



SITIiAs
Worldwide Access

防爆合格证

证 号: GYJ23.1278X

制 造 商 Endress+Hauser SE+Co. KG

(地址: Hauptstrasse 1, 79689 Maulburg Germany)

产 品 名 称 信号转换器

型 号 规 格 SWA50

防 爆 标 志 Ex ia IIC T4 Ga, Ex ia IIIC T₂₀₀135°C Da, Ex tb IIIC T75°C Db

产 品 标 准 /

图 样 编 号 961004058 A

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, GB/T 3836.31-2021

特颁发此证。

本证书有效期: 2023 年 10 月 12 日 至 2028 年 10 月 11 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. 外壳防护等级 IP64。



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
颁发日期二〇二三年十月十二日

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. GYJ23.1278X

Manufacturer	Endress+Hauser SE+Co. KG (Address: Hauptstrasse 1 , 79689 Maulburg Germany)
Product	FieldPort
Model	SWA50
Ex marking	Ex ia IIC T4 Ga, Ex ia IIIC T ₂₀₀ 135°C Da , Ex tb IIIC T75°C Db
Product standard	/
Drawing number	961004058 A

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

GB/T 3836.1-2021,GB/T 3836.4-2021,GB/T 3836.31-2021

Valid until: 2028.10.11

Remarks

- 1.Conditions for safe use are specified in the attachment to this certificate.
- 2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
- 3.Model designation is specified in the attachment(s) to this certificate.
- 4.Safe parameters specified in the attachment to this certificate.
- 5.IP degree IP64.



Approval

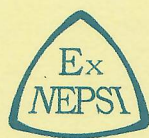
Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
Date of issue 2023.10.12

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

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(GYJ23.1278X)

(Attachment I)

GYJ23.1278X防爆合格证附件 I

由Endress+Hauser SE+Co. KG生产的SWA50信号转换器, 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”保护的设备

GB/T 3836.31-2021 爆炸性环境 第31部分: 由防粉尘点燃外壳“t”保护的设备

产品防爆标志Ex ia IIC T4 Ga, Ex ia IIIC T₂₀₀135°C Da, Ex tb IIIC T75°C Db, 防爆合格证号GYJ23.1278X。

本证书认可的型号规格如下:

SWA50-**aa** **b** **c** **d** **e+** **ff** **gg** **hh**

aa表示NEPSI认可代码, 可为 NB (Ex ia IIC T4 Ga)

ND (Ex ia IIIC T₂₀₀135°C Da)

NE (Ex tb IIIC T75°C Db)

b表示输出, 可为A (Bluetooth)、

B (WirelessHART);

c表示外壳, 可为1 (316L)、

9 (基于上述的微调, 与防爆无关);

d表示版本, 可为 A (分体式安装)、

B (直接安装, M20)、

C (直接安装, NPT1/2)、

Y (基于上述的微调, 与防爆无关);

e表示电气连接, 可为A (plastic M20, 无屏蔽电缆)、

B (Brass M20, 无屏蔽电缆)、

C (Brass M20, 屏蔽电缆)、

D (W/o, dummy plug)、

Y (基于上述的微调, 与防爆无关);

ff表示认证 (可选项), 可为xx (任意两位数字、字母或者组合, 表示船级社, 饮用水等认证, 与防爆无关)

gg表示安装配件 (可选项), 可为PA (用于分体式安装的安装套件)、

R9 (基于上述的微调, 与防爆无关);

或空白

hh表示表面标识 (可选项), 可为Z1 (Tagging (TAG))、或空白

一、产品安全使用特殊条件

产品防爆合格证号后缀“X”表示产品有安全使用特殊要求，具体内容如下：

- 1、设备只能用湿布清洁。
- 2、当设备在要求EPL Db的环境中直接连接到其他设备时，其他设备应按照GB/T 3836.31-2021的要求进行“tb”认证。
- 3、当设备与其他设备直接连接在EPL Ga、Gb或Da的环境中时，其他设备内部的污染程度应为2级或以上。

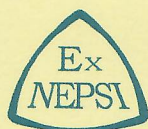
二、产品使用注意事项

- 1、产品的电缆引入口须配用经防爆检验认可的、符合相应防爆型式和等级的电缆引入装置或封堵件。安装后外壳防护等级不得低于IP64。
- 2、产品使用环境温度范围：
-40℃~+70℃
- 3、电气参数：
输入/供电端口电气参数(端子X100-1、X100-2)：
 $U_i = 30V$ $I_i = 115mA$ $P_i = 750mW$ $C_i = 0$ $L_i = 0$
当防爆标志为Ex ia IIIC T₂₀₀135℃ Da时，输入/供电端口电气参数：
 $U_i = 30V$ $I_i = 115mA$ $P_i = 650mW$ $C_i = 0$ $L_i = 0$
现场设备端口输出电气参数(端子X100-1、X100-2)取决于本质安全型安全栅的电气参数。
- 4、本安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环境。其系统接线必须同时遵守本产品 and 所配关联设备的使用说明书要求，接线端子不得接错。
- 5、本安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。
- 6、非本安型产品在现场使用和维护时，必须遵守“断电源后开盖”的原则。
- 7、用户不得自行随意更换该产品的电气零部件，应会同产品制造商共同解决运行中出现的故障，以免影响防爆性能和损坏现象的发生。
- 8、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”及GB 15577-2018“粉尘防爆安全规程”的有关规定。

