



防爆合格证

证 号：GYJ25.1215X

制 造 商 Endress+Hauser SE+Co. KG

(地址：Hauptstrasse 1, 79689 Maulburg Germany)

产 品 名 称 压力变送器

型 号 规 格 Cerabar PMP43

防 爆 标 志 Ex ia II C T4...T1 Ga, Ex ic II C T4...T1 Gc,
Ex ia III B T135°C Da, Ex ic III B T135°C Dc

产 品 标 准 /

图 样 编 号 961007339-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

特颁发此证。

本证书有效期：2025年08月12日至2030年08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. 本安电气参数见本证书附件。
5. 本证书同时适用于恩德斯豪斯(苏州)自动化仪表有限公司(地址：苏州工业园区苏虹中路491号)生产的同型号产品。

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 五 年 八 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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SITIiAs
Worldwide Access

EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ25.1215X

Manufacturer	Endress+Hauser SE+Co. KG (Address:Hauptstrasse 1, 79689 Maulburg Germany)
Product	Pressure Transmitter
Model	Cerabar PMP43
Ex marking	Ex ia IIC T4...T1 Ga, Ex ic IIC T4...T1 Gc, Ex ia IIIB T135°C Da, Ex ic IIIB T135°C Dc
Product standard	/
Drawing number	961007339-A

The product was found to comply with the following standard(s):
GB/T 3836.1-2021, GB/T 3836.4-2021

Valid until: 2030.08.11

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.Intrinsically safe parameters are specified in the attachment(s) to this certificate.
- 5.This certificate is also applicable for the product with the same type manufactured by Endress+Hauser (Suzhou) Automation Instrumentation Co., Ltd. (address: Su Hong Zhong Lu No.491, Suzhou-SIP, China)

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 2025.08.12

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



(GYJ25.1215X)

(Attachment I)

GYJ25.1215X 防爆合格证附件 I

由 Endress+Hauser SE+Co. KG 生产的 Cerabar PMP43 系列压力变送器，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
产品防爆标志详见型号规格，防爆合格证号 GYJ25.1215X。

本证书认可的产品型号规格如下：

Cerabar PMP43

PMP43-**aa bb c d e f g hh i k ll mmm n o** + **pp qq rr ss tt uu vv xx yy zz**

aa 表示 NEPSI 认证代码，可为 NI (Ex ia IIC T4...T1 Ga, Ex ia IIIB T135°C Da)、NA (Ex ia IIC T4...T1 Ga)、NU (Ex ic IIC T4...T1 Gc)、NH (Ex ia IIIB T135°C Da)、NT (Ex ic IIIB T135°C Dc)；

bb 表示输出，可为 AA (2-wire, 4...20mA)、BA (2-wire, 4...20mA HART)；

c 表示显示/操作，可为 C (LED 信号灯带按钮)、D (LED 信号灯带按钮+蓝牙)、G (彩色显示)、H (彩色显示+蓝牙)、J (彩色显示带触摸控制)、K (彩色显示带触摸控制+蓝牙)；

d 表示外壳/材料，可为 F (紧凑型, 316L)；

e 表示电气连接，可为 N (Plug M12, IP66/68/69 NEMA Type 4X/6P)；

f 表示压力类型，可为 6 (Gauge)、8 (Absolute)；

g 表示应用，可为 A (Process temperature max 100°C/212°F)、B (Process temperature max 130°C/266°F, 150°C/302°F max 1h)、C (Process temperature max 150°C/302°F)、D (Process temperature max 200°C/392°F)、E (Advanced condensation resistance)；

hh 表示传感器量程，可为任意字符 (传感器压力)；

i 表示表面处理，可为 A (标准)、E (卫生等级 Ra<0.38µm/15µin, 电抛光)；

k 表示校验，可为任意字符 (传感器校准单元，与防爆无关)；

ll 表示过程连接，密封面，可为 AA.to ZZ (标准过程连接)；

mmm 表示过程连接，可为 AAA to ZZZ (标准过程连接)；

n 表示膜片材质，可为任意字符 (与防爆无关)；

o 表示灌油，可为任意字符 (与防爆无关)；

以下选项为可选项，可为空缺。

pp 表示操作语言显示，可为任意字符 (与防爆无关)；

qq 表示应用程序包，可为任意字符 (与防爆无关)；

rr 表示参考精度，可为任意字符 (与防爆无关)；

ss 表示校准，可为任意字符 (校准证书，与防爆无关)；

tt 表示服务，可为任意字符 (与软件相关的调整，与防爆无关)；

uu 表示测试/认证/声明, 可为任意字符 (与防爆无关);

