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 145373 X** **Issue:** 00

(4) for the product: Signal conditioning instruments
VEGATOR 141 type TOR141.**S/X****
VEGATOR 142 type TOR142.*******

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

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

Order number: 8003032508
Date of issue: 2022-08-19

(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 296774 .

(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**
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

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

(14) **EU-Type Examination Certificate No. TÜV 14 ATEX 145373 X** **Issue 00**

(15) **Description of product:**
The signal conditioning instruments VEGATOR 141 type TOR141.**S/X**** and VEGATOR 142 type TOR142.******* 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 evaluation of the analogue transmitted measuring data.

Type code and Marking:

VEGATOR 141 type TOR141.**S/X****	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 II 3 G (M1) Ex ec nC [ia I Ma] IIC T4 Gc
VEGATOR 142 type TOR142.*******	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 = 22.4 V I_o = 113.5 mA P_o = 636 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]	58	20	0.5	0.2	0.1
	C_o [µF]	2	3.1	3.8	4.8	5.5

Ex ia IIC	L_o [mH]	1.9	1	0.5	0.2	0.1
	C_o [µF]	0.058	0.076	0.097	0.13	0.156

Ex ia IIB (IIIC)	L_o [mH]	16	10	1	0.5	0.2
	C_o [µF]	0.6	0.69	0.74	0.86	1.09

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 296774

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

1. For EPL Gc applications the signal conditioning instruments VEGATOR 141 type TOR141.**S/X**** and VEGATOR 142 type TOR142.******* 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 141 type TOR141.**S/X**** and VEGATOR 142 type TOR142.******* 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 141 type TOR141.**S/X**** and VEGATOR 142 type TOR142.*******, 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 14 ATEX 145373**
(4)	for the equipment:	Signal conditioning instruments type VEGATOR TOR 141.A C/O/U X**** VEGATOR TOR 141.A C/O/U S**** VEGATOR TOR 142.A C/O/U *****
(5)	of the manufacturer:	VEGA Grieshaber KG
(6)	Address:	Am Hohenstein 113 77761 Schiltach Germany
	Order number:	8000437160
	Date of issue:	2014-10-22

(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. 14 203 145373.

(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

Karl-Heinz Schwedt

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(13) **SCHEDULE**

(14) **EC-Type-Examination Certificate No. TÜV 14 ATEX 145373**

(15) Description of equipment

The signal conditioning instruments type
VEGATOR TOR 141.A C/O/U X****
VEGATOR TOR 141.A C/O/U S****
VEGATOR TOR 142.A 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 evaluation of the analogue transmitted measuring data.

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

Electrical data

Supply (Terminals 16/17)
U = 20 ... 253 V a. c./d. c.
U_m = 253 V

Signal circuits (Terminals 1/2, 4/5)
in type of protection „Intrinsic Safety" Ex ia IIC, IIB, I
maximum values per circuit:
U_o = 22.4 V
I_o = 113.5mA
P_o = 636 mW
characteristic line: linear

Ex ia	IIC	IIB	I
max. permissible ext. inductance	0.5 mH	10 mH	10 mH
max. permissible ext. capacitance	0.095 µF	0.55 µF	1.2 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.

Relay outputs (Terminals 10/11/12, 13/14/15)
maximum values:
253 V a. c., 3A
60 V d. c., 1A
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.

(16) The test documents are listed in the test report No. 14 203 145373.

(17) Special conditions for safe use

None

(18) Essential Health and Safety Requirements

no additional ones

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 14 ATEX 145373**
(4)	for the equipment:	Signal conditioning instruments type VEGATOR TOR 141.A C/O/U X**** VEGATOR TOR 141.A C/O/U S**** VEGATOR TOR 142.A C/O/U *****
(5)	of the manufacturer:	VEGA Grieshaber KG
(6)	Address:	Am Hohenstein 113 77761 Schiltach Germany
	Order number:	8000437160
	Date of issue:	2014-10-22

(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. 14 203 145373.

(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

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The head of the notified body

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(13) **SCHEDULE**

(14) **EC-Type-Examination Certificate No. TÜV 14 ATEX 145373**

(15) Description of equipment

The signal conditioning instruments type
VEGATOR TOR 141.A C/O/U X****
VEGATOR TOR 141.A C/O/U S****
VEGATOR TOR 142.A 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 evaluation of the analogue transmitted measuring data.

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

Electrical data

Supply (Terminals 16/17)
U = 20 ... 253 V a. c./d. c.
U_m = 253 V

Signal circuits (Terminals 1/2, 4/5)
in type of protection „Intrinsic Safety" Ex ia IIC, IIB, I
maximum values per circuit:
U_o = 22.4 V
I_o = 113.5mA
P_o = 636 mW
characteristic line: linear

Ex ia	IIC	IIB	I
max. permissible ext. inductance	0.5 mH	10 mH	10 mH
max. permissible ext. capacitance	0.095 µF	0.55 µF	1.2 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.

Relay outputs (Terminals 10/11/12, 13/14/15)
maximum values:
253 V a. c., 3A
60 V d. c., 1A
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.

(16) The test documents are listed in the test report No. 14 203 145373.

(17) Special conditions for safe use

None

(18) Essential Health and Safety Requirements

no additional ones

Translation

(1) Statement of Conformity

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

(3) **Statement of Conformity Number:** **TÜV 14 ATEX 145375 X**

(4)	for the equipment:	Evaluation devices type VEGATOR TOR 141.AAX**** VEGATOR TOR 141.AAS**** VEGATOR TOR 142.AA*****
(5)	of the manufacturer:	VEGA Grieshaber KG
(6)	Address:	Am Hohenstein 113 77761 Schiltach Germany
	Order number:	8000437161
	Date of issue:	2014-10-22

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this statement of conformity and the documents therein referred to.

(8) The TÜV NORD CERT GmbH 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. 14 214 145375.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 EN 60079-11:2012 EN 60079-15:2010

(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 statement of conformity 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 3 G Ex nA nC ic IIC T4 Gc

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Management Explosion Protection

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(13) **SCHEDULE**

(14) **Statement of Conformity No. TÜV 14 ATEX 145375 X**

(15) Description of equipment

The signal conditioning instruments type
VEGATOR TOR 141.AAX****
VEGATOR TOR 141.AAS****
VEGATOR TOR 142.AA*****
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 evaluation of the analogue transmitted measuring data.
Regarding the intrinsically safe signal circuits, an EC-Type Examination Certificate TÜV 14 ATEX 145373 exists.

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

Electrical data

Supply (Terminals 16/17)	U = 20 ... 253 V a. c./d. c. U_m = 253 V
Signal circuits (Terminals 1/2, 4/5)	See EC-Type Examination Certificate TÜV 14 ATEX 145373
Relay outputs (Terminals 10/11/12, 13/14/15)	maximum values: 253 V a. c., 3A 60 V d. c., 1A

(16) The Test documents are listed in the test report No. 14 214 145373.

(17) Special conditions for safe use

According to EN/IEC 60079-15, section 6.3.1, the following is valid for this apparatus:

a) The apparatus has to be mounted in a housing tested according to IEC 60079-0, that meets the requirements of degree of protection IP54.

or

b) The apparatus has to be mounted in a housing tested according to IEC 60079-0, that meets the requirements of degree of protection IP4X. Then, the apparatus may exclusively be mounted in locations providing adequate protection against the entry of solid foreign objects or liquids.

The apparatus may be installed in an area of not more than pollution degree 2.

(18) Essential Health and Safety Requirements

no additional ones