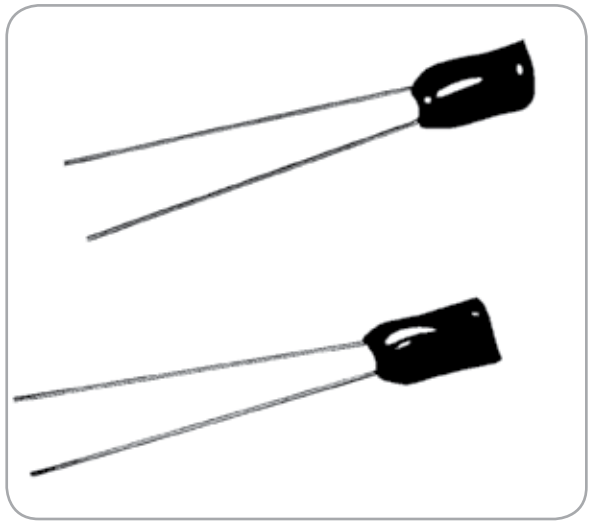
THERMOMETRICS
A COMMITMENT TO EXCELLENCE

NTC Types PRE/K

Thermometrics Thin-Film Resistance Elements



Applications

- Especially suited for surface measurement
- Installation on printed circuit boards
- Application in the auto industry, domestic appliances
- Resistance elements selected in tolerance groups for calorimetry
- Large quantity applications

Features

- Small dimensions available
- High electrical insulation is guaranteed by non-conductive edges and sides
- Short response times

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Types PRE/K Specifications

Description

A ceramic substrate supports a structured platinum layer covered with glass. The connection lead contacts are shear force resistant.

Options

Special versions on request. (Please take into account longer delivery time and minimum order quantity). Examples of possible variations are:

- Narrower IEC tolerances (indicate measurement point or range)
- Temperature up to 1112°F (600°C)
- Metallizations of the back of the substrate
- Longer or shorter connection wires
- Connection wires in opposite direction: U shape or S shape (chip surface completely covered with fixation paste for improved wire connection)
- Silver connection leads (Ø0.3 mm) which allows an easy soft solder (temperature range -94°F to 482°F (-70°C to 250°C))
- Extension of the connection wires with all types of cables.

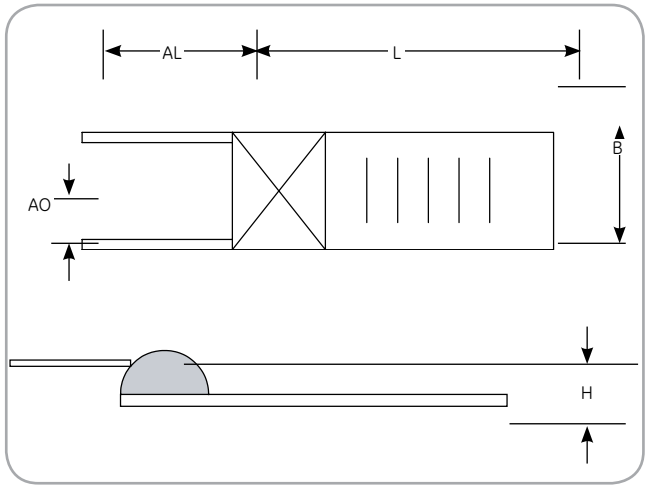
Data

Nominal Resistance Value

100 Ω, 500 Ω, 1000 Ω at 32°F (0°C)

Tolerance Grade

A and B according to IEC 751 and narrower tolerances in restricted temperature ranges.
(-40°F to 302°F (-40°C to 150°C))



NTC Type PRE/K Dimensions

Temperature Range

-94°F to 932°F (-70°C to 500°C)

Connection Material

Platinum coated nickel wire

Temperature Stability

Slight hysteresis possible after temperature shocks.

Vibration Resistance

High resistance to vibration and shocks.

Mechanical Stability

Insensitive to varying pressure, but sensitive to twisting and bending. Care must be taken when housing the elements; excessive stress may affect nominal resistance.

Environmental Conditions

Unhoused, for dry environment only.

Types PRE/K Specifications

Part Number	Nominal Resistance Ω @ 0°C	L	B	H	AL	AO	Self-Heating k/mW air stream v=1 m/s	response time in seconds water current v=0.4 m/s t=0.5	t=0.9	air stream v=1 m/s t=0.5	t=0.9
		(Dimensions in mm)									
Class B											
PT101K1003B1	100	9.5	2.9	0.9	10	0.2	0.15	0.2	0.5	5.4	17.9
PT501K1003B1	500	9.5	2.9	0.9	10	0.2	0.15	0.2	0.5	5.4	17.9
PT102K1003B1	1000	9.5	2.9	0.9	10	0.2	0.15	0.2	0.5	5.4	17.9
PT101K1002B1	100	9.5	1.9	0.9	10	0.2	0.20	0.2	0.4	4.2	12.7
PT501K1002B1	500	9.5	1.9	0.9	10	0.2	0.20	0.2	0.4	4.2	12.7
PT102K1002B1	1000	9.5	1.9	0.9	10	0.2	0.20	0.2	0.4	4.2	12.7
PT101K0403B1	100	3.9	2.9	0.9	10	0.2	0.35	0.2	0.5	4.1	13.6
PT501K0403B1	500	3.9	2.9	0.9	10	0.2	0.35	0.2	0.5	4.1	13.6
PT102K0403B1	1000	3.9	2.9	0.9	10	0.2	0.35	0.2	0.5	4.1	13.6
PT101K0402B1	100	3.9	1.9	0.9	10	0.2	0.50	0.2	0.5	3.4	10.7
PT501K0402B1	500	3.9	1.9	0.9	10	0.2	0.50	0.2	0.5	3.4	10.7
Class A											
PT101K1003D1	100	9.5	2.9	0.9	10	0.2	0.15	0.2	0.5	5.4	17.9
PT101K1002D1	100	9.5	1.9	0.9	10	0.2	0.20	0.2	0.4	4.2	12.7
PT101K0403D1	100	3.9	2.9	0.9	10	0.2	0.35	0.2	0.5	4.1	13.6
PT101K0402D1	100	3.9	1.9	0.9	10	0.2	0.50	0.2	0.5	3.4	10.7
Class 1/3 DIN B											
PT101K1003B3	100	9.5	2.9	0.9	10	0.2	0.15	0.2	0.5	5.4	17.9
PT101K1002B3	100	9.5	1.9	0.9	10	0.2	0.20	0.2	0.4	4.2	12.7
PT101K0403B3	100	3.9	2.9	0.9	10	0.2	0.35	0.2	0.5	4.1	13.6
PT101K0402B3	100	3.9	1.9	0.9	10	0.2	0.50	0.2	0.5	3.4	10.7
Class B											
PT101K2002B1	100	2.3	1.9	0.9	10	0.2	1	0.3	0.8	3	9
Class A											
PT101K2002A1	100	2.3	1.9	0.9	10	0.2	1	0.3	0.8	3	9
Class 1/3 DIN B											
PT101K2002B3	100	2.3	1.9	0.9	10	0.2	1	0.3	0.8	3	9

Dimensional tolerances: L (length of body) and B (width) = ±0.0059 in (±0.15 mm), H (height, includes 0.0157 in (0.4 mm) substrate thickness) = maximum 0.0079 in / 0.0039 in (±0.2mm / -0.1mm), AL (connection wire length) = ±0 .04 in (±1.0 mm). A0 (connection wire diameter) = ±0.00079 in (±0.02 mm).
The measuring point for the basic value is situated at 0.315 in (8 mm) from the end of the sensor body.

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