



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX ULD 19.0015** Page 1 of 4 Certificate history:
Issue 2 (2019-12-05)
Issue 1 (2019-10-18)
Issue 0 (2019-05-24)

Status: **Current** Issue No: 3

Date of Issue: 2020-06-04

Applicant: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Equipment: **Controllers, VEGAMET 841(*), VEGAMET 842(*), VEGAMET 861(*), VEGAMET 862(*)**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: [Ex ia Ga] IIC
[Ex ia Da] IIIC
-40 °C ≤ Ta ≤ +60 °C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:

2020-06-04

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL International DEMKO A/S
Borupvang 5A
DK-2750 Ballerup
Denmark





IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 2 of 4

Date of issue: 2020-06-04

Issue No: 3

Manufacturer: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Additional manufacturing locations: **VEGA Americas, Inc.**
4241 Allendorf Drive, Cincinnati, Ohio 45209
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[DK/ULD/ExTR19.0016/00](#)
[DK/ULD/ExTR19.0016/03](#)

[DK/ULD/ExTR19.0016/01](#)

[DK/ULD/ExTR19.0016/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/09](#)



IECEx Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 3 of 4

Date of issue: 2020-06-04

Issue No: 3

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The controller VEGAMET 84*(*)/ 86*(*) series are industrial controllers designed for use as associated apparatus permitted to be installed in non-hazardous location only. They are able to supply up to two sensors with a intrinsically safe circuit (Ex ia) and can process and display their measurement values through a 4...20 mA input or HART communication VEGAMET 86*(*) only.

Up to three current outputs can be used for data transmission to other control equipment or external indicating instruments and up to 6 relay outputs can be used to operate equipment.

In addition to those features, the controllers VEGAMET 86*(*) have up to four digital inputs to implement more complex controller tasks and a memory card slot which can be used to log data.

Every process controller is equipped with limited energy Bluetooth communication which allows for an easy setup over mobile devices.

The controller VEGAMET 84*(*)/ 86*(*) are associated apparatuses and can be adjusted via pushbutton permitted for installation in none classified hazardous location only, providing intrinsic safe connections for equipment installed in zone classified hazardous locations for EPL Ga or EPL Da equipment.

The measured value is shown on a display.

An internal, non-replaceable battery is used to store the real time for the data logger function of VEGAMET 86*(*).

An plugabble internal memory card is used to store data for the data logger function of VEGAMET 86*(*).

Individual adaptations to demanding applications through adjustment, control and data logger functions are possible.

The VEGAMET 84*(*)/ 86*(*) series is suitable for wall or pipe mounting and is suitable for level, pressure and flow measurement in all industries.

Please see Annex for additional information

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 4 of 4

Date of issue: 2020-06-04

Issue No: 3

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Minor non-technical typographical updates to ratings table.

Issue 2: Update to EXTR associated to this CoC due to addition of accreditation details.

Issue 3: Editorial corrections.

Annex:

[Annex_to_IECEX_ULD_19.0015_Issue_3.pdf](#)



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 3

Page 1 of 4

TYPE DESIGNATION AND PARAMETERS RELATING TO THE SAFETY

Safety relevant model coding of VEGAMET 800 series:

VEGAMET	a	b	c	(*)
	8	Housing for outdoor use		
	4	Basic functions, for simple control tasks		
	6	Extended functions, for complex 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 84(*) is reserved and considered as not safety relevant.

Safety relevant features	VEGAMET 841	VEGAMET 842	VEGAMET 861	VEGAMET 862
Number of 4...20 mA sensor inputs Ex ia	1	2	1	2
HART communication	-	-	Yes	Yes
Number of 0/4...20 mA outputs	1	2	1	3
Number of relay outputs	3	3	4	6
Number of digital inputs	-	-	2	4
Bluetooth communication	Yes	Yes	Yes	Yes
Memory card slot (pluggable)	-	-	Yes	Yes
Battery for data logging (non-replaceable)	-	-	Yes	Yes

ELECTRICAL RATINGS:

VEGAMET 841(*), VEGAMET 842(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay (terminals 61 to 69): 1A AC (cos phi > 0.9), 253VAC, 250 VA.
1A DC, 60V DC, 40 W.
Um = 253V AC

