Duct Temperature Sensor TDS

Jan.08

TDS

Accuracy		
NTC	±0,20°C	0.....70°C
PT 100a	±0,35°C	0...100°C
PT 1000a	±0,35°C	0...100°C
NI 1000a	±0,35°C	0...100°C

Technical Data

Connection 2-wire screened cable
screw terminals 0,5 to 2,5mm²

Ambient range temp. -10…+60°C

Ambient range hum. 5-95% RH

Housing IP65, ABS flame reterdant type VO

Probe IP30, brass 150 mm x 6 mm (standard)

DESIGN FEATURES

The sensing element is fitted into a 150 mm long brass probe with holes to allow air to flow directly over the sensing element.

The IP65 rated enclosure has fixing lugs for direct mounting.

A neoprene gasket is supplied to ensure a good seal onto the duct.

A flange plate TD DFP is available for adjustment of penetration depth.

Features

- **High quality sensing element**
- **Simple 2-wire connection**
- **Good seal onto the duct**
- **Protection Class IP65**
- **Adjustable in length**
- **Optional mounting flange plate**
- **Polarity indepedent**

Usage

The Duct Temperature Sensor TDF is to used to sense temperature in airflows and gaseous media, e.g. in ventilation and air conditioning ducts:

Typical examples being:

- Return or supply air temperature control
- Supply air high or low limit

Function

The sensing elements change their resistance value with respect to temperature:

PT100, PT1000, NI1000 - increasing resistance by increasing temperature.

NTC - increasing resistance by decreasing temperature

Ordering Codes

TDS NTC	Unitron, Trend, Honeywell (Aquatrol), Siox, Satchwell, TAC
TDS PT100	Inu, ABB, Siox, Satt, Honeywell
TDS PT1000	Unitron, Johnson, IVT,Exomatic, Regin Honeywell, Kieback & Peter, Diana, KTC, YIT, Bastec, Saia, Larmia, Alliance
TDS TA	TAC
TDS NI1000	Sauter
TDS LGNI	Siemens Landis & Staefa QAA 23, QAD 21
TDS ALE	Alerton, Satchwell DDU 1804, Honeywell 'TE 200AD-6
TDS AND	Andover, York <40°C, Trane, Carrier
TDS SAT1	Satchwell DRT, DDT, DWT, DOS (vissa)
TDS SAT2	Satchwell DD, DR, DW1202, DWS 1301
TDS SAT3	Satchwell DW1204, DW1202
TDS SAT4	Satchwell DO2202
TDS ST30	Staefa T30
TDS ST1	Staefa T1
TDS JOH	Johnson Control 2,2K3A1
/250	Supplement for 250mm probe
TD DFP	Duct flange plate for adjust length of probe

Duct Temperature Sensor

TDS

Jan.08

Mounting

It is recommended that the unit be mounted with the cable entry at the bottom.

If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.

Remove the front cover by twisting the lid and separating from the main body to make the electrical connection.

Fix the sensor into the pocket and secure with the grup screw provided with the pocket.

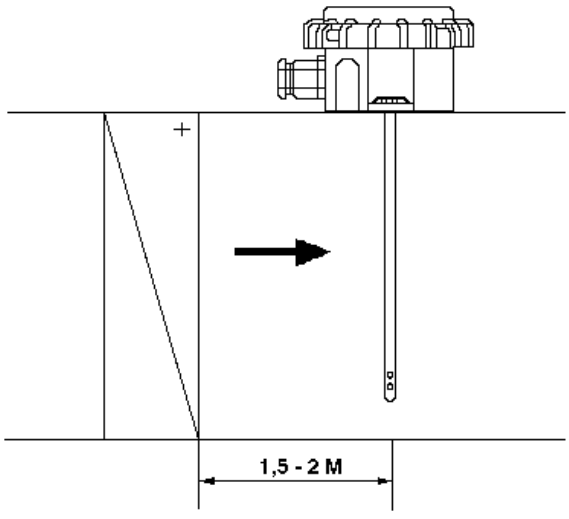
Feed the cable through the waterproof gland and terminate the cores at the terminal block.

Leaving some slack inside the unit, tighten the cable gland onto the cable to ensure watertightness.

Replace the lid after the electrical connections have been made.

The following installation advice should be observed

- Supply air temperature sensing;
  The sensor should be a minimum distance of 1,5m from heater battery.
- Return air temperature sensing;
  The sensor upstream of the extract fan so as to be reprensative of the room temperature.
- Supply air low limiting sensing;
  The sensor should be as close to discharge as possible
- Avoid duct locations where stratification may occur
- The sensor should be located away from any obstructions that could interfere with removal for servicing or replacement



Installation and Connection Details

All connections to DDC controllers, data recorders etc. should be made using screened cable.

Normally, the screen should be earthed at one end only (usually the controller end) to avoid earth hum loops which can create noise.

Low voltage signal and supply cables should be routed separately from high voltage or mains cabling.

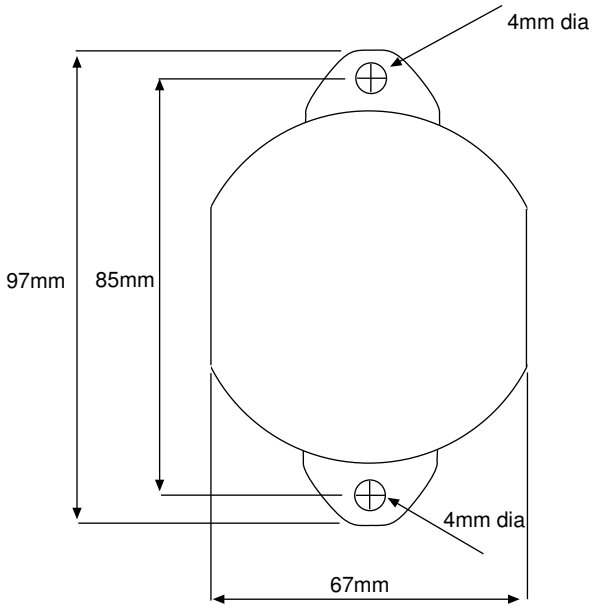
Separate conduit or cable trays should be used.

Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth.

This will provide better immunity to high frequency noise.

Most modern buildings have a separate earth for this purpose.

Dimensions



Connection

Connections are made via a 2-way terminal block. The connections for a thermistor or an nickel/platina element are polarity independent.