



Features

- Sensing elements
Thermistors, Platinum and Nickel
NTC 10K, NTC 1.8K, NTC 20K, PTC, PT100, PT1000, NI1000 etc.
- Available probe/pocket lengths
50, 100, 150, 200, 250, 300 and 400 mm
- Pockets in brass (TISB) and stainless steel (TISS)
- Pocket thread connection G1/2"
- IP 65 protection
- Simple 2-wire connection
- Economical way to measure temperature

Technical data

Measuring range	-30 to +150°C
Sensing elements	See ordering (other elements on request)
Connections	2-wire (on request 3 and 4-wire)
Probe material	Steel
Pocket material	Brass or Stainless steel 1.4571
Nominal pressure	16 bar for brass pocket 40 bar for stainless steel pocket
Probe diameter	6mm
Pocket diameter	8mm
Pocket thread connection	G1/2"
Probe/pocket lengths	50, 100, 150, 200, 250, 300 or 400 mm
Housing material	Plastic
Housing dimensions	72x64x39 mm excluding cable entry gland
Protection	IP 65
Isolation resistance	> 100Mohm, at 20°C (500 Vdc)

Ordering

Type no.	Description
TISB-versions including brass pocket	
TISB NTC 10K xxx	Immersion temp. sensor, incl. brass pocket
TISB NTC 1.8K xxx	Immersion temp. sensor, incl. brass pocket
TISB NTC 20K xxx	Immersion temp. sensor, incl. brass pocket
TISB KTY 2K xxx	Immersion temp. sensor, incl. brass pocket
TISB PT100 xxx	Immersion temp. sensor, incl. brass pocket
TISB PT1000 xxx	Immersion temp. sensor, incl. brass pocket
TISB NI1000 xxx	Immersion temp. sensor, incl. brass pocket
TISS-versions including stainless steel pocket	
TISS NTC 10K xxx	Immersion temp. sensor, incl. s/s pocket
TISS NTC 1.8K xxx	Immersion temp. sensor, incl. s/s pocket
TISS NTC 20K xxx	Immersion temp. sensor, incl. s/s pocket
TISS KTY 2K xxx	Immersion temp. sensor, incl. s/s pocket
TISS PT100 xxx	Immersion temp. sensor, incl. s/s pocket
TISS PT1000 xxx	Immersion temp. sensor, incl. s/s pocket
TISS NI1000 xxx	Immersion temp. sensor, incl. s/s pocket

xxx = probe length in mm; 50, 100, 150, 200, 250, 300 or 400.

Type no. for immersion temperature sensor PT1000 with 150 mm probe length will be TISB PT1000 150

Application/Description

The immersion temperature sensors TISB/TISS are used for acquiring the temperature of liquid or gaseous media (e.g. heating water) in heating, ventilation and air conditioning systems.

The TISB/TISS are passive immersion temperature sensor available with different sensing elements such NTC 10K, NTC 1.8K, NTC 20K, PTC, PT100, PT1000, NI1000 etc.

Passive sensing elements is a low cost alternative to measure temperature with simple 2 wire connection.

The probe is made of quality steel, available with several different lengths from 50 mm up to 400 mm.

TISB-versions are supplied with brass pocket for operation pressures up to 16 bar.

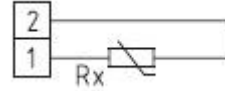
TISS-versions are supplied with stainless steel pocket for operation pressures up to 40 bar.

The pockets have G1/2" threaded connector.

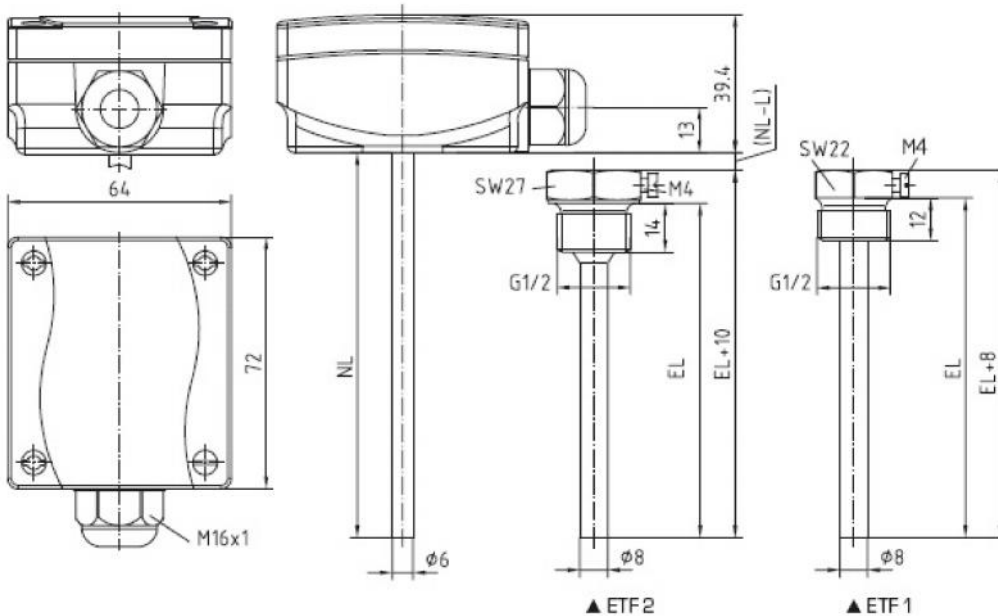
The sensing element is located in the end of the probe and wiring connection is inside the IP 65 housing on a terminal block, the housing is supplied with a plastic cable entry gland.

