

# Safety Instructions

## **Deltabar PMD75B, PMD78B**

II 1 G Ex ia IIC T6...T1 Ga





# Deltabar PMD75B, PMD78B

## Table of contents

Associated documentation .....	4
Supplementary documentation .....	4
Manufacturer's certificates .....	4
Manufacturer address .....	4
Other standards .....	4
Extended order code .....	5
Safety instructions: General .....	6
Safety instructions: Special conditions .....	7
Safety instructions: Installation .....	7
Safety instructions: Zone 0 .....	8
Temperature tables .....	9
Connection data .....	9

<b>Associated documentation</b>	<p>This document is an integral part of the following Operating Instructions:</p> <p>PMD75B BA02014P/00, TI01511P/00</p> <p>PMD78B BA02015P/00, TI01512P/00</p>
<b>Supplementary documentation</b>	<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; Brochures and Catalogs -&gt; Text Search: CP00021Z</li><li>■ On the CD for devices with CD-based documentation</li></ul>
<b>Manufacturer's certificates</b>	<p><b>UK Declaration of Conformity</b></p> <p>Declaration Number: UK00027</p> <p>The UK Declaration of Conformity is available: In the download area of the Endress+Hauser website: <a href="http://www.endress.com">www.endress.com</a> -&gt; Downloads -&gt; Declaration -&gt; Type: UKCA Declaration -&gt; Product Code: ...</p> <p><b>UKCA type-examination certificate</b></p> <p>Certificate number: CML 21UKEX2337X</p> <p>List of applied standards: See UK Declaration of Conformity.</p>
<b>Manufacturer address</b>	<p>Endress+Hauser SE+Co. KG Hauptstraße 1 79689 Maulburg, Germany</p> <p>Address of the manufacturing plant: See nameplate.</p>
<b>Other standards</b>	<p>Among other things, the following standards shall be observed in their current version for proper installation:</p> <ul style="list-style-type: none"><li>■ IEC/EN 60079-14: "Explosive atmospheres - Part 14: Electrical installations design, selection and erection"</li><li>■ EN 1127-1: "Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology"</li></ul>

## 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

PMD7xB – \*\*\*\*\* + 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: Deltabar

#### Device type

PMD75B, PMD78B

#### Basic specifications

Position 1, 2 (Approval)	
Selected option	Description
PMD75B UA PMD78B	UK Ex II 1 G Ex ia IIC T6...T1 Ga

Position 6 (Housing, Material)		
Selected option		Description
PMD75B	B	Single compartment; Alu, coated
PMD75B	J	Dual compartment; Alu, coated
PMD78B	K	Dual compartment; 316L
	M	Dual compartment L-shape; Alu, coated

### Optional specifications

ID Jx, Kx (Test, Certificate, Declaration)		
Selected option		Description
PMD75B	JL	Ambient temp. transmitter -50°C/-58°F, sensor see specification
PMD78B		

ID Nx, Ox (Accessory Mounted)		
Selected option		Description
PMD75B	NA	Overvoltage protection
PMD78B		

ID Px, Rx (Accessory Enclosed)		
Selected option		Description
PMD75B	PA	Weather protection cover, 316L
PMD78B		
PMD75B	PB	Weather protection cover, plastic

### 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.
- 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)
- Modifications to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.

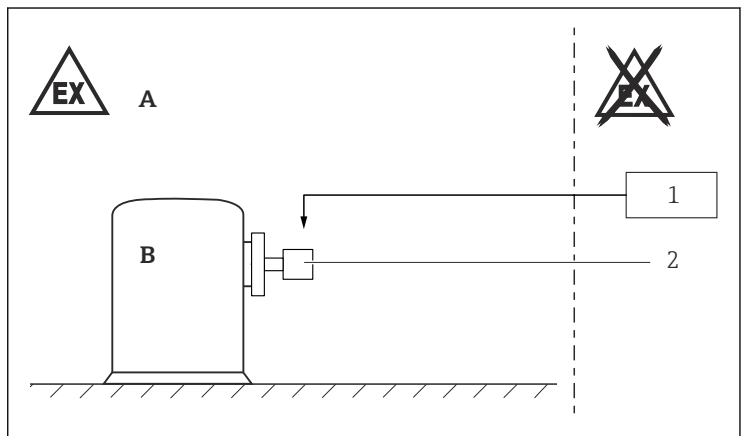
**Safety instructions:**  
**Special conditions**

- 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 ( $\leq 0.5$  m) generating strong electrostatic charges.
- Avoid sparks caused by impact and friction.

