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防爆合格证

证 号: GYJ26.1168X

制 造 商 恩德斯+豪斯公司

(地址: Bergener Ring 27, 01458 Ottendorf-Okrilla, Germany)

产 品 名 称 调试与维护连接设备

型 号 规 格 CDUSB100

防 爆 标 志 [Ex ia Ga] IIC

产 品 标 准 /

图 样 编 号 9403013

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: 2026 年 07 月 21 日 至 2031 年 07 月 20 日

备 注

1. 证书编号后缀“X”表明产品具有特殊使用条件, 详见本证书附件。
2. 产品使用注意事项见本证书附件。
3. 电气参数见本证书附件。

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 六 年 七 月 二 十 一 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. GYJ26.1168X

Manufacturer	Endress+Hauser SICK GmbH+Co. KG (Address: Bergener Ring 27, 01458 Ottendorf-Okrilla, Germany)
Product	Connection device for commissioning and service
Model	CDUSB100
Ex marking	[Ex ia Ga] IIC
Product standard	/
Drawing number	9403013

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

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

Valid until: 2031.07.20

Remarks

1. The symbol "X" placed after the certificate number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
2. The conditions for use are specified in the attachment(s) to this certificate.
3. The electrical parameters are specified in the attachment(s) to this certificate.

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 2026.07.21

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



(GYJ26.1168X)

(Attachment I)

GYJ26.1168X 防爆合格证附件 I

产品符合下列标准:

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

1. 产品特殊使用条件

防爆合格证号后缀“X”表明产品具有特殊使用条件:

1.1 产品使用环境温度范围: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ 。

1.2 USB 端供电电压为 $U_{\text{nom}}=5\text{VDC} \pm 10\%$ 。

1.3 通过 USB 连接的计算机设备必须由满足以下要求的电源供电: SELV/PELV/ES1 设备, 且 USB 接口的最大电压 $U_m \leq 60\text{V}$ 。

1.4 M12 插头连接处的温度不得超过使用环境温度范围。

2. 产品使用注意事项

2.1 电气参数

2.1.1 当 M12 插头与本质安全型主机设备连接时(防爆型式 Ex ia II C):

最高输入电压	最大输入电流	最大输入功率	最大内部等效参数	
U_i (V)	I_i (A)	P_i (W)	C_i (μF)	L_i (μH)
12	3.33	1.1	1.41	0

2.1.2 当 M12 插头连接到非本质安全型主机设备时: $U_m=60\text{V}$ 。

2.1.3 USB-C 接口与 M12 接口之间的电气隔离所能承受的最大电压为 $U_m=60\text{V}$ 。

2.1.4 允许施加到 USB-C 接口的最大电压: 5.5V 。

2.2 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。

2.3 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 3836.15—2024 爆炸性环境 第 15 部分：电气装置设计、选型、安装规范

GB 3836.16—2024 爆炸性环境 第 16 部分：电气装置检查与维护规范

GB/T 3836.18—2024 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

3. 制造商责任

3.1 制造商应将包含上述产品特殊使用条件及产品使用注意事项的使用说明书提供给用户。

3.2 制造商应严格按照国家级仪器仪表防爆安全监督检验站认可的文件资料生产。

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

二〇二六年七月二十一日



(GYJ26.1168X)

(Attachment I)

Attachment I to GYJ26.1168X

1. Description

The product complies with the 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”

2. Special Conditions of Use

The suffix “X” placed after the certificate number indicates that this product is subject to special conditions of use, that is:

2.1 The CDUSB100 is designated for use in ambient temperature range from -40 °C to +70 °C.

2.2 Nominal supply voltage on USB side is $U_{nom} = 5 \text{ VDC} \pm 10 \%$.

2.3 The personal computing device, which is connected via USB, must be supplied by SELV/PELV/ES1 equipment with $U_m = 60 \text{ V}$ (USB interface side)

2.4 The temperature at the connection point of the M12 plug shall not exceed the allowed ambient temperature range.

3. Conditions for Safe Use

3.1 Electrical data

3.1.1 M12 Plug, when connected with intrinsically safe host device, entity parameters, in type of protection Ex ia IIC:

Maximum input voltage U_i (V)	Maximum input current I_i (A)	Maximum input power P_i (W)	Maximum internal equivalent parameters	
			C_i (μF)	L_i (μH)
12	3.33	1.1	1.41	0

3.1.2 M12 Plug, when connected to a non-intrinsically safe host device: $U_m = 60 \text{ V}$.

3.1.3 Maximum voltage across galvanic isolation between USB-C connector and M12 connector: $U_m = 60 \text{ V}$

3.1.4 Maximum voltage allowed to be applied to USB-C connector: 5.5 V

3.2 The user is not permitted to replace any parts of this product independently. In the event of any operational faults, the user shall cooperate with the product manufacturer to resolve the issues, so as to eliminate any potential damage.

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

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

GB 3836.15-2024 “Explosive atmospheres-Part 15: Specification of electrical installations design, selection and

erection”.

GB 3836.16-2024 “Explosive atmospheres-Part 16: Specification of electrical installations inspection and maintenance”.

GB/T 3836.18-2024 “Explosive atmospheres-Part 18: Intrinsically safe electrical systems”.

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

4. Manufacturer’s Responsibility

4.1 Conditions for safe use and special conditions of 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.

Shanghai Inspection and Testing
Institute of Instruments and Automation Systems Co. Ltd.
National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation
2026.07.21