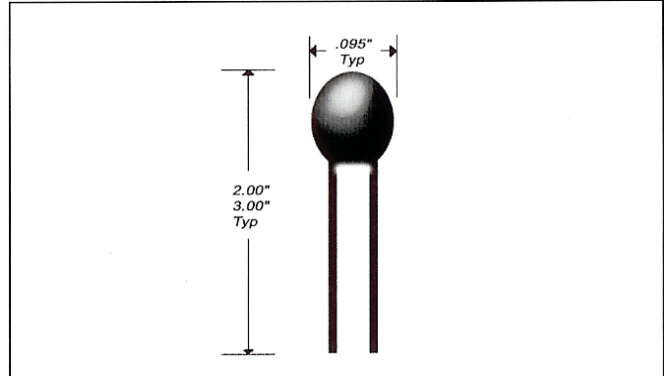
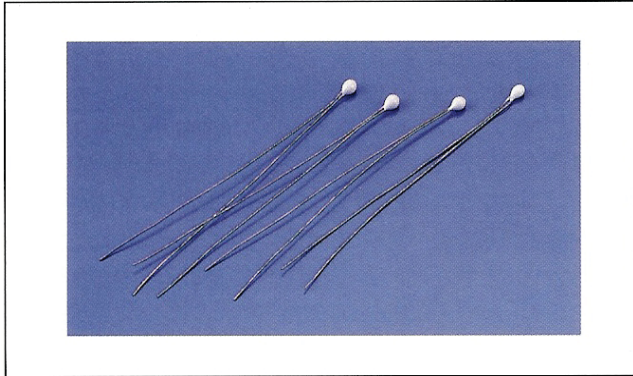


# IN Series



## Feature:

- High accuracy tolerances to +/-0.10°C
- Operating ranges from -50°C to 150°C
- Small size with ease of handling
- Proprietary processes produce top of the line quality and stability

Interchangeable refers to how accurately thermistors guarantee (R/T) curve over a range of temperatures. This allows every thermistor to be interchangeable with every other thermistor of the same series specifications without re-calibration of

## SPECIFICATIONS

<b>Temperature rating/ Recommended operating ranges</b>	IN Series thermistors may be intermittently cycled at temperatures from -50°C to 150°C. Optimum stability is achieved when they are operated at temperatures within the specified temperature range.	<b>R/T Curve</b>	IN Series thermistors are available in all R/T curve materials. Detailed curve material information on pages 35-37
<b>Temperature ranges</b>	-20°C to 50°C, 0°C to 50°C, 20°C to 45°C, 0°C to 70°C, 0°C to 100°C	<b>Dissipation constant</b>	2 mW/°C in still air 13 mW/°C in stirred oil
<b>Tolerances</b>	±0.10°C, ±0.20°C, ±0.50°C, ±1.00°C	<b>Thermal time constant</b>	Typically 0.75 second in stirred oil
		<b>Custom options</b>	Additional temperature and tolerance ranges. Various lead materials, diameters and lengths.

