Auchtek International Pty Ltd (ABN: 59 110 530 535 ； ACN: 110 530 535)

http://www.auchtek.com.au

ACT-6H Ambient Temperature Sensor

Technical and Operation Instructions

1. Introduction

ACT-6H ambient temperature sensor is used for measuring the temperature of product (gas or liquid) in non-enclosed systems, spaces and vessels in aircraft, submarines, special vehicles, ships, locomotives, mining and other industries.

All parts of the sensor are made of 1Cr18Ni9Ti stainless steel and ceramics. So, it can operate safely and reliably at high temperature (T≤350℃). A high precision platinum thermo-sensitive resistor is used as the temperature sensing element, resulting in high precision and excellent stability. It is connected and fixed with the mounting base or support simply through an m12×1 thread.

2. Technical Specifications

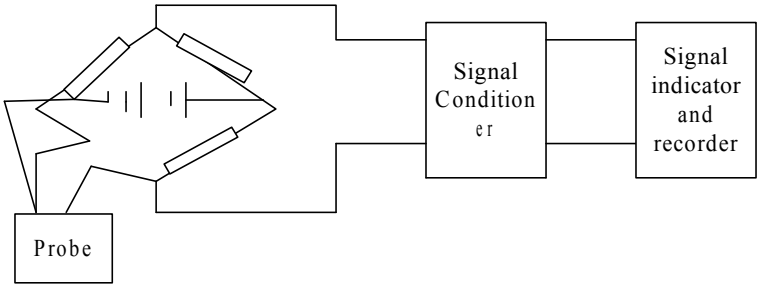
- Temperature Measurement Range: T=-60 to 250℃; 350℃
- Resistance at Freezing Point: R_0=100±0.12Ω
- Accuracy: △t=±（0.3+0.5%｜t｜）℃
- $\mathbf{W}_{100}$ R_{100}/R_0=1.3850±0.0010
- Insulation Resistance at Ambient Temperature and Humidity: R_∞＜20MΩ
- Allowable Operating Current: I≤5mA

3. Operation Principle and Wring 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. This temperature signal is converted through a bridge and processed by a signal conditioner to output an electrical signal as required by the user, or the changed resistance of platinum thermo-sensitive resistor is sent to a temperature transmitter. Then, the transmitter outputs a 4 to 20mA or 1 to 5V DC electrical signal. The signal value is linear with the temperature of the product measured.

Wiring Diagram



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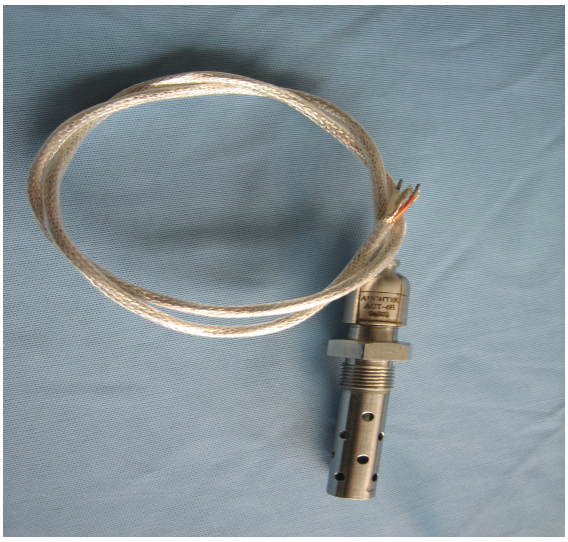
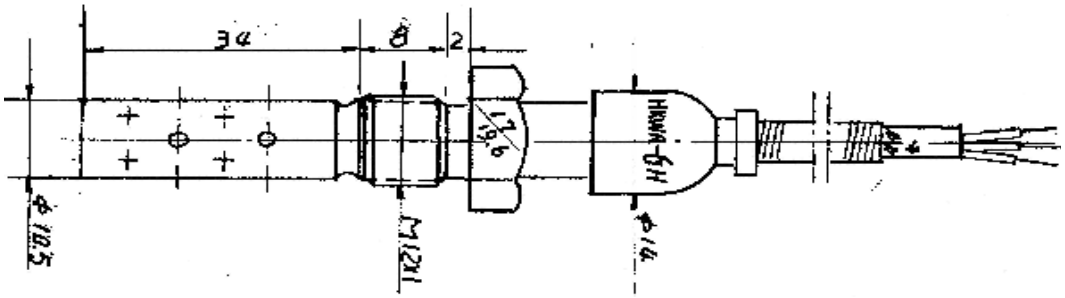
4. **Outline Dimensions**





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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