[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **DEMKO 16 ATEX 1691X Rev. 2**

[4] Product: **Industrial Encoder, LP Series Digital Encoder, AH and HH**

[5] Manufacturer: **BEI Sensors SAS**

[6] Address: **99 rue de Copenhague, Espace Europeen de l'Entreprise-Schiltigheim, BP 70044-67013 Strasbourg, France**

[7] This product and any acceptable variation thereto are 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 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products 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. **4788428448.1.1**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013 **EN 60079-1:2014**

[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 the certificate.

[12] The marking of the product shall include the following:

II 2 G Ex db IIB T4 Gb

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2016-11-21
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Notified Body
UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[13] [14]

Schedule
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[15] Description of Product

This LP Series product is an Industrial Encoder, shaft position transmitter. This product is provided with an aluminum enclosure of explosion-proof design incorporating electrical components providing data for remote shaft position indication. The enclosure has provision for connection to threaded rigid metal conduit. The encoder shall be powered by a NEC Class 2 power supply.

Nomenclature:

HHAX S E6 // 5GE V/US // V // E6R 020 // U6
I II III IV V VI VII VIII IX

I - Type:
AHUX/HHUX – Hollow shaft
AHKX/HHKX – Blind shaft
AHAX/HHAX – Hollow shaft with integrated coupling
AHMX/HHMX – Solid shaft

II - Special features (optional):
S – Special features
Blank - No special features

III - Shaft bore:
E4 – 1/2”
E5 – 5/8”
E6 – 3/4"
E8 – 1”
12 – 12 mm
14 – 14 mm
20 – 20 mm
30 – 30 mm
+ available

IV - Voltage/Output:
2P2/2G2 – 5V voltage and RS422 output
5PE/5GE – 11-30V voltage and reinforced Push-Pull output
PP5/PG5 – 5-30V voltage and Push-Pull output
RP2RP2/RG2 – 4.75-30V voltage and RS422 output
PSS – SSI RS422
PPX – Programmable SSI
PSR – Reinforced SSI

V - Channels:
9 – AA/BB/ZZ/B before A, Z-gated A&B
V/US – AA/BB/ZZ/B before A, Z-gated B low
G – Gray code absolute
B – Binary code absolute

VI - Cycles per turn:
Incremental – up to 10000 standard; 10000+ available, or XPROG
Absolute – up to 16 bits, or XP

VII - Output termination:
E0R – M16 radial terminal box (without cable gland)
E4R – 1/2” radial terminal box (without cable gland)
E6R – 3/4" radial terminal box (without cable gland)

VIII - Cable length:
XXX – Cable length (e.g. 020 – 2 meters)
Blank – No cable

IX - Hub:
U3 – With insulated sleeve
U5 – Blind sleeve
U6 – Through sleeve
** - No sleeve

Temperature range:
The ambient temperature range is -40 °C to +85 °C.

Electrical data
Powered by a Class 2 Supply:

4.75-30 Vdc, 7.6VA maximum

[13] **Schedule**

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Routine tests
Routine tests according to EN 60079-1 cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17] Specific conditions of use:

- The gaps of the different flamepaths are less than the values specified in the tables of the EN 60079-1 standard.
- The width of the different flameproof joints are superior to these specified in tables of EN 60079-1 standard.
- See Document #08329-001 for construction details.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

