
ACT-7X Pipe Temperature Sensor

Technical Instructions

1. Instructions

ACT-7X series pipe temperature sensor is used for measuring the temperature of product (gas or liquid) in the piping lines in aircraft, submarines, special vehicles, ships, locomotives, mining and other industries.

ACT-7X series pipe temperature sensor features simple structure and easy operation and removal. It can be fitted on the installation mount preset in the piping system with a M8X1 screw thread. Its tightness is ensured by an O-ring or soft metal gasket. The nut thread with the installation mount is 3 " /8 and has an angle of 55° and 20 teeth /1 "

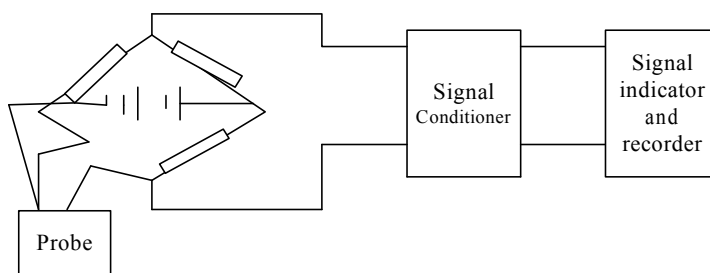
ACT-7X series sensor. all parts of the sensor housing are made of 1Cr18Ni9Ti stainless steel with excellent resistance to corrosion. A high precision platinum thermo-sensitive resistor which is linear with temperature change is used as the temperature sensing element and enclosed tightly in the housing. Therefore, the temperature sensor features high precision, excellent stability and powerful resistance to shock and moisture.

2. Operation Principle and Wiring Diagram

Operation Principle

When the temperature of the measured product (gas or liquid) changes, the resistance of the platinum thermo-sensitive resistor will change accordingly and this temperature signal is sent to a temperature transmitter (or signal conditioner). The transmitter outputs a 4 to 20mA or 1 to 5V DC electrical signal. The output value is linear with the temperature of the product measured.

Wiring Diagram



3. Technical Specifications

- Temperature Measurement Range: T=-60 to 300°C

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- Ambient Temperature: -30~150℃
 - Resistance at Freezing Point: $R_{01}=100\pm 0.12\Omega$
 $R_{02} = 1K, 2K, 5K, \pm 1\%, \pm 2\% \pm 5\%$
 - Accuracy: $\Delta t = \pm(0.3 + 0.5\%/t)^\circ C$
 - Allowable Operating Current: $I_p \leq 5mA$
 - Pressure: $P \leq 5MP_a$
 - Transmitter Operating Power: 25VDC $\pm 20\%$
 - Accuracy: 0.5%
 - Output Signal: 4 to 20mA or 1 to 5VDC

4. Outline Dimensions



5 . **Note: Our company is able to design and manufacture non-standard products with different dimensions, structures and performances as required by users.**

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