

TEMPERATURE SENSORS FOR AIR DUCTS

STA Eng.

- **NTC sensing element**
- **Measurement range:**
 - STA 010 (0... 100 °C)
 - STA 001 (– 30... 40 °C)
- **Installation:**
 - in air duct



1. APPLICATION

Used in conjunction with the appropriate (and indispensable) instrumentation, measure the temperature in air ducts. The sensing element is housed in a brass protective sheath which is itself inserted in a hollow rod. Installation on the air duct is straightforward using the flange with screw holes supplied with the sensor.

2. MODELS AVAILABLE

Code	Description	Range	Sensing element	Max. length cables of:		
				1mm ²	1.5 mm ²	2.5 mm ²
STA 010	Temperature detector for air ducts	0... 100 °C	NTC 10 kΩ	700 m	1000 m	2,000 m
STA 001	Temperature detector for air ducts	– 30... 40 °C	NTC 1 kΩ	350 m	500 m	1,000 m

3. TECHNICAL DATA

Temperature sensing element:		Dimensions:	
type	see table in 2 above	sensing element sheath	ø 5.8 x 50 mm
time constant	1 minute	assembled sensor	see section (5)
measurement range	see table in 2 above	Materials:	
Protection	IP 54	sensing element sheath	brass
Cable entry	PG 11	hollow rod	brass
Construction standards	Italian Electr. Committee (CEI)	flange	brass
Weight	350 g	enclosure	NYLON
		Installation	directly on duct

4. INSTALLATION

Attach the flange supplied to the air duct using the pre-drilled holes, at the same time positioning the central hole so that the hollow rod containing the sensing element sheath can be easily inserted.

Then insert the hollow rod in the air duct so that the tip reaches a point inside the duct significant for the temperature measurement.

Secure it to the flange with screw provided:

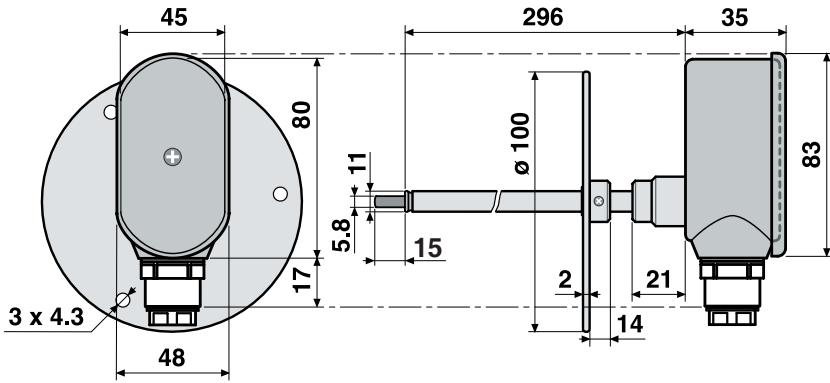
Having installed the sensor according to the above instructions, carry out the electrical wiring as follows

- Separate the cover from the enclosure by loosening the securing screw..
- 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**). In any event, follow the indications given in the table in 2 above.
- Replace the cover on the enclosure and tighten up the screw holding the two parts together.

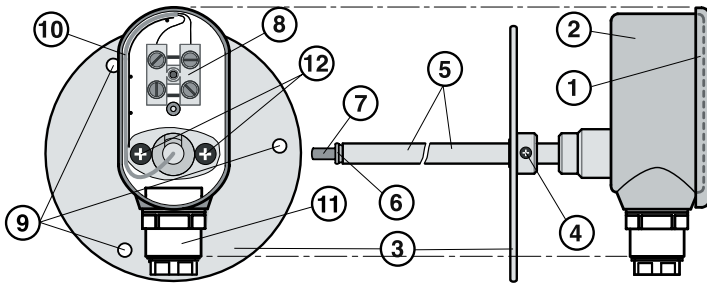
WARNING:

- **If the detectors are connected using bipolar cables, the distances shown in the table under 2 above must be strictly observed to ensure correct transmission of data to the instrumentation.**
- **If several detectors are to be connected using a single multicore cable, ALL the detectors must be of COSTER manufacture.**
- **For the correct functioning of the system the above installation instructions must be followed to the letter.**

5. OVERALL DIMENSIONS

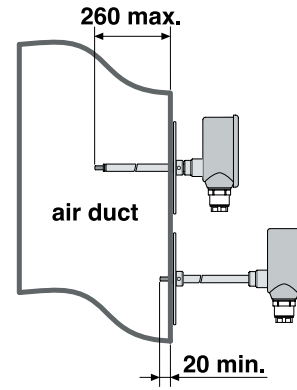


7. ENCLOSURE



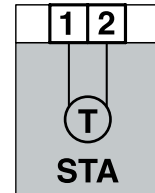
- 1 – Cover
- 2 – Enclosure
- 3 – Flange for fixing to air duct
- 4 – Screw for securing hollow tube to flange
- 5 – Sensing element hollow rod
- 6 – Sensing element sheath securing nut
- 7 – Sensing element sheath
- 8 – Terminals for connections
- 9 – Holes for flange fixing screws
- 10 – Internal wiring
- 11 – PG 11 cable entry
- 12 – Securing screws cover/hollow rod

6. HOLLOW ROD HOLDING SENSING ELEMENT IN AIR DUCT

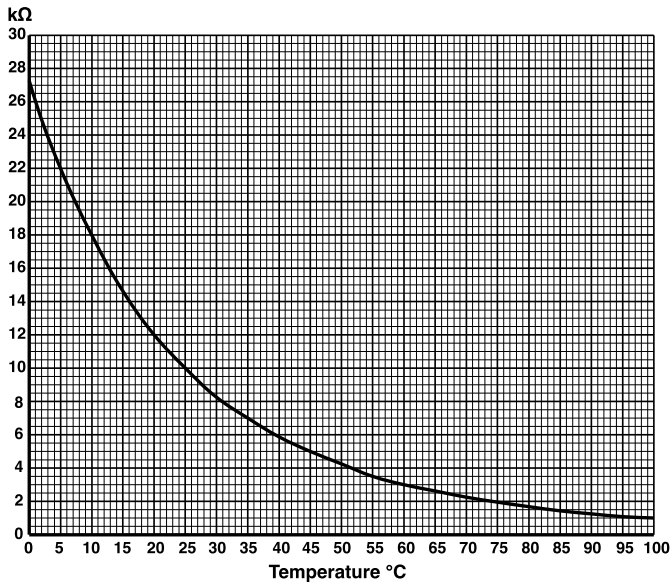


Note: The extent to which the hollow rod is inserted in air duct depends on the diameter of the duct.

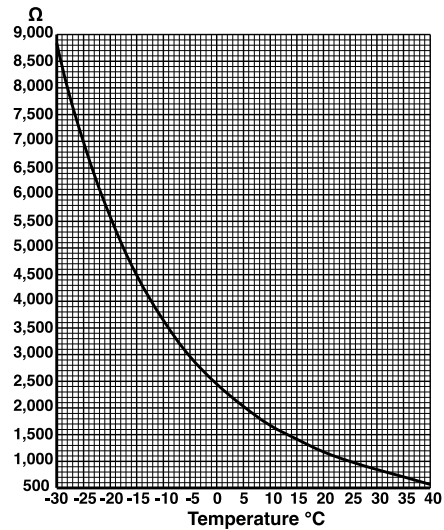
8. WIRING DIAGRAMS



9. NTC 10 KΩ SENSING ELEMENTS



10. NTC 1KΩ SENSING ELEMENTS



Amendments to version dated 13.11.01

Amended.: MC 16.02.05

Page	Section	Amendment
1	General	New photograph.
2	4 Installation	Amendments text (wiring).
	5/6/7/8	Amendments diagrams + new diagram (section 6)
	9/10	Replacement graphs (previously unclear).



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