

ROOM TEMPERATURE SENSORS NORMAL OR IRRADIATED

SAB - SCB - SAI - SCI Eng.

- **NTC temperature sensing element**
- **Measurement range:**
– (0...40 °C)
- **Set-point adjuster (optional):**
– SCB/SCI with variations from: (– 5...+ 5 °C)
- **Installation:**
– on wall or in flush-mounting pattress



1. APPLICATION

In combination with the appropriate COSTER devices (essential) measure room temperature. Moreover, in some models (see 2 below) it is possible to adjust from the room itself the temperature previously set on the controller. The irradiated room temperature sensors are used in heating and cooling installations with radiating panels on the ceiling.

2. MODELS AVAILABLE

Code	Description element	Sensing	Max. distance with cables of:	
			1mm ²	1.5 mm ²
SAB 010	In wall-mount 80x80x26 enclosure	NTC 10 kΩ	700 m	1000 m
SAI 010	Irradiated sensor in 80 x 80 x 26 housing for wall mounting	NTC 10 kΩ	700 m	1000 m
SAB 010/V	Vimar insert in flush-mounting pattress	NTC 10 kΩ	700 m	1000 m
SAB 010/G	Gewiss insert in flush-mounting pattress	NTC 10 kΩ	700 m	1000 m
SAB 010/L	Living insert in flush-mounting pattress	NTC 10 kΩ	700 m	1000 m
SAB 010/LI	Living International insert in flush-mounting pattress	NTC 10 kΩ	700 m	1000 m
SAB 010/LG	Living Light insert in flush-mounting pattress	NTC 10 kΩ	700 m	1000 m
SAB 020	Double sensing element in 80x80x26 wall-mount pattress	NTC 20 kΩ	700 m	1000 m
SAB 011	With internal calibration in 80x80x26 wall-mount pattress	NTC 10 kΩ	700 m	1000 m
SAB 210	With + 1 hour key in 80x80x32 wall-mount pattress	NTC 10 kΩ	700 m	1000 m
SCB 110	With set-p. adjuster (–5...+5 °C) in 80 x 80 x 32 wall-m. pattress	NTC 10 kΩ	700 m	1000 m
SCI 110	Irradiated sensor + adjuster, in 80 x 80 x 32 housing for wall	NTC 10 kΩ	700 m	1000 m
SCB 110/V	With set-p. adjuster (–5...+5 °C) Vimar insert in flush-m. pattress	NTC 10 kΩ	700 m	1000 m
SCB 110/G	With set-p. adjuster (–5...+5 °C) Gewiss insert in flush-m. pattress	NTC 10 kΩ	700 m	1000 m
SCB 110/L	With set-p. adjuster (–5...+5 °C) Living insert in flush-m. pattress	NTC 10 kΩ	700 m	1000 m
SCB 110/LI	With s.p. adjust. (–5...+5 °C) Living International insert in flush-m. pattress	NTC 10 kΩ	700 m	1000 m
SCB 110/LG	With set-p. adjuster (–5...+5 °C) Living Light insert in flush-m. pattress	NTC 10 kΩ	700 m	1000 m
SCB 210	With set-p. adjuster & + 1 hour key in 80x80x32 wall-m. pattress	NTC 10 kΩ	700 m	1000 m

3. TECHNICAL DATA

Temperature sensing element:

Type	see table in 2 above	Materials:	
Time constant	3 min.	Base	NYLON
Measurement range	0...40 °C	Cover	ABS
Variation setting range	–5...+5 °C (SCB)	Dimensions	see table 2 above
Protection	IP 30	Installation	wall-mount or flush
		Construction standards	Italian Electr. Committee (CEI)
		Weight	60 g

4. INSTALLATION

The sensor must be installed in the room to be controlled, at a height of 1.5 to 1.6 meters from the ground, on an internal wall, at a point which represents the average temperature. It must be as far as possible from windows, doors and sources of heat and curtains and corners must be avoided.

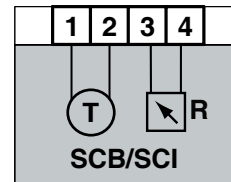
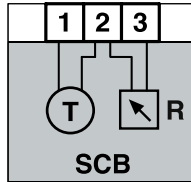
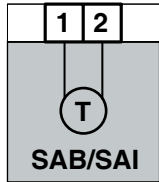
- Separate base from cover by releasing the securing element.
- Attach the base to the wall or to the flush-mounting pattress using the pre-drilled holes.
- Carry out the electric wiring in strict accordance with the diagram and with the safety regulations in force, using cables of the appropriate diameter (**NOT telephone or similar cables**) – see table in 2 above.
- Replace the cover on the base and close carefully until the two snap into place.

