

# STW / STB Series

## SAFETY STRAP-ON THERMOSTATS

### SPECIFICATION DATA



### GENERAL

The STW Series and STB Series of universal strap-on thermostats are designed for floor heating applications. They are suitable for use as strap-on, wall-mounted, or (with optional immersion well) immersion thermostats.

Devices of the **STW Series** measure temperature. If the sensor temperature exceeds the set value, a snap-action switch opens, interrupting the electrical circuit. As soon as the sensor temperature drops by more than 10 K, the snap-action switch again closes automatically. (Also, if the sensor temperature drops to below approx. -20 °C, the snap-action switch opens, but closes again automatically after the temperature rises again.)


Devices of the **STB Series** likewise measure temperature. If the sensor temperature exceeds the set value, a snap-action switch opens, interrupting the electrical circuit, and remains open until reset manually. (Also, if the sensor temperature drops to below approx. -20 °C, the snap-action switch opens, but closes again automatically after the temperature rises again.) To manually reset the device, the sensor temperature must drop by more than approx. 10 K.

### Models

Table 1. Models

order no.	adjustable range	reset
STW 70130 / STW 70130F	70 ... 130 °C	auto
STW 2080 / STW 2080F	20 ... 80 °C	auto
STB 70130 / STB 70130F	70 ... 130 °C	manual
STB 2080 / STB 2080F	20 ... 80 °C	manual

### FEATURES

- Liquid-filled copper capillary with a length of 2 m
- Weidmüller Push-IN® contacts permit easy and fast installation— no wire end sleeves or tool needed
- Self-monitoring sensor system
- Automatic ambient temperature compensation
- Manual reset (STB) or automatic reset (STW)
- CE-approved
-  (Eurasian Conformity)
- Type tested and certified according to DIN EN 14597

### SPECIFICATIONS

Max. switching capacity	230 Vac, 16 A (2.5 A)
Min. switching capacity	24 Vac/dc, 100 mA
Humidity	0...95% rh, non-condensing
Storage/operating temp.	-30 ... +50 °C
Overload temperature	10 K above max. adjustable temperature (see Table 1)
Length of capillary	2 m
Min. bend radius of capillary	5 mm
Pipe diameter	15...100 mm
Mounting position	NL 0 / 90 as per DIN 16257

#### Switch-point accuracy

xxx / xxx 2080x	0...-8 K
xxx / xxx 70130x	0...-12 K
Lifetime drift	max. ±5 K
Hysteresis	approx. 10 K
Protection class	I
Protection type	IP54 as per EN60529
Wiring terminals	Push-IN® for wire cross sections of 0.75 to 2.5 mm <sup>2</sup> (AWG 18...14)
Cable entry	M20x1.5, for Ø 6...12 mm
Housing materials	PA, ABS, PMMA
Weight	280 g
Dimensions	150 x 53 x 63 mm

### MOUNTING

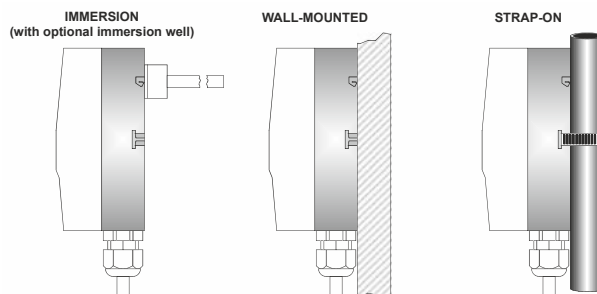


Fig. 1. Types of mounting

## STB / STW SAFETY STRAP-ON THERMOSTATS

STB/STW Safety Strap-On Thermostats are suitable for use as strap-on, wall-mounted, or (with optional immersion well) immersion thermostats (see Fig. 1).

Do not mount upside down (see Fig. 2).

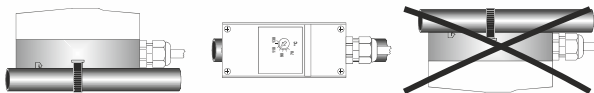


Fig. 2. Mounting orientations

When uncoiling and deploying the capillary tube, maintain a radius of curvature of at least 5 mm, and take care to avoid damaging the tube. In case of damage, i.e., if the expansion fluid in the capillary tube leaks, the switch will open and remain open (resetting no longer possible).

## SETTING AND RESETTING

The switching temperature can be set by unscrewing and removing the cover and using a tool to rotate the adjustment screw to the desired setting.

To reset models featuring manual resetting, first unscrew the protective cap on the face of the thermostat (see Fig. 3) to access the reset switch and then use a tool to gently lift (audible click) and then release the reset switch.

## DIMENSIONS

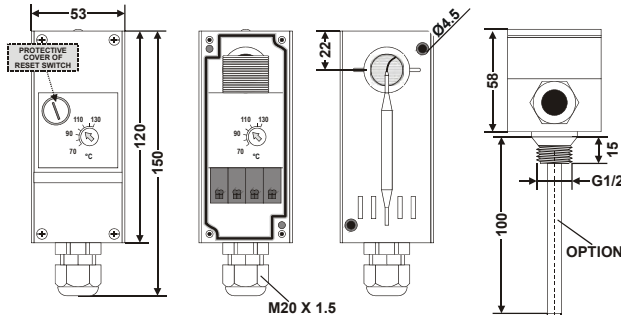


Fig. 3. STW/STB, dimensions in mm

## ! WARNING

All operations performed on the unit – including wiring, testing, and maintenance – must be done without voltage applied to the unit and in compliance with local electrical regulations. All work must be performed by qualified professionals.

Honeywell is not liable for possible damages caused by an improper installation.

## Field Wiring

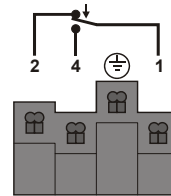


Fig. 4. Field wiring

## INCLUDED IN SHIPMENT

Metal strap, screw, M20 X 1.5 gland, for Ø 6...12 mm.

## OPTIONAL ACCESSORY

Nickel-plated brass G 1/2" immersion wells (order no.: STG12-100 and STG12-100F), including a stress-relief bracket, are available as an optional accessory.

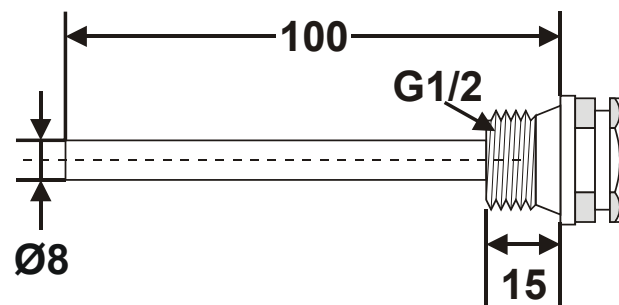


Fig. 5. Immersion well, dimensions in mm

- Nominal pressure when using flat seal DIN 7603, form A: 48 bar;
- Max. temperature when using flat seal DIN 7603, form A: 150 °C;
- Nominal pressure when sealing with hemp: 16 bar;
- Max. temperature when sealing with hemp: 130 °C
- Time constant ( $\tau = 0.632$  sec) in water, oil, air/steam: 45 / 60 / 120 sec