vv 表示附加认证, 可为任意字符 (与防爆无关);

xx 表示附件安装, 可为 QA to QZ (Weld-in adapter, flanges different sizes)、Rx (Process adapter different types)、Sx (Pipe connection different types)、TB (Plug connector M12, IP69)、TC (Plug connector M12 90deg, IP69)、TD (Plug connector M12 90deg, IP69, 5m cable, union nut, 316L)、TE (Plug connector M12 100deg, IP67, 5m cable, union nut, Cu Sn/Ni);

yy 表示固件版本, 可为任意字符 (与防爆无关);

zz 表示标识, 可为任意字符 (Tagging, 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”表示产品有安全使用特殊要求, 具体内容如下:

1、对于 II 类, 温度组别 T4 的产品, 随着介质温度 T_p 的变化, 其最高环境温度有所降低, 详见产品说明书。

2、对于粉尘型产品, 环境温度和介质温度范围为 $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ 。其余的各种环境温度和介质温度范围, 具体见产品说明书。

3、设备应用于介质温度超过所需最高表面温度的最大限制时, 必须考虑设备工艺连接部件热表面的点燃风险。

4、避免非金属表面带静电, 禁止用干布擦拭表面。设备禁止在粉尘流环境中使用, 以免产生静电。

5、设备应使用对大地电气隔离的电源。

二、产品使用注意事项

1、产品外壳设有接地端子, 用户在安装使用时应可靠接地。

2、本安参数:

$U_i = 30\text{V}; I_i = 100\text{mA}; P_i = 700\text{mW}; C_i = 15\text{nF}; L_i = 0.69\text{mH}$ (气体)

$U_i = 30\text{V}; I_i = 100\text{mA}; P_i = 650\text{mW}; C_i = 15\text{nF}; L_i = 0.69\text{mH}$ (粉尘)

3、产品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 GB/T 4208-2017 规定的 IP66/IP68 (1.85m, 24h)。选用的电缆引入装置或封堵件应与产品的工作条件相适应。

4、本安型产品必须与已通过防爆认证的关联装置配套共同组成本安防爆系统方可用于爆炸性环境。其系统接线必须同时遵守本产品和所配关联装置的使用说明书要求, 接线端子不得接错。产品与关联装置的连接电缆应为带绝缘护套的屏蔽电缆, 其屏蔽层应接地。

5、产品在粉尘环境使用维护时, 应定期采取清洁措施, 以防止表面积聚粉尘, 清洁时不得使用溶剂清洗, 避免摩擦从而产生静电堆积, 也不可使用压缩空气吹扫。

6、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。

7、产品的安装、使用和维护应同时遵守产品使用说明书及以下相关标准、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 3836.15-2024 爆炸性环境 第15部分：电气装置的设计、选型和安装
GB 3836.16-2024 爆炸性环境 第16部分：电气装置的检查与维护
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
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) 使用环境温度
 - e) 本安参数

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

二〇二五年八月十二日



(GYJ25.1215X)

(Attachment I)

Attachment I to GYJ25.1215X

1. Description

Cerabar PMP43 series Pressure Transmitter, 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"

The Ex marking is detailed in the model specifications, its certificate number is GYJ25.1215X.

Type approved in this certificate is shown as below:

Cerabar PMP43

PMP43-**aa bb c d e f g hh i k ll mmm n o + pp qq rr ss tt uu vv xx yy zz**

aa indicates Approval, which can be NA (Ex ia IIC T4...T1 Ga), NU (Ex ic IIC T4...T1 Gc), NI (Ex ia IIC T4...T1 Ga, Ex ia IIIB T135°C Da), NH (Ex ia IIIB T135°C Da), NT (Ex ic IIIB T135°C Dc),

bb indicates Output, including AA (2-wire, 4...20mA), BA (2-wire, 4...20mA HART);

c indicates Display/Operating, including C (LED signaling with push button), D (LED signaling with push button + Bluetooth), G (Colored display), H (Colored display + Bluetooth), J (Colored display with touch control), K (Colored display with touch control + Bluetooth);

