[1]

UNITED KINGDOM CONFORMITY ASSESSMENT

UK-TYPE EXAMINATION CERTIFICATE

[2]

Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

[3] UK-Type Examination Certificate No.: **UL21UKEX2280X Rev. 0**

[4] Product: **VEGABAR 28 (*)/ 29 (*)/ 38 (*)/ 39 (*) Pressure Transmitter**

[5] Manufacturer: **VEGA Grieshaber KG**

[6] Address: **Am Hohenstein 113, Schiltach, 77761 Germany**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), 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 Schedule 1 of the Regulations. The examination and test results are recorded in the confidential report **UKRCC-4790037837.3.1.**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN 60079-11:2012** **EN 60079-26:2015**

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

[11] This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

Ex II 1 G Ex ia IIC T4 Ga or

Ex II 1/2 D Ex ia IIC T4 Ga/Gb or

Ex II 2 G Ex ia IIC T4 Gb

Certification Manager
David Lloyd

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2021-12-23

Approved Body UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100

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Schedule
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[15] Description of Product

The VEGABAR 28 (*)/ 29 (*)/ 38 (*)/ 39 (*) pressure transmitters with ceramic or metallic measuring cells. Measured products are gases, vapors and liquids. The equipment must be connected to an external intrinsic safety barrier with consider to the electrical ratings. The output is performing as a two-wire 4-20 mA current output. The metallic part of the enclosure is manufactured of stainless-steel type 316L.

The pressure transmitters can be mounted on reservoirs, pipelines and other units, at any position indoors and outdoors in wide range of environmental conditions. The sensors have no moving parts.

Safety relevant model coding of VEGABAR series:
The placeholder within brackets VEGABAR 28 (*)/ 29 (*)/ 38 (*)/ 39 (*) is reserved and considered as not safety relevant.

VEGABAR	*a*	*b*	*(*)*
	2		Housing with M12- or ISO4400- Connector or Cable outlet wire.
	3		Housing with Display Unit and M12- or S4400- Connector.
		8	Pressure transmitter with ceramic measuring cell
		9	Pressure transmitter with metallic measuring cell

Temperature range
The ambient temperature range is -40°C to +70°C.

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range	**Temperature class**
-40 °C to +70 °C	T4

VEABAR 28 (*)/ 29 (*)/ 38 (*)/ 39 (*) are pressure transmitters evaluated under the entity concept.

Electrical data:
VEGABAR 28 (*)/ 29 (*)/ 38 (*) / 39 (*)
Transmitter M12 (Pin 1, 3)- or ISO4400 (Pin 1, 2)- Plug or cable outlet wire:
4-20 mA two-wire superposed current output.
U_i : 30 V
I_i : 131 mA
P_i : 0.983 W
L_i : 5 µH
C_i : 0

C_i and L_i do not include the capacitance/ inductance of cables to and from VEGABAR 28 (*)/ 29 (*)/ 38 (*)/ 39 (*)
Maximum cable length must be considered based on cable parameters:
Li' = 0.55 µH/m;
$Ci'_{wire/wire}$ = 58 pF/m; and
$Ci'_{wires/shield}$ = 270 pF/m.

The optical radiation output of the product with respect to explosion protection, according to Schedule 1 clause 16 of the Regulation 2016 No. 1107 (as amended by UKSI 2019:696) is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015 .

Routine tests
None

[16] Test Report No. (associated with this certificate issue)
DK/ULD/ExTR19.0013/00

[17] Specific conditions of use:

- Effective earthing of the equipment shall be secured through the mounting on the process equipment.
- The equipment should not be mounted on process equipment, in which pressure can exceed the range of 0.8 – 1.1 bar.
- For installation and operation of the equipment, the specifications given to the process media temperatures in the operating instructions shall be complied with.

[18] Conditions of certification:
None.

[19] Essential Health and Safety Requirements (Regulations Schedule 1)
In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

