

# Safety Instructions

## Cerabar

### PMC21, PMP21, PMP23

Ex ia IIC T4 Ga/Gb

Ex ia IIC T4 Gb





# Cerabar PMC21, PMP21, PMP23

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**Associated documentation**

All documentation is available on the Internet:  
[www.endress.com/Deviceviewer](http://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](http://www.endress.com/Downloads)

**Certificates and declarations****Certificate of Conformity**

Certificate number:  
CML 23JPN2673

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

- JNIO SH-TR-46-1 : 2020
- JNIO SH-TR-46-6 : 2015
- IEC 60079-26 : 2021

**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  <i>(Device type)</i>	-	*****	+	A*B*C*D*E*F*G*..  <i>(Optional specifications)</i>
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\* = 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	JB	JPN Ex ia IIC T4 Ga/Gb
PMP2x		JPN Ex ia IIC T4 Gb

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

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.

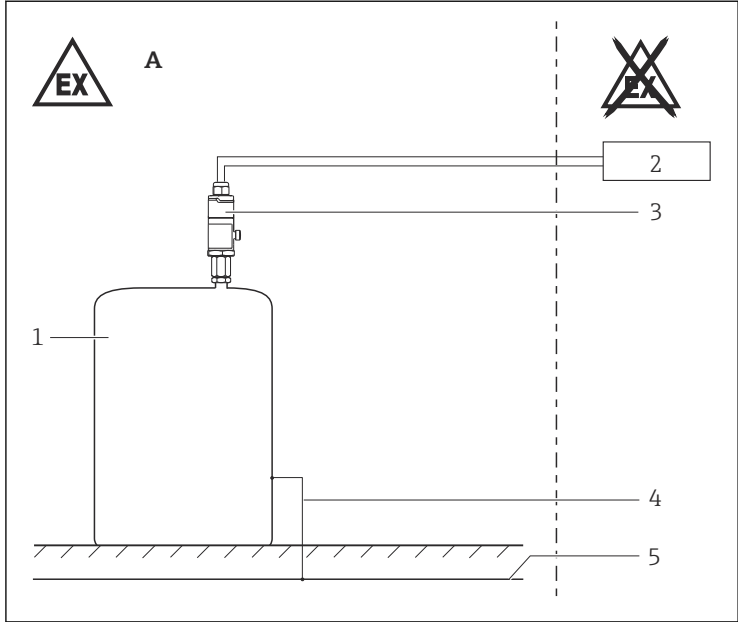
**Safety  
instructions:  
General**

- 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
- 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 ( $\leq 0.5$  m) generating strong electrostatic charges.

## Safety instructions: Installation



A0031218



- 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  $500 V_{\text{rms}}$ .

### 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	$\leq 100\text{ }^\circ\text{C}$	$-40\text{ }^\circ\text{C} \leq T_a \leq +70\text{ }^\circ\text{C}$

**Connection data**

Electrical data
$U_i \leq 30\text{ V}$ $I_i \leq 100\text{ mA}$ $P_i \leq 0.8\text{ W}$ $C_i \leq 11.6\text{ nF}$ $L_i = 0$







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[www.addresses.endress.com](http://www.addresses.endress.com)

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