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防 爆 合 格 证

证 号: GYJ21.3375X

制 造 商 VEGA Grieshaber KG

(地址: Am Hohenstein 113, Schiltach, Germany)

产 品 名 称 振动式限位开关

型 号 规 格 VEGAWAVE WE60 系列

防 爆 标 志 Ex ta IIIC T₂₀₀* °C Da
Ex ta/tb IIIC T* °C Da/Db
Ex tb IIIC T* °C Db

产 品 标 准 /

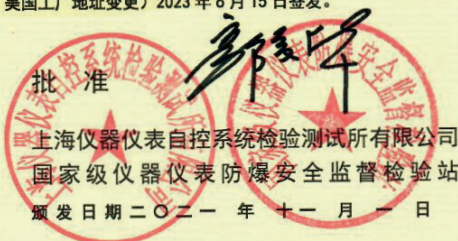
图 样 编 号 GB2014、GB2055、GE1886、GE1888

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 3836.31-2021

特颁发此证。

本证书有效期: 2021 年 11 月 01 日 至 2026 年 10 月 31 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. 电气安全参数见本证书附件。
 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。



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. GYJ21.3375X

Manufacturer	VEGA Grieshaber KG (Address: Am Hohenstein 113, Schiltach, Germany)
Product	Vibrating level switch
Model	VEGAWAVE WE60 series
Ex marking	Ex ta IIIC T ₂₀₀ * °C Da Ex ta/tb IIIC T* °C Da/Db Ex tb IIIC T* °C Db
Product standard	/
Drawing number	GB2014、GB2055、GE1886、GE1888

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

GB/T 3836.1-2021,GB/T 3836.31-2021

Valid until: 2026.10.31

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.Safe 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 standards , 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 2021.11.01

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

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GYJ21.3375X防爆合格证附件 II

由 VEGA Grieshaber KG 和 VEGA Americas Inc.生产的 VEGAVAVE WE60 系列振荡式限位开关, 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 3836.31-2021 爆炸性环境 第31部分: 由防粉尘点燃外壳“t”保护的
产品防爆标志: Ex ta IIIC T₂₀₀*°C Da, Ex ta/tb IIIC T*°C Da/Db, Ex tb IIIC T*°C Db
防爆合格证号GYJ21.3375X。

产品具体认可型号为:

VEGAWAVE WE6**a**(**b**).G**c****d****ef****g****h****i****j**

a代表产品类型, 可为1(短款)或3(长款);

b代表可选版本区别, 与防爆无关项;

c代表应用或组合应用的区域, 与防爆无关项;

d代表型号/过程温度, 可为 A(标准/-40~+150°C)、B(带中间插件/-40~+250°C)、
C(水中固体探测/-40~+150°C)、D(水中固体探测/-40~+250°C)、E(带 Carborcer 涂层;
减少黏附, 无腐蚀/磨损保护/-40~+150°C)或 F(带 Carborcer 涂层; 减少黏附, 无腐蚀/
磨损保护/-40~+250°C);

ef代表过程接口/材质, 与防爆无关项;

g代表电子部件, 可为 C(非接触式开关 20~250VAC/DC)、R(继电器
20~72VDC/20~250VAC (3A))、T(晶体管 10~55VDC)、Z(两线制 10~36VDC)或 N(NAMUR 信
号);

h代表壳体/防护等级, 可为 A(铝制单腔/IP66)、V(不锈钢制单腔/IP66)或*(其它
颜色壳体);

i代表电气接口, 可为 M(M20×1.5/无/无)或 N(1/2 NPT/无/无);

j代表附加配置, 与防爆无关项。

VEGAWAVE WE6**a**(**b**).G**c****d****ef****g****h****i****j**

a代表产品类型, 可为2;

b 代表可选版本区别，与防爆无关项；

c 代表应用或组合应用的区域，与防爆无关项；

d 代表型号/过程温度，可为 T(PUR 电缆/-20~+80°C)、C(PUR 电缆水中固体探测/-20~+80°C)、K(PUR 电缆带 Carborcer 涂层；减少黏附，无腐蚀/磨损保护/-20~+80°C)或 M(PUR 电缆水中固体探测带 Carborcer 涂层；减少黏附，无腐蚀/磨损保护/-20~+80°C)；