*Optional specification, ID Px, Rx = PA*

Connect the weather protection cover to the local potential equalization.

**Safety instructions:**  
**Installation**



A0041997

- A Zone 0, Electronic
- B Zone 0, Process
- 1 Associated intrinsically safe power supply units
- 2 PMD75B, PMD78B

- After aligning (rotating) the enclosure, retighten the fixing screw.
- Continuous service temperature of the connecting cable:  $\geq T_a + 20$  K.
- Observe the pertinent guidelines when interconnecting intrinsically safe circuits.
- 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.

### **Intrinsic safety**

- The device is only suitable for connection to certified, intrinsically safe equipment with explosion protection Ex ia.
- The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least  $500 V_{\text{rms}}$ .

*Optional specification, ID Nx, OX = NA*

The intrinsically safe input power circuit of the device is isolated from ground. The dielectric strength is at least  $290 V_{\text{rms}}$ .

### **Potential equalization**

Integrate the device into the local potential equalization.

### **Safety instructions: Zone 0**

- In the event of potentially explosive vapor/air mixtures, only operate the device under atmospheric conditions.
  - Temperature:  $-20$  to  $+60$  °C
  - Pressure: 80 to 110 kPa (0.8 to 1.1 bar)
  - Air with normal oxygen content, usually 21 % (V/V)
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, the device may also be operated under non-atmospheric conditions in accordance with the manufacturer's specifications.
- Only use the device in media to which the wetted materials have sufficient durability (e.g. process connection seal).



## Temperature tables



- 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.



*Optional specification, ID Jx, Kx = JL*

Lower limit of the ambient temperature for explosion protection changes to  $-50\text{ °C}$ .

*Optional specification, ID Px, Rx = PB*

When using the weather protection cover: Reduce the admissible ambient temperature by 10 K.

### Device Type PMD75B

Temperature class	Process temperature range	Ambient temperature range
T6	$-40\text{ °C} \leq T_p \leq +80\text{ °C}$	$-40\text{ °C} \leq T_a \leq +50\text{ °C}$
T4...T1	$-40\text{ °C} \leq T_p \leq +100\text{ °C}$	$-40\text{ °C} \leq T_a \leq +55\text{ °C}$
	$-40\text{ °C} \leq T_p \leq +85\text{ °C}$	$-40\text{ °C} \leq T_a \leq +60\text{ °C}$
	$-40\text{ °C} \leq T_p \leq +60\text{ °C}$	$-40\text{ °C} \leq T_a \leq +60\text{ °C}$

### Device Type PMD78B

Temperature class	Process temperature range	Ambient temperature range
T6	$-40\text{ °C} \leq T_p \leq +80\text{ °C}$	$-40\text{ °C} \leq T_a \leq +50\text{ °C}$
T4	$-40\text{ °C} \leq T_p \leq +130\text{ °C}$	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$
T3	$-40\text{ °C} \leq T_p \leq +190\text{ °C}$	
T2	$-40\text{ °C} \leq T_p \leq +285\text{ °C}$	
T1	$-40\text{ °C} \leq T_p \leq +400\text{ °C}$	

## Connection data

Power supply
$U_i \leq 30\text{ V}_{DC}$ $I_i \leq 300\text{ mA}$ $P_i \leq 1\text{ W}$ $C_i \leq 10\text{ nF}$ $L_i = 0$







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[www.addresses.endress.com](http://www.addresses.endress.com)

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