

Safety Instructions

Cerabar PMP50

ATEX, IECEx: Ex ta IIIC T₂₀₀ 100 °C Da
Ex tb IIIC T125 °C Db



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 60079-31 : 2022

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	BG	ATEX II 1 D Ex ta IIIC T ₂₀₀ 100 °C Da ATEX II 2 D Ex tb IIIC T ₁₂₅ °C Db IECEX Ex ta IIIC T ₂₀₀ 100 °C Da IECEX Ex tb IIIC T ₁₂₅ °C Db

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

Position 7 (Electrical Connection)		
Selected option		Description
PMP50	B	Gland M20, brass nickel plated, IP66/68 NEMA Type 4X/6P
	C	Gland M20, 316L, IP66/68 NEMA Type 4X/6P

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

Optional specifications

No options specific to hazardous locations are available.

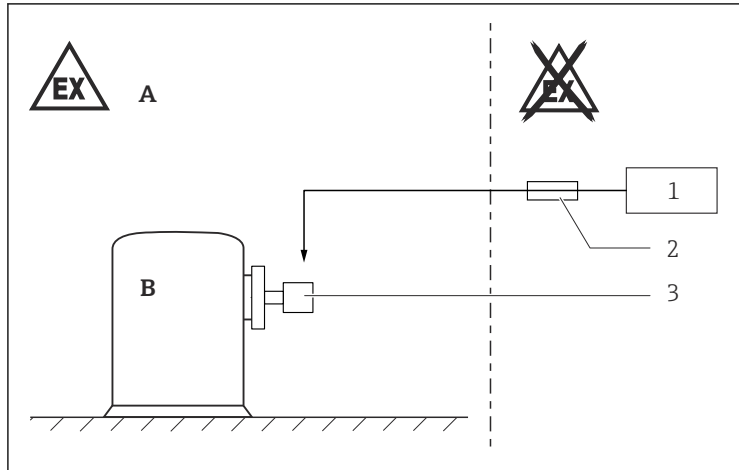
**Safety instructions:
General**

- 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.
- 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.
- The device must be operated with a 100 mA fuse.

Safety instructions: Installation

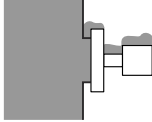
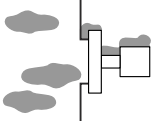


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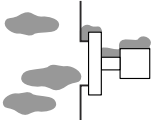
- A Zone 20 or Zone 21, Electronic
 B Zone 20 or Zone 21, Process
 1 Power supply
 2 Fuse
 3 PMP50

- After aligning (rotating) the enclosure, retighten the fixing screw.
- Do not open in a potentially explosive dust atmosphere.
- Seal the cable entry or piping tight (see protection type of enclosure in the "Temperature tables" chapter).
- Before operation:
 - Screw in the cover all the way.
 - Tighten the securing screw on the cover.


*Permitted ambient conditions***Ex ta IIIC T₂₀₀ 100 °C Da**


Process Zone 20	Enclosure Zone 20
Continuous dust submersion	 Dust accumulation or temporary explosive dust atmosphere
Continuous explosive dust atmosphere and deposits	 Dust accumulation or temporary explosive dust atmosphere

Ex tb IIIC T125 °C Db


Process Zone 21	Enclosure Zone 21
Continuous dust deposits or temporary explosive dust atmosphere	 Dust accumulation or temporary explosive dust atmosphere

Temperature tables

-  The specified surface temperature takes into account all direct heat influences from process heat and self-heating at the enclosure.
- Surface temperatures at the process side maybe higher and must be considered by the user (e.g. at high temperature process connections).
- The T-marking is based on the process temperature of the compact designs.
- 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.

 *Basic specification, Position 6 = K*
When using the stainless steel enclosure: Reduce the admissible ambient temperature by 5 K.

For detailed information see Technical Information.

 Protection type of enclosure: IP66/67

Ex ta IIIC T₂₀₀ 100 °C Da

Maximum surface temperature	Process temperature range	Ambient temperature range	Temperature rise on the electronics
T100 °C	-40 °C ≤ T _p ≤ +60 °C	-40 °C ≤ T _a ≤ +60 °C	40 K

Specific conditions of use:

The surface temperature for equipment protection level (EPL) Da is:
T₂₀₀ 100 °C (with 200 mm dust deposit)

Ex tb IIIC T_L 125 °C Db

Maximum surface temperature	Process temperature range	Ambient temperature range
T125 °C	-40 °C ≤ T _p ≤ +125 °C	-40 °C ≤ T _a ≤ +60 °C

Basic specification, Position 10 = G

Maximum surface temperature	Process temperature range	Ambient temperature range
T125 °C	-40 °C ≤ T _p ≤ +400 °C	-40 °C ≤ T _a ≤ +70 °C

Specific conditions of use:

The surface temperature for equipment protection level (EPL) Db is:
T_L 125 °C (with dust accumulation T_L)



T_L marking:

The assigned surface temperature without dust layer is the same.

Connection data

Power supply
U ≤ 35 V _{DC} P ≤ 1 W

Cable entry: Connection compartment**Ex tb**

Cable gland: *Basic specification, Position 7 = B*

Thread	Clamping range	Material	Sealing insert	O-ring
M20x1,5	ø 8 to 10.5 mm	Ms, nickel-plated	Silicone	EPDM (ø 17x2)

Cable gland: *Basic specification, Position 7 = C*

Thread	Clamping range	Material	Sealing insert	O-ring
M20x1,5	ø 7 to 12 mm	1.4404	NBR	EPDM (ø 17x2)



- The tightening torque refers to cable glands installed by the manufacturer:
 - Recommended: 3.5 Nm
 - Maximum: 10 Nm
- This value may be different depending on the type of cable. However, the maximum value must not be exceeded.
- Only suitable for fixed installation. The operator must pay attention to a suitable strain relief of the cable.
- The cable glands are suitable for a low risk of mechanical danger (4 Joule) and must be mounted in a protected position if larger impact energy levels are expected.
- To maintain the ingress protection of the enclosure: Install the enclosure cover, cable glands and blind plugs correctly.



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www.addresses.endress.com
