XA01363P-C/00/EN/03.24-00
71682269
2025-04-07

Safety Instructions
Cerabar
PMC21, PMP21, PMP23

Ex ia IIC T4 Ga/Gb

Endress+Hauser
People for Process Automation

Cerabar PMC21, PMP21, PMP23

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About this document

The document number of these Safety Instructions (XA) must match the information on the nameplate.

Associated documentation

All documentation is available on the Internet:
www.endress.com/Deviceviewer
(enter the serial number from the nameplate).

To commission the device, please observe the Operating Instructions pertaining to the device:

BA01271P

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:
www.endress.com/Downloads

Certificates and declarations

NEPSI Declaration of Conformity

Certificate number:
GYJ25.1069X

Affixing the certificate number certifies conformity with the following standards (depending on the device version):

- GB/T 3836.1-2021
- GB/T 3836.4-2021
- GB 3836.20-2010

Manufacturer address

Endress+Hauser SE+Co. KG
Hauptstraße 1
79689 Maulburg, Germany

Address of the manufacturing plant: See nameplate.

Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

Structure of the extended order code

PMC21, PMP2x	–	**********	+	A*B*C*D*E*F*G*..
(Device type)		*(Basic specifications)*		*(Optional specifications)*

* = Placeholder
At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available.
The selected option of a feature can consist of several positions.

Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

Extended order code: Cerabar

The following specifications reproduce an extract from the product structure and are used to assign:
- This documentation to the device (using the extended order code on the nameplate).
- The device options cited in the document.

Device type

PMC21, PMP21, PMP23

Basic specifications

Position 1, 2 (Approval)		
Selected option		**Description**
PMC21 PMP2x	NA	NEPSI Ex ia IIC T4 Ga/Gb

Position 3 (Output)		
Selected option		**Description**
PMC21 PMP2x	1	4 to 20 mA

Position 4 (Electrical Connection)		
Selected option		**Description**
PMC21 PMP2x	A	Cable 5 m, IP66/68 NEMA Type 4X/6P Encl.
	B	Cable 10 m, IP66/68 NEMA Type 4X/6P Encl.
	C	Cable 25 m, IP66/68 NEMA Type 4X/6P Encl.
	M	Plug M12, IP65/67 NEMA Type 4X Encl.
	U	Valve plug ISO4400 M16, IP65 NEMA Type 4X Encl.
	V	Valve plug ISO4400 NPT1/2, IP65 NEMA Type 4X Encl.
PMP23	N	Plug M12, IP66/69 NEMA Type 4X Encl.

Optional specifications

No options specific to hazardous locations are available.

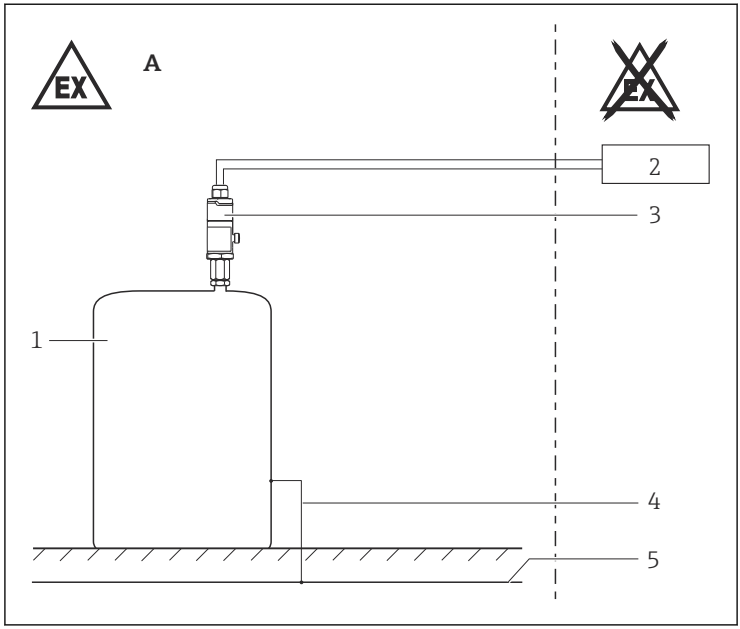
Safety instructions: General

- The device is intended to be used in explosive atmospheres as defined in the scope of IEC 60079-0 or equivalent national standards. If no potentially explosive atmospheres are present or if additional protective measures have been taken: The device may be operated according to the manufacturer's specifications.
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations
- For installation, use and maintenance of the device, users must also observe the requirements stated in the Operating Instructions and the 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 3836.18-2024: "Explosive atmospheres, Part 18: Intrinsically safe electrical systems".
- Install the device according to the manufacturer's instructions and national regulations.
- Only use the device in media to which the wetted materials have sufficient durability.
- Avoid electrostatic charging:
  - Of plastic surfaces (e.g. enclosure, sensor element, special varnishing, attached additional plates, ...)
  - Of isolated capacities (e.g. isolated metallic plates)

Safety instructions: Specific conditions of use

- To avoid electrostatic charging: Do not rub surfaces with a dry cloth.
- In the event of additional or alternative special varnishing on the enclosure or other metal parts or for adhesive plates:
  - Observe the danger of electrostatic charging and discharge.
  - Do not install in the vicinity of processes (≤ 0.5 m) generating strong electrostatic charges.

Safety instructions: Installation



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A Zone 1
1 Tank; Zone 0
2 Certified associated apparatus
3 Transmitter enclosure
4 Potential equalization line
5 Potential equalization

Intrinsic safety

- When the device is connected to certified intrinsically safe circuits of Category Ex ib for Equipment Groups IIC and IIB, the type of protection changes to Ex ib IIC and Ex ib IIB. Do not operate the sensor in Zone 0 if connecting to an intrinsically safe circuit of Category Ex ib.
- The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least 500 V_{rms}.

Potential equalization

If the potential equalization cannot be guaranteed by the installation: In order to avoid electrostatic charging, integrate metallic parts of the enclosure into the potential equalization.

Safety instructions: Zone 0

Associated devices with galvanic isolation between the intrinsically safe and non-intrinsically safe circuits are preferred.

Temperature tables

Temperature class	Process temperature T_p (process)	Ambient temperature T_a (ambient): enclosure
T4	≤ 100 °C	−40 °C ≤ T_a ≤ +70 °C

Connection data

Electrical data
U_i ≤ 30 V I_i ≤ 100 mA P_i ≤ 0.8 W C_i ≤ 11.6 nF L_i = 0

www.addresses.endress.com

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