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Safety Instructions
Cerabar S PMC71

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

EAC: Ex ia IIIC T85°C Da/Db

Document: XA01758P-A
Safety instructions for electrical apparatus for explosion-hazardous areas → 3

Endress+Hauser
People for Process Automation

Cerabar S PMC71

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

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Associated documentation

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

HART
- BA00271P/00
- BA00274P/00

PROFIBUS PA
- BA00295P/00
- BA00296P/00

FOUNDATION Fieldbus
- BA00302P/00
- BA00303P/00

Supplementary documentation

Explosion-protection brochure: CP00021Z/11

The Explosion-protection brochure is available:
- In the download area of the Endress+Hauser website:
  www.endress.com -> Downloads -> Media Type: Documentation -> Documentation Type: Brochures and catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

Manufacturer's certificates

Certificate of Conformity TP TC 012/2011

Inspection authority:
LLC NANIO CCVE (ООО «НАНИО ЦСВЭ»)

Certificate number:
TC RU C-DE.AA87.B.01064

Affixing the certificate number certifies conformity with the following standards (depending on the device version):
- GOST 31610.0-2014 (IEC 60079-0:2011)
- GOST 31610.11-2014 (IEC 60079-11:2011)

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

PMC71	–	**********	+	A*B*C*D*E*F*G*..
(Device type)		*(Basic specifications)*		*(Optional specifications)*

* = 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 S

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

PMC71

Basic specifications

Position 1 (Approval)		
Selected option		**Description**
PMC71	2	ATEX II 1/2 D Ex ia IIIC T85°C Da/Db

Position 2 (Output, Operating)		
Selected option		**Description**
PMC71	A, B, C	4-20 mA HART
	D, E, F	4-20 mA HART, L_i = 0
	M, N, O	PROFIBUS PA
	P, Q, R	FOUNDATION Fieldbus

Position 10 (Additional Option 1)		
Selected option		**Description**
PMC71	M	Overvoltage protection

Position 11 (Additional Option 2)		
Selected option		**Description**
PMC71	M	Overvoltage protection

Optional specifications

ID Lx (Additional Approval)		
Selected option		**Description**
PMC71	L8	EAC marking

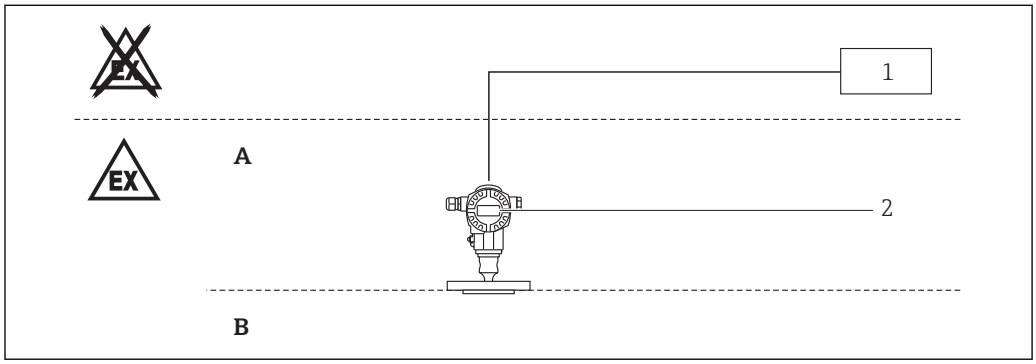
Safety instructions: General

- 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.
- Avoid electrostatic charging:
  - Of plastic surfaces (e.g. housing, sensor element, special varnishing, attached additional plates, ..)
  - Of isolated capacities (e.g. isolated metallic plates)

Safety instructions: Special conditions

In the event of additional or alternative special varnishing on the housing or other metal parts:
- Observe the danger of electrostatic charging and discharge.
- Do not rub surfaces with a dry cloth.

Safety instructions: Installation



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A Zone 21, Electronic
B Zone 20, Process
1 Certified associated apparatus
2 PMC71

- After aligning (rotating) the housing, retighten the fixing screw.
- Seal the cable entry or piping tight (see ingress protection of housing in the "Temperature tables" chapter).
- Only use cable glands which are suited for dust-Ex protection.
- Connect the device using suitable cable and wire entries of protection type "Equipment dust ignition protection by enclosure (Ex t)" or "Increased safety (Ex e)" (ingress protection of at least IP65). Lay connecting cable and secure.

Intrinsic safety

The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least 500 V_{rms}.

Overvoltage protection

Basic specification, Position 10 + 11 (Additional Option 1 + 2) = M
The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least 290 V_{rms}.

Temperature tables

Type of protection	Ingress protection of housing	Max. surface temperature at max. ambient temperature	Ambient temperature T_a (ambient): housing
EAC: Ex ia IIIC T85°C Da/Db	IP66/67	+85 °C [1]	−40 °C ≤ T_a ≤ +70 °C

1) Maximum thickness of the dust layer: 5 mm

Connection data

Basic specification, Position 2 (Output, Operating) = A, B, C, D, E, F

Power supply
U_i ≤ 30 V_{DC} I_i ≤ 300 mA P_i ≤ 1 W C_i ≤ 11.8 nF L_i ≤ 225 µH [1] or L_i = 0 [2]

1) Basic specification, Position 2 (Output, Operating) = A, B, C
2) Basic specification, Position 2 (Output, Operating) = D, E, F

Basic specification, Position 2 (Output, Operating) = M, N, O, P, Q, R

Power supply	
FISCO	Entity
U_i ≤ 17.5 V_{DC} I_i ≤ 500 mA P_i ≤ 5.5 W C_i ≤ 5 nF L_i ≤ 10 µH	U_i ≤ 24 V_{DC} I_i ≤ 250 mA P_i ≤ 1.2 W C_i ≤ 5 nF L_i ≤ 10 µH

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