



SITIiAs
Worldwide Access

防爆合格证

证 号: GYJ21.3395X

制 造 商 VEGA Grieshaber KG

(地址: Am Hohenstein 113, Schiltach, Germany)

产 品 名 称 控制器

型 号 规 格 VEGAMET 14a(b) 系列

防 爆 标 志 [Ex ia Ga] IIC
[Ex ia Da] IIIC

产 品 标 准 /

图 样 编 号 GE4238

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: 2021 年 11 月 19 日 至 2026 年 11 月 18 日

- 备 注
1. 安全使用注意事项见本证书附件。
 2. 证书编号后缀“X”表明产品具有安全使用特殊条件, 内容见本证书附件。
 3. 型号规格说明见本证书附件。
 4. 本安电气参数见本证书附件。
 5. 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。
 6. [更改 1] (防爆标志、防爆标准、美国工厂地址变更) 2023 年 6 月 15 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
颁发日期二〇二一年十一月十九日

本证书仅对与认可文件和样品一致的产品有效。

地址: 上海市漕宝路103号
邮编: 200233

网址: www.nepsi.org.cn
Email: info@nepsi.org.cn

电话: +86 21 64368180
传真: +86 21 64844580





SITIiAS
Worldwide Access

EXPLOSION PROTECTION

CERTIFICATE OF CONFORMITY

Cert No. GYJ21.3395X

Manufacturer	VEGA Grieshaber KG (Address: Am Hohenstein 113, Schiltach, Germany)
Product	Industrial Controllers
Model	VEGAMET 14a(b) series
Ex marking	[Ex ia Ga] IIC [Ex ia Da] IIIC
Product standard	/
Drawing number	GE4238

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

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

Valid until: 2026.11.18

Remarks

1. Conditions for safe use are specified in the attachment(s) to this certificate.
2. Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3. Model designation is specified in the attachment(s) to this certificate.
4. Intrinsic safety parameters specified in the attachment(s) to this certificate.
5. This certificate also covers the product with the same type that manufactured by VEGA Americas Inc. (3877 Mason Research Parkway, Mason, Ohio, 45036, USA).
6. [Variation I] (modify the standards and Ex-marking and factory address in America) issued on 2023.06.15.



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 2021.11.19

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

103 Cao Bao Road
Shanghai 200233, China

<http://www.nepsi.org.cn>
Email: info@nepsi.org.cn

Tel: +86 21 64368180
Fax: +86 21 64844580



(GYJ21.3395X)

(Attachment II)

GYJ21.3395X防爆合格证附件 II

由 VEGA Grieshaber KG 和 VEGA Americas Inc.生产的 VEGAMET 142(b) 系列防爆隔离器, 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”保护的的设备

产品防爆标志: [Ex ia Ga] IIC [Ex ia Da] IIIC

防爆合格证号GYJ21.3395X。

产品具体认可型号为:

VEGAMET 142(b)

2代表通道数, 可为1(单通道)或2(双通道);

4代表OEM商预留位, 无防爆无关项。

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定条件:

1. 设备的安装方向必须与说明书一致。
2. 使用环境温度: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 。

二、 产品使用注意事项

1. 电气参数:

供电(端子91、92): 24V~65VDC, 3W(VEGAMET 141), 4W(VEGAMET 142); 100V~230VAC, 50/60Hz, 10VA (VEGAMET 141), 12VA (VEGAMET 142); $U_m=253\text{VAC}$ 。

继电器输出(端子61~69): 1A AC ($\cos \phi > 0.9$), 250 VAC, 250VA ; 1A DC, 60VDC, 40W; $U_m=253\text{VAC}$ 。

电流输出电路(端子41~44): $I=0/4 \sim 20\text{mA}$; $U \leq 16\text{V}$; 负载最大 500Ω ; $U_m=253\text{VAC}$ 。

传感器输入回路（端子1、2、4、5）：4~20mA；本安参数最大值 $U_o \leq 23.3V$ 、 $I_o \leq 109.8mA$ 、 $P_o \leq 639.6mW$ 线性 $C_i \approx 0$ $L_i \approx 0$ 。

