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防爆合格证

证号: GYJ19.1359X

制造商 VEGA Grieshaber KG

(地址: Am Hohenstein 113, D-77761 Schiltach, Germany)

产品名称 控制器

型号规格 VEGAMET 8 **a b**

防爆标志 [Ex ia Ga] IIC, [Ex ia Da] IIIC

产品标准 /

图样编号 GE3964, GE3965

经图样及技术文件的审查和样品检验, 确认上述产品符合下列标准:
GB/T 3836.1-2021, GB/T 3836.4-2021

特颁发此证。

本证书有效期: 2019年09月20日至2024年09月19日

备注

1. 安全使用注意事项见本证书附件。
2. 型号规格说明见本证书附件。
3. 本安电气参数见本证书附件。
4. 本证书同时适用于 VEGA Americas Inc. (3877 Mason Research Parkway, Mason, Ohio, 45036, USA) 组装生产的相同型号产品。
5. [更改 1] 变更标准和防爆标志 2023年6月21日签发。



批准

上海仪器仪表自控系统检验测试所有限公司
国家级仪器仪表防爆安全监督检验站
颁发日期二〇一九年九月二十日

本证书仅对与认可文件和样品一致的产品有效。

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EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ19.1359X

Manufacturer	VEGA Grieshaber KG (Address: Am Hohenstein 113, 77761 Schiltach, Germany)
Product	Controllers
Model	VEGAMET 8 <i>a b</i>
Ex marking	[Ex ia Ga] IIC, [Ex ia Da] IIIC
Product standard	/
Drawing number	GE3964, GE3965

The product was found to comply with the following standard(s):

GB/T 3836.1-2021, GB/T 3836.4-2021

Valid until: 2024.09.19

Remarks

1. Conditions for safe use are specified in the attachment(s) to this certificate.
2. Model designation is specified in the attachment(s) to this certificate.
3. Intrinsic safety parameters specified in the attachment(s) to this certificate.
4. This certificate also covers the product with the same type that manufactured by VEGA Americas Inc. (3877 Mason Research Parkway, Mason, Ohio, 45036, USA) .
5. [Variation I] Modify the standards and Ex marking issued on 2023.06.21.



Approval

Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.

National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation

Date of issue 2019.09.20

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

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GYJ19.1359X 防爆合格证附件 II

由VEGA Grieshaber KG和VEGA Americas Inc.生产的VEGAMET 8 a b 型控制器，经检验符合下列标准：

GB/T 3836.1-2021 爆炸性环境 第1部分：设备 通用要求

GB/T 3836.4-2021 爆炸性环境 第4部分：由本质安全型“i”保护的设

产品防爆标志[Ex ia Ga] II C, [Ex ia Da] III C。防爆合格证号为GYJ19.1359X。

产品具体认可型号为：

VEGAMET 8 a b

a : 4、6；

b : 1、2。

一、 产品安全使用特殊条件

产品防爆合格证号后缀“X”代表产品安全使用有特殊条件：产品使用环境温度范围为-40℃~+60℃。

二、 产品安装使用注意事项

1. 产品为本安关联设备，必须安装在非危险场所。
2. 产品安全特性如下表：

安全特性	VEGAMET 841	VEGAMET 842	VEGAMET 861	VEGAMET 862
Ex ia的4~20mA传感器输入数量	1	2	1	2
HART通讯	不适用	不适用	是	是
0/4~20mA输出数量	1	2	1	3
继电器输出数量	3	3	4	6
数字输入数量	不适用	不适用	2	4
蓝牙通讯	是	是	是	是
存储卡槽	不适用	不适用	是	是
数据记录用非替换电池	不适用	不适用	是	是

3. VEGAMET 841或VEGAMET 842型控制器电气参数如下:

功能	电气参数
电源 (端子91、92)	24V~65VDC(-15%~+10%); 100V~230VAC(-15%~+10%) 50/60Hz; Um=253VAC
继电器 (端子61~69)	1A AC(cos phi>0.9),253VAC,250VA; 1A DC,60VDC,40W; Um=253VAC
输出电流 (VEGAMET 841端子41、42或 VEGAMET 842端子41~44)	0/4~20mA, U≤16V, 最大负载500Ω, Um=253VAC
通讯端口	蓝牙
传感器输入: 4~20mA (VEGAMET 841端子1、2或 VEGAMET 842端子1、2、4、5)	Uo≤23.3V、Io≤109.8mA、Po≤639.6mW Ci=0、Li=0
允许最大外部参数 ([Ex ia Ga] IIC)	Lo=0.2mH、Co=120nF Lo=0.5mH、Co=88nF
允许最大外部参数 ([Ex ia Ga] II B、[Ex ia Da] IIIC)	Lo=0.5mH、Co=580nF Lo=2mH、Co=470nF
允许最大外部参数 ([Ex ia Ga] IIA)	Lo=10mH、Co=770nF
本安与非本安电路之间最高峰值电压	375V
非本安电路最高电压	253V AC