d indicates Housing/Material, including F (Compact; 316L);

e indicates Electrical Connection, including N (Plug M12, IP66/68/69 NEMA Type 4X/6P);

f indicates Pressure Type, including 6 (Gauge), 8 (Absolute);

g indicates Application, including A (Process temperature max 100°C/212°F), B (Process temperature max 130°C/266°F, 150°C/302°F max 1h), C (Process temperature max 150°C/302°F), D (Process temperature max 200°C/392°F), E (Advanced condensation resistance);

hh indicates Sensor Range, including Any character (Sensor pressure);

i indicates Surface Refinement, including A (Standard), E (Hygienic Ra<0.38µm/15µin, electro-polished);

k indicates Calibration/Unit, including Any character (Sensor calibration unit not relevant for the certification);

ll indicates Process Connection, Sealing Surface, including AA to ZZ (Standard industrial process connection);

mmm indicates Process Connection, including AAA to ZZZ (Standard industrial process connection);

n indicates Membrane material, including Any character (not relevant for the certification);

o indicates Fill fluid of the sensor part, including Any character (not relevant for the certification);

The following options are optional and can be blank.

pp indicates Operation Language Display, including Any character (not relevant for the certification);

qq indicates Application Package, including Any character (not relevant for the certification);

rr indicates Reference Accuracy, including Any character (not relevant for the certification);
ss indicates Calibration, including Any character (calibration certificate; not relevant for the certification);
tt indicates Service, including Any character (Software related adjustments, not relevant for the certification);
uu indicates Test, Certificate, Declaration, including Any character (not relevant for the certification);
vv indicates Additional Approval, including Any character (not relevant for the certification);
xx indicates Accessory Enclosed, including QA to QZ (Weld-in adapter, flanges different sizes), Rx (Process adapter different types), Sx (Pipe connection different types), TB (Plug connector M12, IP69), TC (Plug connector M12 90deg, IP69), TD (Plug connector M12 90deg, IP69, 5m cable, union nut, 316L), TE (Plug connector M12 100deg, IP67, 5m cable, union nut, Cu Sn/Ni);
yy indicates Firmware Version, including Any character (not relevant for the certification.);
zz indicates Marking, including Any character (Tagging, not relevant for the certification).

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 specified as follows:

2.1 The maximum ambient temperature for group II, temperature class T4 process temperature T_p , are derated in tables provided in Safety Instructions.

2.2 Ambient and process temperature range for group III is from -40°C to $+70^{\circ}\text{C}$. Refer to the temperature tables for various ambient and process temperature ranges.

2.3 In applications where the process temperature exceeds the maximum surface temperature limits of the required maximum surface temperature, the hot surface ignition hazard at the process connecting parts of the device shall be addressed.

2.4 To avoid electrostatic charging in explosive atmospheres, avoid rubbing of the non-metallic surfaces using electrostatic generating materials. Do not use the device in applications with moving dust atmosphere causing electrostatic charging.

2.5 The device shall use a power supply that is galvanically isolated from earth.

3. Conditions for Safe Use

3.1 The external earth connection facility shall be connected reliably.

3.2 Intrinsically safe parameters:

$U_i = 30\text{V}$; $I_i = 100\text{mA}$; $P_i = 700\text{mW}$; $C_i = 15\text{nF}$; $L_i = 0.69\text{mH}$ (For gas)

$U_i = 30\text{V}$; $I_i = 100\text{mA}$; $P_i = 650\text{mW}$; $C_i = 15\text{nF}$; $L_i = 0.69\text{mH}$ (For dust)

3.3 Suitable certified cable gland and blanking plug approved by ExTL and meets the corresponding explosion-proof type and grade shall be used and correctly installed; after installation, degree of protection of enclosure is at least IP66/IP68 (1.85m, 24h) according to GB/T 4208-2017. The cable glands and blanking plugs to be used shall suitable for the product working conditions.

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

3.5 Clean the surface of this product termly when using in combustible dust atmosphere. During cleaning, solvents should not be used to avoid friction and static accumulation, and compressed air blowing should not be used.

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

3.7 For installation, use and maintenance of this product, the end user shall 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: Electrical installations design, selection and erection”.

GB 3836.16-2024 “Explosive atmospheres- Part 16: 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”.


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) Ambient temperature range
- 5) Intrinsically safe parameters

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

2025.08.12