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或相关技术文件中；
- 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) 安全电气参数
 - e) 使用环境温度

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
二〇二三年十月十二日



(GYJ23.1278X)

(AttachmentI)

Attachment I to GYJ23.1278X
(translation)

1. Description

FieldPort typed SWA50, manufactured by Endress+Hauser SE+Co.KG, has been certified and 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"

GB/T 3836.31-2021 Explosive atmospheres-Part 31: Equipment dust ignition protection by enclosure "t"

The Ex marking is Ex ia IIC T4 Ga, Ex ia IIIC T₂₀₀135°C Da, Ex tb IIIC T75°C Db, its certificate number is GYJ23.1278X.

Type approved in this certificate is shown as following:

SWA50-aa b c d e+ ff gg hh

Note: aa indicates NEPSI approval code, NB(Ex ia IIC T4 Ga)

ND(Ex ia IIIC T₂₀₀135°C Da)

NE(Ex tb IIIC T75°C Db)

b indicates Output, A(Bluetooth),

B(Wireless HART);

c indicates Housing, 1(316L),

9(minor change, no Ex relevant);

d indicates Version, A(Remote mounting, Thread on both sides),

B(Direct mounting on field device with connection Adapter M20, Thread on both sides),

C(Direct mounting on field device with connection Adapter NPT1/2, Thread on both sides),

Y(minor change, no Ex relevant);

e indicates Cable Gland, A(plastic M20, for unshielded cables),

B(Brass M20, for unshielded cables),

C(Brass M20, for shielded cables),

D(W/o, dummy plug),

Y(minor change, no Ex relevant);

ff indicates Additional Approval(Optional), xx(any 2-digit combination of letters and/or numbers representing approvals for marine and/or potable water and/or functional contents, no Ex relevant)

gg indicates Accessory Enclosed(Optional), PA(Mounting kit for remote mounting),

R9(minor change, no Ex relevant);

or blank

hh indicates Marking(Optional), Z1(Tagging (TAG)),
or blank

2. Special Conditions for Safe Use

The suffix "X" placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

2.1 The equipment shall only be cleaned with a damp cloth.

2.2 When the equipment is connected directly to other apparatus in environments requiring EPL Db, the other apparatus shall be certified "tb" in accordance with the requirements of GB/T 3836.31-2021.

2.3 When the equipment is connected directly to other apparatus in environments requiring EPL Ga, Gb, or Da, the interior of the other apparatus shall be pollution degree 2 or better. This is to maintain the IP rating of the device.

3. Conditions for Safe Use

3.1 For cable entries, appropriate cable glands or blind plugs shall be used. Provide a minimum degree of protection of IP64.

3.2 The ambient temperature range is $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$

3.3 Electrical data:

The equipment input/supply port (terminals X100-1 and X100-2) has the following safety description

$U_i = 30\text{V}$ $I_i = 115\text{mA}$ $P_i = 750\text{mW}$ $C_i = 0$ $L_i = 0$

The Da variant has the following safety description

$U_i = 30\text{V}$ $I_i = 115\text{mA}$ $P_i = 650\text{mW}$ $C_i = 0$ $L_i = 0$

The output parameters of the field device port (terminals X102-1 and X102-2) are dependent upon the intrinsically safe barrier

3.4 When used as intrinsically safe product, it should be used in explosive 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.

3.5 Connecting cable between intrinsically safe product and associated apparatus should be insulated screen cable; connect the cable screen functionally to earth.

3.6 Obey the warning "Keep tight when the circuit is alive" when the area is known to be hazardous as the non Ex ia products.

3.7 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment. Any change may impair safety.

3.8 For installation, use and maintenance of this product, the end user shall observe the instruction manual and the following standards:

GB 50257-2014 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

GB/T 3836.13-2021 "Explosive atmospheres- Part 13: Equipment repair, overhaul, reclamation and modification".

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".

4. Manufacturer's Responsibility

4.1 Conditions for safe use, as specified above, should be included in the documentation the user is provided with.

4.2 Manufacturing should be done according to the documentation approved by NEPSI.

4.3 Nameplate should include these contents listed below:

- 1) NEPSI logo 
- 2) Ex marking
- 3) certificate number
- 4) safety parameters
- 5) 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
2023.10.12