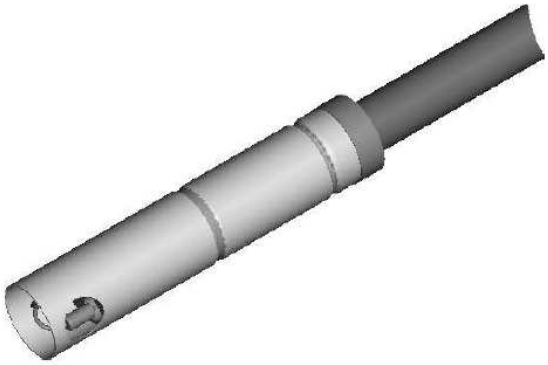
DOUBLE-NTC TEMPERATURE PROBES TYPE ST16 CERTIFIED TO EN60730-2-9



APPLICATION

These temperature probes are suitable to be used as ambient or external probes in room temperature adjustment systems and in products such as hot air generators.

This probe is an innovative product in that it is provided with two independent NTCs ensuring a higher reliability, as if one NTC should not work, the other one will enable the electronic device to read the temperature in any case.

Besides, if the probe is coupled to a device in compliance with EN14459:2007, it can be used as a safety element and therefore replace the boiler safety thermostat.

MECHANICAL FEATURES

• Probe body	Copper tube Ø: 8.8mm Length: 40mm
• Silicone cable	Operating temperature up to 250℃ Dimensions of the leads: 3 x 0.25mm Outside Ø : 5.9mm
• Operating temperature range	-30℃ ÷ +230℃

ELECTRICAL FEATURES

• Sensors	NTC thermistors
• Resistance value at 80℃	1650Ω ± 3%
• β coefficient (25℃ – 80℃) (*)	3530ºK ±2%
• Isolation voltage	1250 Vac for 1 sec.

(*) Possible versions with different NTC upon request.

SAFETY PROBE

- Tested according to 60730-2-9 and annex J.
- If coupled to a device complying with EN 14459:2007, the probe can be used as a thermal cut-off (TCF) for water limit temperature control
- Operating temperature range when used as a TCF: -20℃ ÷ +110℃

FORMULAS

The following formula enables to calculate the resistance value of the NTC sensor at a T temperature expressed in Kelvin degrees:

$$R_T = R_{25} \exp[\beta(\frac{1}{T} - \frac{1}{T_{25}})]$$

Example: calculation of the resistance value of a probe with NTC with β 3480 at a temperature of 60℃:

$$R_{60} = 10k \exp[3480(\frac{1}{(60+273.15)} - \frac{1}{(25+273.15)})] = 2933\Omega$$

COSTRUCTION

These probes consist of a copper body to be positioned into the system to control.
The large holes of the probe enable for a quick response of the sensing elements to temperature changes, thus allowing the system to react quickly in the environmental situations in which it is placed.

CONNECTIONS

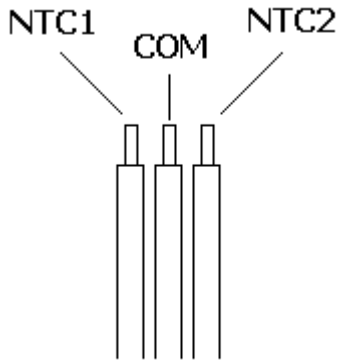


Fig. 1

As shown in Fig. 1, the central pole of the connector is the common wire of the two NTCs (black wire), while the external poles are connected to the other terminal of each NTC.

OVERALL DIMENSIONS

Fig. 2 shows the overall dimensions of these probes in mm.

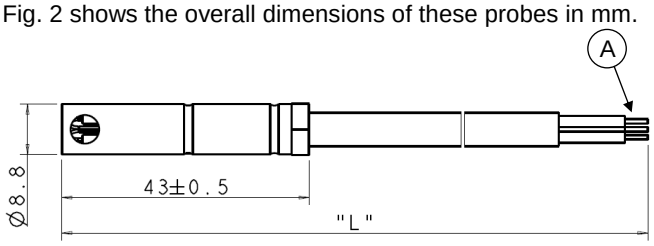


Fig. 2

PART REFERENCES

ST16 X_1

Finished temperature probe length (L) in cm (CM) including the copper tube.

Example:

- **ST16 CM100**

ST16	Temperature probe type ST16
CM100	Length of the cable + probe body: 100 cm.

NOTES ABOUT PRODUCT DISPOSAL

The device contains electronic components and cannot therefore be disposed of as normal household waste. For the disposal procedure, please refer to the local rules in force for special waste.

ATTENTION -> Company Brahma S.p.A. takes no responsibility for any damage resulting from Customer tampering with the product.

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