[1]	TYPE EXAMINATION CE	ERTIFICATE									
		Ex)									
[2]	Equipment or Protective System inte in Potentially Explosive Atmos Directive 2014/34/E	nded for use pheres EU									
[3]	3] Type Examination Certificate Number: DEMKO 19 ATEX 2195X Rev.	Type Examination Certificate Number: DEMKO 19 ATEX 2195X Rev. 0									
[4]	Product: ROTAMAG, Bearingless magnetic ring encoder, Se	Product: ROTAMAG, Bearingless magnetic ring encoder, Series SMLAX									
[5]	5] Manufacturer: LIKA Electronic s.r.l.										
[6]	Address: Via San Lorenzo 25, Carrè, VI, 36010, Italy	Address: Via San Lorenzo 25. Carrè, VI. 36010. Italv									
[7]	7] This equipment and any acceptable variation thereto is specified in the sched	This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.									
[8]	UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.										
	The examination and test results are recorded in confidential report no. 4788483617.2.1										
[9]	P] Compliance with the Essential Health and Safety Requirements has been ass	Compliance with the Essential Health and Safety Requirements has been assured by compliance with:									
	EN IEC 60079-0:2018	EN 60079-18:2015									
	except in respect of those requirements listed at item 18 of the Schedule.										
[10]	I0] If the sign "X" is placed after the certificate number, it indicates that the produ schedule to this certificate.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.									
[11]	11] This Type examination certificate relates only to the design of the specified pr manufactured.	This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.									
[12]	2] The marking of the product shall include the following:										
	Ex II 3 G Ex mc II	C T4 Gc									
	Certification Manager Jan-Erik Storgaard Janitic Storgaard	e Product described herein ("Certified Product") has been investigated ard(s) indicated on this Certificate, in accordance with the ATEX Product his certificate and test results obtained apply only to the product r. UL did not select the sample(s) or determine whether the sample(s) anufactured product. UL has not established Follow-Up Service or other cturer is solely and fully responsible for conformity of all product to all quirements or Directives. The test results may not be used, in whole or in s prior writen approval.									
	Jan but Supernal Date of issue: 2019-08										
	Certification Body UL International Demko Tel. +45 44 85 65 65, in	A/S, Borupvang 5A, 2750 Ballerup, Denmark fo.dk@ul.com, www.ul.com									

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[15] <u>Description of Product:</u>

[13]

[14]

SMLAX is a series of bearingless encoders for position and speed feedback on applications with large rotating shaft in potentially explosive atmospheres. The SMLAX reading head must be paired with an MRx series magnetic ring.

SMLAX rotary encoder is available with an SSI absolute interface, with an incremental output, and with a dual output (absolute + incremental). An absolute sensor, an incremental sensor, and a reference sensor can be installed in the same package. Thus the magnetic ring can be equipped with two or three tracks according to model.

The absolute resolution does not affect the safety requirements of the system and can be typically 12 bits (4.096 cpr), 13 bits (8.192 cpr), and 14 bits (16.384 cpr) or according to customer's request and the physical characteristics of the measuring system. The absolute position is provided through the SSI interface.

Also the incremental resolution is according to customer's request and the physical characteristic of the measuring system; square wave signals are provided via Push-Pull and Line Driver output circuits.

Nomenclature for Series SMLAX:

Type 1 Sensor (Absolute + incremental version):

SMLAX		<u>B0</u>	1	XX	<u>L1</u>	/SXXX
	X				V	VI

I - Series: SMLAX

II - Output circuits:

B0 = SSI, Binary + 1024 PPR Line Driver

- G0 = SSI, Gray + 1024 PPR Line Driver
- B5 = SSI, Binary + 1024 PPR Push Pull G5 = SSI, Gray + 1024 PPR Push Pull
- III Supply Voltage:
 - $1 = +5V \pm 5\%$ (not for B5, G5)
 - $2 = +10V \div +30V$

IV - Resolution: Two numeric character to indicate resolution, not safety relevant.

- V Connections Cable length:
 - L1 = cable output 1 m
 - Lx = cable output x meters

VI - Customer version: Three numeric character to indicate specific customer requirements, not safety relevant.

Type 2 Sensor (Absolute or incremental version):

SMLAX		1	A	XXX	R	L1 –	/SXXX
	II	III		IV	V	VI	VII

- I Series: SMLAX
- II Output circuits:

L = Line Driver (RS422)Y = Push-Pull AB0 /AB0 BG = SSI binary coded GG = SSI Gray coded

- III Supply Voltage: 1 = +5V±5% (not for B5, G5)
 - $2 = +10V \div +30V$

IV – Resolution: Three numeric character to indicate resolution, not safety relevant.

V - Index:

R = unique reference signal (no output for BG, GG)

- VI Connections Cable length: L1 = cable output 1 m
 - Lx = cable output x meters

VII - Customer version: Three numeric character to indicate specific customer requirements, not safety relevant.

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Temperature range:

The ambient temperature range is -10 °C to +85 °C.

Electrical data

Power supply: +5Vdc ± 5%, +10Vdc ÷ +30Vdc Output current (each channel): 20 mA

Routine tests:

Each SMLAX bearingless encoder shall be subjected to a visual inspection to determine such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion or softening per Cl. 9.1 of EN 60079-18.

[16] <u>Descriptive Documents</u>

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

[17] Special Conditions of Use:

• Care shall be taken to prevent accumulation of electrostatic charges. See installation instructions.

[18] Essential Health and Safety Requirements

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

Additional information



Lika Electronic Srl Via S. Lorenzo, 25 36010 Carré (VI) • Italy

will be used as the company identifier on the marking label.