Translation

(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 14 ATEX 133904 X** **Issue:** 00

(4) for the product: Signal conditioning instruments
VEGATOR 111 type TOR111 .**S/X****
VEGATOR 112 type TOR112.*******

(5) of the manufacturer: **VEGA Grieshaber KG**

(6) Address: Am Hohenstein 113, 77761 Schiltach, Germany

Order number: 8003032498
Date of issue: 2021-12-21

(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. 21 203 296739.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018 **EN IEC 60079-7:2015/A1:2018** **EN 60079-11:2012**
EN IEC 60079-15:2019

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:

See “Type code and Marking”

TÜV NORD CERT GmbH, Am TÜV 1, 45307 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 of the head of the notified body

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(13) **S C H E D U L E**

(14) **EU-Type Examination Certificate No. TÜV 14 ATEX 133904 X** **Issue 00**

(15) **Description of product:**
The signal conditioning instruments VEGATOR 111 type TOR111 .**S/X**** and VEGATOR 112 type TOR112.******* are used for the supply of passive, intrinsically safe 1.2 mA/2.1 mA two wire NAMUR measuring sensors, the safe galvanic separation of the intrinsically safe circuits from all non-intrinsically safe circuits and the evaluation of the analogue transmitted measuring data.

Type code and Marking:

	II 3 (1) G Ex ec nC [ia Ga] IIC T4 Gc II 3 G (1) D Ex ec nC [ia IIIC Da] IIC T4 Gc
VEGATOR 111 type TOR111 .**S/X****	II 3 G (M1) Ex ec nC [ia I Ma] IIC T4 Gc
VEGATOR 112 type TOR112.*******	I (M1) [Ex ia Ma] I II (1) G [Ex ia Ga] IIC II (1) D [Ex ia Da] IIIC

Electrical data:

Supply (Terminals 16/17)	For connection to non-intrinsically safe circuits with the following maximum values: U_n = 24...230 V a.c (-15 … +10%) U_n = 24… 65 V d.c (-15 … +10%) U_m = 253 V a.c
Relay outputs (Terminals Relay 1: 10/11/12 Relay 2: 13/14/15)	For connection to non-intrinsically safe circuits with the following maximum values: U_n = 253 V a.c; I_n = 3 A U_n = 60 V d.c; I_n = 1 A
Signal circuits (Terminals 1/2, 4/5)	In type of protection intrinsic safety Ex ia I/IIC/IIB(IIIC) With following maximum values per circuit: U_o = 10.8 V I_o = 19.6 mA P_o = 52.8 mW Characteristic line: linear
Effective internal capacitance C_i	Negligibly small
Effective internal inductance L_i	Negligibly small

The maximum permissible values for the external inductance L_o and the external capacitance C_o can be taken from the following tables:

Ex ia I	L_o [mH]	100	50	5	0.5	0.1
	C_o [µF]	12	13	19	35	58

Ex ia IIC	L_o [mH]	100	20	10	0.5	0.05
	C_o [µF]	0.33	0.55	0.63	1.1	2.1

Ex ia IIB (IIIC)	L_o [mH]	100	20	10	0.5	0.05
	C_o [µF]	3	3.9	4.4	8.3	15

The intrinsically safe signal circuit is safe galvanically separated from the non-intrinsically safe circuits up to a peak value of the voltage of 375 V.

Thermal data:
Permissible ambient temperature range: -20 °C ≤ Ta ≤ +60 °C.

(16) Drawings and documents are listed in the ATEX Assessment Report No. 21 203 296739

(17) **Specific Conditions for Use:**

1. For EPL Gc applications the signal conditioning instruments VEGATOR 111 type TOR111 .**S/X**** and VEGATOR 112 type TOR112.******* have to be installed in a suitable enclosure according to EN 60079-7 resp. EN 60079-15 in such a way that a degree of protection of at least IP54 is achieved.

2. For EPL Gc applications the signal conditioning instruments VEGATOR 111 type TOR111 .**S/X**** and VEGATOR 112 type TOR112.******* have to be erected in such a way that a pollution degree 2 or less, according to EN 60664-1, is achieved.

3. For EPL Gc applications measures have to be taken, external to the signal conditioning instruments VEGATOR 111 type TOR111 .**S/X**** and VEGATOR 112 type TOR112.*******, to provide a transient protection that ensures that the rated voltage, connected to the power supply terminals, is not exceeded by more than 40 %.

4. For EPL Gc applications the connecting and disconnecting of non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

(18) **Essential Health and Safety Requirements:**
No additional ones.

- End of EU-Type Examination Certificate -