Ex ia	IIC		IIB,IIIC		IIA
Lo	0.2mH	0.5mH	0.5mH	2mH	10mH
Co	120nF	88nF	580nF	470nF	770nF
Lo/Ro	55uH/ Ω	55uH/ Ω	221uH/ Ω	221uH/ Ω	443uH/ Ω

2. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。

3. 产品的安装、使用和维护应同时遵守产品使用说明书、GB/T 3836.13-2021“爆炸性环境 第13部分：设备的修理、检修和改造”、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：电气装置的检查和维修”、GB/T 3836.18-2017“爆炸性环境 第18部分：本质安全电气系统”、GB50257-2014“电气设备安装工程爆炸和火灾危险环境电气装置施工及验收规范”、GB15577-2018 粉尘防爆安全规程。

三、制造厂责任

1. 制造厂必须将上述使用特殊条件和注意事项纳入产品的使用说明书中。
2. 制造厂必须严格按照NEPSI认可的文件资料生产。
3. 产品铭牌中应至少包括下列内容：

a) NEPSI认可标志（见防爆合格证书）



b) 产品防爆标志

c) 防爆合格证号

d) 使用环境温度范围等

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

二〇二三年六月十五日

注：本附件II代替附件I



Attachment II to GYJ21.3395X

Industrial Controllers types VEGAMET 14**a(b)** series manufactured by VEGA Grieshaber KG and VEGA Americas Inc. has been certified, this product accords 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 GYJ21.3395X.

Type designation:

VEGAMET 14**a(b)**

a denotes reserved for the channel number, can be 1 or 2.

b denotes reserved for OEM partners with same device, not relevant for Ex approval.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use:

1.1 The installation orientation of the device must be in accordance with the instructions.

1.2 Ambient temperature: -20℃~+60℃

2. Condition for safe use

2.1 Electrical ratings:

Power supply nominal range (terminals 91,92): 24V~65VDC,3W(VEGAMET 141), 4W(VEGAMET 142); 100V~230VAC, 50/60Hz,10VA (VEGAMET 141), 12VA (VEGAMET 142); Um=253VAC.

Relay output maximum values: (terminals 61~69) :1A AC (cos phi > 0,9), 250 VAC, 250VA ; 1A DC, 60VDC, 40W; Um=253VAC.

Current output: (terminals 41~44): I=0/4~20mA; U≤16V; Load = max. 500 Ω ; Um=253VAC.

Sensor input circuit: (terminals 1、2、4、5): 4~20mA; Maximum values of the intrinsically safe signal circuit $U_o \leq 23.3V$, $I_o \leq 109.8mA$, $P_o \leq 639.6mW$ Characteristic: linear $C_i \approx 0$ Li ≈ 0 .

Ex ia	IIC		IIB,IIC		IIA
Lo	0.2mH	0.5mH	0.5mH	2mH	10mH
Co	120nF	88nF	580nF	470nF	770nF
Lo/Ro	55uH/Ω	55uH/Ω	221uH/Ω	221uH/Ω	443uH/Ω

2.2 The user shall not replace the parts of the product by himself. The user shall work with the

product manufacturer to solve the failure during operation to prevent the occurrence of damage.

2.3 During the installation, using and maintenance, the user shall following the instruction and following standards:

GB/T3836.13-2021 Explosive atmospheres-Part 13: Equipment repair overhaul and reclamation

GB/T3836.15-2017 Explosive atmospheres-Part 15: Eletrical installations design, selection and erection

GB/T3836.16-2022 Explosive atmospheres-Part 16: Eletrical installations inspectio and maintenance

GB/T3836 18-2017 Explosive atmospheres-Part 18: Intrinsically safe electrical systems

GB50257-2014 Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering.

GB15577-2018 Safety regulations for dust explosion protection .

3. Manufacturer's Responsibility

3.1 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.