4. VEGAMET 861或VEGAMET 862型控制器电气参数如下:

功能	电气参数
电源 (端子91、92)	24V~65VDC(-15%~+10%); 100V~230VAC(-15%~+10%) 50/60Hz; Um=253VAC
继电器 (VEGAMET 861端子61~72 或VEGAMET 862端子61~78)	1A AC(cos phi>0.9), 253VAC,250VA; 1A DC,60VDC,40W; Um=253VAC
数字输入 (VEGAMET 861端子21~26或 VEGAMET 862端子21~32)	最高电压30V DC 最大电流30mA
输出电流 (VEGAMET 861端子41、42或 VEGAMET 862端子41~46)	0/4~20mA、U≤16V、最大负载500Ω、Um=253VAC
通讯端口	蓝牙
传感器输入: 4~20mA或HART (VEGAMET 861端子1、2或 VEGAMET 862端子1、2、4、5)	Uo≤23.3V、Io≤111.3mA、Po≤648.4mW Ci=0、Li=0
允许最大外部参数 ([Ex ia Ga] IIC)	Lo=0.2mH、Co=120nF Lo=0.5mH、Co=88nF
允许最大外部参数	Lo=0.5mH、Co=580nF



([Ex ia Ga] II B、[Ex ia Da] IIIC)	Lo=2mH、Co=470nF
允许最大外部参数 ([Ex ia Ga] II A)	Lo=10mH、Co=760nF
本安与非本安电路之间最高峰值电压	375V
非本安电路最高电压	253V AC

5. 用户不得自行更换该产品的零部件，应会同产品制造厂共同解决运行中出现的故障，以杜绝损坏现象的发生。
6. 产品的安装、使用和维护应同时遵守产品使用说明书、及下列相关标准、规范的要求：
 - GB/T 3836.13-2021 爆炸性环境 第13部分：设备的修理、检修、修复和改造
 - GB/T 3836.15-2017 爆炸性环境 第15部分：电气装置的设计、选型和安装
 - GB/T 3836.16-2022 爆炸性环境 第16部分：电气装置的检查与维护
 - GB/T 3836.18-2017 爆炸性环境 第18部分：本质安全电气系统
 - GB 50257-2014 电气装置安装工程爆炸和火灾危险环境电气装置施工及验收规范
 - GB 15577-2018 粉尘防爆安全规程

三、 制造厂责任

1. 产品制造厂必须将上述使用注意事项纳入产品使用说明书中。
2. 制造厂必须严格按照NEPSI认可的文件资料进行生产。

上海仪器仪表自控系统检验测试所有限公司
 国家级仪器仪表防爆安全监督检验站
 二〇二三年六月二十一日

注：本证书附件 II 替换原附件 I。



Attachment II to GYJ19.1359X
(translation)

Typed VEGAMET 8 a b controller manufactured by VEGA Grieshaber KG and VEGA Americas Inc. has been inspected to accord with following standards:

GB/T 3836.1-2021 Explosive atmospheres - Part 1:Equipment – General requirements

GB/T 3836.4-2021 Explosive atmospheres - Part 4: Equipment protection by intrinsic safety "I"

The Ex marking is [Ex ia Ga] IIC, [Ex ia Da] IIIC. The certificate number is GYJ19.1359X.

Type approved in this certificate is shown as below:

VEGAMET 8 a b

a : 4, 6;

b : 1, 2.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use: Ambient temperature range: (-40~+60) °C.

