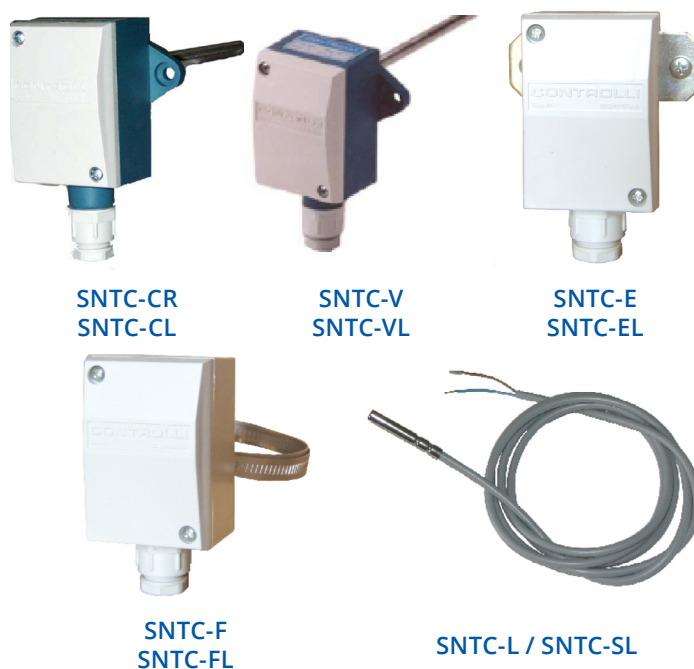


## Temperature Sensors

MODEL	RANGE [°C]	SENSING ELEMENT	APPLICATION
SNTC-CR	-35T150	NTC 10K ( $\beta$ @ 25° = 3977) for MULTIPRO and MultiNet	Immersion shank
SNTC-E	-20T60		Outside
SNTC-F	-10T120		Strap-on pipe
SNTC-V	-20T65		Duct shank
SNTC-L*	-30T80	NTC 10K ( $\beta$ @ 25° = 3435) for W560 OmniaPro, MultiNet and NR9000	With ABS cap
SNTC-SL*	-30T105		With AISI 304 cap
SNTC-CL	-35T110		Immersion shank
SNTC-EL	-20T60		Outside
SNTC-FL	-10T110		Strap-on pipe
SNTC-VL	-20T65		Duct shank



\* SNTC-L and SNTC-SL sensors can be installed on AXCU too.

### APPLICATION AND USE

Temperature sensors are employed in heating and air conditioning systems for both civil and industrial purposes. Connected to the relevant controllers (see product table), they allow detecting and controlling room, immersion, duct and outside temperature.

### TECHNICAL CHARACTERISTICS

DESCRIPTION	SNTC-X
Sensing element	NTC 10000 Ohm at 25°C
Accuracy	±1%
SNTC-E, SNTC-F, SNTC-V, SNTC-CR	
$\beta$ at 25°	3977
SNTC-EL, SNTC-FL, SNTC-VL, SNTC-CL, SNTC-L, SNTC-SL	
$\beta$ at 25°	3435
SNTC-E/EL, SNTC-F/FL, SNTC-V/VL, SNTC-CR/CL (*)	
Terminal board	Screw terminals for wires from 1,5 to 2,5mm <sup>2</sup>
Conduit opening	PG9
Protection	IP44
Weight	0,25 kg

\* SNTC-CR/CL sensors are supplied with AISI 306 stainless steel pocket with 1/2" gas male connection - 113 mm well length. For mounting with pocket, it is necessary to use thermoconduction pulp since the sensors have a 7,5 mm hole.

### OPERATION

The sensors detect temperature through a sensing element, whose Ohm value varies according to the detected unit. Each sensor is characterized by the sensing element type, which determines its Ohm/°C function, and by the application. All sensors are provided with a negative temperature coefficient sensing element (Ohm value increases when the temperature

The performances stated in this sheet can be modified without any prior notice.

decreases). All sensors must be connected to the controller by means of two wires, in order to receive the Ohm signal generated by the corresponding sensing element.

## MANUFACTURING CHARACTERISTICS

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### Air Duct Sensors SNTC-V/SNTC-VL

It is composed of an ABS housing including the terminal board. On the back is located the pocket containing the sensing element. The pocket is provided at its end with slots for air circulation. The cover is locked by screws.

### Strap-on Sensor SNTC-F/SNTC-FL

It consists in an ABS case with a built-in card with the terminals for electrical connections. The sensing element is inserted into a metal core.

### Outside Sensor SNTC-E/SNTC-EL

It consists of an ABS case with a built-in card with the terminals for electrical connections. The sensing element is inserted into a metal core.

