Duct RH/Temperature transmitter instructions

Introduction:

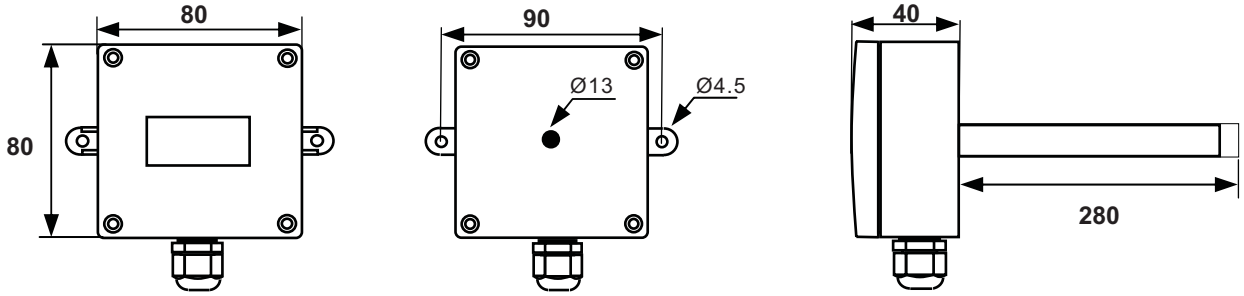
Duct RH/Temperature transmitter instructions use the 304 stainless steel probe. And it uses the standard PT1000 (rate A, Switzerland) as the temperature sensor and a capacitive type humidity sensor (rate of Switzerland)、IC processor and new type microprocessor temperature compensation operation amplifier, convert the measuring temperature and the humidity as the corresponding standard signals;

The device uses the PC shell that is all closure and prevents the water. The equipment has a small volume, a light weight, high accuracy, High linearity, fast response time, long term stability. It is the special device of temperature measurement that applys the HVAC duct systems.

Specifications:

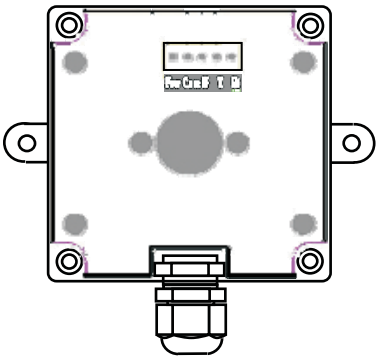
- RH Transmitter Type: high precision hygristor of Switzerland
- Temperature Transmitter Type: PT-1000Ω(Rate A)
- Temperature Sensor Type: PT-1000、PT-100、NTC10K、NTC20K
- Measurement Range: RH: 0～100%（RH）
  Temperature: 0～50℃、0～100℃、-50～50℃、-20～80℃、0～200℃
- Power Supply: 24Vdc/ac ±20%
- Signal Output: Current: 4~20mA Load Res istance < 5 00Ω
  Vo l t a g e: 0~5V/0~10V Load R esistance > 10KΩ
- Accuracy: RH: ±3%、±5% (20~80%RH) Temperature: ±3 ℃
- Length of the Probe: 275mm
- Connecting Terminal: Plug Port: 3.81mm，5Pin PBT; Screw Steel: M2;
  Torsional Moment: 0.2Nm; Contact Resistance: 20mΩ
- Wiring Connections: 18~22AWG（1.5mm^2），stripping length: 6~7mm
- Water Joint: PG7(Black)
- Storage Conditions: -20~60℃(< 90%RH)，non-condensing
- Surge Immunity: Rate Ⅲ
- Enclosure Options: PC Polycarbonate, Black Plastic
- Water Resistance: IP65
- Weight: 1955 g
- Pro-environment: RoHS

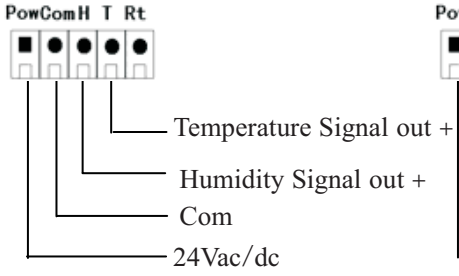
Dimensions:（Unit: mm）



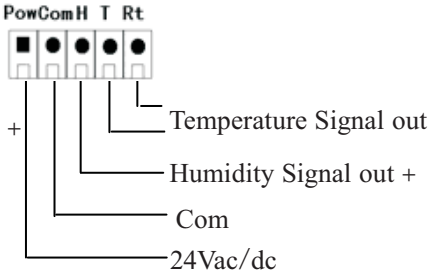
Mounting: Drill a 5/8" (or larger) hole in the return air duct. Remove the protective plastic sleeve from the probe and place it through the hole and secure the enclosure to the duct with sheetmetal screws. Orientation of the enclosure and probe will have no effect on the operation of the device.

