

PTC THERMISTORS



APPLICATION

Thermik Thermistors with PTC characteristic are utilized for the temperature control of windings. Their 3 mm pill is especially suited for the integration into windings of electric motors and large transformers.

Other Thermistor types are also available for overload protection, temperature control and sensing e.g. of electronic circuits, transformers etc.

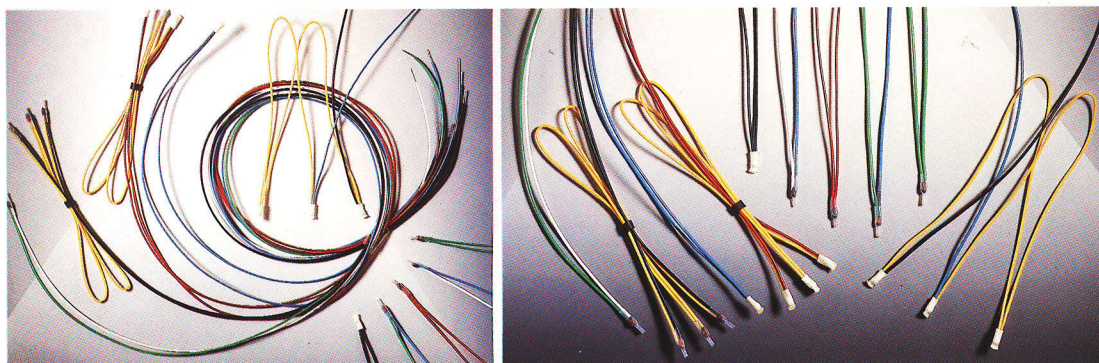


FUNCTION

Thermik PTC Thermistors are manufactured in accordance with DIN 44081 and 44082 respectively. Due to their small thermal mass, they feature a most favourable temperature sensitivity when properly located inside the windings. Utilizing the steep resistance increase in the narrow nominal response temperature area, a suitable electronic tripping circuit or remote tripping device cuts the current of the protected device when the nominal response temperature is reached. The temperature resistance diagram left shows the principal characteristic of Thermik PTC Thermistors.

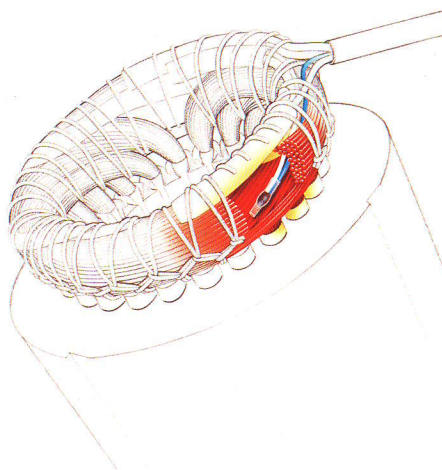
PTC THERMISTORS

Thermik Thermistors for winding protection optimally complement the Thermik product line of Thermal Cut-outs.

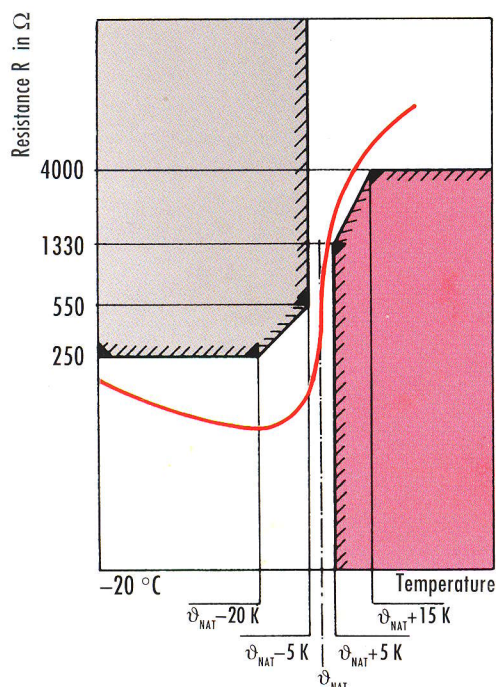


FEATURES

Characteristics according to DIN 44081/44082. Miniature design, only 3 mm in diameter. Fast response because of the small thermal mass. Robust construction. Cold resistance < 250 Ohm, other values upon request.



TEMPERATURE-RESISTANCE-DIAGRAM ACCORDING TO DIN 44081/44082



MAIN CHARACTERISTICS

Nominal response temperatures

$T_{NAT} = 60\text{ °C}$ up to 180 °C
in steps of 10 K
also available 115 °C , 145 °C and 155 °C

Typical Values	Value per PTC	Measuring voltage
Resistance in the temperature range -20 °C to $T_{NAT-20K}$	20 to $250\text{ }\Omega$	$\leq 2,5\text{ V}$
Resistance at T_{NAT-5K}	$\leq 550\text{ }\Omega$	$\leq 2,5\text{ V}$
Resistance at T_{NAT+5K}	$\geq 1330\text{ }\Omega$	$\leq 2,5\text{ V}$
Resistance at $T_{NAT+15K}$	$\geq 4000\text{ }\Omega$	$\leq 7,5\text{ V}$ – pulsating

Maximum Operating Voltage: $U_{max} = 30\text{ V}$ –
Dielectric strength of insulation: $U_{eff} = 2000\text{ V}$
Thermal response time according to DIN 44081 and 44082 respectively.