Current output:
(terminals 41, 42 [VEGAMET 841]) 0/4...20 mA
U ≤ 16 V
(terminals 41 to 44 [VEGAMET 842]) Load = max. 500 Ω
Um = 253V AC



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 3

Page 2 of 4

Communication interface: Bluetooth

Sensor input circuit:
(terminals 1, 2 [VEGAMET 841])
(terminals 1, 2, 4, 5 [VEGAMET 842])

4...20 mA
in type of protection intrinsic safety Ex ia
Maximum values of the intrinsically safe signal circuit:
 $U_o \leq 23.3V$
 $I_o \leq 109.8 mA$
 $P_o \leq 639.6 mW$
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

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 253V rms in the event of a fault. VEGAMET 841(*), VEGAMET 842(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 3

Page 3 of 4

ELECTRICAL RATINGS:

VEGAMET 861(*), VEGAMET 862(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay output maximum values: 1A AC (cos phi > 0.9), 253VAC, 250 VA
(terminals 61 to 72 [VEGAMET 861]) 1A DC, 60VDC, 40 W
(terminals 61 to 78 [VEGAMET 862]) Um = 253V AC

Digital input: max. 30 V DC
(terminals 21 to 26 [VEGAMET 861]) max. 30 mA
(terminals 21 to 32 [VEGAMET 862])

Current output: 0/4...20 mA
(terminals 41, 42 [VEGAMET 861]) U ≤ 16 V
(terminals 41 to 46 [VEGAMET 862]) Load = max. 500 Ω
Um = 253V AC

Communication interface: Bluetooth

Sensor input circuit: 4...20 mA, HART
(terminals 1, 2 [VEGAMET 861]) in type of protection intrinsic safety Ex ia.
(terminals 1, 2, 4, 5 [VEGAMET 862]) Maximum values of the intrinsically safe signal circuit:
Uo ≤ 23.3V
Io ≤ 111.3 mA
Po ≤ 648.4 mW
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

Ex ia	IIC		IIB, IIIC		IIA
permissible external inductance Lo	0.2 mH	0.5 mH	0.5 mH	2 mH	10 mH
permissible external capacitance Co	120 nF	88 nF	580 nF	470 nF	760 nF

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 253V rms in the event of a fault. VEGAMET 861(*), VEGAMET 862(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 3

Page 4 of 4

MARKING

Marking has to be readable and indelible; it has to include the following indications:

VEGAMET 842		s/n 12345678	
IECEx ULD 19.0015 [Ex ia Ga] IIC, [Ex ia Da] IIIC		DEMKO 19 ATEX 2144 (see doc. 61270)	
Associated Apparatus for use in non-hazardous locations U _o ≅ 23.3V, I _o ≅ 109.8mA, P _o ≅ 639.6mW, U _m ≅ 253V, Ex ia IIC:Co ≅ 120nF, L _o ≅ 0.2mH Ta-40°C...+60°C			
24...65V $\overline{\overline{=}}$ 100...230V \sim , 50/60Hz 5W, 15VA	4...20mA 0/4...20mA 250V \sim , 1A, 250VA	IP66/67, TYPE 4X	
TAG-No. 0123456789		2019 www.vega.com Made in Germany D-77761 Schiltach	

VEGAMET 862		s/n 12345678	
IECEx ULD 19.0015 [Ex ia Ga] IIC, [Ex ia Da] IIIC		DEMKO 19 ATEX 2144 (see doc. 61270)	
Associated Apparatus/Appareillage Connexe for use in non-hazardous locations U _o ≅ 23.3V, I _o ≅ 111.3mA, P _o ≅ 648.4mW, U _m ≅ 253V, Ex ia IIC:Co ≅ 120nF, L _o ≅ 0.2mH Ta-40°C...+60°C			
24...65V $\overline{\overline{=}}$ 100...230V \sim , 50/60Hz 7W, 19VA	4...20mA / HART 0/4...20mA 250V \sim , 1A, 250VA	IP66/67, TYPE 4X	
TAG-No. 0123456789		2019 www.vega.com Made in Germany D-77761 Schiltach	

ROUTINE EXAMINATIONS AND 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 IEC 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.



