

# Safety Instructions

## Cerabar M

### PMC51, PMP51, PMP55

#### 4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

Ex ic IIC T6...T4 Gc

Ex ic IIC T6...T3 Gc

IECEX KEM 09.0016

Document: XA00488P-B

Safety instructions for electrical apparatus for explosion-hazardous areas  
according to IEC standards



# Cerabar M PMC51, PMP51, PMP55

english

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

**Associated Documentation**

This document is an integral part of the following Operating Instructions:  
BA00382P/00

The Operating Instructions which are supplied and correspond to the device type apply.

**Supplementary Documentation**

Explosion-protection brochure:  
CP00021Z/11

**Designation**

Explanation of the labelling and type of protection can be found in the explosion protection brochure.

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**Designation according to IECEx  
Equipment protection level (EPL)**

Gc

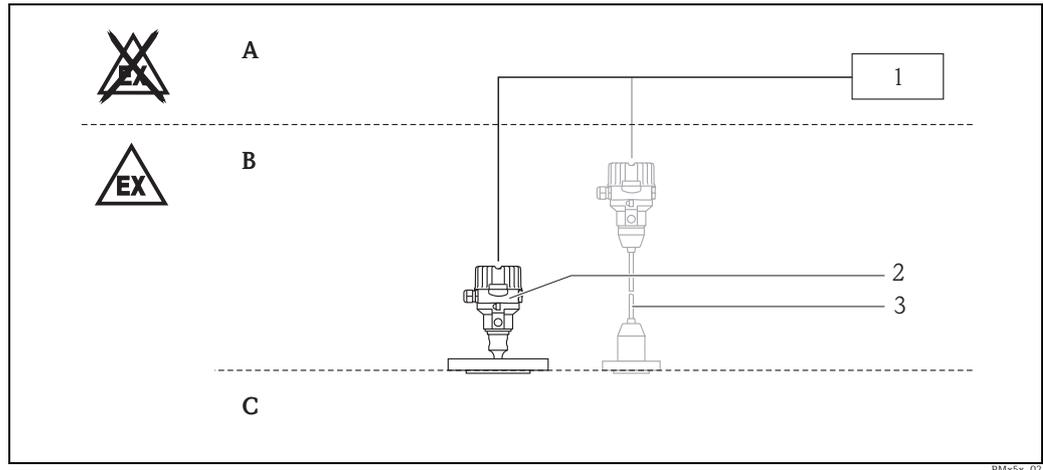
**Designation of type of protection/  
level of protection**

Ex ic IIC T6...T4 Gc  
Ex ic IIC T6...T3 Gc

**Applied standards**

IEC 60079-0 :2011  
IEC 60079-11 :2011

### Safety instructions: Installation



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**A** Power supply  
**B** Zone 2, Electronic  
**C** Zone 2, Process

1 Certified associated apparatus  
 2 PMC51, PMP51 or PMP55  
 3 Option: Separate housing

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations.
- Only install the devices in media for which the wetted materials have sufficient durability.
- Avoid electrostatic charging of the plastic surfaces, for plastic process connections or plastic coatings.
- The intrinsically safe input power circuit of the device is isolated from ground potential and has a dielectric strength of at least 500 V<sub>rms</sub> with respect to it.
- Avoid impact or friction sparks for light metal flanges or flange faces (e.g. titanium, zirconium).
- In case of additional or alternative special varnishing of the enclosure or other metallic parts the danger of an electrostatic charging must be observed. Do not rub surfaces with dry cloth.

### Temperature tables

Electronic insert	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (Housing)
4-20 mA HART	Ex ic IIC T6...T4/T3 Gc	T6	≤ 80 °C	-40 °C ≤ Ta ≤ +40 °C
		T4	≤ 125 °C	-40 °C ≤ Ta ≤ +70 °C
		T3 (at PMC51, PMP51 acc. nameplate)	≤ 150 °C	-40 °C ≤ Ta ≤ +70 °C
PROFIBUS PA, FOUNDATION Fieldbus	Ex ic IIC T6...T4/T3 Gc	T6	≤ 80 °C	-40 °C ≤ Ta ≤ +40 °C
		T4	≤ 125 °C	-40 °C ≤ Ta ≤ +70 °C
		T3 (at PMC51, PMP51 acc. nameplate)	≤ 150 °C	-40 °C ≤ Ta ≤ +70 °C

The process temperatures refer to the temperature at the separation membrane of PMC51 and PMP51. For PMP55, higher temperatures are permitted depending on the type of diaphragm seal (do not exceed the max. ambient temperature at the housing).

## Connection data

Electronic insert	Electrical data
4-20 mA HART	$U_i \leq 45 \text{ V DC}$ , $I_i \leq 300 \text{ mA}$ , $P_i \leq 1 \text{ W}$ $C_i \leq 10 \text{ nF}$ , $L_i = 0$
PROFIBUS PA, FOUNDATION Fieldbus	$U_i \leq 17.5 \text{ V DC}$ , $I_i \leq 500 \text{ mA}$ , $P_i \leq 5.5 \text{ W}$ $C_i \leq 5 \text{ nF}$ , $L_i \leq 10 \mu\text{H}$ (FISCO field device) or $U_i \leq 32 \text{ V DC}$ , $I_i \leq 250 \text{ mA}$ , $P_i \leq 1.2 \text{ W}$ $C_i \leq 5 \text{ nF}$ , $L_i \leq 10 \mu\text{H}$







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