ef 代表过程接口/材质，与防爆无关项；

g 代表电子部件，可为 C(非接触式开关 20~250VAC/DC)、R(继电器 20~72VDC/20~250VAC (3A))、T(晶体管 10~55VDC)、Z(两线制 10~36VDC)或 N(NAMUR 信号)；

h 代表壳体/防护等级，可为 A(铝制单腔/IP66)、V(不锈钢制单腔/IP66)或*(其它颜色壳体)；

i 代表电气接口，可为 M(M20×1.5/无/无)或 N(1/2 NPT/无/无)；

j 代表附加配置，与防爆无关项。

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. 预期短路电流 I_{cn} 不得超过规定的值。
2. 在可燃性粉尘大量覆盖的情况下（最小点火能量 $<3\text{mJ}$ ），设备不能用于预期密集充电的区域。
3. 使用环境温度： $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$

二、 产品使用注意事项

1. 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。

2. 产品不同型号时，电气参数不同，如下：

VEGAWAVE WE6 **a** **(b)** . G **c** **d** **ef** C **h** **i** **j**：

供电电压：20~253VDC/AC；输出：非接触开关；自用电流：小于5mA；负载电流：10~400mA；最大短路电流：100A。

VEGAWAVE WE6 **a** **(b)** . G **c** **d** **ef** R **h** **i** **j**：

供电电压: 20~253VAC or 20~72VDC; 最大功耗: 1~8VA, 1.6W; 继电器回路最大值: 253VAC, 3A, 500VA (触电阻1)、253VAC, 1A, 41W (触电阻2); 最大短路电流: 35A。

VEGA WAVE WE6a(b).Gc d ef T h i j:

供电电压: 10~55VDC; 最大功耗: 0.5W; 最大负载电流: 400mA; 最大短路电流: 100A。

VEGA WAVE WE6a(b).Gc d ef Z h i j:

电源和信号回路与本安设备相连, 本安参数: $U_i=30V$, $I_i=131mA$, $P_i=983mW$, $C_i \approx 0$, $L_i \approx 0$ 。

VEGA WAVE WE6a(b).Gc d ef N h i j:

电源和信号回路与本安设备相连, 本安参数: $U_i=20V$, $I_i=103mA$, $P_i=516mW$, $C_i \approx 0$, $L_i=5uH$ 。

3. 产品型号不同对应不同过程介质温度:

VEGA WAVE WE61/3(b).Gc A/C/E ef g h i j: $-40^{\circ}C \sim +150^{\circ}C$

VEGA WAVE WE61/3(b).Gc B/D/F ef g h i j: $-40^{\circ}C \sim +250^{\circ}C$

VEGA WAVE WE62(b).Gc C/K/M/T ef g h i j: $-20^{\circ}C \sim +80^{\circ}C$

4. 产品应当保持产品外壳表面清洁, 以防粉尘堆积, 但严禁用压缩空气吹扫。

5. 产品不同型号下套管和外壳处的最高表面温度:

套管处: 过程温度+6K。

外壳处: VEGA WAVE WE6a(b).Gc d ef C/R/T h i j: $98^{\circ}C$

VEGA WAVE WE6a(b).Gc d ef N h i j: 环境温度+23K

VEGA WAVE WE6a(b).Gc d ef Z h i j: 环境温度+36K (21 区)

VEGA WAVE WE6a(b).Gc d ef Z h i j: 环境温度+43K (20 区)

6. 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、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: 电气装置的检查和维修”、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：

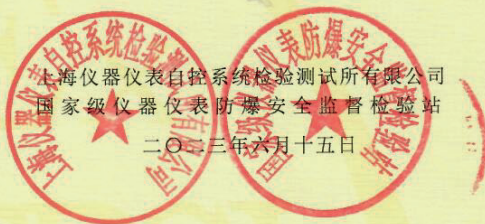
a) NEPSI认可标志（见防爆合格证书）



b) 产品防爆标志

c) 防爆合格证号

d) 使用环境温度范围等



注：本附件II代替附件I



Attachment II to GYJ21.3375X

Vibrating level switch types VEGAWAVE WE60 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 3836.31-2021 Explosive atmospheres-Part 31: Equipment dust ignition protection by enclosure "t"

The Ex marking is Ex ta IIIC T₂₀₀* °C Da, Ex ta/tb IIIC T* °C Da/Db, Ex tb IIIC T* °C Db

The certificate number is GYJ21.3375X.

