

(1) **EU-Type Examination Certificate**

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

(3) **Certificate Number** TÜV 15 ATEX 167275 X **issue:** 00

(4) for the product: Encoder Type 01-08

(5) of the manufacturer: Eltomatic A/S

(6) Address: Fabriksvej 6
9490 Pandrup
Denmark

Order number: 8000466656

Date of issue: 2017-02-13

- (7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the 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 the confidential ATEX Assessment Report No. 17 203 191366.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013
EN 60079-26:2015

EN 60079-1:2007

EN 60079-11:2012

except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for 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 equipment. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 **II 1 G Ex d+ib IIB T4 Ga**

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The deputy head of the notified body


Christian Roder

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(13) SCHEDULE

(14) EU-Type Examination Certificate No. TÜV 15 ATEX 167275 X issue 00

(15) Description of product

The incremental shaft encoder 01-08 is designed for heavy-duty application in environments where potentially explosive atmospheres can be expected and devices for category 1 and Gas group IIB are required.

The electronics of the pulse generator is designed as intrinsically safe electronic, which is enclosed inside a metallic "d" enclosure which is intended for mounting directly on the corresponding gearbox. The counter disc is built-in into the enclosure, with a corresponding optical tracking, which is activated from the gearbox by a leading-in shaft. The connection cable mounted by the manufacturer is lead into the enclosure through a cemented stopping box, which is integrated in the enclosure.

Type variants covered

Encoder type: 01-08

Technical data

It can be delivered with a different number of channels (1-channel, 2-channels or 3-channels) in the voltage range 5 to 12 VDC, max 100 mA.

Maximum measurable rotating speed:
600 rpm

Ambient temperature range:
-30 °C to + 70 °C – with fixed mounted cable
-25 °C to + 60 °C – with movable cable

Electrical data

12-V Version

Supply and
signal circuit

in type of protection intrinsic safety Ex ia IIB
only for connection to a certified intrinsic safe circuit.
maximum values:

	U_i	=	15	V
	I_i	=	260	mA
	P_i	=	1.25	mW
effective internal capacitance	C_i	≤	30	nF
effective internal inductance	L_i	≤	35	μH

resp.

5-V Version

Supply and
signal circuit

in type of protection intrinsic safety Ex ia IIB
only for connection to a certified intrinsic safe circuit.
maximum values:

	U_i	=	8	V
	I_i	=	260	mA
	P_i	=	1.25	mW
effective internal capacitance	C_i	≤	30	nF
effective internal inductance	L_i	≤	35	μH

Schedule to EU-Type Examination Certificate No. TÜV 15 ATEX 167275 X issue 00

(16) Drawings and documents are listed in the ATEX Assessment Report No. 17 203 191366

(17) Specific Conditions for Use

The permitted range of the ambient temperature is -30 °C to +70 °C with fixed mounted cable and -25 °C to +60 °C with movable cable.

The encoder cable must be routed and externally fixed in such a way that it is protected from mechanical damage.

The encoder shaft must be driven via a coupling arrangement that allows some radial and axial movement; otherwise damage to the shaft bearings may occur.

The housing material excludes the allowed value of aluminium for the usage inside EPL Ga areas. The device has to be installed in such a way that no arcs or sparks will occur.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -