

## TS-U/I-D-YY Duct temperature transmitter

### Features

- Temperature measurement for air ducts.
- Simple and secure installation
- Wide range of temperature probes
- 0...10V or 4...20mA measuring signals
- Compact size and modern design

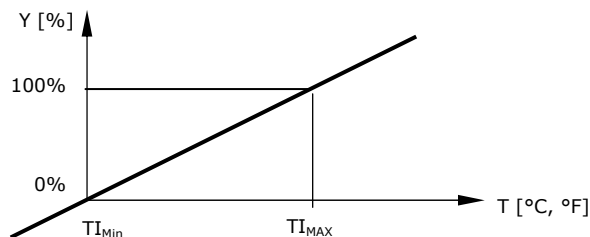
### Applications

- On return air ducts to measure heating/cooling return air
- On supply air ducts to measure heating/cooling supply air
- In heat exchangers and air handling units to control heating/cooling coils for temperature and humidity control
- As frost protection sensor

### Temperature Transmitter

The transmitter measures the temperature by the use of a PT1000 sensing element. The transmitter analog output may be 0-10V or 4-20mA. And the transmitter include a noise filter. the power supply is large range VDC18V---VDC30V. Standard temperature measurement range is -30...70 °C.

linearity Signal output:



### Ordering

Ordering number: TS-U/I-D-YY

-U indicates the transmitter signal out is 0-10V.

-I indicates the transmitter signal out is 4-20mA.

YY indicates the probe length. Standard probe length is 20 cm.

For example: TS-U-D-20

The duct temperature transmitter signal out is 0-10V, and the probe length is 20 cm.

### Installation

Duct probes should be installed directly on the duct, in an area where the air stream is well mixed:

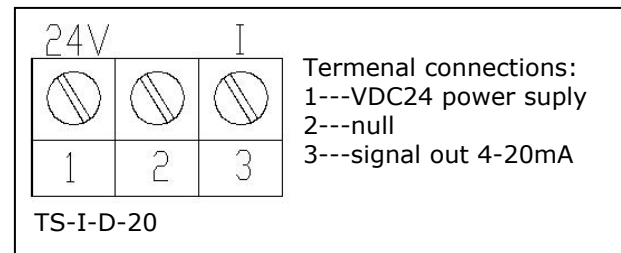
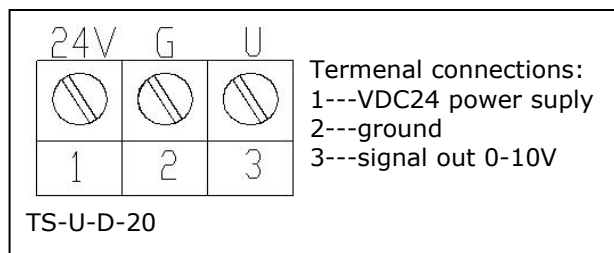
- Locate a supply air sensor two or three meters down stream from the nearest fan and coil.
- Mount the return air sensor close to the air inlet but downstream from a return fan if one is present.
- To install the sensor, assemble base plate and probe, then drill a 8 mm hole and two 3 mm holes on a diameter of 25 mm in the duct.
- Use two self-tapping sheet metal screws to tighten the mounting circuit in the cover.
- Connect the wires according to the wiring diagram to the measuring circuit in the cover:
  - If the transmitter signal out is 0-10V, it's need three terminal connections, DC24V, Ground and signal out.
  - If the transmitter signal out is 4-20mA, it's need two terminal connections, DC24V, Ground and signal out.
  - The connection signal cable should be shield wires.
- Assemble the cover with the mounting plate.
- Insert the assembled probe through the center opening of the mounting plate into the air stream.
- Tighten the horizontal screw on the mounting plate to fix the probe to the duct.



### Technical Specification

|                   |  |   |
|-------------------|--|---|
| Power supply      | Option voltage   | VDC18V---VDC30V   |
|                   | Power Consumption  | Max 2 VA  |
| Signal outputs    | -U type  | 0-10VDC   |
|                   | -I type  | 4-20mA  |
|                   | accuracy   | 0.5%  |
|                   | Temperature range  | -30-----70°C  |
| Sensing Probe     | Platinum-Film:<br>Range<br>Accuracy  | PT, 0.3851ohm/k<br>-30----70°C<br>±0.3k   |
| Connection        | Connection Terminals   | 2.5 mm <sup>2</sup>   |
| Environment       | Operation<br>Climatic Conditions<br>Temperature<br>Humidity                                    | To IEC 721-3-3<br>class 3 K5<br>-40...70°C<br><95% r.h.   |
|                   | Transport & Storage<br>Climatic Conditions<br>Temperature<br>Humidity<br>Mechanical Conditions | To IEC 721-3-2 and IEC 721-3-1<br>class 3 K3 and class 1 K3<br>-40...80°C<br><95% r.h.<br>class 2M2 |
| Standards         | <b>CE</b> conform according to<br>EMC Standard 89/336/EEC<br>EMEI Standard 73/23/EEC           | EN 61 000-6-1/ EN 61 000-6-3  |
|                   | Automatic electrical controls for<br>household and similar use                                 | EN 60 730 -1  |
|                   | Special requirement on temperature<br>dependent controls                                       | EN 60 730 - 2 - 9   |
|                   | Pollution Class  | Normal acc. To EN 60 730,RoHS compliant   |
|                   | Degree of Protection   | IP56 to EN 60 529   |
|                   | Safety Class   | III (IEC 60536)   |
| Housing Materials | Cover & Mounting Plate<br>Probe  | Fire proof ABS plastic<br>Stainless Steel   |
| General           | Dimensions [mm]  | Cover: 42 x 112 x 88 (H x W x D)<br>Probe: ø 6 x 200 (Diameter x L)                                 |
|                   | Weight (including package)   | 135g  |

### Wire diagram



### dimension [mm]

