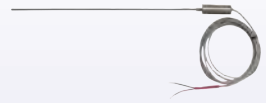


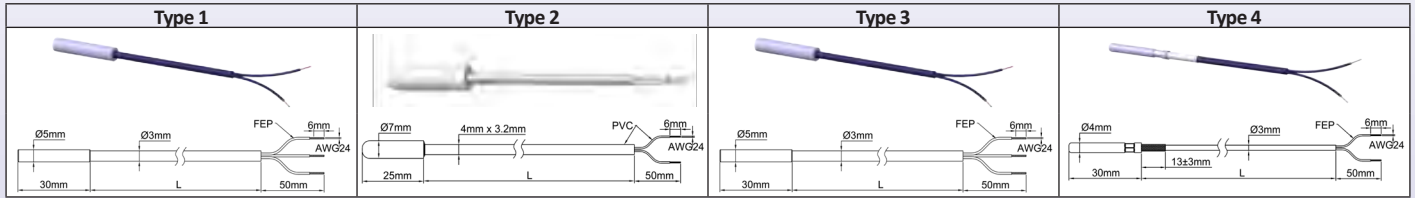
Usual temperature sensors for applications with electronic temperature controls and control boxes

(Installation in thermo-wells, ambient or pipe surface mounting)



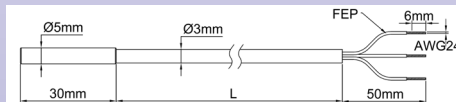
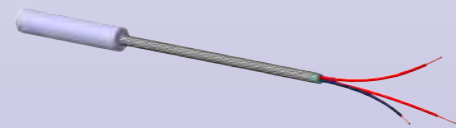
NTC Thermistor

NTC thermistors (whose resistance decreases with temperature) are cheap and interchangeable. Their high resistance makes them insensitive to the resistance of the measuring line and thus a two-wires connection is allowed. Wiring is not polarized



References	Temperature ranges	R	B	Protection pocket	Cable, (L)	applications	Model
TNR60030C20001F6	-20+120°C	R25°C: 10KΩ +/- 1%	B25/50°C: 3380 +/-1%	Ni plated copper 6 x 30 mm	FEP L=2m	Common applications, ambient and up to 120°C, for controllers 273 and 2PE2N6 series	1
TNR70025P01501F6	-30+50°C	R25°C: 10KΩ +/- 1%	B25/50°C: 3380 +/-1%	PVC, sealed, 7 x 25mm	PVC 80°C, L=150 mm	Cold rooms and ambient, for controllers 273 and 2PE2N6 series	2
TNR70025P20001F6	-30+50°C	R25°C: 10KΩ +/- 1%	B25/50°C: 3380 +/-1%	PVC, sealed, 7 x 25mm	PVC 80°C L=2m	Cold rooms and ambient, for controllers 273 and 2PE2N6 series	2
TMR60030C20001F6	50-300°C	R100°C: 3.3K +/-2.5%	80/100°C : 3970 +/-2%	Stainless Steel, 6 x 30mm	FEP L=2m	200 and 300°C ranges, for controllers 273 series	3
TPR40030C20001F6	50-300°C	R25°C: 500K +/-2.5%	B25/50°C : 4260 +/-2%	Stainless Steel, 4 x 30mm	FEP L=2m	200 and 300°C ranges, for controllers 2PE2N6 series	4

PT100



The resistivity of platinum has excellent repeatability and high accuracy over a wide temperature range. Its variation curve with temperature is much more linear than the thermocouple or thermistor curves. The low resistance of the probe requires the use of a three wire connection to measure and compensate for the resistance of the measuring line. The Pt100 sensor provides the highest accuracy in measuring low and medium temperatures.

