



**TSSH**

**Features**

- **Sensing elements**  
Thermistors, Platinum and Nickel  
NTC 10K, NTC 1.8K, NTC 20K, PTC, PT100, PT1000, NI1000 etc.
- **Included 300 mm adjustable strap-on band,**  
for pipe diameter 13 to 92 mm (1/4" to 3")
- **IP 65 protection**
- **Housing dimensions 72x64x39 mm**
- **Simple 2-wire connection**
- **Economical way to measure temperature**

**Technical data**

<b>Measuring range</b>	-30 to +110°C
<b>Sensing elements</b>	See ordering (other elements on request)
<b>Isolation resistance</b>	> 100Mohm, at 20°C (500 Vdc)
<b>Connections</b>	2-wire (on request 3 and 4-wire)
<b>Strap-on band length</b>	300 mm, other lengths on request
<b>Housing material</b>	Plastic
<b>Housing dimensions</b>	72x64x39 mm excluding cable entry gland
<b>Protection</b>	IP 65

**Ordering**

Type no.	Description
<b>TSSH NTC 10K</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH NTC 1.8K</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH NTC 20K</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH KTY 2K</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH PT100</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH PT1000</b>	Strap-on temp. sensor with IP 65 housing
<b>TSSH NI1000</b>	Strap-on temp. sensor with IP 65 housing

**Application/Description**

The strap-on temperature sensor TSSH is used for sensing the temperature of pipework in heating, ventilation and air conditioning systems.

The TSSH is passive immersion temperature sensor available with different sensing elements such NTC 10K, NTC 1.8K, NTC 20K, PTC, PT100, PT1000, NI1000 etc.

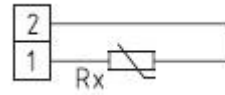
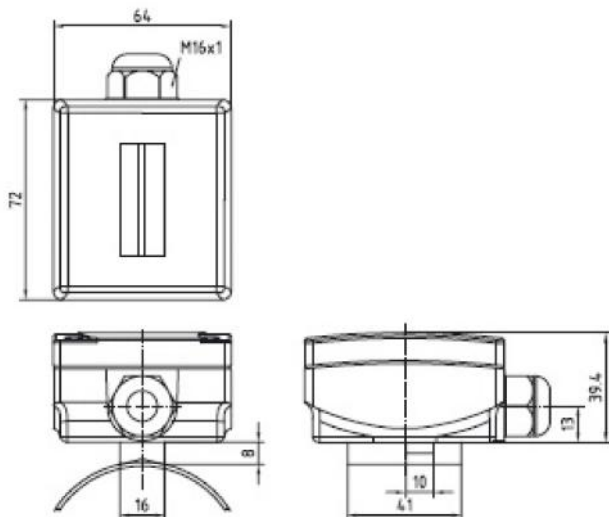
Passive sensing elements is a low cost alternative to measure temperature with simple 2 wire connection.

The IP 65 plastic housing is supplied with a plastic cable entry gland, connection terminal is under the cover.

The TSSH is provided with a clamp that adapts to the pipe's surface and the unit is fixed with an adjustable 300 mm strap-on band, other strap-on lengths are available.

**Connection**

1x two-wire connection

**Dimensions (mm)**

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.

**Without display****TSTH****With display**

### 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
- IP65 housing
- Included 300 mm adjustable strap-on band,  
for pipe diameter 13 to 92 mm (1/4" to 3")

### Ordering

Type no.	Output	Display
<b>TSTH 010</b>	0-10 Vdc	No
<b>TSTH 420</b>	4-20mA	No
<b>TSTH 010D</b>	0-10 Vdc	Yes
<b>TSTH 420D</b>	4-20mA	Yes