2. Condition for safe use

2.1 This equipment shall be installed in a non-hazardous area as an associated apparatus.

2.2 Safety relevant features of the equipment:

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

2.3 Electrical data of controller typed VEGAMET 841 and VEGAMET 842:

Function	Electrical data
Power supply(terminals 91, 92)	24V~65VDC(-15%~+10%); 100V~230VAC(-15%~+10%) 50/60Hz;Um=253VAC



Relay (terminals 61~69)	1A AC(cos phi>0.9),253VAC,250VA; 1A DC,60VDC,40W;Um=253VAC
Output current (terminals 41, 42 for VEGAMET 841 and terminals 41~44 for VEGAMET 842)	0/4~20mA, U≤16V, Maximum load=500Ω, Um=253VAC
Communication interface	Bluetooth
Sensor input: 4~20mA (terminals 1, 2 for VEGAMET 841 and terminals 1,2,4,5 for VEGAMET 842)	Uo≤23.3V, Io≤109.8mA, Po≤639.6mW Ci=0, Li=0
Permissible external parameter [Ex ia Ga] IIC	Lo=0.2mH, Co=120nF Lo=0.5mH, Co=88nF
Permissible external parameter [Ex ia Ga] IIB、 [Ex ia Da] IIIC	Lo=0.5mH, Co=580nF Lo=2mH, Co=470nF
Permissible external parameter [Ex ia Ga] IIA	Lo=10mH, Co=770nF
Maximum voltage between intrinsic safety circuits and non-intrinsic safety circuits	375V
Maximum voltage of non-intrinsic safety circuits	253V AC

2.4 Electrical data of controller typed VEGAMET 861 and VEGAMET 862:

Function	Electrical data
Power supply(terminals 91, 92)	24V~65VDC(-15%~+10%); 100V~230VAC(-15%~+10%) 50/60Hz; Um=253VAC
Relay (terminals 61~72 for VEGAMET 861 and terminals 61~78 for VEGAMET 862)	1A AC(cos phi>0.9), 253VAC,250VA; 1A DC,60VDC,40W; Um=253VAC
Digital input (terminals 21~26 for VEGAMET 861 and terminals 21~32 for VEGAMET 862)	Maximum voltage 30VDC Maximum current 30mA
Output current (terminals 41, 42 for VEGAMET 861 and terminals 41~46 for VEGAMET 862)	0/4~20mA, U≤16V, Maximum load=500Ω, Um=253VAC
Communication interface	Bluetooth
Sensor input: 4~20mA or HART (terminals 1, 2 for VEGAMET 861 and terminals 1,2,4,5 for VEGAMET 862)	Uo≤23.3V, Io≤111.3mA, Po≤648.4mW Ci=0, Li=0
Permissible external parameter [Ex ia Ga] IIC	Lo=0.2mH, Co=120nF Lo=0.5mH, Co=88nF
Permissible external parameter [Ex ia Ga] IIB、 [Ex ia Da] IIIC	Lo=0.5mH, Co=580nF Lo=2mH, Co=470nF
Permissible external parameter [Ex ia Ga] IIA	Lo=10mH, Co=760nF
Maximum voltage between intrinsic safety circuits and non-intrinsic safety circuits	375V
Maximum voltage of non-intrinsic safety circuits	253V AC

- 2.5 This product should be used in explosive atmospheres together with approved associated apparatus, follow the instruction manual of the general purpose indicator and associated apparatus when connecting the wiring. Connect the wiring terminals correctly.
- 2.6 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment.
- 2.7 For installation, use and maintenance of the product, the end user shall observe the instruction manual and the following standards:
- GB/T 3836.13-2021 Electrical atmospheres Part 13: Equipment repair, overhaul and reclamation
- GB/T 3836.15-2017 Explosive atmospheres-Part 15: Electrical installations design, selection and erection
- GB/T 3836.16-2022 Explosive atmospheres-Part 16: Electrical installations inspection and maintenance
- GB/T 3836.18-2017 Explosive atmospheres-Part 18: Intrinsically safe electrical systems
- GB 15577-2018 Safety regulations for dust explosion prevention and protection
- GB 50257:2014 Code for construction and acceptance of electric equipment on fire and explosion hazard electrical equipment installation engineering

3. Manufacturer's Responsibility

- 3.1 Special condition for safe use and condition for safe use specified above should be included in the instruction manual.
- 3.2 Manufacturing should be done according to the documentation approved by NEPSI.



Shanghai Inspection and Testing Institute of
Instruments and Automation Systems
National Supervision and Inspection
Center for Explosion Protection
and Safety of Instrumentation
June 21st, 2023

Note: Attachment I is replaced by this document.