



NTC THERMISTORS: TYPE JA, JE, JF, JP 01-09

DESCRIPTION:

This range of interchangeable thermistor probes is intended for temperature measurement and control applications over the range -25°C to $+225^{\circ}\text{C}$.

There are four different standard configurations available, probe types JA, JE, JF and JP.

All are metal sheathed and are designed for various methods of mounting by insertion and screw fixing.

Each probe type has a resistance at a specified reference temperature (T_r) of $2000\Omega \pm 2\%$ and a slope tolerance of $\pm 2\%$ for a given B value.

There are nine different number codes corresponding to the reference temperature and all configurations with matching number codes are electrically interchangeable. The nine reference temperatures are in 25°C steps from 0°C to 200°C . Each probe is identified for its reference temperature by the number code printed on a plastic sleeve positioned at the end of the PTFE insulated lead-wires.

STANDARD RANGE:

| T_r $^{\circ}\text{C}$ | B Value K | Applies over $^{\circ}\text{C}$ | Product Code | | | |
|-----------------------------|--------------|------------------------------------|--------------|------|------|------|
| 0 | 3129 | 0 to 25 | JA01 | JE01 | JF01 | JP01 |
| 25 | 3387 | 25 to 50 | JA02 | JE02 | JF02 | JP02 |
| 50 | 3275 | 25 to 50 | JA03 | JE03 | JF03 | JP03 |
| 75 | 3520 | 25 to 75 | JA04 | JE04 | JF04 | JP04 |
| 100 | 4165 | 25 to 100 | JA05 | JE05 | JF05 | JP05 |
| 125 | 4390 | 25 to 125 | JA06 | JE06 | JF06 | JP06 |
| 150 | 4240 | 25 to 150 | JA07 | JE07 | JF07 | JP07 |
| 175 | 4452 | 25 to 175 | JA08 | JE08 | JF08 | JP08 |
| 200 | 5000 | 25 to 200 | JA09 | JE09 | JF09 | JP09 |

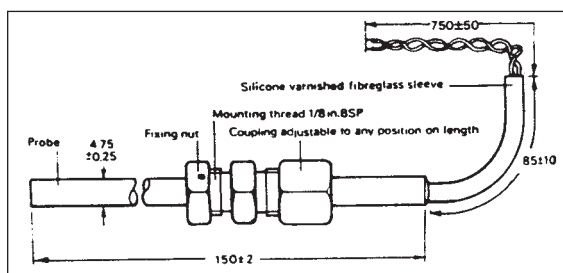
Note

The actual temperature seen by the thermistor element will depend upon the depth of insertion of the probe tip and the thickness and material of the tank, chamber or pipe wall. As it is impossible to quote data for all possible methods of mounting, all electrical characteristics have been determined assuming total immersion of the whole probe assembly.

Type JA



DIMENSIONS:



Stainless steel-sheathed, 150mm long temperature probe intended for mounting through the wall of a tank, pipe or oven chamber via a 1/8 in. BSP tapped boss or 10mm diameter hole.

The probe has an adjustable brass coupling which may be secured at any position along the length of the probe to give the required depth of insertion. The coupling includes a sealing olive which provides a gas or liquid seal.

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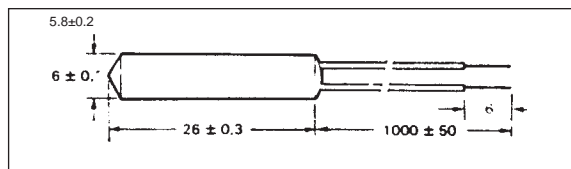
Type JP





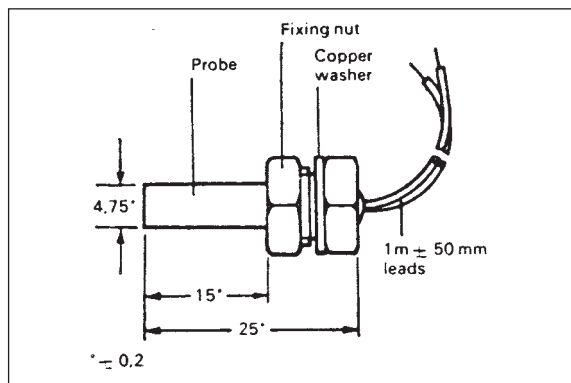
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Type JP



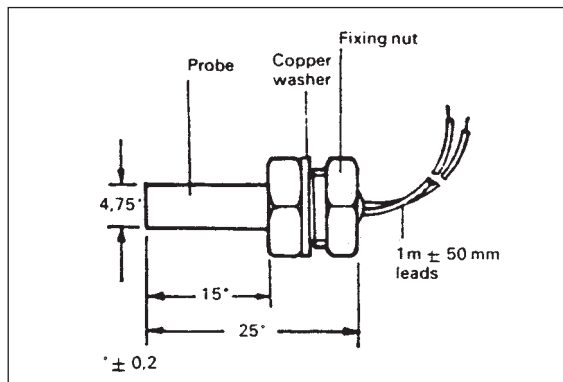
General purpose temperature probe with 26mm long anodized aluminum sheath, intended for various methods of mounting, e.g. by clip fastening, insertion down a 6.5mm diameter hole or through a rubber grommet.

Type JE



Nickel-plated brass temperature probe with threaded head and 15mm protrusion intended for fixed depth wall mounting via a 1/8 in. BSP tapped boss or 10mm diameter hole. A fixing nut and washer are included and are assembled from the probe tip.

Type JF



Similar to the type JE except that the fixing nut and washer are assembled from the connecting wire end.

DATA:

| | |
|--|-------------------------------|
| Resistance at T_r (R_{Tr}) | 2000 Ω |
| Tolerance on resistance | $\pm 2\%$ |
| Tolerance on B value | $\pm 2\%$ |
| Dissipation constant (k) | 5mW/K |
| Typical time constant (τ) | 3 min |
| (cooling from heated state) | |
| Maximum permissible electrical power dissipation (P_{max}) for temperature measurement | 50mW |
| Maximum ambient temperature ($T_A \text{ max}$) | 100°C or whichever is greater |
| Minimum ambient temperature ($T_A \text{ min}$) | -30°C |
| Isolation voltage, case to leads | 500V |



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