### Immersion Sensor SNTC-CR/SNTC-CL

It is composed of an ABS housing containing the terminal board. On the back is located the brass pocket containing the sensing element. The cover is locked by screws.

### SNTC-L Sensor

It is composed of an ABS 7x25 mm cap, strengthened insulation and 1.5 m PVC cable.

### SNTC-SL Sensor

It is composed of an AISI304 6x40 mm steel cap, strengthened insulation and 1.5 m PVC cable.

## INSTALLATION

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### Pipe Sensors (SNTC-CR/-CL, SNTC-F/FL)

Install the sensor preferably downstream the circulating pump and, in any case, at least 1 m. from the control valve constant flow outlet.

Moreover for strap-on sensors (SNTC-F): remove the eventual insulation and painting on the pipe before installing the sensor, then tighten the mounting strap around the pipe (max. pipe diameter 100 mm).

### Air Duct Sensors (SNTC-V/VL)

Install the sensor into the duct by using the little flange and fix it on the duct surface by means of the two screws. The sensor pocket must be totally immersed into the air duct in vertical position, preferably at the centre.

**Supply air sensor:** install it downstream the supply fan and, in any case, at least 0,5 m from the coil.

**Sensor in return-air duct for room temperature detection:** install it upstream the return air fan and, in any case, near the return air duct.

**Dew point sensor:** install it downstream the drop separator so that it cannot come into contact with water drops.

### Outside Sensor (SNTC-E/EL)

Install the sensor on the outside of the building, facing north or northwest. Avoid placing the sensor in areas exposed to sunlight. Avoid installation near windows, ventilation grids, over doors, windows, on chimneys or protected by balconies, canopies, etc.

## ACCESSORIES

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421 AISI 306 stainless steel pocket with 1/2" gas male connection - 113 mm well length.

## ELECTRIC CONNECTIONS

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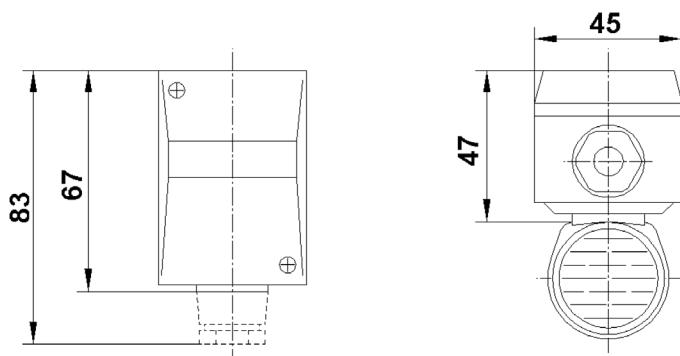
For the cable type and for terminal board connections to the controllers, make reference to the controller data sheets or to the diagrams and documents supplied with the ordered control system.

It is fundamental to carry out the connections according to the existing standards, in particular CEI 64-8. It is, moreover, necessary to avoid routing the sensor and the power cables into a single protection pipe or raceway. Therefore, we recommend to use separate conduits.

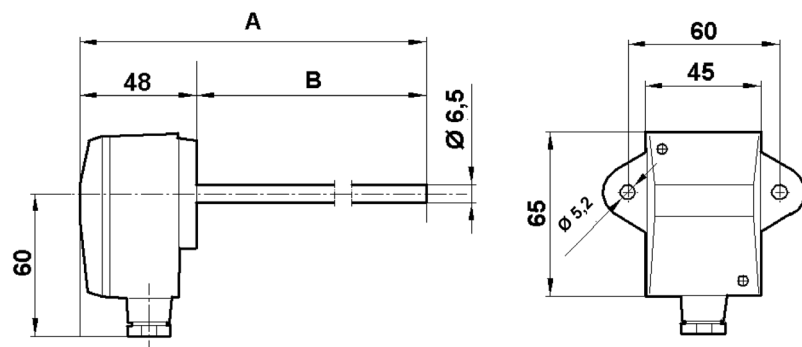
In case of shielded cable, ground only one cable end.

SNTC-X 2 non-polarized terminals

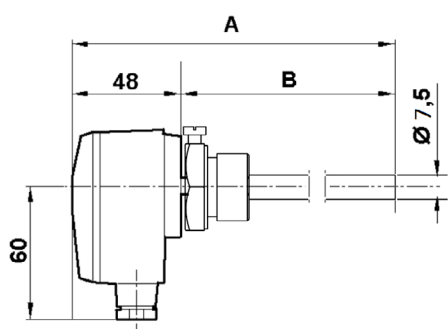
SNTC-F/FL



SNTC-V/VL



SNTC-CR/CL



MODEL	A	B
SNTC-V/VL	348	300
SNTC-CR/CL	184	136

SNTC-E/EL