Warning:

- **If the sensors are connected using a single bipolar conductor, the distances shown in table in 2 above must be strictly observed if correct temperature measurement is to be obtained.**
- **If several sensors are to be connected by a single multicore cable, all the sensors must be of COSTER manufacture.**
- **For correct temperature measurement, these installation instructions must followed to the letter.**

If the sensor is installed in flush-mounting pattress there is the possibility that the sensing element could become cooled by the cold air coming through the ducting protecting the electric cables. In this event it will be necessary to provide thermal isolation for rear of the base.

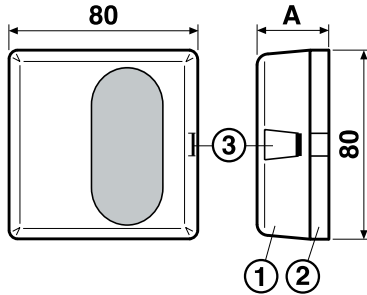
5. WIRING DIAGRAMS



Connection sensor & remote with three terminals (discontinued sensors)

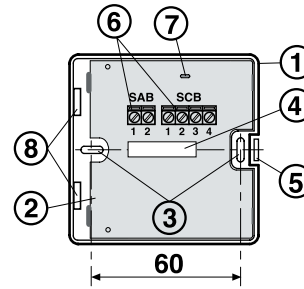
Connection sensor & remote control with four terminals (actual sensor)

6. OVERALL DIMENSIONS



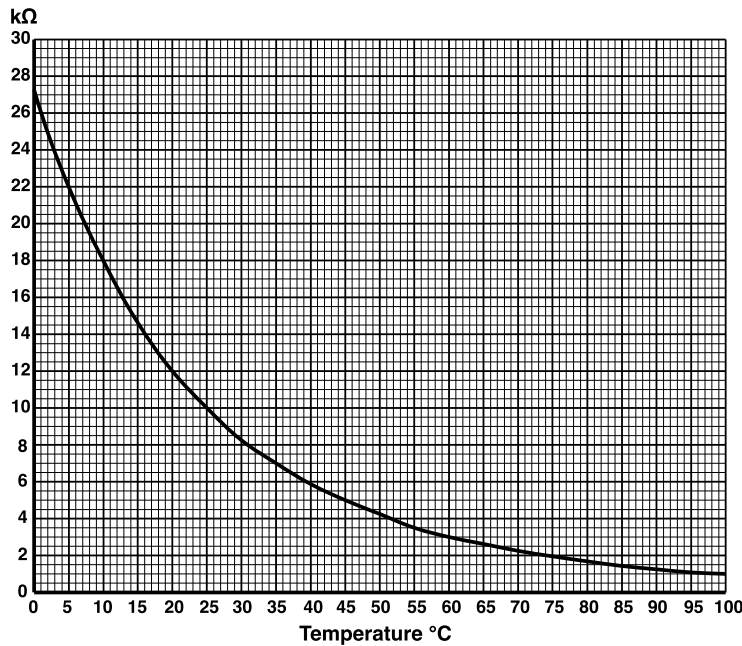
- 1 - Cover
- 2 - Base
- 3 - Cover securing element
- A = 26 mm model SAB/SAI
- A = 32 mm model SAB 210 + model SCB/SCI

7. BASE



- 1 - Base
- 2 - Printed circuit
- 3 - Screw holes for mounting
- 4 - Cable entry cutout
- 5 - Cover securing element
- 6 - Terminal block
- 7 - Temperature sensing element
- 8 - Couplings for cover

8. NTC 10 kΩ SENSING ELEMENTS: TEMPERATURE / RESISTANCE



Amendments to data sheet

Date	Revision No.	Page	Section	Details of amendments
31.01.05 MC		1	2. Models 4. Installation 5/6/7 8. Diagram	Table updated (Description & diagram) Amendment text (see Connections section) Update diagrams (wiring) Heading amended.
20.11.07 AM	01	1	2. Models	Added models SAI 010 & SCI 110 irradiated sensors



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