Wiring Connections:





RH/Temperature Transmitter
（Current/Voltage）out



Humidity transmitter（Current/Voltage）
& T emperature Res istance out

Illustrate:

1、 The te rminals of **Pow** and **Com** are the power supply。When using 24Vdc input，please note that the **Pow** connects the anode(+) ，the **Com** connects the cathode(-)（The device is reverse voltage protected and will not operate if connected backwards)；when using 24Vac input，don't consider the anode and cathode too much, but the consideration of the code for electrical design and installation，advice that the **Pow** connects the **HOT** and the **Com** connects the **NEUTRAL.**（The red mark in the **Pow**）

2、 **"Rt"** is the terminal of the temperature resistance signal out，when measuring the temperature，the sensor option output is on the two terminals marked **"Rt"**and**"T".**

Attentions:

- In order to prevent the water，please dont damage the waterproof of the shell when mounting the device，mount the OSA enclosure with the sensor module facing down;
- When using 24Vdc input，please note that the anode and the cathode of the power，Don't reverse the wiring;
- The use of shielded cable is optional but recommended for the highest noise immunity;
- Disconnect the power supply before ma king any connectionsto prevent electrical shock or equipment dam a ge;
- When mounting the device, the constructor should wear the antistatic gloves to avoid damaging the RH/Temperature transmitter;
- After warm-up the products for several minutes, the device should be mounted the filed where the device is debugged and ment easily and to avoid the strong shock;
- For best results locate the ensor on the north side of the structure high under an eave to prevent incorrect readings from direct sunlight and damage due to the elements;
- It will thoroughnessly damage the polymer layer of the sensor when the device in the filed where it has chemical pollutant that has high density. The product should be stored where it is away from the source of chemical pollutant;
- Specific practices refers to < Industrial Automation Project Construction & Technology> and < Process Automation Instrumentation Project Construction & Acceptance Inspection Regulation> GB50093-2002

Warranty: In the 18-month warranty period,we will provide repair service for free based on normal use and non-human damage**(It will be necessary to calibrate the transmitter when it is used above 18 month.)**.

Duct Temperature Sensor/Transmitter

Introduction:

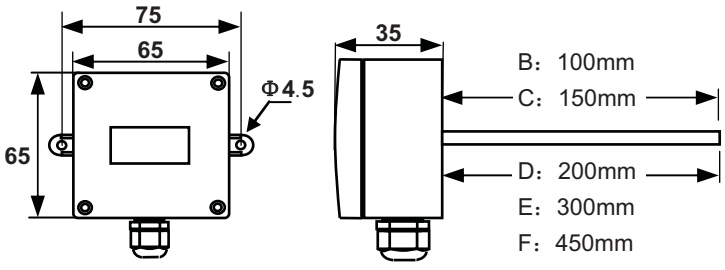
Duct Temperature Sensor uses the PC shell that is all closure and prevents the water; it uses the standard platinum resistor (rate A) or NTC inside as the temperature sensor; there are many lengths optional. The device has a small volume, a light weight, high accuracy, high linearity, fast response time, long term stability. Duct temperature transmitter has IC processor and new type microprocessor temperature compensation operation amplifier, convert the measuring temperature and the humidity as the corresponding standard signals, it is the special device of temperature measurement that it applys the HVAC duct systems.

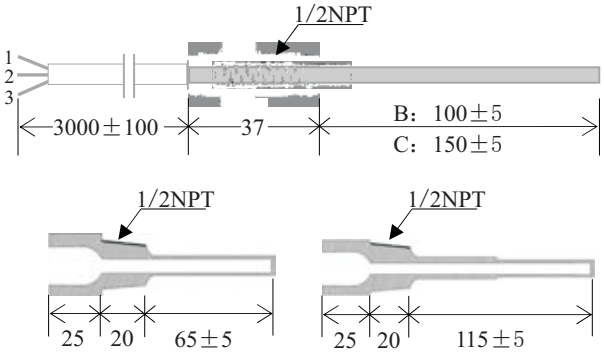
Immersion Temperature Sensor/Transmitter is designed to measure the temperature inside pipes carrying liquid or steam, it is used with the 304 stainless well.

