

Safety Instructions

Cerabar PMP50

II 3 G Ex ec IIC T4...T1 Gc

II 3 D Ex tc IIC T125 °C Dc

UK
CA



Cerabar PMP50

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About this document

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

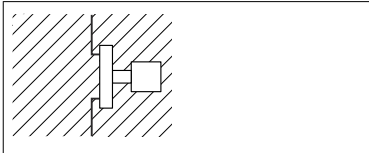
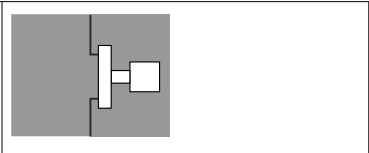
Associated documentation

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

General notes:
Combined approval

	
Ex ec IIC Zone 2	Ex tc IIIC Zone 22

The device is designed for operation in explosive gas or explosive dust atmosphere as shown in the sketch above. In the event of potentially explosive gas-air and dust-air mixtures occurring simultaneously: Suitability requires further assessment.

Certificates and declarations

UK Declaration of Conformity

Declaration Number:
UK_00611
The UK Declaration of Conformity is available on the Internet:
www.endress.com/Downloads

UKCA type-examination certificate

Certificate number:
UK 00611 X
List of applied standards: See UK Declaration of Conformity.

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	UL	UK II 3 G Ex ec IIC T4...T1 Gc
		UK II 3 D Ex tc IIIC T125 °C Dc

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.

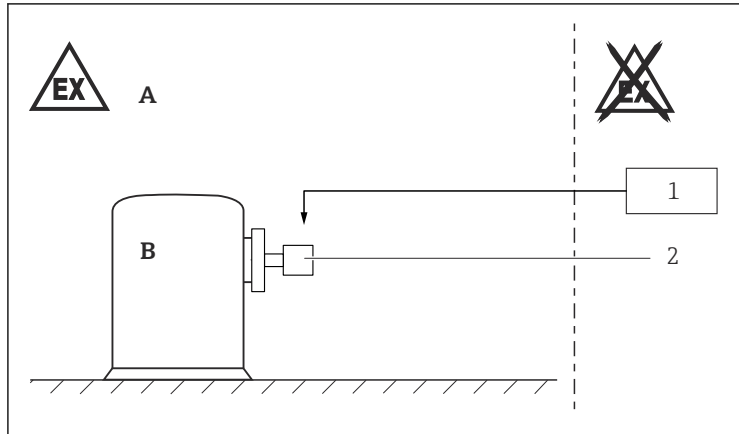
**Safety
instructions:
General**

- The device is intended to be used in explosive atmospheres as defined in the scope of EN 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.
- The device shall only be used in an area of pollution degree 2 or better.
- Refer to the temperature tables for various ambient and process temperature ranges.

Safety instructions: Installation



A0041997

- A Zone 2 or Zone 22, Electronic
 B Zone 2 or Zone 22, Process
 1 Power supply
 2 PMP50

- After aligning (rotating) the enclosure, retighten the fixing screw.
- Perform the following to achieve the degree of protection IP66/67:
 - Screw the cover tight.
 - Mount the cable entry correctly.
- In potentially explosive atmospheres:
 - Do not disconnect the electrical connection of the power supply circuit when energized.
 - Do not open the connection compartment cover and the electronics compartment cover when energized.
- Continuous service temperature of the connecting cable: $\geq T_a + 20 \text{ K}$.
- 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.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- Supplied cable glands and metallic sealing plugs comply with the requirements of type of protection marked on the nameplate.
- Before operation:
 - Screw in the cover all the way.
 - Tighten the securing screw on the cover.

Potential equalization

Integrate the device into the local potential equalization.

Temperature tables

II 3 G Ex ec IIC T4...T1 Gc



- 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 maximum 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 T _a (ambient)
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 T _a (ambient)
T4	+130 °C	−40 to +70 °C
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

II 3 D Ex tc IIIC T125 °C Dc

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 - 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 temperature ranges can be restricted depending on the version: See Operating Instructions.
 - Do not exceed the maximum ambient temperature at the enclosure.
 - The process temperatures refer to the temperature at the separation membrane.

For detailed information see Technical Information.

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Basic specification, Position 6 = K

When using the stainless steel enclosure: Reduce the admissible ambient temperature by 5 K.
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Protection type of enclosure: IP66/67

Maximum surface temperature	Process temperature range	Ambient temperature range
T125 °C	$-40\text{ °C} \leq T_p \leq +125\text{ °C}$	$-40\text{ °C} \leq T_a \leq +60\text{ °C}$

Basic specification, Position 10 = G

Maximum surface temperature	Process temperature range	Ambient temperature range
T125 °C	$-40\text{ °C} \leq T_p \leq +400\text{ °C}$	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$

Connection data

Power supply
$U \leq 35\text{ V}_{DC}$ $P \leq 1\text{ W}$

Cable entry parameters

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