Connection

1x two-wire connection

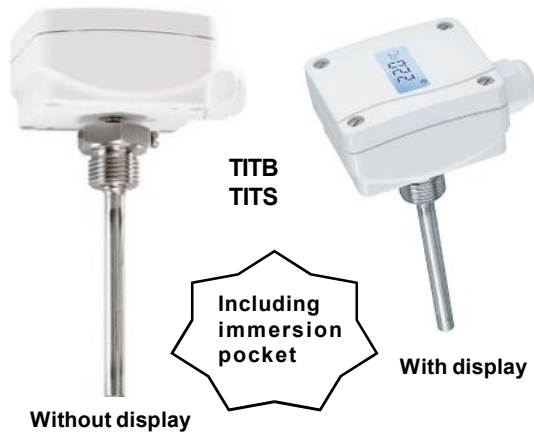


Dimensions (mm)



NL = 50, 100, 150, 200, 250, 300 or 400 mm (probe length)

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Features

- Active transmitters
0-10 Vdc or 4-20 mA output
- 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
- With or without display
- Pockets in brass and stainless steel
- Pocket thread connection G1/2"
- Available probe/pocket lengths
50, 100, 150, 200, 250 and 300 mm
- IP 65 protection

Ordering

Immersion temperature transmitter

Type no.	Output	Pocket	Display
TITB 010 xxx	0-10 Vdc	Brass	No
TITB 420 xxx	4-20 mA	Brass	No
TITB 010 xxxD	0-10 Vdc	Brass	Yes
TITB 420 xxxD	4-20 mA	Brass	Yes
TITS 010 xxx	0-10 Vdc	s/s	No
TITS 420 xxx	4-20 mA	s/s	No
TITS 010 xxxD	0-10 Vdc	s/s	Yes
TITS 420 xxxD	4-20 mA	s/s	Yes

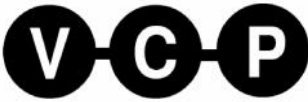
s/s = stainless steel

xxx = probe length in mm; 50, 100, 150, 200, 250 or 300.

Examples:

Ordering code for unit with 0-10 Vdc output and 150 mm brass pocket without display will be TITB 010 150.

Ordering code for unit with 4-20 mA output and 100 mm stainless steel probe with display will be TITS 420 100D.

**Technical data**

Measuring ranges	8 different temperature ranges in same unit as standard selectable via jumpers on pcb. with manual zero point correction (+/-10K)
Sensing element	PT1000, DIN EN 60751, class B
Accuracy	0.3 K (Kelvin)
Connections	3-wire for 0-10 Vdc 2-wire for 4-20 mA
Power supply	24 Vac/dc +/- 10% for output 0-10 Vdc 15-35 Vdc for output 4-20 mA
Ambient temperature	-30°C to +70°C
Humidity	< 95% r.H. non-precipitating air
Protection type	IP65 (according to EN 60529)
Protection class	III (according to EN 60730)
Housing material	Plastic, material polyamide, 30% glass-globe-reinforced with quick-locking screws colour pure-white (similar RAL9010)
Housing dimensions	72x64x39 mm excluding cable entry gland
Cable gland	M16, including strain relief
Standards	CE conformity, electromagnetic compatibility according to EN 61326:2006 according to EMC directive 2004/108/EC
Display	single line display with illumination, cutout 37x15 mm (W x H), for displaying actual temperature (only for TITB 010D, TITB 420D TITS 010D, and TITS 420D)
Probe material	Stainless steel 1.4571, V4A
Probe diameter	6 mm
Pocket	TITB: brass, nickel plated G1/2" straight pipe thread, wrench 22 mm, dia 8mm TITS: stainless steel 1.4571, V4A G1/2" straight pipe thread, wrench 27 mm, dia 8mm
Max. pressure	TITB: brass pocket 10 bar TITS: stainless steel pocket 40 bar
Probe/pocket lengths	50, 100, 150, 200, 250 or 300 mm

Application/Description

The immersion temperature transmitters TITB/TITS are used for acquiring the temperature of liquid or gaseous media (e.g. heating water) in heating, ventilation and air conditioning systems.

