防爆合格证

证　号：GYJ21.1292X

制　造　商　VEGA Grieshaber KG

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

产品名称　控制器

型号规格　VEGATOR 121 系列, VEGATOR 122 系列

防爆标志　Ex ec nC [ia Ga] IIC T4 Gc,
Ex ec nC [ia IIIC Da] IIC T4 Gc or [Ex ia Ga]IIC,
[Ex ia Da]IIIC

产品标准　/

图样编号　GE3084

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 3836.3-2021,GB/T 3836.4-2021,GB/T 3836.8-2021
特颁发此证。

本证书有效期：2021 年 06 月 28 日 至 2026 年 06 月 27 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. 电气安全参数见本证书附件。
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]变更标准和防爆标志，2023 年 6 月 25 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　六　月　二十八　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. GYJ21.1292X

Manufacturer	**VEGA Grieshaber KG** **(Address: Am Hohenstein 113, 77761 Schiltach, Germany)**
Product	**Signal conditioning instrument**
Model	**VEGATOR 121series, VEGATOR 122 series**
Ex marking	**Ex ec nC [ia Ga] IIC T4 Gc,** **Ex ec nC [ia IIIC Da] IIC T4 Gc or [Ex ia Ga]IIC,** **[Ex ia Da]IIIC**
Product standard	**/**
Drawing number	**GE3084**

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

GB/T 3836.1-2021,GB/T 3836.3-2021,GB/T 3836.4-2021,GB/T 3836.8-2021

Valid until: 2026.06.27

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. Safe parameters specified in the attachment(s) to this certificate.
4. Intrinsic safety parameters specified in the attachment(s) to this certificate.
5. This certificate also cover 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 Ex standards and Ex marking issued on 2023.06.25.

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 2021.06.28

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

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GYJ21.1292X 防爆合格证附件Ⅱ

由VEGA Grieshaber KG和VEGA Americas Inc.生产的VEGATOR 121系列, VEGATOR 122系列控制器，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 3836.3-2021 爆炸性环境 第3部分：由增安型“e”保护的设备

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

GB/T 3836.8-2021 爆炸性环境 第8部分：由“n”型保护的设备

产品防爆标志Ex ec nC [ia Ga] ⅡC T4 Gc, Ex ec nC [ia ⅢC Da] ⅡC T4 Gc or [Ex ia Ga] ⅡC, [Ex ia Da] ⅢC。防爆合格证号为GYJ21.1292X。

产品具体认可型号为：

VEGATOR 121. *a b c d e f g*

a ：代表范围，可选代码为N；

b ：代表认证，可选代码为A、C；

c ：代表版本，可选代码为X、S；

d ：代表SIL认证，可选代码为X、S；

e ：代表外壳/保护，可选代码为K；

f ：代表端子排/连接，可选代码为B；

g ：代表证书，可选代码为M。

VEGATOR 122. *a b c d e f g*

a ：代表范围，可选代码为N；

b ：代表认证，可选代码为A、C；

c ：代表版本，可选代码为X；

d ：代表SIL认证，可选代码为X、S；

e ：代表外壳/保护，可选代码为K；

f ：代表端子排/连接，可选代码为B；

g ：代表证书，可选代码为M。

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：

1. 产品使用环境温度范围为 -20℃～+60℃。
2. 产品在爆炸性环境中使用和维护时，须遵循"严禁带电断开或连接"的原则。
3. 产品必须安装在符合GB/T 3836.1-2021的IP54要求的外壳中，方可用于爆炸性危险场所；或设备必须安装在符合GB/T 3836.1-2021的IP4X的外壳中，且必须提供足够的保护，防止固体异物或液体进入。
4. 产品只能使用在GB/T16935.1-2008污染等级至少2级以上的环境中。
5. 产品用于2区时，连接端子的拧紧扭矩必须位于0.5Nm和0.6Nm之间。

