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 15 ATEX 161797 X** **Issue:** 00

(4) for the product: Ex-Separator type
VEGATRENN 151.*C/O/U*****
VEGATRENN 152.*C/O/U*****
VEGATRENN 151.*A*****
VEGATRENN 152.*A*****

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

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

Order number: 8003032471
Date of issue: See date of signature

(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. 22 203 296730.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018/AC:2020-02 **EN IEC 60079-7:2015/A1:2018** **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:

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

TÜVNORD
Digital unterschrieben von Meyer Andreas
Datum: 2023.03.06 17:09:47 +01'00'

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

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

(14) **EU-Type Examination Certificate No. TÜV 15 ATEX 161797 X Issue 00**

(15) **Description of product:**
The Ex-Separators type VEGATRENN 151.*C/O/U*****, VEGATRENN 152.*C/O/U*****, VEGATRENN 151.*A***** and VEGATRENN 152.*A***** are used for the supply of passive, intrinsically safe 4…20 mA two wire measuring sensors, the safe galvanic separation of the intrinsically safe circuits from all non-intrinsically safe circuits and the signal transmission from 4…20 mA sensors.
The Ex-Separators type VEGATRENN 151.*C/O/U*****, VEGATRENN 152.*C/O/U*****, VEGATRENN 151.*A***** and VEGATRENN 152.*A***** are passive without own supply are executed with 1 or with 2 channels.

Type code and Marking:

	II 3 G (M1) Ex ec [ia I Ma] IIC T4 Gc
VEGATRENN 151.*C/O/U*****	II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
VEGATRENN 152.*C/O/U*****	II 3 G (1) D Ex ec [ia IIIC Da] IIC T4 Gc
VEGATRENN 151.*A*****	I (M1) [Ex ia Ma] I
VEGATRENN 152.*A*****	II (1) G [Ex ia Ga] IIC
	II (1) D [Ex ia Da] IIIC

Electrical data:

Current output circuits (Terminals Channel 1: 10, 11; 12 Channel 2: 13, 14; 15)	For connection to non-intrinsically safe circuits with the following maximum values: U = 15… 35 V d.c., 4…20 mA U_m = 253 V a.c.
Current input circuits (Terminals Channel 1: 1, 2 Channel 2: 4, 5)	In type of protection intrinsic safety Ex ia I/IIC/IIB(IIIC) with following maximum values per circuit: U_o = 18 V I_o = 31.6 mA P_o = 569 mW Characteristic line: rectangular
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	20	10	0.5	0.05
	C_o [µF]	2.5	4.1	4.8	6.7	9

Ex ia IIC	L_o [mH]	7.7	1	0.5	0.2	0.02
	C_o [µF]	0.11	0.13	0.16	0.2	0.309

Ex ia IIB (IIIC)	L_o [mH]	100	20	10	0.5	0.1
	C_o [µF]	0.35	0.9	1.1	1.5	1.78

Schedule to EU-Type Examination Certificate No. TÜV 15 ATEX 161797 X Issue 00

The intrinsically safe signal circuits are 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 during operation: -20 °C ≤ Ta ≤ +60 °C.

(16) Drawings and documents are listed in the ATEX Assessment Report No. 22 203 296730

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

1. For EPL Gc applications the Ex-Separators type VEGATRENN 151.*C/O/U*****, VEGATRENN 152.*C/O/U*****, VEGATRENN 151.*A***** and VEGATRENN 152.*A***** have to be installed in a suitable enclosure according to EN 60079-7 in such a way that a degree of protection of at least IP54 according to EN 60529 is achieved.
2. For EPL Gc applications the s Ex-Separators type VEGATRENN 151.*C/O/U*****, VEGATRENN 152.*C/O/U*****, VEGATRENN 151.*A***** and VEGATRENN 152.*A***** 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 Ex-Separators type VEGATRENN 151.*C/O/U*****, VEGATRENN 152.*C/O/U*****, VEGATRENN 151.*A***** and VEGATRENN 152.*A*****, 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 -

Translation

(1) # EC-Type-Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**

(3)	**Certificate Number**	**TÜV 15 ATEX 161797**
(4)	for the equipment:	The Ex-separators type VEGATRENN 151.*C/O/U***** VEGATRENN 152.*C/O/U*****
(5)	of the manufacturer:	VEGA Grieshaber KG
(6)	Address:	Am Hohenstein 113 77761 Schiltach Germany
	Order number:	8000448171
	Date of issue:	2015-08-21

(7) The design of this equipment or protective system and any acceptable variation thereto are specified in the schedule to this EC-Type-Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report No. 15 203 161797.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 EN 60079-11:2012

(10) If the sign "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 in accordance to the Directive 94/9/EC. 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 equipment or protective system must include the following:

Ex II (1) G [Ex ia Ga] IIC, II (1) D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I

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 head of the notified body

Heinen

Hanover office, Am TÜV 1, 30519 Hanover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

(13) **SCHEDULE**

(14) **EC-Type-Examination Certificate No. TÜV 15 ATEX 161797**

(15) Description of equipment

The Ex-separators type
VEGATRENN 151.*C/O/U*****
VEGATRENN 152.*C/O/U*****
are used for the supply of passive, intrinsically safe 4 ... 20 mA two wire measuring sensors, the safe galvanic separation of the intrinsically safe circuits from all non-intrinsically safe circuits and the signal transmission from 4...20 mA sensors in the explosion hazardous area.
The Ex-separators are passive without own supply.

The Ex-separators are executed with 1 or with 2 channels.

The permissible ambient temperature range is -20 °C ... +60 °C.

Electrical data

Current output circuits (Terminals Channel 1: 10, 11; 12 Channel 2: 13, 14; 15)	U = 15 ... 35 V d. c., 4...20 mA U_m = 253 V a. c.
Current input circuits (Terminals Channel 1: 1, 2 Channel 2: 4, 5)	in type of protection „Intrinsic Safety" Ex ia IIC, IIB, I Maximum values per circuit: U_o = 18 V I_o = 32 mA P_o = 569 mW Characteristic line: rectangular The effective internal capacitances and inductances are negligibly small.

Ex ia	IIC	IIB	I
max. permissible ext. inductance	2 mH	5 mH	10 mH
max. permissible ext. capacitance	0.15 µF	1.3 µF	1.5 µF

The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The values for IIC and IIB are also permissible for explosive dust atmospheres.

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

(16) The test documents are listed in the test report No. 15 203 1^61797.

(17) Special conditions for safe use

None

(18) Essential Health and Safety Requirements

no additional ones