



[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] Type Examination Certificate No.: **UL21UKEX2281X Rev. 0**  
[4] Product: **Industrial Controllers, VEGAMET 341(\*), VEGAMET 342(\*)**  
[5] Manufacturer: **VEGA Grieshaber KG**  
[6] Address: **Am Hohenstein 113, 77761 Schiltach, 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 **4790037837.4.1**.

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

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

Except in respect of those requirements listed at section 18 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:

 **II (1) G [Ex ia Ga] IIC**

 **II (1) D [Ex ia Da] IIIC**

**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 Ex UK 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:** 2021-09-30

**Approved Body** UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK  
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[15] Description of Product

The controller VEGAMET 341(\*)/ 342(\*) series are industrial controllers designed for use in indoor applications as associated apparatus permitted to be installed in non-hazardous locations only.

The controller VEGAMET 340(\*) series can be used for regulation and control tasks in industrial areas for Ex applications for one (VEGAMET 341(\*\*)) or two (VEGAMET 342(\*\*)) sensors (sensors with 4 ... 20 mA).

They are able to supply up to two sensors with an intrinsically safe circuit (Ex ia) and can process and display their measurement values through a 4...20 mA input.

Up to two current outputs can be used for data transmission to other control equipment or external indicating instruments and up to 3 relay outputs can be used to operate equipment.

The devices can be operated via turn-push button or remotely using smartphone/tablet and PC/Laptop using Bluetooth Smart (limited energy Bluetooth communication).

The measured value is shown on a display.

The devices are configured for panel mounting (e.g. in a control cabinet).

**Safety relevant model coding of VEGAMET 340 model types:**

VEGAMET	a	b	c	(*)
	3		Housing for the installation for panel mounting (indoor)	
		4	Basic functions, for simple control tasks	
			1	Single channel version, for use with one sensor
			2	Dual channel version, for use with one or two sensors

The placeholder within brackets (VEGAMET 34x(\*\*)) is reserved and considered as not safety relevant. It is for internal production control without effect on the product construction.

Safety relevant features	VEGAMET 341(*)	VEGAMET 342(*)
Number of 4...20 mA sensor inputs Ex ia	1	2
Number of digital inputs	-	-
Number of 0/4...20 mA current outputs	1	2
Number of relay outputs	3	3
Bluetooth communication	Yes	Yes

Temperature range

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

Electrical data

Power supply: Nominal range:  
(terminals 91, 92)

24 V ... 65 V DC; 4 W (341), 5 W (342)  
100 V ... 230 V AC; 50/60 Hz  
13 VA (341), 15 VA (342)  
Um = 253V AC for [Ex ia] only

Protection rating:

IP20; Front IP40 (only enclosure front for panel mounting)

Relay output maximum values:  
(terminals 61 to 69)

1A AC (cos phi > 0.9), 250VAC, 250 VA  
1A DC, 60V DC, 40 W  
Um = 253V AC for [Ex ia] only

Current output:  
(terminals 41, 42 [VEGAMET 341(\*)])  
(terminals 41 to 44 [VEGAMET 342(\*)])

0/4...20 mA  
U ≤ 16 V  
Load = max. 500 Ω  
Um = 253V AC for [Ex ia] only

Communication interface:

Bluetooth

Sensor input circuit:  
(terminals 1, 2 [VEGAMET 341(\*)])  
(terminals 1, 2, 4, 5 [VEGAMET 342(\*)])

Maximum values of the intrinsically safe signal circuit:  
Uo ≤ 23.3 V  
Io ≤ 109.8 mA  
Po ≤ 639.6 mW

characteristic: linear  
Ci is negligibly small  
Li is negligibly small



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The maximum values in the table may be used as concentrated capacitances and concentrated inductances.

Ex ia	IIC		IIB, IIIC	IIA	
Permissible external inductance $L_o$	0.2 mH	0.5 mH	0.5 mH	2 mH	10 mH
Permissible external capacitance $C_o$	120 nF	88 nF	580 nF	470 nF	770 nF
Permissible outer Lo/Ro ratio	55 $\mu\text{H}/\text{Ohm}$	55 $\mu\text{H}/\text{Ohm}$	221 $\mu\text{H}/\text{Ohm}$	221 $\mu\text{H}/\text{Ohm}$	443 $\mu\text{H}/\text{Ohm}$

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

The maximum voltage at the non-intrinsically safe circuits must not exceed 253Vrms in the event of a fault. VEGAMET 340(\*) series have intrinsically safe circuits and non-intrinsically safe circuits.

