

TX Pressure Transmitter

INSTALLATION AND OPERATING INSTRUCTIONS



CONSTRUCTION :

TX is a newly developed pressure transmitter with LED display. A high stable pressure sensor and a high performance specialised processing circuit are mounted in SS housing. It is stable and reliable. The TX pressure transmitter can be widely used for liquid pressure measurement in power plants, for oil hydraulics, air, steam and many other applications.

PRINCIPLE OF OPERATION:

The pressure from pressure sensing port acts on SS diaphragm. A high stable pressure sensor and a high performance specialised processing circuit are mounted in SS housing. It is stable and reliable which converts mechanical pressure into corresponding electrical signals showing corresponding pressure value on LED display.

MOUNTING :

Before installation, please ensure :

- 1) The measuring pressure is in the measurement range;
- 2) The process medium is compatible with wetted parts;
- 3) The process medium will not jam the pressure-sensing port.

Usually the transmitter should be mounted vertically. If this is not possible, maximum tilt allowable is 30 degrees to vertical (ref Fig 2). It is not recommended to mount the transmitter in inverted position.

A Gasket ring for sealing has been provided on the male mounting threads. For easy installation and repair, it is advisable to use a needle valve after the transmitter.

Installation Drawing

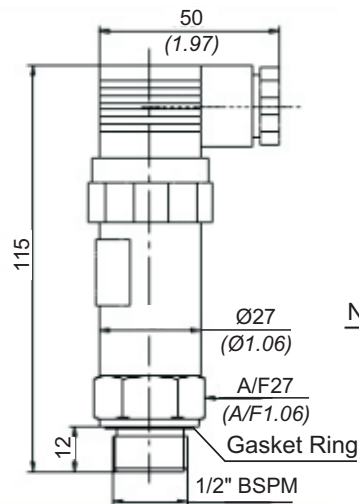


Fig. 1

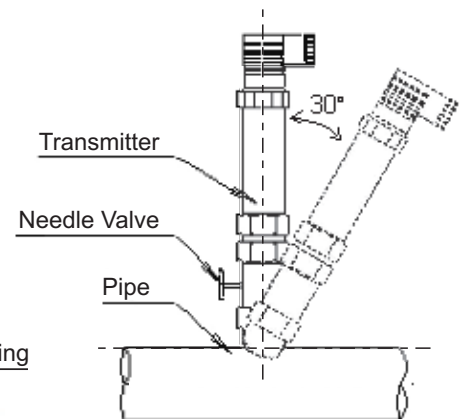


Fig. 2

ELECTRIC CONNECTIONS:

Pin	2-wire
1	+V
2	+OUT
3	NULL

Chart 1

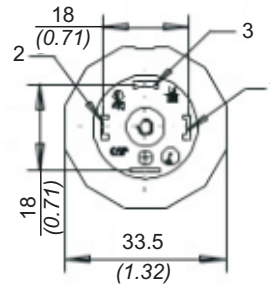


Fig. 3

WIRING : (Refer chart 1, fig 3 & fig 4.)

- 1) To remove the DIN connector, loosen the central screw (1) on top of the connector with phillips screw driver.
- 2) Hold the connector housing (2) with fingers and pull it out gently from the plug. (6)
- 3) Turn the removed connector upside down and insert a small flat screwdriver into a slot in the corner marked "lift" and give a slight pull until plug core (5) comes out from connector housing (2).
- 4) To connect the cable, insert the cable through cable entry screw (4) and connect the wire to terminal 1 & 2 only (Ref fig 3.). (Please choose Φ 4.5 - 7mm shield cable and connect the cable firmly to prevent short circuit).
- 5) Pull the cable slightly and push the plug core (5) gently into the connector housing (2) (a rattling sound could be heard) then hand tighten the cable entry screw. (4)
- 6) Relocate the gasket (3) back to the original position in order to maintain ingress protection class.
- 7) Now connect the DIN connector to the plug and tighten the central screw. (1)
- 8) Now the transmitter is ready to use without any adjustment. Please ensure that the installation and electric connections are correct.
- 9) The transmitter will start working as soon as power is supplied, but signal output will stabilise after 30 minutes.
- 10) Please ensure regulated power supply of 28 VDC. The transmitter will work between 11 VDC to 28 VDC

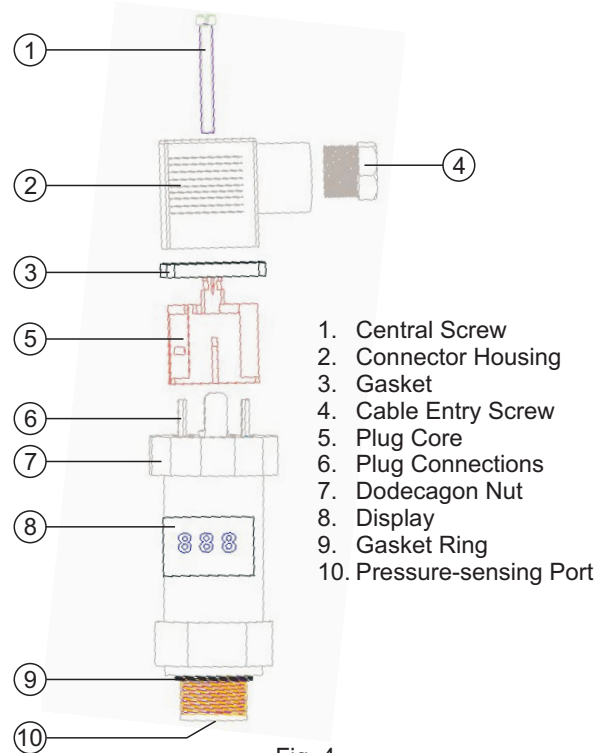


Fig. 4

Caution: Do not remove the Dodecagon Nut.(7)

TROUBLESHOOTING TIPS :

For properly selected transmitter, if following symptoms are observed, the likely causes and remedies are as stated below:

SYMPTOM 1: TRANSMITTER DOES NOT OPERATE

- 1) Wiring may not be correct. Check electrical connections to the transmitter, if they are as per wiring diagram.
- 2) Ensure that the supply voltage is between 11 VDC to 28 VDC
- 3) Pressure does not reach the pressure port
 - a) Check if the pressure sensing port (10) is not blocked by frozen process or impurities in the process.
 - i) If this is the case, try freeing the blocked path by a blunt tool in case of scales and impurities.

Caution: DO NOT INSERT ANY WIRE OR POINTED OBJECT TO CLEAR THE HOLE IN PRESSURE PORT. The sensor diaphragm is sensitive and may be damaged permanently if pressed by a sharp tool or fingers.

- ii) For frozen process, it is advisable to use chemical seals.

SYMPTOM 2 : SHORT WIRING :

Isolate the transmitter electrically. Check the connections of terminal 1 & 2 (Ref fig 3.) and the screws fitted to the plug core, check the short connections elsewhere in the circuit.

SYMPTOM 3 : LEAKAGE :

In case leakage is observed, check whether Gasket ring (9) is in position. If leakage is still observed then transmitter has to be returned to the factory.

Check for the following likely causes and use a new transmitter taking proper precautions.

- a) System pressure is greater than working pressure : Use an over range protector or a transmitter with appropriate maximum working pressure.