



Features

- Active transmitters
0-10 Vdc or 4-20 mA output
- With or without display
- 8 different temperature ranges in same unit, selectable via jumpers on pcb

-20°C to +150°C, -50°C to +50°C, -20°C to +80°C, -30°C to +60°C, 0 to +40°C, 0 to +50°C, 0 to +100°C and 0 to +150°C.

other temperature ranges on request
- Standard probe length 200 mm
On request 50, 100, 150, 250 or 300 mm probe lengths
- IP65 enclosure with quick locking screws
- Supplied with duct mounting flange for good sealing into the duct.

Ordering

Duct temperature transmitter

Type no.	Output	Probe length	Display
TDTH 010 200	0-10 Vdc	200 mm	No
TDTH 010 200D	0-10 Vdc	200 mm	Yes
TDTH 420 200	4-20 mA	200 mm	No
TDTH 420 200D	4-20 mA	200 mm	Yes

Above TDTH are with probe length 200 mm
To order TDTH with probe length 50, 100, 150, 250 or 300 mm:
Replace 200 with 50, 100, 150, 250 or 300

Examples:

Ordering code for TDTH with 0-10 Vdc output and 150 mm probe length without display will be TDTH 010 150.

Ordering code for TDTH with 4-20 mA output and 150 mm probe length with display will be TDTH 420 150D.

Description

The duct temperature transmitter TDTH is used for sensing the air temperature in heating, ventilation and air conditioning systems (e.g. in supply air, extract air or mixed air ducts).

Duct temperature transmitters TDTH have 8 different temperature ranges in same unit, selectable via jumpers on pcb:
-20C to +150C, -50C to +50C, -20 to +80C, -30C to +60C, 0 to +40C, 0 to +50C, 0 to +100C and 0 to +150C.
Other temperature ranges on request.

The power supply for duct temperature transmitter TDTH with 4-20 mA output is 15-36 Vdc and the power supply for duct temperature transmitter TDTH with 0-10 Vdc output is 24 Vac/dc.

The active duct temperature transmitter TDTH with output 0-10 Vdc and 4-20 mA have a PT1000 sensor (DIN EN 60751, class B).

The sensing element for the duct temperature transmitter TDTH is located in the end of the probe.

Duct temperature transmitter TDTH have IP65 enclosure.

Wiring connection for duct temperature transmitter TDTH is inside the ABS plastic enclosure on a terminal block.

The enclosure of duct temperature transmitter TDTH is supplied with a plastic cable entry gland M 16 x 1.5, including strain relief.

TDTH duct temperature transmitter can be supplied with or without LCD display.

The probe of duct temperature transmitter TDTH is made of quality steel, standard probe length for the duct temperature transmitter TDHT is 200 mm, on request the duct temperature transmitter TDHT can be supplied with 50, 100, 150,, 250 and 300 mm probe lengths.

Duct temperature transmitter TDTH is supplied with a duct mounting flange for fast and easy mounting and for good sealing into the duct.

Technical data

Measuring ranges

multi-range switching with 8 switchable measuring ranges, see table (other ranges optional)
with manual zero point correction ($\pm 10K$).

Working resistance

R_a (ohm) = $(U_b - 14 V) / 0.02 A$ for I variant

Load resistance

$R_L > 5 k\Omega$ for U variant

Sensing element

PT1000, DIN EN 60751, class B

Outputs

0-10 Vdc, 3-wire (TDTH 010 types)

4-20 mA, 2-wire (TDTH 420 types)

Power supply

24 Vac/dc $\pm 10\%$ for output 0-10 Vdc (TDTH 010 types)

15-35 Vdc for output 4-20 mA

(TDTH 420 types)

Deviation temperature

$\pm 0.2K$ at $+25^\circ C$

Power consumption

$< 1.0 VA / 24 Vdc$; $< 2.2VA / 24Vac$

Ambient temperature

Measuring transducer $-30^\circ C$ to $+70^\circ C$

Humidity

$< 95\%$ r.H. non-precipitating air

Protection class

III (according to EN 60730)

Protection type

IP65 (according to EN 60529)

Enclosure

plastic, UV-stabilised, material polyamide, 30 % glass-globe-reinforced, with quick-locking screws (slotted/Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!