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX ULD 19.0015** Page 1 of 4 [Certificate history:](#)
Issue 1 (2019-10-18)
Issue 0 (2019-05-24)

Status: **Current** Issue No: 2

Date of Issue: 2019-12-05

Applicant: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Equipment: **Controllers, VEGAMET 841(*), VEGAMET 842(*), VEGAMET 861(*), VEGAMET 862(*)**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: [Ex ia Ga] IIC
[Ex ia Da] IIIC
-40 °C ≤ Ta ≤ +60 °C

Approved for issue on behalf of the IECEx
Certification Body:

Erin LaRocco

Position:

Staff Engineer

Signature:
(for printed version)

Date:

2019-12-05

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL International DEMKO A/S
Borupvang 5A
DK-2750 Ballerup
Denmark





IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 2 of 4

Date of issue: 2019-12-05

Issue No: 2

Manufacturer: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Additional manufacturing locations: **VEGA Americas, Inc.**
4241 Allendorf Drive, Cincinnati, Ohio 45209
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DK/ULD/ExTR19.0016/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/08](#)



IECEx Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 3 of 4

Date of issue: 2019-12-05

Issue No: 2

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The controller VEGAMET 84*(*)/ 86*(*) series are industrial controllers designed for use as associated apparatus permitted to be installed in non-hazardous location only. They are able to supply up to two sensors with a intrinsically safe circuit (Ex ia) and can process and display their measurement values through a 4...20 mA input or HART communication VEGAMET 86*(*) only.

Up to three current outputs can be used for data transmission to other control equipment or external indicating instruments and up to 6 relay outputs can be used to operate equipment.

In addition to those features, the controllers VEGAMET 86*(*) have up to four digital inputs to implement more complex controller tasks and a memory card slot which can be used to log data.

Every process controller is equipped with limited energy Bluetooth communication which allows for an easy setup over mobile devices.

The controller VEGAMET 84*(*)/ 86*(*) are associated apparatuses and can be adjusted via pushbutton permitted for installation in non-classified hazardous location only, providing intrinsic safe connections for equipment installed in zone classified hazardous locations for EPL Ga or EPL Da equipment.

The measured value is shown on a display.

An internal, non-replaceable battery is used to store the real time for the data logger function of VEGAMET 86*(*).

An plugabble internal memory card is used to store data for the data logger function of VEGAMET 86*(*).

Individual adaptations to demanding applications through adjustment, control and data logger functions are possible.

The VEGAMET 84*(*)/ 86*(*) series is suitable for wall or pipe mounting and is suitable for level, pressure and flow measurement in all industries.

Please see Annex for additional information

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 4 of 4

Date of issue: 2019-12-05

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Minor non-technical typographical updates to ratings table.

Issue 2: Update to ExTR associated to this CoC due to addition of accreditation details.

Annex:

Annex to IECEx ULD 19.0015 Issue 2.pdf

Certificate No.: IECEx ULD 19.0015

Issue No.: 2

Page 1 of 4

TYPE DESIGNATION AND PARAMETERS RELATING TO THE SAFETY

Safety relevant model coding of VEGAMET 800 series:

VEGAMET	a	b	c	(*)
	8	Housing for outdoor use		
		4	Basic functions, for simple control tasks	
		6	Extended functions, for complex 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 84*(*) is reserved and considered as not safety relevant.

Safety relevant features	VEGAMET 841	VEGAMET 842	VEGAMET 861	VEGAMET 862
Number of 4...20 mA sensor inputs Ex ia	1	2	1	2
HART communication	-	-	Yes	Yes
Number of 0/4...20 mA outputs	1	2	1	3
Number of relay outputs	3	3	4	6
Number of digital inputs	-	-	2	4
Bluetooth communication	Yes	Yes	Yes	Yes
Memory card slot (pluggable)	-	-	Yes	Yes
Battery for data logging (non-replaceable)	-	-	Yes	Yes

ELECTRICAL RATINGS:

VEGAMET 841(*), VEGAMET 842(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay (terminals 61 to 69): 1A AC (cos phi > 0.9), 253VAC, 250 VA.
1A DC, 60V DC, 40 W.
Um = 253V AC