Temperature range: -50 to 550°C (-60 to 1020°F) on the ceramic substrate, but temperature in use limited to 200 °C due to the FEP connecting cable

Temperature curve: EN 60751 (100 ohms @ 0°C, 138.5 Ohms @ 100°C)

Accuracy and tolerances: (according to EN 60751)

Class A, ±0.15°C @ 0°C; (±0.06 Ω @ 0°C)

Class B, ±0.3°C @ 0°C; (±0.12 Ω @ 0°C)

Protection pocket: Stainless Steel 304, dia. 5mm x 30 mm

Temperature range: -50°C, +200°C

Connection cable:

- 3 wires, 0.35 mm², FEP insulation + silver-plated copper braid + FEP, temperature resistance 200°C, external diameter 2.7 mm (0.127").
- Ends: stripped

Polarity: The two red wires are connected together at their welded junction to one of the chips ceramic substrate terminal and the white wire is connected to the other terminal.

References	Class	Cable length	Applications
TSR50030I2000AK6	A	2000 mm	Remote sensing
TSR50030I2000BK6	B	2000 mm	Remote sensing
TSR50030I0070AK6	A	70 mm	Room temperature sensing
TSR50030I0070BK6	B	70 mm	Room temperature sensing
TSR50030I0150AK6	A	150 mm	Room temperature sensing
TSR50030I0150BK6	B	150 mm	Room temperature sensing

K Thermocouple

A thermocouple is made of two different metal leads welded at their ends. When heated, the solder generates a potential difference proportional to the temperature. Thermocouples need special connection cables and a temperature compensation system.

Protection pocket: Stainless Steel 304, dia. 6mm x 50 mm

Temperature range: 50°C, +200°C

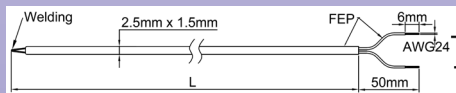
Temperature curve: according to EN 60584-1 and IEC 584-1

Accuracy and tolerances: Class 2 according to EN 60584-1 and 2, ±2.5°C within -40 °C and 333 °C

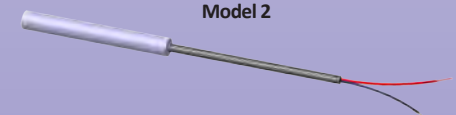
Polarity (according to DIN 43714) : red = positive, blue= negative



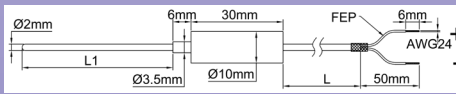
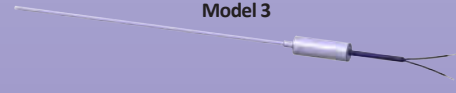
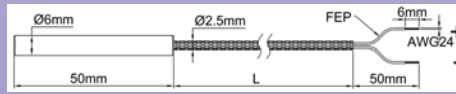
Model 1



Model 2



Model 3



References	Protection pocket	Sensor temperature range	Connection cable	Model
TPR00060W02002F4	Bare solder	-50+200°C	2 leads 0.35mm ² , FEP insulation 200°C L=200mm	1
TPR00060W05002F4	Bare solder	-50+200°C	2 leads 0.35mm ² , FEP insulation 200°C L=500mm	1
TPR00060W10002F4	Bare solder	-50+200°C	2 leads 0.35mm ² , FEP insulation 200°C L=1m	1
TPR00060W20002F4	Bare solder	-50+200°C	2 leads 0.35mm ² , FEP insulation 200°C L=2m	1
TPR60050I10002E4	Stainless Steel dia 6mm x 50 mm	-50C, +200°C	2 leads 0.35mm ² , external sleeve dia 2.7mm, Nickel plated metal braid, L=1m	2
TPR60050I20002E4	Stainless Steel dia 6mm x 50 mm	-50C, +200°C	2 leads 0.35mm ² , external sleeve dia 2.7mm, Nickel plated metal braid, L=2m	2
TPR20200R20002E4	Sleeve sensor in refractory Stainless Steel, dia 2, L1=200mm	-40+800°C	2 leads 0.35mm ² , external sleeve dia 2.7mm, Nickel plated metal braid, L2=1m	3
TPR20400I20002E4	Sleeve sensor in refractory Stainless Steel, dia 2, L1=400mm	-40+800°C	2 leads 0.35mm ² , external sleeve dia 2.7mm, Nickel plated metal braid, L2=2m	3

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