二、 产品安装使用注意事项

1. 产品安全特性如下表：

功能	电气参数
电源（端子16/17）	24V~230VAC(-15%~+10%)； 24V~65VDC(-15%~+10%)； Um=253V
信号电路（端子1/2, 4/5） 每个电路的允许参数[1)] ([Ex ia Ga] ⅡC, [Ex ia Da] ⅢC)	Uo=22.4V、Io=113.5mA、Po=636mW
允许最大外部参数[1)] ([Ex ia Ga]ⅡB、[Ex ia Da]ⅢC)	Lo=16mH、Co=0.6μF Lo=10mH、Co=0.69μF Lo=5mH、Co=0.69μF Lo=0.5mH、Co=0.86μF Lo=0.2mH、Co=1.09μF
允许最大外部参数[1)] ([Ex ia Ga]ⅡC)	Lo=1.9mH、Co=0.058μF Lo=1mH、Co=0.076μF Lo=0.5mH、Co=0.097μF Lo=0.2mH、Co=0.13μF Lo=0.1mH、Co=0.156μF
继电器1（端子10/11/12） 继电器2（端子13/14/15） 最大限值	253VAC, 3A 60VDC, 1A
本安与非本安电路之间最高峰值电压	375V
1)表中的最大值也可以作为集中电容和集中电感的最大允许值。	

2. 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。
3. 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

二〇二三年六月二十五日

注：本证书附件Ⅱ替换原附件Ⅰ。

Attachment Ⅱ to GYJ21.1292X
(translation)

VEGATOR 121series, VEGATOR 122 series 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 3836.3-2021 Explosive atmospheres - Part 3: Equipment protection by increased safety "e"

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

GB/T 3836.8-2021Explosive atmospheres - Part 8: Equipment protection by type of protection "n"

The Ex marking is Ex ec nC [ia Ga] IIC T4 Gc, Ex ec nC [ia IIIC Da] IIC T4 Gc or [Ex ia Ga] IIC, [Ex ia Da] IIIC. The certificate number is GYJ21.1292X.

Type approved in this certificate is shown as below:

VEGATOR 121. *a b c d e f g*

a denotes Scope: N;

b denotes Approval: A, C ;

c denotes Version: X, S ;

d denotes SIL qualification: X, S ;

e denotes Housing/Protection: K ;

f denotes Terminal blocks/ Connection: B;

g denotes Certificates: M.

VEGATOR 122. *a b c d e f g*

a denotes Scope: N;

b denotes Approval: A, C ;

c denotes Version: X;

d denotes SIL qualification: X, S ;

e denotes Housing/Protection: K ;

f denotes Terminal blocks/ Connection: B;

g denotes Certificates: M.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use:

1.1 Ambient temperature range: (-20～+60) ℃.

1.2 For use and maintenance in explosive atmosphere, observe the warning "DO NOT CONNECT OR DISCONNECT WHEN ENERGIZED".

1.3 Installation of the device in a protective housing IP54 in accordance with GB/T 3836.1-2021 is required; Or Installation of the device in a protective housing IP44 in accordance with GB/T 3836.1-2021 is required, the equipment may exclusively be mounted in locations providing adequate protection against the entry of solid foreign objects or liquids.

1.4 The product shall only be used in an area of minimum pollution degree 2 or better, as defined in GB/T16935.1-2008

1.5 The torque for terminal blocks shall be 0.5Nm~0.6Nm,when equipment is used in zone 2.

2. Condition for safe use

2.1 Electrical data and intrinsic safety data of controller:

Function	Electrical data
Power supply(terminals 16/17)	24V~230VAC(-15%~+10%)； 24V~65VDC(-15%~+10%)； Um=253V
Signal circuits (terminals 1/2, 4/5) Maximum values per circuit[1)] ([Ex ia Ga] IIC, [Ex ia Da] IIIC)	Uo=22.4V、Io=113.5mA、Po=636mW
Permissible external parameter[1)] ([Ex ia Ga] IIB, [Ex ia Da] IIIC)	Lo=16mH、Co=0.6μF Lo=10mH、Co=0.69μF Lo=5mH、Co=0.69μF Lo=0.5mH、Co=0.86μF Lo=0.2mH、Co=1.09μF
Permissible external parameter[1)] ([Ex ia Ga] IIC)	Lo=1.9mH、Co=0.058μF Lo=1mH、Co=0.076μF Lo=0.5mH、Co=0.097μF Lo=0.2mH、Co=0.13μF Lo=0.1mH、Co=0.156μF
Relay 1 (Terminals10/11/12) Relay 2 (Terminals13/14/15) Maximum values	253VAC, 3A 60VDC, 1A
Maximum voltage between intrinsic safety circuits and non-intrinsic safety circuits	375V
1）The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances	

2.2 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment.

2.3 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 Centerfor Explosion Protection and Safety of Instrumentation
June 25th, 2023

Note: Attachment Ⅰ is replaced by this document.