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[19] Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Product Marking - VEGABAR 28/29/38/39 (*) UKEX Ex i UL21UKEX2280X	VEGAZW-6-78366	01	2021-12-16
Safety instructions VEGABAR 28, 29, 38, 39	62859	-	2021-12-16
BAR3x exploded drawing with M12 Plug and valve connector.	SK6192-1500-03	02	2018-11-14
BAR28/BAR38 structure overview Ex	GE4090	01	2020-09-28
BAR29/BAR39 structure overview Ex	GE4091	01	2021-02-02
BAR28/BAR38 versions with BRPLCNTDDSE	GE4075	-	2019-03-20
BAR28/BAR38 versions with BRPLCHTDDSE	GE4076	-	2019-03-20
BAR29/BAR39 thread manometer connection	GE4077	-	2019-03-20
BAR29/BAR39 nozzle external version	GE4078	-	2019-03-20
BAR29/BAR39 nozzle compact version	GE4079	-	2019-03-20
BAR29/BAR39 pressure transducer	GE4080	-	2019-03-20
BAR29/BAR39 high pressure assembly	GE4081	-	2019-03-20
Electronic insert BR18-2LEB in Potting cup	GE4082	02	2019-10-22
BAR28/BAR38 readings recorder	GE4083	-	2019-03-20
BAR29/BAR39 readings recorder	GE4084	-	2019-03-20
BAR28/BAR29 housing for M12 connector	GE4085	-	2019-03-20
BAR28/BAR29 housing for M12 connector	GE4085-1	-	2020-08-26
BAR28/BAR29 housing for valve connector	GE4086	-	2019-03-20
BAR28/BAR29 housing for valve connector	GE4086-1	-	2020-08-26
BAR28/BAR29 with cable outlet	GE4087	-	2019-03-20
BAR38/BAR39 housing for M12 connector	GE4088	-	2019-03-20
BAR38/BAR39 housing for valve connector	GE4089	-	2019-03-20
Electronic circuit schematic BR-PL-2LE , BR-PL-2LEB	SB1504-1-02-0	-	2019-10-24
Component layout BR-PL-2LEB	GE4054-02	-	2019-06-24
Trace layout BR-PL-2LEB	GE4053-03	-	2019-10-15
Electronic circuit schematic BR-PL-2DIS	SB1512-1-01-0	-	2019-10-16
Component layout BR-PL-2DIS	GE4050-02	-	2019-10-14
Trace layout BR-PL-2DIS	GE4051-02	-	2019-11-18
Electronic circuit schematic BR-PL-2DIS	SB1512-1-02-0		2020-11-24
Electronic circuit schematic BR-PL-2DIS	SB1512-1-03-0		2021-09-20
Component layout BR-PL-2DIS	GE4050	04	2021-09-20
Trace layout BR-PL-2DIS	GE4051	04	2021-10-08
Electronic circuit schematic BR-PL-CDM	SB1507-1-00-0	-	2019-10-16
Component layout BR-PL-CDM	GE4058	-	2019-02-07
Trace layout BR-PL-CDM	GE4057	-	2019-11-18
Electronic circuit schematic BR-PL-RD	SB1513-1-02-0	-	2019-10-16
Component layout BR-PL-RD	GE4060	-	2019-02-07
Trace layout BR-PL-RD	GE4059	-	2019-11-18
Electronic circuit schematic BR-PL-RDA/R	SB1521-1-01-0	-	2019-10-16
Component layout BR-PL-RDA	GE4062	-	2019-02-08

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Title:	Drawing No.:	Rev. Level:	Date:
Trace layout BR-PL-RDA	GE4061	-	2019-11-18
Electronic circuit schematic BR-PL-RDH	SB1525-1-00-0	-	2019-10-16
Component layout BR-PL-RDH	GE4065	-	2019-02-08
Trace layout BR-PL-RDH	GE4064	-	2019-11-18
Electronic circuit schematic BR-PL-2MC	SB1509-1-00-0	-	2018-04-26
Component layout BR-PL-2MC	GE4069	-	2019-11-18
Trace layout BR-PL-2MC	GE4068	-	2019-11-18
Electronic circuit schematic BR-PL-2MC	SB1509-1-02-0	-	2020-01-29
Component layout BR-PL-2MC	GE4069	03	2021-03-09
Trace layout BR-PL-2MC	GE4068	03	2021-03-09
Electronic circuit schematic BR-PL-2MC	SB1509-1-03-0	-	2020-04-20
Component layout BR-PL-2MC	GE4069	04	2021-03-09
Trace layout BR-PL-2MC	GE4068	04	2021-03-09
Electronic circuit schematic BR-PL-2MC	SB1509-2-00-0	-	2020-04-08
Component layout BR-PL-2MC	GE4069	05	2021-03-09
Trace layout BR-PL-2MC	GE4068	05	2021-03-09
Electronic circuit schematic BR-PL-2V	SB1517-1-03-0	-	2018-10-16
Component layout BR-PL-2V	GE4067	-	2019-11-18
Trace layout BR-PL-2V	GE4066	-	2019-02-08
Electronic circuit schematic BR-PL-2V	SB1517-2-00-0	-	2020-05-05
Component layout BR-PL-2V	GE4067	04	2021-03-09
Trace layout BR-PL-2V	GE4066	04	2021-03-09
Electronic circuit schematic BR-PL-AM	SB1547-1-00-0	-	2018-10-16
Component layout BR-PL-AM	GE4073	-	2019-02-13
Trace layout BR-PL-AM	GE4072	-	2019-02-13
Electronic circuit schematic BR-PL-AV	SB1548-1-00-0	-	2018-09-13
Component layout BR-PL-AV	GE4071	-	2019-02-13
Trace layout BR-PL-AV	GE4070	-	2019-02-13
Connecting wire BAR3x BR-PL-2LE(B)	GE4159	01	2019-10-22
Connecting wire BAR3x display BR-PL-2LE(B)	GE4160	01	2019-10-22
Series BAR20 BAR30 Distance antenna to metal parts.	GE4169	01	2019-10-22
BAR 28 and BAR38 Concept against ex zone carryover	GE4172	-	2019-07-16
BAR 29 and BAR39 Concept against ex zone carryover	GE4171	-	2019-07-16
BAR 28 and BAR38 with single s Concept against ex zone carryover	GE4219	-	2019-10-31
BAR28 G½ Manometer	GE3905-1	-	2020-08-26
BAR28_38 UL-Zulassung	GE4114-1	-	2020-08-26
BAR29_39 UL-Zulassung	GE4115-1	-	2020-08-26
BAR2x with M12 316L	GE4345	-	2021-02-12
BAR28_Bar29 Overview device setup	GE4354-1	-	2021-03-09
BAR28 BAR29 with cable outlet metal	GE4362	-	2021-03-23