Current output:
(terminals 41, 42 [VEGAMET 841]) 0/4...20 mA
U ≤ 16 V
(terminals 41 to 44 [VEGAMET 842]) Load = max. 500 Ω
Um = 253V AC



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 2

Page 2 of 4

Communication interface: Bluetooth

Sensor input circuit:
(terminals 1, 2 [VEGAMET 841])
(terminals 1, 2, 4, 5 [VEGAMET 842])

4...20 mA
in type of protection intrinsic safety Ex ia
Maximum values of the intrinsically safe signal circuit:
 $U_o \leq 23.3V$
 $I_o \leq 109.8 mA$
 $P_o \leq 639.6 mW$
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

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 253V rms in the event of a fault. VEGAMET 841(*), VEGAMET 842(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 2

Page 3 of 4

ELECTRICAL RATINGS:

VEGAMET 861(*), VEGAMET 862(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay output maximum values: 1A AC (cos phi > 0.9), 253VAC, 250 VA
(terminals 61 to 72[VEGAMET 861]) 1A DC, 60VDC, 40 W
(terminals 61 to 78[VEGAMET 862]) Um = 253V AC

Digital input: max. 30 V DC
(terminals 21 to 26 [VEGAMET 861]) max. 30 mA
(terminals 21 to 32 [VEGAMET 862])

Current output: 0/4...20 mA
(terminals 41, 42 [VEGAMET 861]) U ≤ 16 V
(terminals 41 to 46 [VEGAMET 862]) Load = max. 500 Ω
Um = 253V AC

Communication interface: Bluetooth

Sensor input circuit: 4...20 mA, HART
(terminals 1, 2 [VEGAMET 861]) in type of protection intrinsic safety Ex ia.
(terminals 1, 2, 4, 5 [VEGAMET 862]) Maximum values of the intrinsically safe signal circuit:
Uo ≤ 23.3V
Io ≤ 111.3 mA
Po ≤ 648.4 mW
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

Ex ia	IIC		IIB, IIIC		IIA
permissible external inductance Lo	0.2 mH	0.5 mH	0.5 mH	2 mH	10 mH
permissible external capacitance Co	120 nF	88 nF	580 nF	470 nF	760 nF

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 253V rms in the event of a fault. VEGAMET 861(*), VEGAMET 862(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 2

Page 4 of 4

MARKING

Marking has to be readable and indelible; it has to include the following indications:

VEGAMET 842		s/n 12345678	
IECEx ULD 19.0015 [Ex ia Ga] IIC, [Ex ia Da] IIIC		DEMKO 19 ATEX 2144 (see doc. 61270)	
Associated Apparatus for use in non-hazardous locations U _o ≅ 23.3V, I _o ≅ 109.8mA, P _o ≅ 639.6mW, U _m ≅ 253V, Ex ia IIC: Co ≅ 120nF, L _o ≅ 0.2mH Ta-40°C...+60°C			
24...65V $\overline{\sim}$ 100...230V $\overline{\sim}$, 50/60Hz 5W, 15VA	4...20mA 0/4...20mA 250V $\overline{\sim}$, 1A, 250VA	IP66/67, TYPE 4X	
TAG-No. 0123456789		2019 www.vega.com Made in Germany D-77761 Schiltach	

VEGAMET 862		s/n 12345678	
IECEx ULD 19.0015 [Ex ia Ga] IIC, [Ex ia Da] IIIC		DEMKO 19 ATEX 2144 (see doc. 61270)	
Associated Apparatus/Appareillage Connexe for use in non-hazardous locations U _o ≅ 23.3V, I _o ≅ 111.3mA, P _o ≅ 648.4mW, U _m ≅ 253V, Ex ia IIC: Co ≅ 120nF, L _o ≅ 0.2mH Ta-40°C...+60°C			
24...65V $\overline{\sim}$ 100...230V $\overline{\sim}$, 50/60Hz 7W, 19VA	4...20mA / HART 0/4...20mA 250V $\overline{\sim}$, 1A, 250VA	IP66/67, TYPE 4X	
TAG-No. 0123456789		2019 www.vega.com Made in Germany D-77761 Schiltach	

ROUTINE EXAMINATIONS AND 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 IEC 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.



