防爆合格证

证　号：GYJ19.1061X

制　造　商　VEGA Grieshaber KG

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

产品名称　振动式限位开关

型号规格　VEGASWING SG66(*). a b c de f g h i j

防爆标志　Ex ia ⅡC T1…T6 Ga

产品标准　/

图样编号　GE2949-01, GE2953, GE2976

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 08 月 07 日 至 2024 年 08 月 06 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 I]增加制造地，2021 年 11 月 22 日签发。
7. [更改 II]变更防爆标准和防爆标志，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 八 月 七 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. GYJ19.1061X

Manufacturer	**VEGA Grieshaber KG** **(Address: Am Hohenstein 113, 77761 Schiltach, Germany)**
Product	**Vibrating level switch**
Model	**VEGASWING SG66(*). *a b c de f g h i j***
Ex marking	**Ex ia IIC T1…T6 Ga**
Product standard	**/**
Drawing number	**GE2949-01, GE2953, GE2976**

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

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

Valid until: 2024.08.06

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 cover the product with the same type that manufactured by VEGA Americas Inc.(3877 Mason Research Parkway, Mason, Ohio, 45036, USA).
6.[Variation I]Product site added, issued on 2021.11.22.
7.[Variation II] Modify the Ex 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 2019.08.07

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

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GYJ19.1061X 防爆合格证附件Ⅲ

由VEGA Grieshaber KG和VEGA Americas Inc.生产的VEGASWING SG66(*). *a b c de f g h i j*振动式限位开关，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”保护的设备

产品防爆标志Ex ia ⅡC T1…T6 Ga。防爆合格证号为GYJ19.1061X。

产品具体认可型号为：

VEGASWING SG66(*). *a b c de f g h i j*

*代表仅供内部使用的附加字符的占位符，与防爆无关

a ：代表适用范围，可选代码为N；

b ：代表许可证，可选代码为C；

c ：代表版本/材料，可选代码为K、R、H，与防爆无关；

de ：代表过程接口/材料，代表符合工业标准的过程接口，与防爆无关；

f ：代表过程温度，可选代码为A；

g ：代表电子部件，可选代码为Z或L；

h ：代表壳体/防护等级，可选代码为K、A、8、V或其他；

i：代表电缆引入/连接，可选代码为M、N或其他适合的电缆引入口。

j：代表其他证书，与防爆无关。

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. 产品的温度组别、使用环境温度（电子外壳）和介质温度范围（传感器）的关系如下：

整个产品位于0区

温度组别	使用环境温度（电子外壳）	介质温度范围（传感器）
T6	-20°C～+48°C	-20°C～+48°C
T5～T1	-20°C～+60°C	-20°C～+60°C

传感器位于0区，电子外壳位于1区

温度组别	使用环境温度（电子外壳）	介质温度范围（传感器）
T6	-50°C～+48°C	-20°C～+60°C

T5	-50°C～+63°C	-20°C～+60°C
T4～T1	-50°C～+70°C	-20°C～+60°C

整个产品位于1区

温度组别	使用环境温度（电子外壳）	介质温度范围（传感器）
T6	-50°C～+48°C	-196°C～+85°C
T5	-50°C～+63°C	-196°C～+100°C
T4	-50°C～+70°C	-196°C～+135°C
T3	-50°C～+70°C	-196°C～+200°C
T2	-50°C～+70°C	-196°C～+300°C
T1	-50°C～+70°C	-196°C～+450°C

2. 铝合金外壳用于要求EPL Ga级的场所时，应采取措施防止由于冲击或摩擦引起的点燃危险。
3. 应采取措施避免产品裸露非金属部件静电电荷产生引燃危险。
4. 产品用于要求EPL Ga或EPL Ga/Gb的场所时，应连接等电位联结导体（连接阻抗≤1MΩ）。
5. 产品的安装应确保探头与罐体之间有足够的间距，特别是管长超过3m的产品。
6. 产品用于要求EPL Ga或EPL Ga/Gb的场所时，测量介质不得对接液部分有不良影响。