3.3 Following items should be added to the nameplate

- a) NEPSI logo 
- b) Ex marking
- c) Number of certificate
- d) Ambient temperature range

Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
Jun. 15th, 2023

Note: This annex II replaces Annex I



防爆合格证

证 号: GYJ21.3395X

由 VEGA Grieshaber KG

制造的产品:

(地址: Am Hohenstein 113, Schiltach, Germany)

名 称 控制器

型号规格 VEGAMET 14a(b) 系列

防爆标志 [Ex ia Ga] II C, [Ex iaD]

产品标准 /

图样编号 GE4238

经图样及技术文件的审查和样品检验, 确认上述产品
符合 GB 3836.1-2010, GB 3836.4-2010, GB 3836.20-2010, 标准,
GB 12476.1-2013, GB 12476.4-2010
特颁发此证。

本证书有效期: 2021年11月19日至2026年11月18日

备注

1. 安全使用注意事项见本证书附件。
2. 证书编号后缀“X”表明产品具有安全使用特殊条件, 内容见本证书附件。
3. 型号规格说明见本证书附件。
4. 本安电气参数见本证书附件。
5. 本证书同时适用于VEGA Americas Inc. (4241 Allendorf Drive, Cincinnati, Ohio 45209, USA) 组装生产的相同型号产品。

站 长

国家级仪器仪表防爆安全监督检验站

颁发日期 二〇二一年十一月十九日

本证书仅对与认可文件和样品一致的产品有效。

地址: 上海市漕宝路103号
邮编: 200233

网址: www.nepsi.org.cn
Email: info@nepsi.org.cn

电话: +86 21 64368180
传真: +86 21 64844580





EXPLOSION PROTECTION

CERTIFICATE OF CONFORMITY

Cert NO.GYJ21.3395X

This is to certify that the product

Industrial Controllers

manufactured by VEGA Grieshaber KG

(Address: Am Hohenstein 113, Schiltach, Germany)

which model is VEGAMET 147(0) series

Ex marking [Ex ia Ga]IIC, [Ex iaD]

product standard /

drawing number GE4238

has been inspected and certified by NEPSI, and that it conforms

to GB 3836.1-2010, GB 3836.4-2010, GB 3836.20-2010, GB 12476.1-2013,
GB 12476.4-2010.

This Approval shall remain in force until 2026.11.18

Remarks

1. Conditions for safe use are specified in the attachment(s) to this certificate.
2. Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3. Model designation is specified in the attachment(s) to this certificate.
4. Intrinsic safety parameters specified in the attachment(s) to this certificate.
5. This certificate also covers the product with the same type that manufactured by VEGA Americas Inc. (4241 Allendorf Drive, Cincinnati, Ohio 45209, USA).

Director

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

Issued Date 2021.11.19

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

103 Cao Bao Road
Shanghai 200233, China

<http://www.nepsi.org.cn>
Email: info@nepsi.org.cn

Tel: +86 21 64368180
Fax: +86 21 64844580

国家级仪器仪表防爆安全监督检验站

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

(GYJ21.3395X)

(Attachment I)

GYJ21.3395X防爆合格证附件 I

由 VEGA Grieshaber KG 和 VEGA Americas Inc.生产的 VEGAMET 14 (C) 系列防爆
隔离器，经国家级仪器仪表防爆安全监督检验站(NEPSI)检验，符合下列标准：

GB 3836.1-2010 爆炸性环境 第1部分：设备 通用要求

GB 3836.4-2010 爆炸性环境 第4部分：由本质安全型“i”保护的的设备

GB 3836.20-2010 爆炸性环境 第20部分：设备保护等级（EPL）为Ga级的设备

GB 12476.1-2013 可燃性粉尘环境用电气设备 第1部分：通用要求

GB 12476.4-2010 可燃性粉尘环境用电气设备 第4部分：本质安全型“iD”

产品防爆标志：[Ex ia Ga] IIC，[Ex iaD]

防爆合格证号GYJ21.3395X。

产品具体认可型号为：

VEGAMET 14 (C)

代表通道数，可为1（单通道）或2（双通道）；

代表OEM商预留位，无防爆无关项。

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定条件：设备的安装
方向必须与说明书一致。

二、 产品使用注意事项

1. 使用环境温度：-20℃~+60℃。
2. 产品的输出端的最大输出参数（线性输出）如下表所示：

本安端	1, 2	4, 5
U _o	23.3V	23.3V
I _o	109.8mA	109.8mA
P _o	639.6mW	639.6mW

3. 产品的允许外部最大电容和最大电感如下表所示:

Ex ia	IIC		IIB,iaD		IIA
Lo	0.2mH	0.5mH	0.5mH	2mH	10mH
Co	120nF	88nF	580nF	470nF	770nF
Lo/Ro	55uH/ Ω	55uH/ Ω	221uH/ Ω	221uH/ Ω	443uH/ Ω

4. 用户不得自行更换该产品的零部件,应会同产品制造商共同解决运行中出现的故障,以杜绝损坏现象的发生。

5. 产品的安装、使用和维护应同时遵守产品使用说明书、GB3836.13-2013“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 3836.16-2017“爆炸性环境 第16部分:电气装置的检查和维修”、GB/T 3836.18-2017“爆炸性环境 第18部分:本质安全电气系统”、GB50257-2014“电气设备安装工程爆炸和火灾危险环境电气装置施工及验收规范”。GB15577-2018 粉尘防爆安全规程。

三、制造厂责任

1. 制造厂必须将上述使用特殊条件和注意事项纳入产品的使用说明书中。
2. 制造厂必须严格按照NEPSI认可的文件资料生产。
3. 产品铭牌中应至少包括下列内容:

a) NEPSI认可标志(见防爆合格证书)

b) 产品防爆标志

c) 防爆合格证号

d) 使用环境温度范围等



国家仪器仪表防爆安全监督检验站

二〇二一年十一月十九日

国家级仪器仪表防爆安全监督检验站

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

(GYJ21.3395X)

(Attachment I)

Attachment I to GYJ21.3395X

Industrial Controllers types VEGAMET 14⁽¹⁾ series manufactured by VEGA Grieshaber KG and VEGA Americas Inc. has been certified by National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI), this product accords with following standards:

GB 3836.1-2010 Explosive atmospheres-Part 1: Equipment-General Requirements

GB 3836.4-2010 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

GB 3836.20-2010 Explosive atmospheres-Part 20: Equipment with equipment protection level (EPL) Ga

GB 12476.1-2013 Electrical apparatus for use in the presence of combustible dust – Part 1: General requirements

GB12476.4-2010 Electrical apparatus for use in the presence of combustible dust- Part 4: Protection by intrinsic safety "iD"

The Ex marking is [Ex ia Ga] IIC , [Ex iaD]

The certificate number is GYJ21.3395X.

Type designation:

VEGAMET 14⁽¹⁾

⁽¹⁾ denotes reserved for the channel number, can be 1 or 2.

⁽²⁾ denotes reserved for OEM partners with same device, not relevant for Ex approval.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use: The installation orientation of the device must be in accordance with the instructions.

2. Condition for safe use

2.1 Ambient temperature: -20℃~+60℃

2.2 The user shall not replace the parts of the product by himself. The user shall work with the product manufacturer to solve the failure during operation to prevent the occurrence of damage.

2.3 Maximum values of the intrinsically safe signal circuit:

intrinsically safe terminal	1,2	4,5
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U _o	23.3V	23.3V
I _o	109.8mA	109.8mA
P _o	639.6mW	639.6mW

2.4 The maximum external capacitance and maximum external inductance allowed by the product are shown in the table below:

Ex ia	IIC		IIB, iaD		IIA
L _o	0.2mH	0.5mH	0.5mH	2mH	10mH
C _o	120nF	88nF	580nF	470nF	770nF
L _o /R _o	55uH/Ω	55uH/Ω	221uH/Ω	221uH/Ω	443uH/Ω

2.5 During the installation, using and maintenance, the user shall following the instruction and following standards:

GB3836.13-2013 Explosive atmospheres-Part 13: Equipment repair, overhaul and reclamation

GB/T3836.15-2017 Explosive atmospheres-Part 15: Eletrical installations design, selection and erection

GB/T3836.16-2017 Explosive atmospheres-Part 16: Eletrical installations inspectio and maintenance

GB/T3836 18-2017 Explosive atmospheres-Part 18: Intrinsically safe electrical systems

GB50257-2014 Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering.

GB15577-2018 Safety regulations for dust explosion protection .

3. Manufacturer's Responsibility

3.1 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.

3.3 Any modification with influence on the type of protection should be submitted to NEPSI before application.

3.4 Following items should be added to the nameplate

- a) NEPSI logo 
- b) Ex marking
- c) Number of certificate
- d) Ambient temperature range

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

Nov. 19th, 2021