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX ULD 19.0015** Page 1 of 4 [Certificate history:](#)
Issue 0 (2019-05-24)

Status: **Current** Issue No: 1

Date of Issue: 2019-10-18

Applicant: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Equipment: **Controllers, VEGAMET 841(*), VEGAMET 842(*), VEGAMET 861(*), VEGAMET 862(*)**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: [Ex ia Ga] IIC
[Ex ia Da] IIIC
-40 °C ≤ Ta ≤ +60 °C

Approved for issue on behalf of the IECEx
Certification Body:

Erin LaRocco

Position:

Staff Engineer

Signature:
(for printed version)

Erin LaRocco

Date:

2019-10-18

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL International DEMKO A/S
Borupvang 5A
DK-2750 Ballerup
Denmark





IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 2 of 4

Date of issue: 2019-10-18

Issue No: 1

Manufacturer: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Additional manufacturing locations: **VEGA Americas, Inc.**
4241 Allendorf Drive, Cincinnati, Ohio 45209
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DK/ULD/ExTR19.0016/01](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/08](#)



IECEx Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 3 of 4

Date of issue: 2019-10-18

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The controller VEGAMET 84*(*)/ 86*(*) series are industrial controllers designed for use as associated apparatus permitted to be installed in non-hazardous location only. They are able to supply up to two sensors with a intrinsically safe circuit (Ex ia) and can process and display their measurement values through a 4...20 mA input or HART communication VEGAMET 86*(*) only.

Up to three current outputs can be used for data transmission to other control equipment or external indicating instruments and up to 6 relay outputs can be used to operate equipment.

In addition to those features, the controllers VEGAMET 86*(*) have up to four digital inputs to implement more complex controller tasks and a memory card slot which can be used to log data.

Every process controller is equipped with limited energy Bluetooth communication which allows for an easy setup over mobile devices.

The controller VEGAMET 84*(*)/ 86*(*) are associated apparatuses and can be adjusted via pushbutton permitted for installation in non-classified hazardous location only, providing intrinsic safe connections for equipment installed in zone classified hazardous locations for EPL Ga or EPL Da equipment.

The measured value is shown on a display.

An internal, non-replaceable battery is used to store the real time for the data logger function of VEGAMET 86*(*).

An plugabble internal memory card is used to store data for the data logger function of VEGAMET 86*(*).

Individual adaptations to demanding applications through adjustment, control and data logger functions are possible.

The VEGAMET 84*(*)/ 86*(*) series is suitable for wall or pipe mounting and is suitable for level, pressure and flow measurement in all industries.

Please see Annex for additional information

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No.: **IECEX ULD 19.0015**

Page 4 of 4

Date of issue: 2019-10-18

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Non-technical typographical changes to the ratings table and technical documents table.

Annex:

[Annex to IECEx ULD 19.0015 Issue 1.pdf](#)



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 1

Page 1 of 4

TYPE DESIGNATION AND PARAMETERS RELATING TO THE SAFETY

Safety relevant model coding of VEGAMET 800 series:

VEGAMET	a	b	c	(*)
	8	Housing for outdoor use		
		4	Basic functions, for simple control tasks	
		6	Extended functions, for complex 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 84(*) is reserved and considered as not safety relevant.

Safety relevant features	VEGAMET 841	VEGAMET 842	VEGAMET 861	VEGAMET 862
Number of 4...20 mA sensor inputs Ex ia	1	2	1	2
HART communication	-	-	Yes	Yes
Number of 0/4...20 mA outputs	1	2	1	3
Number of relay outputs	3	3	4	6
Number of digital inputs	-	-	2	4
Bluetooth communication	Yes	Yes	Yes	Yes
Memory card slot (pluggable)	-	-	Yes	Yes
Battery for data logging (non-replaceable)	-	-	Yes	Yes

ELECTRICAL RATINGS:

VEGAMET 841(*), VEGAMET 842(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay (terminals 61 to 69): 1A AC (cos phi > 0.9), 253VAC, 250 VA.
1A DC, 60V DC, 40 W.
Um = 253V AC

Current output:
(terminals 41, 42 [VEGAMET 841]) 0/4...20 mA
U ≤ 16 V
(terminals 41 to 44 [VEGAMET 842]) Load = max. 500 Ω
Um = 253V AC