The immersion temperature transmitters TITB/TITS are available with 0-10 Vdc or 4-20 mA output with 8 different measuring temperature ranges selectable on pcb in same unit.

The probe is made of quality steel, available with several different lengths from 50 mm up to 300 mm.

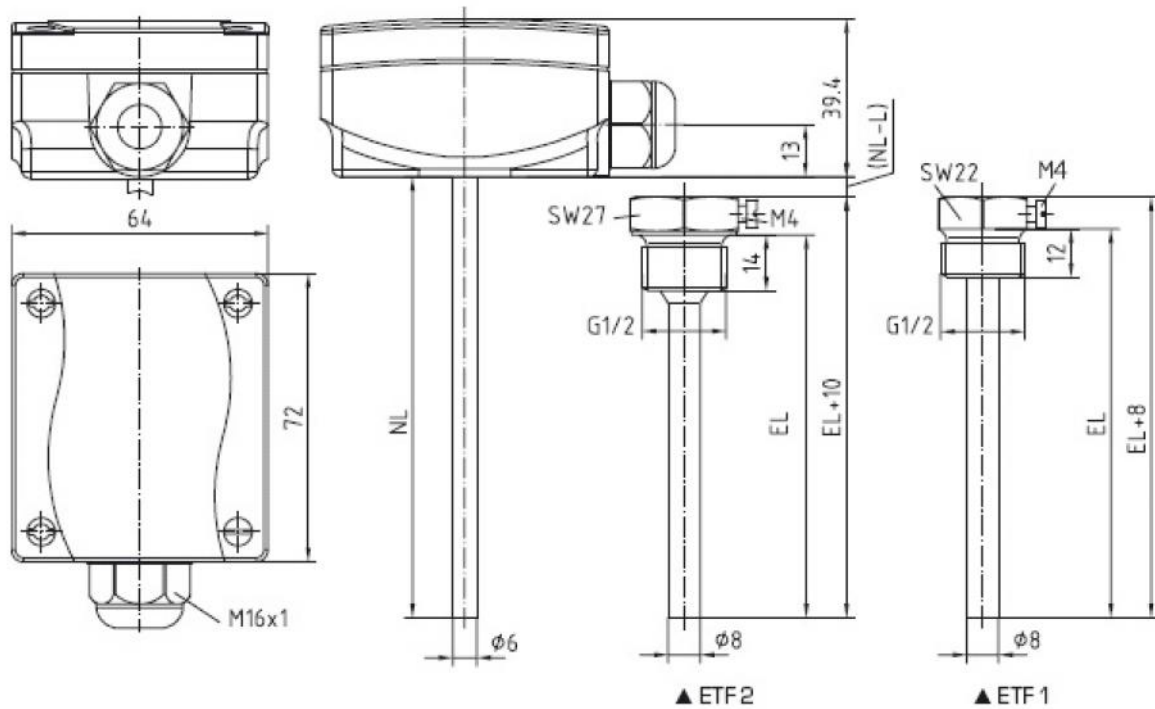
TITB-versions are supplied with brass pocket for operation pressures up to 16 bar.

TITS-versions are supplied with stainless steel pocket for operation pressures up to 40 bar.

The pockets have G1/2" threaded connector.

