

Safety Instructions

Cerabar PMP50

ATEX, IECEx: Ex ia IIC T4 Ga
Ex ia IIC T4 Ga/Gb
Ex ia IIC T4 Gb




Cerabar PMP50

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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).

 If not yet available, a translation into EU languages can be ordered.

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

BA02332P

Supplementary documentation

Explosion protection brochure: CP00021Z

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

Certificates and declarations**EU Declaration of Conformity**

Declaration Number:
EU_01183

The EU Declaration of Conformity is available on the Internet:
www.endress.com/Downloads

EU type-examination certificate

Certificate number:
FM24ATEX0010X

List of applied standards: See EU Declaration of Conformity.

IEC Declaration of Conformity

Certificate number:
IECEX FMG 24.0008X

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

- IEC 60079-0 : 2017
- IEC 60079-11 : 2023
- IEC 60079-26 : 2021

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

PMP50

Basic specifications

Position 1, 2 (Approval)		
Selected option		Description
PMP50	BA	ATEX II 1 G Ex ia IIC T4...T1 Ga IECEX Ex ia IIC T4...T1 Ga
	BB	ATEX II 1/2 G Ex ia IIC T4...T1 Ga/Gb ATEX II 2 G Ex ia IIC T4...T1 Gb IECEX Ex ia IIC T4...T1 Ga/Gb IECEX Ex ia IIC T4...T1 Gb

Position 6 (Housing, Material)		
Selected option		Description
PMP50	J	Dual compartment; Alu, coated
	K	Dual compartment; 316L

Position 10 (Diaphragm Seal Type)		
Selected option		Description
PMP50	G	Temperature isolator

Optional specifications

ID Nx, Ox (Accessory Mounted)		
Selected option		Description
PMP50	NA	Overvoltage protection

**Safety instructions:
General**

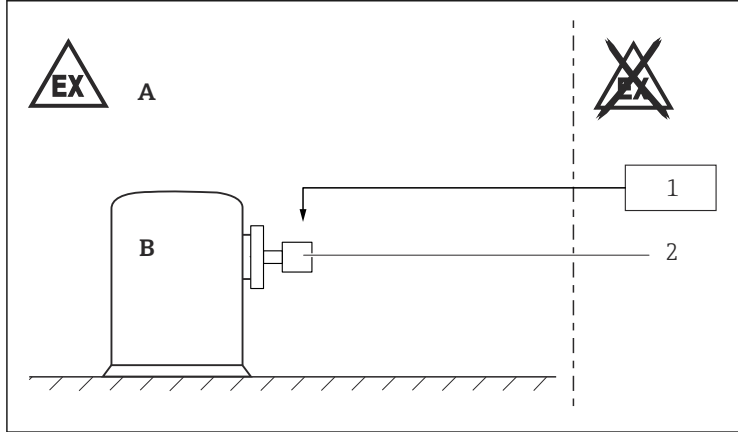
- The device is intended to be used in explosive atmospheres as defined in the scope of IEC 60079-0 or equivalent national standards. If no potentially explosive atmospheres are present or if additional protective measures have been taken: The device may be operated according to the manufacturer's specifications.
- Devices suitable for zone separation (marked Ga/Gb or Da/Db) are always suitable for installation in the less critical zone (Gb or Db). Due to space limitations the corresponding marking maybe not indicated on the nameplate.
- Comply with the installation and safety instructions in the Operating Instructions.
- 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.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- 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)
- Alterations to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.

**Safety instructions:
Specific conditions of use**

- In the case of process connections made of polymeric material or with polymeric coatings, avoid electrostatic charging of the plastic surfaces.
- For light metal flanges or flange faces (e.g. titanium, zirconium), avoid sparks caused by impact and friction.
- 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.

- Avoid sparks caused by impact and friction.
- Refer to the temperature tables for various ambient and process temperature ranges.
- Material specification of the separating element: > 1 mm glass feed-through, edged with > 1 mm stainless steel and ≥ 0.3 mm welds between the glass feedthrough and the stainless steel.

Safety instructions: Installation



A0041997

- A Zone 0 or Zone 1, Electronic
 B Zone 0 or Zone 1, Process
 1 Associated intrinsically safe power supply units
 2 PMP50

- After aligning (rotating) the enclosure, retighten the fixing screw.
- 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.
- Continuous service temperature of the connecting cable: $\geq T_a + 20$ K.
- Observe the pertinent guidelines when interconnecting intrinsically safe circuits.
- Observe the maximum process conditions according to the manufacturer's Operating Instructions.
- Install the device to exclude any mechanical damage or friction during the application. Pay particular attention to flow conditions and tank fittings.

Intrinsic safety

- The device is only suitable for connection to certified, intrinsically safe equipment with explosion protection Ex ia / Ex ib.
- The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least 500 V_{rms}.

Optional specification, ID Nx, Ox = NA

The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least 290 V_{rms}.

Potential equalization

Integrate the device into the local potential equalization.

Temperature tables



- The specified ambient and process temperature ranges exclusively refer to the explosion protection and must not be exceeded. Operationally permitted ambient temperature ranges can be restricted depending on the version: See Operating Instructions.
- Do not exceed the max. ambient temperature at the enclosure.
- The process temperatures refer to the temperature at the separation membrane.

Temperature class	Process temperature T _p (process)	Ambient temperature range
T4...T1	+80 °C	-40 to +65 °C
	+100 °C	-40 to +60 °C
	+125 °C	-40 to +50 °C

Basic specification, Position 10 = G

Temperature class	Process temperature T _p (process)	Ambient temperature range
T3	+190 °C	-40 to +60 °C
T2	+290 °C	-40 to +60 °C
T1	+300 °C	-40 to +60 °C
	+400 °C	-40 to +55 °C

Connection data**Power supply**

$$U_i \leq 30 \text{ V}_{\text{DC}}$$

$$I_i \leq 100 \text{ mA}$$

$$P_i \leq 0.7 \text{ W}$$

$$C_i \leq 10 \text{ nF}$$

$$L_i = 0$$



71640823

www.addresses.endress.com
