

## Safety precautions

⚠ Pressure sensor/ transmitter shall be installed by professional engineers, technicians and other qualified personnel, please read carefully the content and important information provided by this installation guide and label before installation.

⚠ Pressure sensor / transmitter is powered by an external power supply, the power supply should be in accordance with relevant standards stipulated by energy limitation circuit, and pay attention to the high-voltage that may exist in the circuit.

⚠ The maximum static pressure overload has been marked on the label, the maximum pressure value should be no more than the span of sensor.

⚠ Using pressure sensor/transmitter in dangerous situations, product installation, using and maintenance should comply with installation guide and relevant provisions of national standards.

⚠ Measuring diaphragm is located in the forefront of the process connection, touch or squeeze with hard objects may cause damage to the diaphragm.

⚠ Attention please! Disassemble the instruments under the condition of normal atmospheric pressure only

## Product Usage

### Pipe pressure measurement



Mounted directly on the pipe fittings, a cooling element should be used with pressure transmitter for high temperature medium.

### Container pressure measurement



Pressure transmitter mounted on top of the container, to avoid the errors caused by contacting with the medium static pressure.

### Differential pressure measurement system



With two pressure transmitters to make up a DP measurement system, can measure the pressure value and calculate the differential pressure value.

### Container level measurement



⚠ When using DP diaphragm system measurement, the static pressure is near to vacuum, differential pressure transmitters should be installed lower 1m than the high-pressure side pressure port.

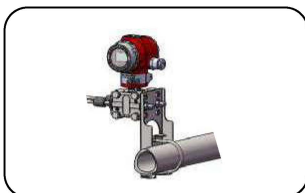
## Install pressure transmitter

### Direct installation



Integrated pressure transmitter, installed directly with process connections.

### Brackets installation



DP diaphragm systems. Install membrane systems with process connections directly and install differential pressure transmitter with optional brackets.

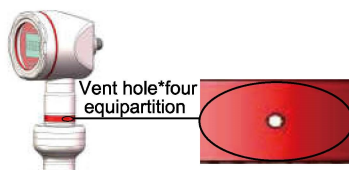
⚠ The diaphragm seals system and pressure transmitter together form a closed calibrated system. Filling fluid through the diaphragm seals and the openings of pressure transmitters in the measuring system. The openings have been sealed. Please do not open..

- Please do not remove the protection cap of the isolated diaphragm.
- To prevent capillary from overbending (bending radius:  $\geq 10\text{mm}$ ), please make sure stress relieving completely of the capillary before the installation.
- The static pressure of the liquid column in the capillary may result in zero shift. It can be corrected by the display at site.

In order to get more accurate measuring results and avoid instrument failure, Please note the following when mount capillary

- No vibration (avoid extra pressure fluctuation)
- Do not mount around the heating pipes or cold pipes.
- Should do heat preservation treatment to the capillary when ambient temperature is below or above the reference temperature.
- Bending radius  $\geq 100\text{mm}$ .
- If diaphragm seals system at both sides are adopted, the two capillaries should be same in length and ambient temperature.

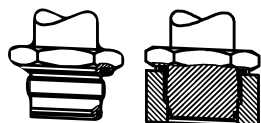
### Gage vent



⚠ Please make sure the vent hole is connected with atmosphere when gauge pressure measuring

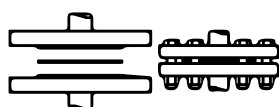
## Process connection

### Thread connection



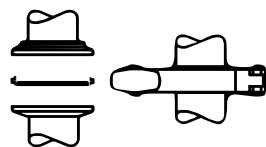
⚠ Forbid welding base together with pressure transmitter! Note threaded screw length to avoid glitches scratch the diaphragm.

### Flange connection



Select gaskets according to medium characters and temperature range, pay attention to balance each bolt lock.

### Tri-clamp connection



Choose gaskets which meet the hygienic standards, to avoid the measurement errors caused by excessive locking clamp gasket and diaphragm compression.

⚠ Hygienic pressure transmitter Tri-Clamp has been approved by 3-A certificate.

⚠ The gaskets of Tri-Clamp, filling fluid of diaphragm seals and all the wetted parts are in line with FDA standards.

## Welding installation rules

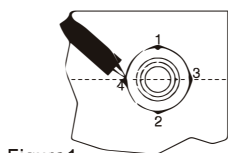


Figure1

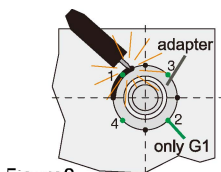


Figure2

Welding to pipes and containers, please comply with the detailed steps as following

- ① Bore a hole in the pipe or housing wall with the outside diameter of the adapter(max. tolerance: 0.2 mm);
- ② Fix the adapter at four points with sufficient holding force(see figure 1), apply the fixing points at equal distance opposite each other! For G1", should fix the adapter at eight points (see figure 2)
- ③ Screw on welding adapters.
- ④ Apply the welding seams between the fixing points opposite each other (see figure 2)

⚠ Ensure sufficient intervals between the individual sections (cooling phases to avoid glowing through / warping of the adapter due to overheating).

⚠ Please adopt welding adapter to ensure correct operation at measuring points.

⚠ Please note: Max mounting torque is 20Nm!

⚠ Please make sure the atmospheric connection side open.