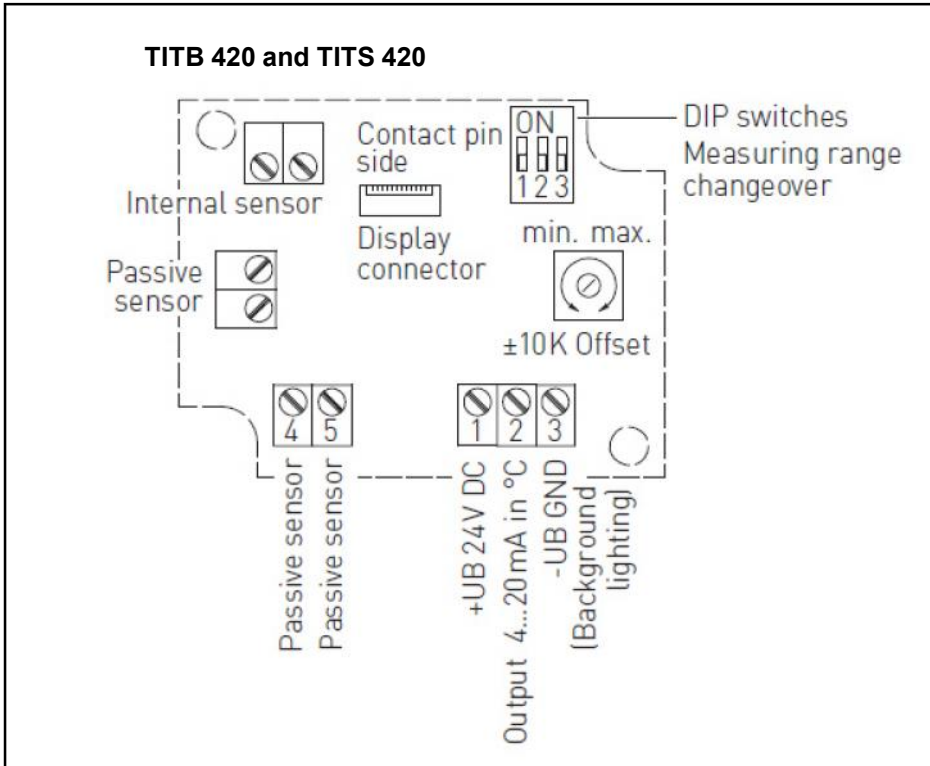
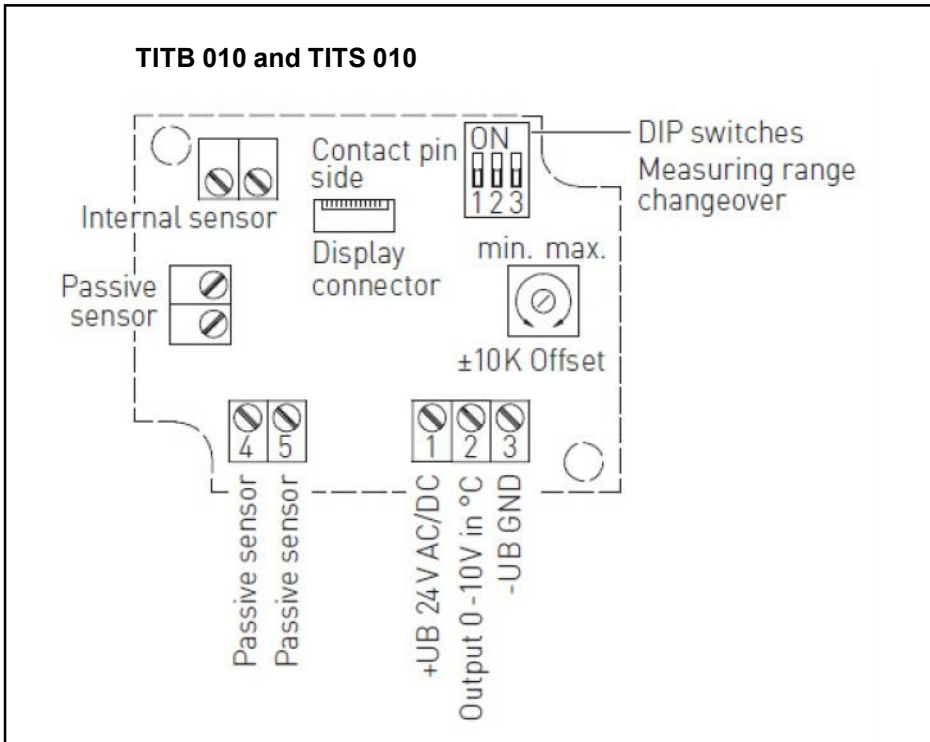
The sensing element is located in the end of the probe. PCB and wiring connection is inside the IP 65 housing, the housing is supplied with a plastic cable entry gland.

Dimensions (mm)



NL = 50, 100, 150, 200, 250 or 300 mm (probe length)

Electrical connections



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

Measuring ranges (adjustable)	JP 1	JP 2	JP 3	JP 4
-20 °C ... + 150 °C				
-50 °C ... + 50 °C				
-20 °C ... + 80 °C				
-30 °C ... + 60 °C				
0 °C ... + 40 °C				
0 °C ... + 50 °C				
0 °C ... + 100 °C				
0 °C ... + 150 °C				

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