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EC TYPE EXAMINATION CERTIFICATE

Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC

EC type examination certificate number: ISSeP08ATEX051X

Equipment: Flameproof motors Series BA(X) 1xy * * *

Applicant – Manufacturer:

ELNOR MOTORS N.V.

(6)Address: De Costerstraat 45

3150 Haacht (Wespelaar)

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

ISSeP, notified body n^r 492 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 report no 07077

Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0:2006 (IEC 60079-0:2004) IEC 60079-0:2007 EN 60079-1:2007 (IEC 60079-1: 2007)

- (10) If the symbol "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 this Directive may 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 indications:

⟨Ex⟩ II 2 G

Ex d IIB T6 to T3

(according to standard EN 60079-0:2006)

Ex d IIB T6 to T3 Gb (according to standard IEC 60079-0: 2007)

Colfontaine, the 23.10.2008

INSTITUT SCIENTIFIQUE DE SERVICE PUBLIC Zoning A. Schweitzer - B7340 Colfontaine (Wasmes) Tél: ++ 32 65 610811 - Fax: ++ 32 65 610808

Marcel Lambert Manager of Colfontaine division

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(13)

SCHEDULE

(14) EC TYPE EXAMINATION CERTIFICATE No ISSeP08ATEX051X

(15) Description of the equipment or protective system:

Three-phase asynchronous motor :BA(X) 1xyTR

Single-phase asynchronous motor :BA(X) 1xy C or E or CP

Direct current motor: BA(X) 1xy DC

The flameproof enclosure of this motor consists of a carcass made of steel and end shields made of cast iron .

The motor may be equipped with:

- a terminal box compartment. In this case an additional marking will indicate that the insulation of the supply cable provided by the user shall be compatible with a temperature of at least 100°C (for the temperature classes T4) and 120°C (for the temperature class T3).
- two ends shaft
- an operating rod for push button mounted on the terminal box compartment suitable to reset the manual thermal protection.

The fastenings are made by through bolts of property class 8.8 and internal socket head screws class 12.9.

Temperature classes

The motors on S1 duty service cooled by the process have the temperature class T3. These motors have the temperature classes T6 or T5 or T4 if they are equipped with a thermal protection suitable to the temperature class.

The motors with natural cooling & the motors energised by converters and the motors on S2 to S9 duty service are provided with a thermal protection or a PTC thermistance suitable to the temperature class.

Electrical characteristics

Power range: from 0.018 kW to 2.2 kW

Voltages supply : up to 660 VAC - $50/60 \ Hz$

from 6 VDC to 150 VDC

Insulation class: F

Eventual prescriptions

Ambient temperature range: -40°C up to +70°C

Routine test

Each apparatus shall be submitted to the routine verifications and tests necessary to ensure that it complies with the specification submitted to the testing station with the prototype.

The motors are exempted from the overpressure routine test provided that they are operated within the ambient temperature range -20°C to +40°C.

However a control of the welding of the carcass shall be made.

The motors operated within the ambient temperature range -40° C to $+70^{\circ}$ C shall be submitted to routine test under the value of 1431 kPa (14.31 bar).

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SCHEDULE

EC TYPE EXAMINATION CERTIFICATE No ISSeP08ATEX051X

(16) Report no 07077 dated 22.10.2008 composed in total of 28 pages.

The manual of instructions of the manufacturer of 13.11.2007 (5 pages)

The data sheets related to the parts of the flameproof enclosure dated 14.05.2007 - Rev. 3 of 16.10.2008 - (4 pages)

The data related to the self-adhesive marking plate - document of 10.05.2007 signed on 30.05.2007 (1 page)

The document related to the minimum radial clearance (k) and the maximum radial clearance (m) of the shaft glands, dated 29.10.2007 – signed on 13.11.2007 (1 page)

The document related to the discharge time of the capacitor dated 25.08.2008 (1 page)

The drawings 240000420B Rev. B of 25.08.2008 501000606A Rev.A of 21.05.2007 505990125C Rev.C of 21.10.2008 801100636 of 29.10.2007 810100603A of 11.07.2002 810100604A of 11.07.2002 810100608 of 15.03.2002

- (17) Special conditions for safe use: symbol X
 - An appropriate connection of the free end of the cable shall be foreseen when the motor is provided with a permanently connected cable
- (18) Essential Health and Safety Requirements: covered by the standards listed under point 9 of the present certificate and by the descriptive documents from the manufacturer.

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VARIATION

EC TYPE EXAMINATION CERTIFICATE N° ISSeP08ATEX051X/1

(14) Equipment: Flameproof motors

Three phase asynchronous motor: BA(X)1xy TR

Single phase asynchronous motor: BA(X)1xy C or E or CP

Direct current motor:

 $BA(X)1xy \cdot DC$

(15) Subject of the variation:

Update of the initial certificate with the ATEX standards EN 60079-0, with the last edition (EN 60079-0: 2012),

Marking: Ex II 2 G Ex d IIB T6...T3 Gb

Eventual Prescriptions: no change

Routine verifications and tests: (Clause 27 of EN 60079-0)

The manufacturer must do the verifications and individual tests to assure that the produced electrical apparatus conforms with the specification submitted to the test station

- (16) Report n° 15019 of 17.02.2015 (13 pages)
- (17) Special conditions for safe use: Unchanged
- (18) Essential Health and Safety Requirements:
 - Covered by the detailed norms on point 9 of the initial certificate.

Colfontaine, 18.02.2015

Manager.

INSTITUT SCIENTIFIQUE DE SERVICE PUBLIC

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This document may not be used without the original certificate