### Route tests

Transformer TR101 and TR201 shall be subjected to a voltage of 2500 V rms between primary and secondary windings, for at least 60 seconds, in accordance with the requirements of Clause 11.2 of EN 60079-11. Alternatively, the test may be carried out at 1.2 times the test voltage, but with a reduced duration of at least 1 second.

[16] Test Report No. (associated with this certificate issue)  
EXTR Number DK/ULD/EXTR20.0029/00

[17] Specific conditions of use:  
The installer must also ensure that the rated ambient temperature range of the equipment is not exceeded when installed in an enclosure with other equipment and that sufficient separation is provided around the device.

[18] 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.

[19] Drawings and Documents

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Safety instructions VEGAMET 341, 342	64252	-	2021-09-01
Circuit diagram METSIN1EX (VEGAMET 341)	SB1583_METSIN1EX-1	-	2020-04-03
Component layout of METSIN1EX (VEGAMET 341)	BB1583_METSIN1EX-1	-	2020-04-17
Trace layout of METSIN1EX (VEGAMET 341) / METSIN2EX (VEGAMET 342)	LP1583_METSIN-1	-	2020-04-17
Circuit diagram METSIN2EX (VEGAMET 342)	SB1583_METSIN2EX-1	-	2020-04-03
Component layout of METSIN2EX (VEGAMET 342)	BB1583_METSIN2EX-1	-	2020-04-17
Circuit diagram METSGP (VEGAMET 34*)	SB1586_METSGP-1	-	2020-03-18
Component Layout METSGP	BB1586_METSGP-1	-	2020-04-23
Trace Layout METSGP	LP1586_METSGP-1	-	2020-04-23
Circuit diagram METSREL3 (VEGAMET 34*)	SB1582_METSREL3-1	-	2020-04-01
Component Layout METSREL	BB1582_METSREL3-1	-	2020-04-23
Trace layout METSREL	LP1582-METSREL-1	-	2020-04-23
Circuit diagram METSNT1 (VEGAMET 341)	SB1597_METSNT1-1	-	2020-04-16
Circuit diagram METSNT2 (VEGAMET 342)	SB1597_METSNT2-1	-	2020-04-16
Component layout of METSNT1 (VEGAMET 341)	BB1597_METSNT1-1	-	2020-04-23
Component layout of METSNT2 (VEGAMET 342)	BB1597_METSNT2-1	-	2020-04-23
Trace layout of METSNT1 (VEGAMET 341) / METSNT2 (VEGAMET 342)	LP1597_METSNT-1	-	2020-04-23
Coating layout of METSIN (VEGAMET 34*)	GE4297-1	-	2020-12-17
VEGAMET341 Construction Drawing	GE4265	-	2020-04-08
VEGAMET342 Construction Drawing	GE4266	-	2020-04-08
Isolation transformer EF12.6	GE851	02	2011-03-02
Isolation transformer for MET Ex-DC-converter	BV1723-00	-	2018-07-16
Part list of VEGAMET 341 (METSIN1EX, METSNT1)	Ex Part list VEGAMET341; circuit diagram SB1583_METSIN1EX-1; circuit diagram SB1597_METSNT1-1	-	2020-04-14
Part list of VEGAMET 342	Ex Part list VEGAMET342;	-	2020-04-14

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**Schedule**  
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<b>Technical Documents</b>			
<b>Title:</b>	<b>Drawing No.:</b>	<b>Rev. Level:</b>	<b>Date:</b>
(METSIN2EX,METSNT2)	circuit diagram SB1583_METSIN2EX-1; circuit diagram SB1597_METSNT2-1		
Product Marking	VEGAZW-6-62830-UKEX Ex ia Marking	00	2021-09-22
Ex separating chamber MET34x Length dimension	GE4309	-	2020-10-05
Optocoupler construction	GE4302	-	2020-08-06
Electronic MET342 Ex minimum distances	GE4308	-	2020-11-23