**Technical data**

<b>Measuring ranges</b>	8 different temperature ranges in same unit as standard selectable via jumpers on pcb. T max up to 100°C, operating range -50°C to +100°C with manual zero point correction (+/-10K)
<b>Sensing element</b>	PT1000, DIN EN 60751, class B
<b>Accuracy</b>	0.3 K (Kelvin)
<b>Connections</b>	3-wire for 0-10 Vdc 2-wire for 4-20 mA
<b>Power supply</b>	24 Vac/dc +/- 10% for output 0-10 Vdc 15-35 Vdc for output 4-20 mA
<b>Ambient temperature</b>	-30°C to +70°C
<b>Humidity</b>	< 95% r.H. non-precipitating air
<b>Protection type</b>	IP65 (according to EN 60529)
<b>Protection class</b>	III (according to EN 60730)
<b>Housing material</b>	Plastic, material polyamide, 30% glass-globe-reinforced with quick-locking screws colour pure-white (similar RAL9010)
<b>Housing dimensions</b>	72x64x39 mm excluding cable entry gland
<b>Cable gland</b>	M16, including strain relief
<b>Standards</b>	CE conformity, electromagnetic compatibility according to EN 61326:2006 according to EMC directive 2004/108/EC
<b>Display</b>	single line display with illumination, cutout 37x15 mm (W x H), for displaying actual temperature (only for TSTH 010D, TSTH 420D)
<b>Mounting</b>	300 mm adjustable metal strap-on band with a tightener delivered together with the TSTH for pipe diameter 13 to 92 mm (1/4" to 3")

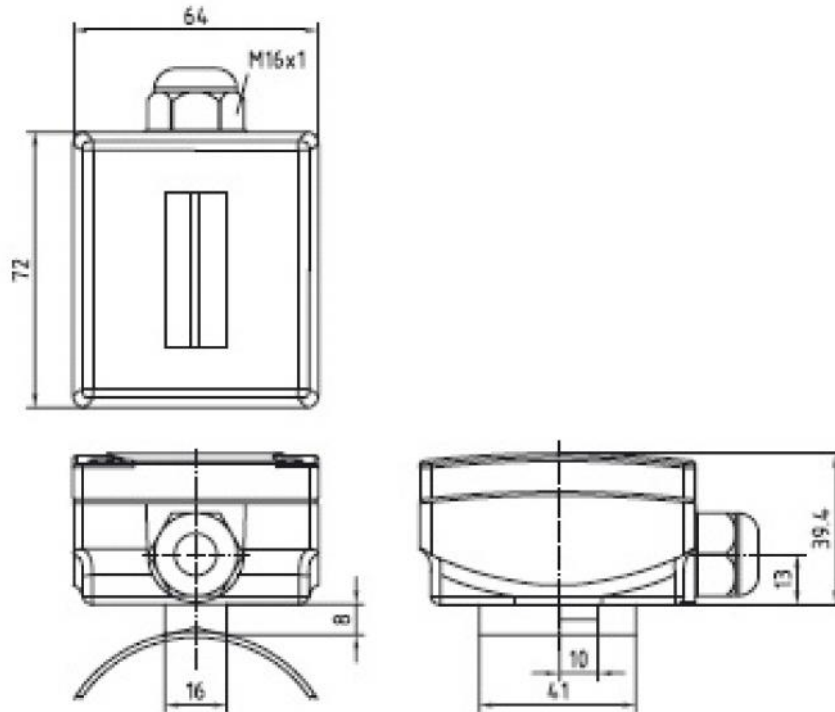
**Application/Description**

The strap-on temperature transmitter TSTH is used for sensing the temperature of pipework in heating, ventilation and air conditioning systems.