Specifications:

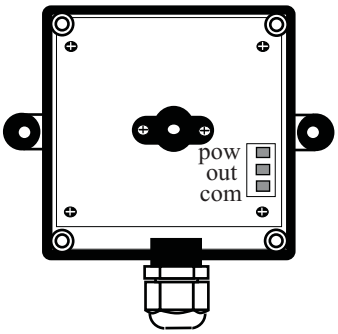
- Length of the Probe: Water pipe 100mm、150mm、200mm
  Air pipe 200mm、300mm、450mm
- Temperature Sensor Type:
  Sensor: PT1000、PT100、NI1000、NTC3K、NTC10K (Type 2&Type 3)、NTC20K
  Transmitter: PT1000 (rate A)
- Power Supply: 24Vdc/ac ±20%
- Measurement Range: 0~50℃、0~100℃、-50~50℃、-20~80℃、-40~60℃
- Output Signal: Current: 4~20mA Load Resistance ≤750Ω
  Voltage: 0~5V/0~10V Load R esistance ≥5KΩ
- Accuracy: 0.5 %
- Connecting Terminal: Plug Port: 3.81mm 5PIN PBT; Screw Steel: M2;
  Torsional Moment: 0.2Nm; Contact Resistance: 20 mΩ
- Wiring Connections: 18~22AWG (1.5mm^2), stripping length: 6~7mm
- Water Joint: PG7 (Black)
- Storage Conditions: -20~60℃ (＜90%RH), non-condensing
- Surge Immunity: Rate Ⅲ
- Enclosure Options: PC Polycarbonate, Black Plastic
- Water Resistance: IP66
- Pro-environment: RoHS

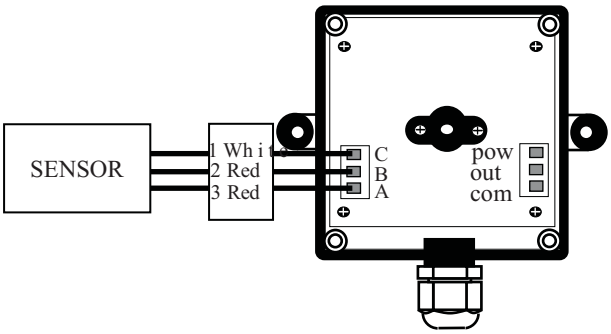
Dimensions: (Unit: mm)





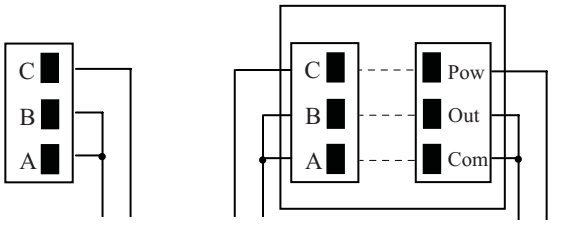
Wiring:





Wiring of Sensor:

(Pic 1、2: Resistance Output Type)

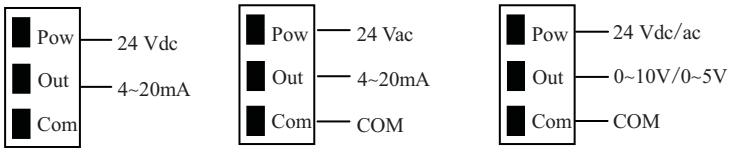


Pic 1: Duct Wiring

Pic 2: Immersion Wiring

Wiring of Transmitter:

(Pic3、4、5 Current/Voltage Output)



24Vdc Input, 4~20mA Output
Pic 3: 2 wires

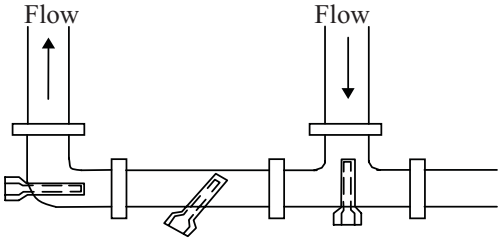
24Vac Input, 4~20mA Output
Pic 4: 3 wires

24V dc/ac Input, 0~10V/0~5V Output
Pic 5: 3 wires

Attentions:

- When mounting and using the device, note that the side of the product, mount thermo well either horizontally or with the open end facing down to allow any condensation to drain, unit should be mounted away from any supply air exhausts or other sources of heat or cold;
- Be sure to turn off the power before mounting or replacing the device;Wire the connections bases on the wiring diagram in the lid of the enclosure.Dont reverse the wiring of the power or signal, or else damage the transmitter that it will not be mend;
- There are two wires that the output signalis 4~20mA when the power supply is 24Vdc (e.g. Pic 3); When the power supply is 24Vac, no matter the output signal is 4~20mA or 0~10V or 0~5V, there are all three wires (e.g. Pic 4 and 5);
- The probe of the immersion temperature sensor/transmitter separates from the main body of the transmitter, please wire the two wires of the temperature probe connect the pins A and B of the board of the transmitter, the white wire connect the pin C when wiring the connection (e.g. Pic 2);
- In order to prevent the water, please dont damage or drop the waterproof of the shell when mounting the device.

Remark:



Warranty: In the 18-month warranty period, we will provide repair service for free based on normal use and non-human damage.
(It will be necessary to calibrate the transmitter when it is used above 18 month.)