## ORDERING INFORMATION

Examples of Interchangeable NTC Thermistors – IN Series

Part No.	R/T Curve	Res. In ohms @25°C	Tolerance	Tolerance Range	Lead Type	AWG	Coating	O.L.
ES IN-A001K-C3-13	A	1K	± 0.2 °C	0 to 70°C	Tinned copper	30	Phenolic	2"
ES IN-A001K-D4-17-03	A	1K	± 0.1 °C	0 to 100°C	Tinned alloy 180	32	Phenolic	3"
ES IN-A010K-C3-13	A	10K	± 0.2 °C	0 to 70°C	Tinned copper	30	Phenolic	2"
ES IN-A010K- D4-17-03	A	10K	± 0.1 °C	0 to 100°C	Tinned alloy 180	32	Phenolic	3"
ES IN-A010K-C2-13	A	10K	± 0.2 °C	-20 to 50°C	Tinned copper	30	Phenolic	2"
ES IN-A100K-A1-13	A	100K	± 1.0 °C	20 to 45°C	Tinned copper	30	Phenolic	2"
ES IN-A006K-C1-13	A	6K	± 0.2 °C	20 to 45°C	Tinned copper	30	Phenolic	2"
ES IN-A2252-D1-13	A	2,252	± 0.1 °C	20 to 45°C	Tinned copper	30	Phenolic	2"
ES IN-B030K-D3-07	B	30K	± 0.1 °C	0 to 70°C	Tinned copper	32	Phenolic	2"
ES IN-B100K-B1-13	B	100K	± 0.5 °C	20 to 45°C	Tinned copper	30	Phenolic	2"
ESIN-C010K-A3-13	C	10K	± 1.0 °C	0 to 70°C	Tinned copper	30	Phenolic	2"
ES IN-D100K-A3-23	D	100K	± 1.0 °C	0 to 70°C	Tinned copper	30	Phenolic	3"
ES IN-G0300-B3-18-03	G	300	± 0.5 °C	0 to 70°C	Tinned alloy 180	32	epoxy	3"

# IN Series – Order Map

ES IN -         - XX

**R/T CURVE**  
A= Curve A H= Curve H  
B= Curve B J= Curve J  
C= Curve C K= Curve K  
D= Curve D P= Curve P  
E= Curve E

**Resistance in ohms @25°C**  
0300=300 ohms  
001K=1K ohms  
006K=6K ohms  
100k=100K ohms  
2252=2,252 ohms

**Tolerance at 25°C**  
A=±1.0°C B=±0.5°C  
C=±0.2°C D=±1.0°C  
X=new letter assigned on specials

**Temperature Ranges**  
1= +20°C to 45°C 5= +20°C to 90°C  
2= -20°C to 50°C 6= -40°C to 40°C  
3= 0°C to 70°C 7= +50°C to 125°C  
4= 0°C to 100°C 8= 0°C to 50°C  
9= -20°C to 125°C  
X=new digit assigned on specials

2" Leads				
Code	AWG	Lead o.d.	Lead Type	Chip Coating
04	30	0.010"	Tinned Copper	Uncoated
05	26	0.0169"	Tinned Copper	Epoxy
06	28	0.0126"	Tinned Copper	Epoxy
07	32	0.008"	Tinned Copper	Phenolic
08	30	0.010"	Nickel	Phenolic
09	26	0.0159"	Tinned Copper	Uncoated
10	26	0.0159"	Tinned Copper	Phenolic
11	32	0.008"	Nickel	Phenolic
12	32	0.008"	Tinned Copper	Epoxy
13	30	0.010"	Tinned Copper	Phenolic
14	30	0.010"	Tinned Copper	Epoxy
15	28	0.0126"	Tinned Copper	Phenolic
16	28	0.0126"	Tinned Copper	Uncoated
17	32	0.008"	Tinned Alloy 180	Phenolic
18	32	0.008"	Tinned Alloy 180	Epoxy
19	32	0.008"	Tinned Copper	Uncoated
20	28	0.0126"	Nickel	Phenolic

3" Leads				
Code	AWG	Lead o.d.	Lead Type	Chip Coating
21	32	0.008"	Nickel	Phenolic
22	32	0.008"	Tinned Copper	Epoxy
23	30	0.010"	Tinned Copper	Phenolic
24	30	0.010"	Tinned Copper	Epoxy
25	28	0.0126"	Tinned Copper	Phenolic
26	28	0.0126"	Tinned Copper	Epoxy
27	32	0.008"	Tinned Alloy 180r	Phenolic
28	32	0.008"	Tinned Alloy 180	Epoxy
31	30	0.010"	Red Teflon Alloy 180	Epoxy
41*	30	0.010"	Ag/Cu Twisted Kynar	Epoxy

\* 6K to 30K only  
For optional lengths other than 2" or 3" substitute XX with lengths in inches  
Example 4"=04