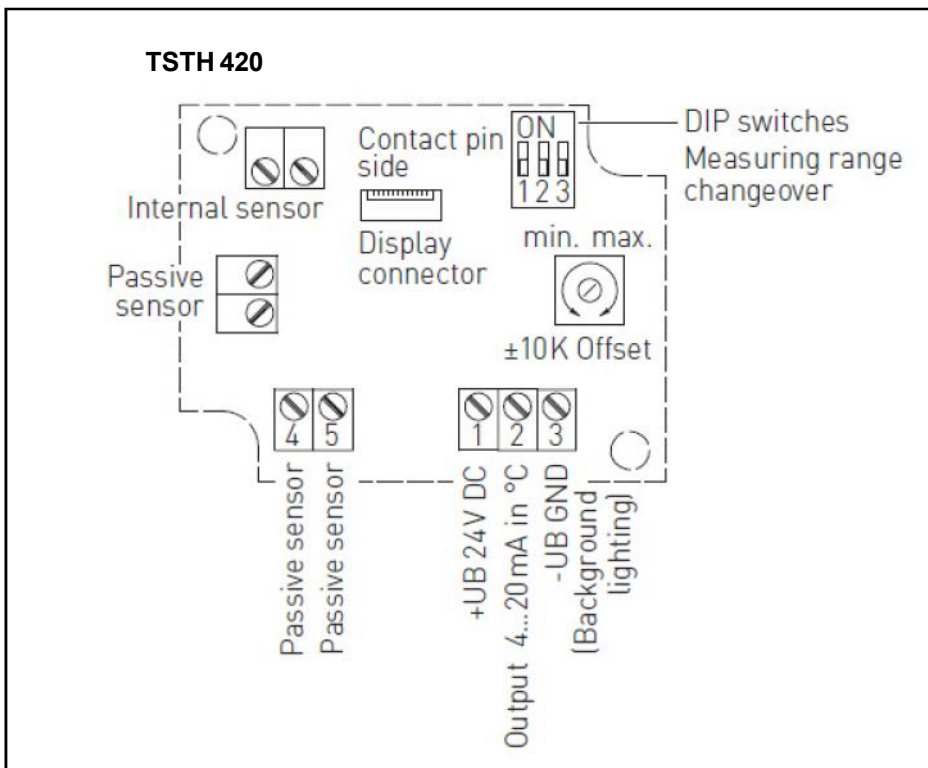
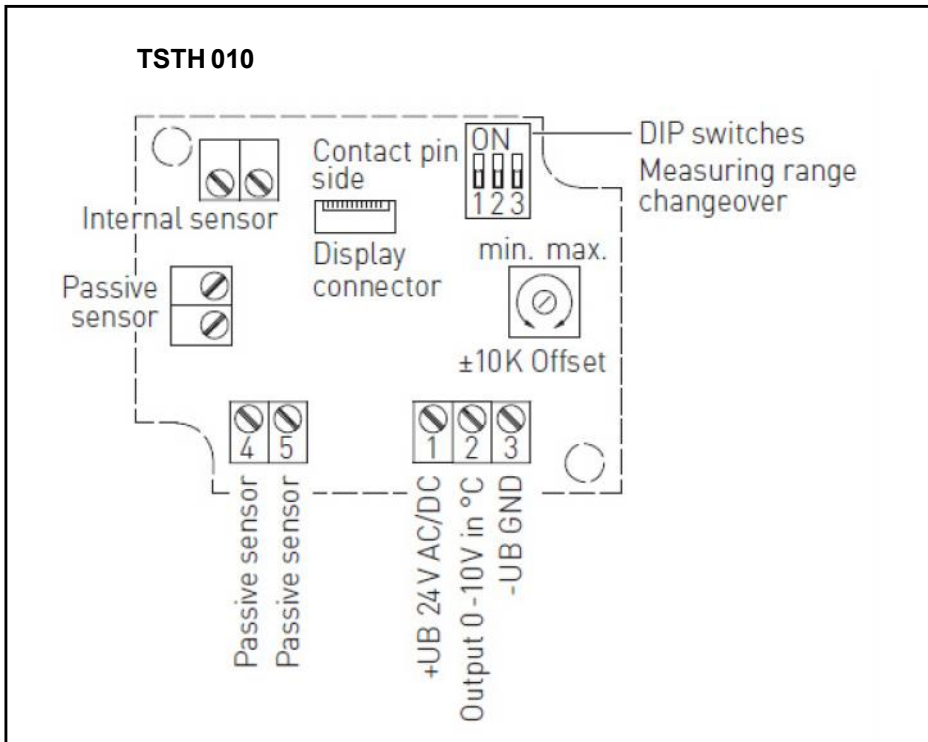
The strap-on temperature transmitter TSTH are available with 0-10 Vdc or 4-20 mA output with 8 different measuring temperature ranges selectable on pcb in same unit.

The IP 65 plastic housing is supplied with a plastic cable entry gland. PCB and connection terminal is under the cover.

The TSTH is provided with a clamp that adapts to the pipe's surface and the unit is fixed with an adjustable 300 mm strap-on band, other strap-on lengths are available.

**Dimensions (mm)**

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				

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.