

# Safety Instructions

## Deltabar S


### PMD75, FMD77, FMD78

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

EAC: Ex ta IIIC T85°C Da / Ex tc IIIC T85°C Dc



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4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

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Associated documentation	<p>This document is an integral part of the following Operating Instructions:</p> <p>HART</p> <ul style="list-style-type: none"><li>■ BA00270P/00</li><li>■ BA00274P/00</li></ul> <p>PROFIBUS PA</p> <ul style="list-style-type: none"><li>■ BA00294P/00</li><li>■ BA00296P/00</li></ul> <p>FOUNDATION Fieldbus</p> <ul style="list-style-type: none"><li>■ BA00301P/00</li><li>■ BA00303P/00</li></ul>										
Supplementary documentation	<p>Explosion-protection brochure: CP00021Z/11</p> <p>The Explosion-protection brochure is available:</p> <ul style="list-style-type: none"><li>■ In the download area of the Endress+Hauser website: <a href="http://www.endress.com">www.endress.com</a> -&gt; Downloads -&gt; Media Type: Documentation -&gt; Documentation Type: Brochures and catalogs -&gt; Text Search: CP00021Z</li><li>■ On the CD for devices with CD-based documentation</li></ul>										
Manufacturer's certificates	<p><b>Certificate of Conformity TP TC 012/2011</b></p> <p>Inspection authority: LLC NANIO CCVE (ООО «НАНИО ЦСВЭ»)</p> <p>Certificate number: TC RU C-DE.AA87.B.01064</p> <p>Affixing the certificate number certifies conformity with the following standards (depending on the device version):</p> <ul style="list-style-type: none"><li>■ GOST 31610.0-2014 (IEC 60079-0:2011)</li><li>■ GOST R IEC 60079-31-2013</li></ul>										
Manufacturer address	<p>Endress+Hauser SE+Co. KG Hauptstraße 1 79689 Maulburg, Germany Address of the manufacturing plant: See nameplate.</p>										
Extended order code	<p>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.</p> <p><b>Structure of the extended order code</b></p> <table><tr><td>PMD75, FMD7x</td><td>–</td><td>*****</td><td>+</td><td>A*B*C*D*E*F*G*..</td></tr><tr><td>(Device type)</td><td></td><td>(Basic specifications)</td><td></td><td>(Optional specifications)</td></tr></table> <p>* = Placeholder At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.</p> <p><i>Basic specifications</i></p> <p>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.</p>	PMD75, FMD7x	–	*****	+	A*B*C*D*E*F*G*..	(Device type)		(Basic specifications)		(Optional specifications)
PMD75, FMD7x	–	*****	+	A*B*C*D*E*F*G*..							
(Device type)		(Basic specifications)		(Optional specifications)							

*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: Deltabar 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*

PMD75, FMD77, FMD78

*Basic specifications*

Position 1 (Approval)		
Selected option		Description
PMD75	4	ATEX II 1/3 D Ex ta/tc IIIC T85°C Da/Dc
FMD7x		

Position 2 (Output, Operating)		
Selected option		Description
PMD75 FMD7x	A, B, C	4-20 mA HART
	D, E, F	4-20 mA HART, L <sub>1</sub> = 0
	M, N, O	PROFIBUS PA
	P, Q, R	FOUNDATION Fieldbus

*Optional specifications*

ID Jx (Test, Certificate)		
Selected option		Description
PMD75	JN	Ambient temperature transmitter –50 °C/-58 °F
FMD7x		

ID Lx (Additional Approval)		
Selected option		Description
FMD7x	L8	EAC marking

Safety instructions: General

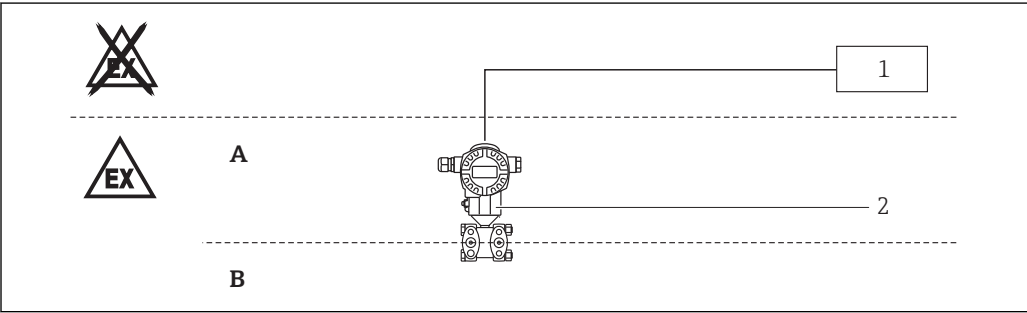
- Comply with the installation and safety instructions in the Operating Instructions.
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Only use the device in media to which the wetted materials have sufficient durability.
- 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



- A    Zone 22, Electronic  
B    Zone 20, Process  
1    Power supply  
2    PMD75, FMD77, FMD78

- After aligning (rotating) the housing, retighten the fixing screw.
- Do not open in a potentially explosive dust atmosphere.
- Seal the cable entry or piping tight (see ingress protection of housing in the "Temperature tables" chapter).
- 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.

Temperature tables

Type of protection	Ingress protection of housing	Max. surface temperature under fault conditions	Ambient temperature T <sub>a</sub> (ambient): housing
Ex ta IIIC T85°C Da Ex tc IIIC T85°C Dc	IP66/67	+85 °C <sup>1) 2)</sup>	–40 °C ≤ T <sub>a</sub> ≤ +70 °C

- 1)    Measured at max. ambient temperatur of +70 °C  
2)    Maximum thickness of the dust layer: 5 mm

Optional specification, ID Jx (Test, Certificate) = JN  
Lower limit of the ambient temperature for explosion protection changes to –50 °C.

Connection data

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

Power supply
$U \leq 45 \text{ V}_{\text{DC}}$

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

Power supply
$U \leq 32 \text{ V}_{\text{DC}}$



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