Type designation:

VEGAWAVE WE6**a**(**b**).G**c****d****ef****g****h****i**

a denotes product type, can be 1 or 3;

b denotes optional version differentiation, not relevant for Ex approval;

c denotes area of application or combination of areas, not relevant for Ex approval;

d denotes version/temperature range/material, can be A, B, C, D, E or F;

ef denotes process connection, not relevant for Ex approval;

g denotes electronics, can be C, R, T, Z or N;

h denotes enclosure/type of protection, can be A, V or *;

i denotes cable entry, can be M or N;

j denotes additional features, not relevant for Ex approval.

VEGAWAVE WE6**a**(**b**).G**c****d****ef****g****h****i**

a denotes product type, can be 2;

b denotes optional version differentiation, not relevant for Ex approval;

c denotes area of application or combination of areas, not relevant for Ex approval;

d denotes version/temperature range/material, can be T, C, K or M;

ef denotes process connection, not relevant for Ex approval;

g denotes electronics, can be C, R, T, Z or N;

h denotes enclosure/type of protection, can be A, V or *;

i denotes cable entry, can be M or N;

j denotes additional features, not relevant for Ex approval.

1. Special condition for safe use

Symbol "X" denotes special condition for safe use:

1.1 The prospective short-circuit current I_{cn} must not exceed the specified value.

1.2 In case of extremely ignitable dusts(MIE<3mJ)the equipment must not be used in areas where intensive charging processes are to be expected.

1.3 Ambient temperature: -40℃~+60℃

2. Condition for safe use

2.1 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.

2.2 For different types of products, the electrical parameters are different, as follows:

VEGAWAVE WE6**a**(**b**).G**c**d**e**f**C** **h****i****j**;

Supply voltage: 20~253VDC/AC; output: contactless switch; current: <5mA; load current: 10~400mA; Maximum short circuit current I_{cn}: 100A.

VEGAWAVE WE6**a**(**b**).G**c**d**e**f**R** **h****i****j**;

Supply voltage: 20~253VAC or 20~72VDC; power consumption: 1~8VA, 1.6W; reply circuit max.values: 253VAC, 3A, 500VA, 253VAC, 1A, 41W; Maximum short circuit current I_{cn}: 35A.

VEGAWAVE WE6**a**(**b**).G**c**d**e**f**T** **h****i****j**;

Supply voltage: 10~55VDC; power consumption: 0.5W; load current: 400mA; Maximum short circuit current I_{cn}: 100A.

VEGAWAVE WE6**a**(**b**).G**c**d**e**f**Z** **h****i****j**;

Supply and signal circuit connect to a certified intrinsically safe product, intrinsically safe parameters:U_i=30V, I_i=131mA, P_i=983mW, C_i≈0, L_i≈0.

VEGAWAVE WE6**a**(**b**).G**c**d**e**f**N** **h****i****j**;

Supply and signal circuit connect to a certified intrinsically safe product, intrinsically safe parameters:U_i=20V, I_i=103mA, P_i=516mW, C_i≈0, L_i=5uH.

2.3 Different product models correspond to different process medium temperatures:

VEGAWAVE WE61/3(**b**).G**c** A/C/E **e****f****g** **h****i****j**: -40℃~+150℃

VEGAWAVE WE61/3(**b**).G**c** B/D/F **e****f****g** **h****i****j**: -40℃~+250℃

VEGAWAVE WE62(**b**).G**c** C/K/M/T **e****f****g** **h****i****j**: -20℃~+80℃

2.4 The surface of the product shell should be kept clean to prevent dust accumulation, but it is

strictly prohibited to use compressed air to purge.

2.5 Maximum surface temperature at the probe and the electronics enclosure of different types of products:

Probe: process temperature +6K

Electronics enclosure:

VEGAWAVE WE6a(b).Gc d ef C/R/T h i j: 98℃

VEGAWAVE WE6a(b).Gc d ef N h i j: Ambient temperature +23K

VEGAWAVE WE6a(b).Gc d ef Z h i j: Ambient temperature +36K (zone 21)

VEGAWAVE WE6a(b).Gc d ef Z h i j: Ambient temperature +43K (zone 20)

2.6 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