二、 产品安装使用注意事项

1. 产品必须与已通过防爆认证的关联设备配套共同组成本安防爆系统方可使用于爆炸性气体环境。其系统接线必须同时遵守本产品和所配关联设备的使用说明书要求，接线端子不得接错。
2. 产品的本安参数如下：

最高输入电压 Ui（V）	最大输入电流 Ii（mA）	最大输入功率 Pi（mW）	最大内部等效参数	
			Ci(nF)	Li(μH)
30	131	983	接近0	接近0

3. 产品与关联设备的连接电缆应为带绝缘护套的屏蔽电缆，其屏蔽层应接地。
4. 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。
5. 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 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/T 3836.18-2017 爆炸性环境 第18部分：本质安全电气系统

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III替换原附件II。

Attachment Ⅲ to GYJ19.1061X
(translation)

Vibrating level switch VEGASWING SG66(*). *a b c de f g h i j* 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 ⅡC T1...T6 Ga. The certificate number is GYJ19.1061X.

Type approved in this certificate is shown as below:

VEGASWING SG66(*). *a b c de f g h i j*

a denotes Scope: N;

b denotes Approval: C ;

c denotes Version/material: K, R, H, not effect Ex performance;

de denotes Process interface/material, represents the process interface conforming to industry standard, not effect Ex performance;

f denotes process temperature: A ;

g denotes electronic components: Z, L;

h denotes enclosure/protection level: K, A, 8, V or others;

i denotes cable entry/ connection: M, N or other proper cable entry;

j denotes other certificates, not effect Ex performance.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use:

1.1 The relationship between temperature class, ambient temperature (electronic housing) and medium temperature (sensor) is shown as following:

EPL Ga equipment

Temperature class	Ambient temperature (electronic housing)	Medium temperature (sensor)
T6	-20℃～+ 48℃	-20℃～+ 48℃
T5~T1	-20℃～+ 60℃	-20℃～+ 60℃

EPL Ga/Gb equipment

Temperature class	Ambient temperature (electronic housing)	Medium temperature (sensor)
T6	-50℃～+ 48℃	-20℃～+ 60℃
T5	-50℃～+ 63℃	-20℃～+ 60℃
T4~T1	-50℃～+ 70℃	-20℃～+ 60℃

EPL Gb equipment

Temperature class	Ambient temperature (electronic housing)	Medium temperature (sensor)
T6	-50℃～+ 48℃	-196℃～+ 85℃
T5	-50℃～+ 63℃	-196℃～+ 100℃
T4	-50℃～+ 70℃	-196℃～+ 135℃
T3	-50℃～+ 70℃	-196℃～+ 200℃
T2	-50℃～+ 70℃	-196℃～+ 300℃
T1	-50℃～+ 70℃	-196℃～+ 450℃

1.2 For EPL Ga applications, at the metallic parts of the products made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.

1.3 At the plastic parts of the products, there is a danger of ignition by electrostatic discharge. Observe manual of the manafacturer and warning label.

1.4 For EPL Ga or EPL Gb applications, the product shall be connected to the equipotential bonding conductor (contact resistance $\leqslant$ 1M Ω) in order to prevent metal elements from being charged electrostatically.

1.5 This product shall be installed in such a way that contact between the measuring sensor and the tank wall will be excluded with sufficient safety, considering the tank installations and the flow conditions inside the tank. This applies, in particular, to distance pipes exceeding the length of 3 m.

1.6 For EPL Ga or EPL Ga/Gb applications, the medium tangent materials have to be resistant to the media. Observe manual of the manufacturer.

2. Condition for safe use

2.1 This product should be used in explosive gas atmospheres together with approved associated apparatus, follow the instruction manual of this product and associated apparatus when connecting the wiring. Connect the wiring terminals correctly.

2.2 Intrinsically safe input parameters:

Ui = 30V Ii = 131mA Pi = 983mW Ci = negligibly low Li = negligibly low

2.3 Connecting cable between this product and associated apparatus should be insulated screen cable; connect the cable screen functionally to earth ground.

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

2.5 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 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 21st, 2023

Note: Attachment Ⅱ to GYJ19.1061X is replaced by this document.