



Operating instructions

(Ex protection related part) for the submersible pressure transmitter PS3xxA

UK

Remarks for safe use in hazardous areas

Functions and features

- Use in hazardous areas according to the classification

I M1

(Group I, category M1, apparatus for mines susceptible to firedamp).

- Use in hazardous areas according to the classification

II 1G, II 1/2G, II 2G

(Group II, category II 1G, II 1/2G, II 2G, apparatus for gas atmosphere).

- Use in hazardous areas according to the classification

II 1D

(Group II, category II 1D, apparatus for dust atmosphere).

Type examination certificate

BVS 10 ATEX E 132 X
IECEx BVS 10.0085 X

- Marking

 I M1 Ex ia I Ma

 II 1 G Ex ia IIA T4/T5/T6 Ga

 II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb

 II 2 G Ex ia IIC T4/T5/T6 Gb

 II 1D Ex ia IIIC T135°C Da

Installation / Set-up

The units must only be installed, connected and set up by qualified staff. The qualified staff must have knowledge of protection classes, regulations and provisions for apparatus in hazardous areas.

Check whether the classification (see "Marking" above and marking on the unit) is suitable for the application.

- Connection to intrinsically safe supply isolators (Ex ia).
- Safety-related maximum values

Voltage U_i	30 V DC
Current intensity I_i	100 mA
Power P_i	1 W for groups I and II 750 / 650 / 550 mW for group III
Maximum effective internal capacitance (C_i)	16.5 nF +0.1 nF/m cable (value see type label on the submersible pressure transmitter)
Maximum effective internal inductance (L_i)	0 μ H +1 μ H/m cable (value see type label on the submersible pressure transmitter)

- Permissible ambient and medium temperature at the mounting location (proper usage)

ATEX category	Ambient and medium temperature
M 1, 1 G, 1/2 G, 2 G (Ma, Ga, Ga/Gb, Gb)	T6: -10 ... +60 °C T5: -10 ... +80 °C T4: -10 ... +85 °C
1 D (Da)	-10 ... +40 °C (750 mW) -10 ... +70 °C (650 mW) -10 ... +85 °C (550 mW)

Installation remarks / Installation

- Adhere to the respective national regulations and provisions as well as the relevant installation regulations.
- Avoid electrostatic charging on connection cables.
- Prepare the cable with ferrules.
- The cable screen is conductively connected to the housing.
- Ground the cable screen on at least one cable side if the cables are longer than 30 m (2 wires) or leave the building.
- Ensure that no moisture penetrates at the end of the cable.
- Protect devices and cables against damage.
- For the wiring and the electrical characteristics please see the device marking or the technical data sheet.
- Only use the device when it is in a condition fully complying with safety standards.
- Visually check the device before set-up.
- If liquid is leaking, this indicates damage.
- Explosion protection is not ensured if the diaphragm is damaged.
- Earth the cable screen on one side and preferably in the non-hazardous area (EN 60079-14). Simultaneous connection of housing and cable screen to ground is only

permissible if the transfer of potential between shielded connection (e.g. to an isolated barrier) and housing can be excluded (see EN 60079-14).

Special conditions for safe operation

- The device is suitable for installation in walls which separate zone 0 from zone 1.
- The installation of the submersible pressure transmitter in walls of areas requiring EPL Ga equipment must be carried out in such a way that protection rating IP67 according to EN 60529 is guaranteed.
- The installation of the device's cable entry in walls which separate areas with EPL Ga requirements from less hazardous areas must be carried out in such a way that protection rating IP67 according to EN 60529 is guaranteed.
- When using the submersible pressure transmitter in areas that require EPL Ga or EPL Da, the screen of the connection cable and the metal part of the tension clamp must be included in the equalisation of potential of the tank.
- The manufacturer's technical information concerning the use of the submersible pressure transmitter in combination with aggressive and corrosive media and on avoiding mechanical hazards must be observed.
- Installation of the submersible pressure transmitter in walls separating areas with EPL Ga equipment from less hazardous areas: For functional reasons, the wall (diaphragm) to the area in contact with the medium has a thickness of < 0.2 mm. It must be ensured that damage to the wall, e.g. by aggressive media or mechanical stress, is excluded during use.

Maintenance / Repair

- The submersible pressure transmitter has to be included in the recurrent pressure test of the tank.
- The unit must not be modified nor can it be repaired. In case of a fault please contact the manufacturer.
- If required, the technical data sheets and EC declarations of conformity can be obtained from the manufacturer. Indicate the article number.

