with the screw shafts when liquid is pumped through the meter chamber. The encoder is mounted on the end of the meter in such a way the liquid flows around the code disc and through the centre of the encoder housing. The magnets activate the Hall sensors causing a clearly defined, alternating on/off sequence which creates the required waveform and duty cycle. An earthing clamp is provided adjacent to the cable exit for extra protection.

Report No.:

130640-01 Report
130640-02 Report
130640-04 Report

Drawings:

Number	Date	Description
59.1015	05.11.01	ATEX Type Label, Magnetic Encoder Type ME 01-02
00.2003_7	12.06.01	General Assembly, Magnetic Encoder
70.0602_3	12.11.98	Magnetic Encoder, Housing type 98.0102
70.0601	14.12.00	Housing Cover For Magnetic Encoder

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 Epsilon-x mark .

UL International Demko A/S

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Report: 130640-04



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EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 01 ATEX 130640X

[17] Special conditions for safe use:

The certificate number is followed by the symbol "X" due to the following:

- The 5.5 V input voltage shall be supplied through a safety-isolated transformer according to EN60742 or EN61558-1 and the maximum fuse rating shall be 250 mA or through a 1.3W power limited circuit complying with clause 4.1.3 and 4.1.4 in the standard EN 50028.
- The cable must be connected in safe area or in suitable certified terminal boxes.
- Ambient temperatures are depending on the used cable type and fixing as follows:
 - LiYCY 4557-F : -15°C to +70°C
 - LIXC114-4x0.14mm² : Loose: -30°C to +70°C Fixed: -50°C to +70°C
 - MCY-4x0.14mm² : Loose: -5°C to +70°C Fixed: -30°C to +70°C
 - Datapur-C : Loose: -5°C to +70°C Fixed: -30°C to +70°C
 - LiYCY 4x0.14 7001 : -30°C to +70°C

[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, 2004-09-28


Karina Christiansen
Certification Manager

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