

T H E R M O M E T R I C S  
A C O M M I T M E N T T O E X C E L L E N C E

# NTC Type A990 Series

## Thermometrics Thermistors



### Applications

#### Type A990B

For insertion into metal housing or close tolerance openings

#### Type A990C

Fully immersible sub-assembly for use in conductive fluids.

#### Type A990D

Limited depth immersion or surface contact, for use in measuring the temperature of liquids or solids.

#### Type A990E

Fully immersible sub-assembly with additional mechanical strain relief, for use in metal housings for liquid immersion or close tolerance openings.

#### Type A990M

Sub-assembly encapsulated into sharpened hypodermic needle with 3 ft (1 m) extension leads of #28 GA PVC wire. For use in various laboratory temperature measurements.

#### Type A990P

Standard sub-assembly encapsulated into vinyl catheter tubing with #28 GA PVC wire extension leads, for use in various commercial applications.

#### Type A990T

Sub-assembly encapsulated into closed end stainless steel sheath with threaded hub. For use in various commercial applications or severe environments.

The NTC Type A990 Interchangeable sub-assemblies consist of matched pairs of small, glass encapsulated thermistor beads which are connected in either series or parallel circuit configurations. These sub-assemblies are available in a variety of styles which enable them to be used in measuring the temperature of liquids or solids or to be encapsulated into larger housings such as hypodermic needles or closed end sheaths.

The sub-assemblies provide interchangeable resistance-temperature characteristics in extremely small, fast response packages which are easy to handle. The units shown are available from stock and/or with fast delivery. Resistance, tolerances and temperature ranges, other than those which are indicated, may be available upon special order. Other assembly configurations may be available upon special order. Please consult the factory for any special requests or modifications.

Maximum Operating or Storage Temperature for Optimum Stability is 221°F (105°C).

**Amphenol**  
**Advanced Sensors**

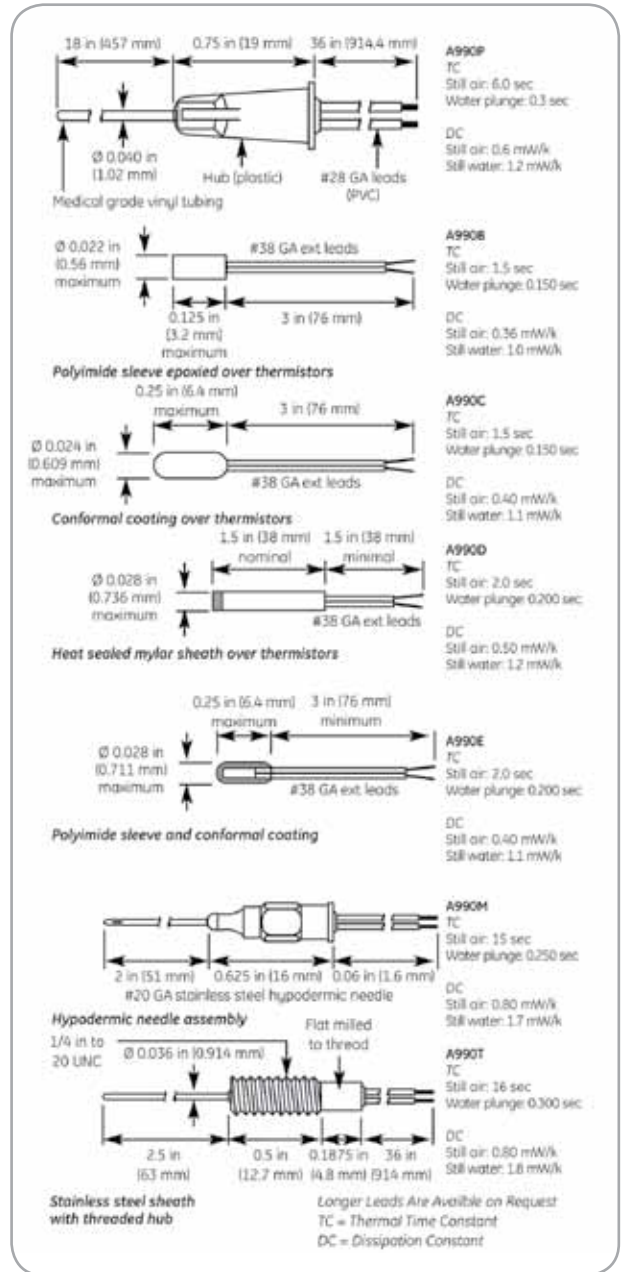
# NTC Type A990 Specifications

## Curve Tolerances

Tolerance Code	Temperature Tolerance in °C			
	0°C to 25°C	25°C to 50°C	50°C to 70°C	70°C to 105°C
Sx1	±0.1	±0.05	±0.1	±0.2
Sx2	±0.1	±0.1	±0.1	±0.2
Sx3	±0.2	±0.1	±0.2	±0.3
Sx4	±0.2	±0.2	±0.2	±0.3

## Resistance vs. Temperature Characteristics

Temperature (°C)	Resistance Code (Data in Ω)					
	UN 103	UT 103	UN 223	UT 223	UN 443	UT 443
0	14129.9	56519.5	31452.1	125808	64394.4	257577.5
5	11335.1	45340.5	25168.0	100672	51167.4	204669.5
10	9152.8	36611.2	20273.6	81094.6	40931.5	163726.2
15	7437.4	29749.5	16435.7	65742.7	32956.3	131825.2
20	6080.3	24321.1	13406.3	53625.1	26701.3	106805.3
25	5000.0	20000.0	11000.0	44000.0	21764.2	87056.8
30	4134.9	16539.7	9077.0	36307.9	17843.2	71372.8
35	3438.1	13752.5	7531.1	30124.5	14710.6	58842.5
40	2873.8	11495.1	6281.4	25125.7	12193.5	48774.1
45	2414.2	9656.7	5265.6	21062.5	10159.7	40638.8
50	2038.0	8151.9	4435.6	17742.3	8507.6	34030.3
55	1728.4	6913.8	3753.9	15015.5	7154.4	28617.7
60	1472.6	5890.2	3191.3	12765.2	6043.0	24171.9
65	1260.0	5040.0	2724.8	10899.2	5126.1	20504.4
70	1082.7	4330.6	2336.2	9344.9	4366.4	17465.8
75	934.02	3736.1	2011.1	8044.5	3734.4	14937.8
80	808.93	3235.7	1738.0	6952.0	3206.5	12825.9
85	703.23	2812.9	1507.6	6030.3	2763.7	11054.7
90	613.55	2454.2	1312.4	5249.6	2390.8	9563.4
95	537.18	2148.7	1146.5	4586.0	2075.7	8303.0
100	471.90	1887.6	1004.9	4019.6	1808.5	7233.9
105	415.90	1663.6	883.67	3534.7	1580.9	6323.7

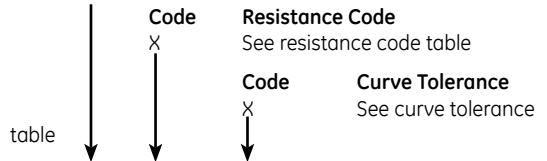


NTC Type A990 dimensions

## Ordering Information

The code number to be ordered may be specified as follows:

A990x (x = B, C, D, E, M, P or T)



A990 - \_ - \_ - \_ - Typical model number