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 1

Page 2 of 4

Communication interface: Bluetooth

Sensor input circuit:
(terminals 1, 2 [VEGAMET 841])
(terminals 1, 2, 4, 5 [VEGAMET 842])

4...20 mA
in type of protection intrinsic safety Ex ia
Maximum values of the intrinsically safe signal circuit:
 $U_o \leq 23.3V$
 $I_o \leq 109.8 mA$
 $P_o \leq 639.6 mW$
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

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 253V rms in the event of a fault. VEGAMET 841(*), VEGAMET 842(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 1

Page 3 of 4

ELECTRICAL RATINGS:

VEGAMET 861(*), VEGAMET 862(*)

Power supply (terminals 91, 92): 24 V ... 65 V DC (-15 % ... +10 %)
100 V ... 230 V AC (-15 % ... +10 %) 50/60 Hz.
Um = 253V AC

Relay output maximum values: 1A AC (cos phi > 0.9), 253VAC, 250 VA
(terminals 61 to 72[VEGAMET 861]) 1A DC, 60VDC, 40 W
(terminals 61 to 78[VEGAMET 862]) Um = 253V AC

Digital input: max. 30 V DC
(terminals 21 to 26 [VEGAMET 861]) max. 30 mA
(terminals 21 to 32 [VEGAMET 862])

Current output: 0/4...20 mA
(terminals 41, 42 [VEGAMET 861]) U ≤ 16 V
(terminals 41 to 46 [VEGAMET 862]) Load = max. 500 Ω
Um = 253V AC

Communication interface: Bluetooth

Sensor input circuit: 4...20 mA, HART
(terminals 1, 2 [VEGAMET 861]) in type of protection intrinsic safety Ex ia.
(terminals 1, 2, 4, 5 [VEGAMET 862]) Maximum values of the intrinsically safe signal circuit:
Uo ≤ 23.3V
Io ≤ 111.3 mA
Po ≤ 648.4 mW
characteristic: linear
Ci is negligibly small
Li is negligibly small

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

Ex ia	IIC		IIB, IIIC		IIA
permissible external inductance Lo	0.2 mH	0.5 mH	0.5 mH	2 mH	10 mH
permissible external capacitance Co	120 nF	88 nF	580 nF	470 nF	760 nF

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 253V rms in the event of a fault. VEGAMET 861(*), VEGAMET 862(*) have intrinsically safe circuits and non-intrinsically safe circuits.



IECEx Certificate of Conformity

Certificate No.: IECEx ULD 19.0015

Issue No.: 1

Page 4 of 4

MARKING

Marking has to be readable and indelible; it has to include the following indications:

VEGAMET 842		s/n 12345678	
IECEx ULD 19.0015 DEMKO 19 ATEX 2144 (see doc. 61270) [Ex ia Ga] IIC, [Ex ia Da] IIIC Associated Apparatus for use in non-hazardous locations Uo ≅ 23.3V, Io ≅ 109.8mA, Po ≅ 639.6mW, Um: ≅ 253V, Ex ia IIC: Co ≅ 120nF, Lo ≅ 0.2mH Ta-40°C...+60°C			
24...65V 100...230V 50/60Hz 5W, 15VA	4...20mA 0/4...20mA 250V 1A, 250VA	IP66/67, TYPE 4X	2019 www.vega.com Made in Germany D-77761 Schiltach
TAG-No. 0123456789			

VEGAMET 862		s/n 12345678	
IECEx ULD 19.0015 DEMKO 19 ATEX 2144 (see doc. 61270) [Ex ia Ga] IIC, [Ex ia Da] IIIC Associated Apparatus/Appareillage Connexe for use in non-hazardous locations Uo ≅ 23.3V, Io ≅ 111.3mA, Po ≅ 648.4mW, Um: ≅ 253V, Ex ia IIC: Co ≅ 120nF, Lo ≅ 0.2mH Ta-40°C...+60°C			
24...65V 100...230V 50/60Hz 7W, 19VA	4...20mA / HART 0/4...20mA 250V 1A, 250VA	IP66/67, TYPE 4X	2019 www.vega.com Made in Germany D-77761 Schiltach
TAG-No. 0123456789			

ROUTINE EXAMINATIONS AND 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 IEC 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.