

# Safety Instructions

## Deltabar S

### FMD76

4-20 mA HART,  
PROFIBUS PA, FOUNDATION Fieldbus

Ex ia IIIC T85°C Da/Db  
TÜV 13.2007



Document: XA01317P-A

Safety instructions for electrical apparatus for explosion-hazardous areas



# Deltabar S

## FMD76

4-20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus

### Associated Documentation

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

HART: BA00270P/00, BA00274P/00

PROFIBUS PA: BA00294P/00, BA00296P/00

FOUNDATION Fieldbus: BA00301P/00, BA00303P/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.

**Designation of type of protection**

**Ex ia IIC T85 °C Da/Db**

### Applied standards

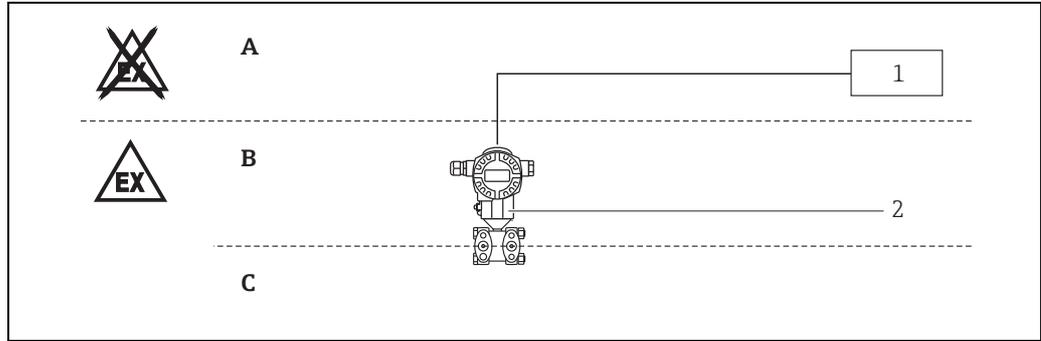
ABNT NBR IEC 60079-0 :2008

ABNT NBR IEC 60079-11 :2009

**Safety instructions:**  
**General**

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

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



- A** Power supply
- B** Zone 21, Electronic
- C** Zone 20, Process
- 1** Certified associated apparatus
- 2** FMD76

- Seal the cable entry or piping tight (see housing ingress protection in the table above).
- Only use cable glands which are suited for dust-Ex protection: e.g. with Ex t approval or Ex e approval (min. IP65 ingress protection). Lay connecting cable and secure.
- After aligning (rotating) the housing, retighten the fixing screw.
- 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. For devices with integrated overvoltage protection (optional), the dielectric strength is min. 290 V<sub>rms</sub> to earth.

**Temperature tables**

Type of protection	Ingress protection of housing	Max. surface temperatur at max. ambient temperature	Ambient temperature (Housing)
Ex ia IIIC T85°C Da/Db	IP66/67	+85 °C	-40 °C ≤ T <sub>a</sub> ≤ +70 °C

**Connection data**

Electronic insert: 4-20 mA HART

**Electrical data**

$U_i \leq 30 \text{ V DC}$   
 $I_i \leq 300 \text{ mA}$   
 $P_i \leq 1 \text{ W}$   
 $C_i \leq 11.8 \text{ nF}$   
 $L_i \leq 225 \text{ } \mu\text{H}$  (Order code, Position 2 "Output; Operation": A, B, C)  
or  
 $L_i = 0$  (Order code, Position 2 "Output; Operation": D, E, F)

Electronic insert: PROFIBUS PA, FOUNDATION Fieldbus

**Electrical data**

$U_i \leq 17.5 \text{ V DC}$   
 $I_i \leq 500 \text{ mA}$   
 $P_i \leq 5.5 \text{ W}$   
(suitable for connection to a fieldbus system according to the FISCO model)  
or  
 $U_i \leq 24 \text{ V DC}$   
 $I_i \leq 250 \text{ mA}$   
 $P_i \leq 1.2 \text{ W}$   
 $C_i \leq 5 \text{ nF}$   
 $L_i \leq 10 \text{ } \mu\text{H}$







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