Enclosure dimensions

72x64x37.8 mm (without display)

72x64x43.3 mm (with display)

Cable gland

M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm

Electrical connection

0.14 - 1.5 mm² via terminal screws on circuit board

Probe material

Stainless steel 1.4571, V4A

Probe diameter

6 mm

Probe length

200 mm standard length,

on request 50, 100, 150, 250 and 300 mm

Contin. Technical data

Humidity

$< 95\%$ r. H., non-precipitating air

Protection class

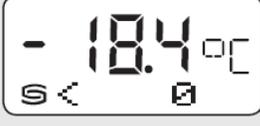
III (according to EN 60 730)

Standards

CE conformity, electromagnetic compatibility according to EN 61326 according to EMC directive 2004/30/EU

Display

Two-line display with illumination cutout 36x15 mm (W x H), for displaying actual temperature and intergral dignostics (measuring range exceeded, measuring range not reached, sensor breakage, sensor short circuit) only for TDTH 010D and TDTH 420D

Display and internal diagnostics	
	Standard
	Measuring range exceeded
	Measuring range not reached
	Sensor breakage
	Sensor short circuit

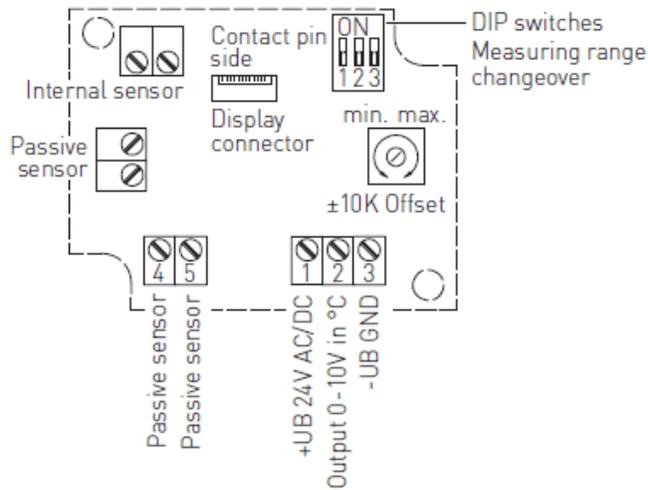
Temperature ranges

When selecting measuring transducer ranges, it is necessary to ensure that the maximum temperatures permissible for sensor/enclosure are not exceeded !

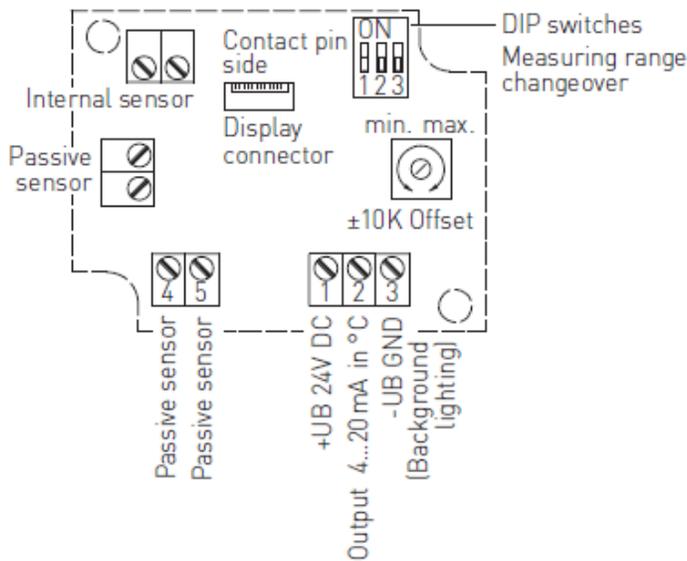
Ambient temperature for measuring transducers:

-30 to $+70^\circ C$

Wiring TDTH with 0-10 Vdc output



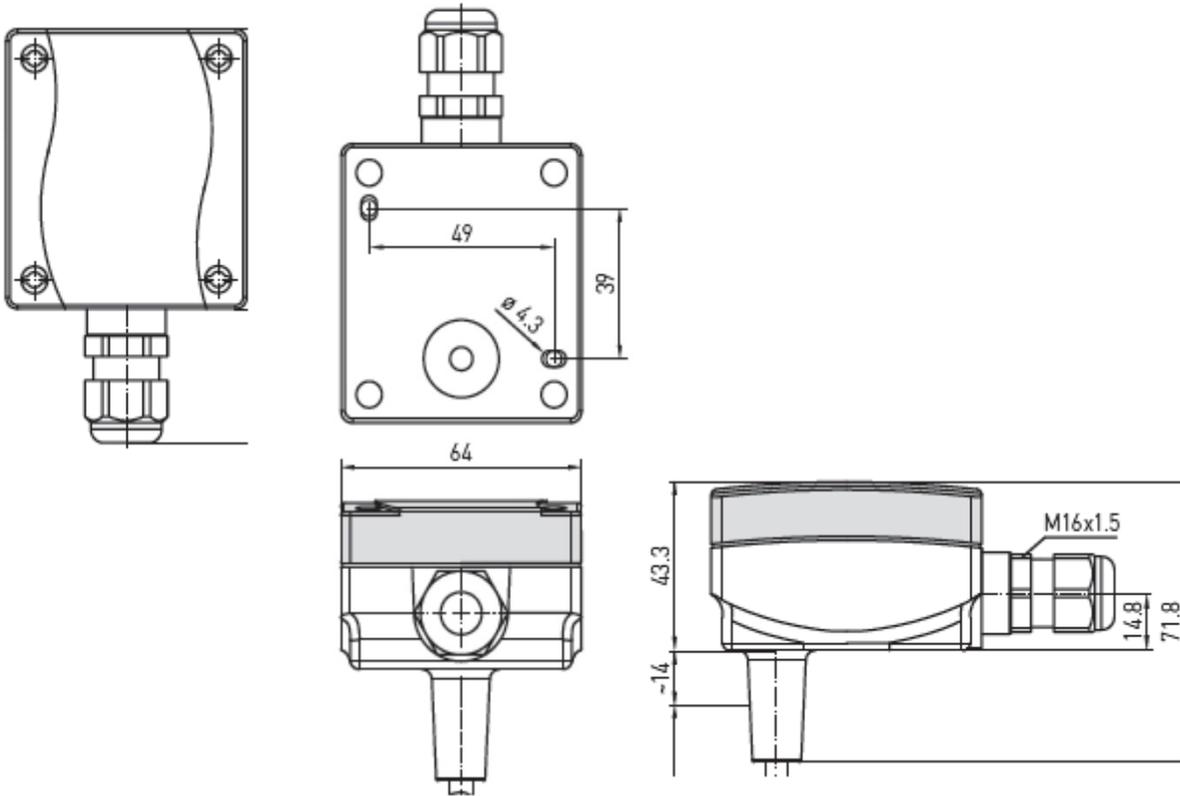
Wiring TDTH with 4-20 mA output.



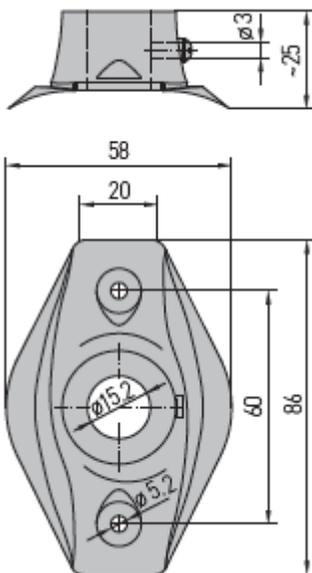
8 different temperature ranges in same unit, selectable via jumpers on pcb

Measuring ranges (adjustable)	DIP 1	DIP 2	DIP 3
-20°C ... +150°C	ON	ON	ON
-50°C ... +50°C	OFF	ON	ON
-20°C ... +80°C	ON	OFF	ON
-30°C ... +60°C	OFF	OFF	ON
0°C ... +40°C	ON	ON	OFF
0°C ... +50°C	OFF	ON	OFF
0°C ... +100°C	ON	OFF	OFF
0°C ... +150°C	OFF	OFF	OFF

Dimensions of TDTH



Duct mounting flange



We reserve the right to make changes in our products without any notice which may effect the accuracy of the information contained in this leaflet.