

PTC Thermistors

Complete protection from burning of motor

CE

RoHS

Function:

INSTA Thermistors are manufactured in accordance with DIN 44081 or 44082 & BS EN 60034-11:2004. Due to their small thermal mass, they have favourable temperature sensitivity. The resistance increases sharply in the region of the nominal response temperature. This signal can be used to switch off power circuit of electric motors/transformers by using TEMPESENSE (Thermistor Protection Unit - TPU). The temperature resistance diagram shows the principle characteristics of INSTA PTC Thermistors.

Special Designs:

INSTA can supply customized connections with your individual lead lengths, cross-sectional areas, crimped contacts etc. PTC ceramics with cold resistance $\leq 100 \Omega$ are available on request.

Dimensional Details:

INSTA Thermistors with positive temperature coefficient (PTC) are utilised for the temperature sensing of windings. The 3mm pill is especially suitable for embedding into the windings of electric motors and transformers. Other Thermistor types are also available for overload protection, temperature control and sensing e.g. of Sub-assemblies, Heat sinks, Transformers etc.

Installation Instructions:

INSTA Thermistors should be placed as near as possible to the hot spot. In three phase motors, one Thermistor should be embedded in each phase. Good thermal coupling between Thermistor and winding is essential. The PTC Thermistors should be inserted parallel to the winding.

In this way the mechanical stresses on the PTC Thermistors during forming the end turns of overhang winding can be minimized. Shrink cap is especially well suited for this because of its mechanical stability. Response times ≤ 5 sec. are achieved with INSTA Thermistor.

INSTA PTC thermistors are available in miniature (3mm) versions. Resistance at room temperature is $\leq 250\Omega$ or $\leq 100\Omega$ on request.

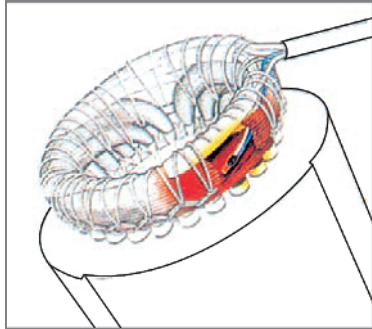


INSTA CONTROL™

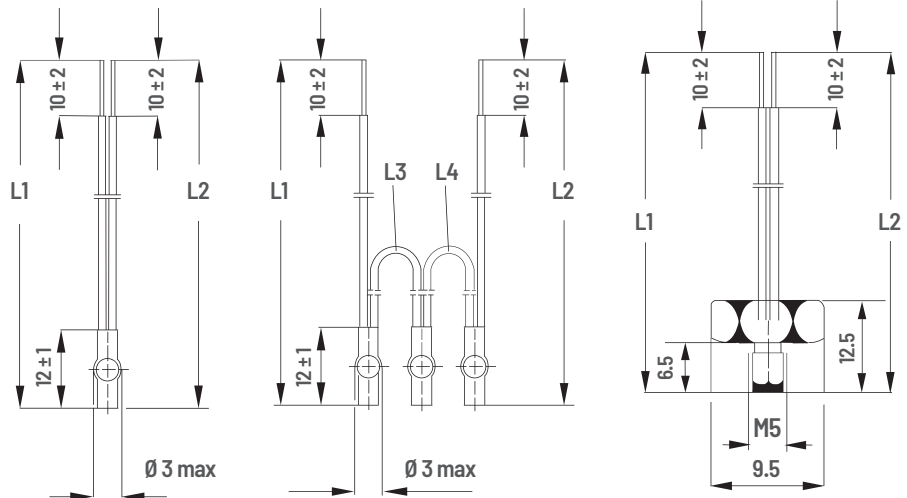
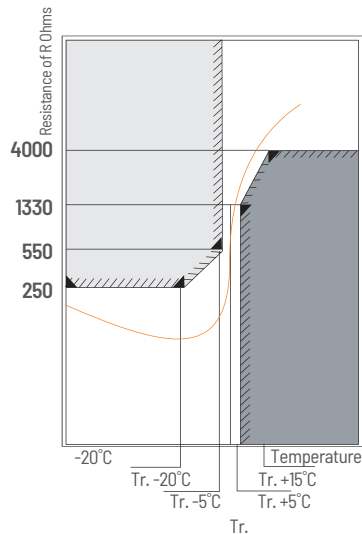
EXPERTISE OVER 4 DECADES IN WINDING PROTECTION AT YOUR SERVICE

Standard

- ▶ Characteristics according to DIN 44081, 44082 & BS EN 60034-11:2004.
- ▶ Miniature design 3mm because of the small thermal mass.
- ▶ Robust construction
- ▶ Cold resistance $\leq 100 \Omega$ or $\leq 250 \Omega$ values on request.



Temperature Resistance diagram according to DIN 44081/44082 & BS EN 60034-11:2004



Single Thermistor
with Nomex Mylar/
Kynar shrink sleeve.

Triplex Thermistor
with Nomex Mylar/Kynar shrink
sleeve.

Mount-on Sensor
in isolated brass/aluminium
housing with M5 tapping

L1 = 500mm | L2 = 500mm | L3 = 200mm | L4 = 200mm | **Customized lead lengths also available**

Main Characteristics

Nominal response temperature

Tr. = 60°C upto 190°C in steps of 10°C also available 145°C and 155°C

Characteristics values	Values	Measurement Voltage (DC)
Resistance in the temperature range -20°C upto Tr. -20°C	20 to 250 Ω	$\leq 2.5V$
Resistance at Tr. -5°C	$\leq 550 \Omega$	$\leq 2.5V$
Resistance at Tr. +5°C	$\geq 1330 \Omega$	$\leq 2.5V$
Resistance at Tr. +15°C	$\geq 4000 \Omega$	$\leq 7.5V$ pulsed

Maximum Operating Voltage: $U_{max} = 30V$ DC

High Voltage Insulation: $U_{rms} = 2.5$ KV

Thermal response time according to DIN 44081 or 44082 & BS EN 60034-11:2004.

Colour Coding

Class of Insulation	Sub.	Sub.	Sub.	A	E	E	E	B	F	F	F	F	H	H	H	On Req.
Nominal Response Temperature Tr [°C]	60	70	80	90	100	110	120	130	140	145	150	155	160	170	180	190
Colour Codes of Leads as per the DIN standards	White Grey	White Brown	White White	Green Green	Red Red	Brown Brown	Grey Grey	Blue Blue	White Blue	White Black	Black Black	Blue Black	Blue Red	White Green	White Red	Orange Black

Other products from Insta Control

Dual TPU, Single TPU, PT-100 RTDs, PT-100 BTDs, Slot RTDs, KTY Sensor, Space Heater & Thermal Switches (TOPs), ATEX & IEC Exe approved PT-100 Slot RTDs, Bead type PT-100 RTDs & Bearing RTDs are available on request.

ISO 9001 : 2015 Certified Company



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