



NTC THERMISTORS: TYPE MA400

DESCRIPTION:

The Thermometrics Type MA400 interchangeable temperature probes have been designed to provide high reliability and performance for temperature measuring and controlling instruments. The Series 400 temperature probes are based on our 2252 Ohm interchangeable curve.

The curve shown is for the thermistor only and may vary slightly, for any specific probe, by the lead resistance present.

APPLICATIONS:

These probes are recommended for applications requiring high stability, precise interchangeable measurements at comparatively low cost.

DATA:

- $\pm 0.10^{\circ}\text{C}$ Interchangeability over a 0°C to 70°C range.
- 0°C to 100°C recommended temperature range.
- 10 foot shielded vinyl cable except when otherwise specified.
- Standard 0.250" molded phone plug terminations.

The Unitherm thermochips used in these assemblies may be operated at temperatures as low as -80°C and as high as 150°C . However, best overall stability is achieved with exposure or storage temperatures below 105°C . Degraded stability will result if the devices are subjected to temperatures greater than 105°C . In addition, the vinyl materials (tubing and leads) used for the probes begin to become brittle at temperatures below 0°C and have a maximum exposure temperature of 100°C .

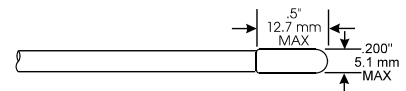
TEMP °C	2252 OHMS	TEMP °C	2252 OHMS
-55	217036	25	2252.00
-54	201609	26	2155.69
-53	187379	27	2064.02
-52	174245	28	1976.76
-51	162116	29	1893.67
-50	150910	30	1814.51
-49	140550	31	1739.09
-48	130968	32	1667.22
-47	122101	33	1598.51
-46	113891	34	1533.20
-45	106284	35	1470.89
-44	99234.8	36	1411.58
-43	92697.4	37	1354.91
-42	86632.0	38	1300.77
-41	81001.8	39	1249.08
-40	75773.0	40	1199.72
-39	70914.6	41	1152.57
-38	66398.2	42	1107.52
-37	62197.6	43	1064.47
-36	58289.1	44	1023.30
-35	54650.5	45	983.97
-34	51261.7	46	946.02
-33	48104.0	47	909.99
-32	45160.4	48	875.92
-31	42413.4	49	842.96
-30	39853.5	50	811.42
-29	37457.4	51	780.92
-28	35228.0	52	752.29
-27	33143.3	53	724.59
-26	31193.4	54	698.03
-25	29370.0	55	672.58
-24	27659.5	56	648.23
-23	26061.2	57	624.83
-22	24573.5	58	602.45
-21	23173.7	59	580.90
-20	21862.1	60	560.34
-19	20632.5	61	540.56
-18	19479.5	62	521.58
-17	18397.8	63	503.35
-16	17382.7	64	485.85
-15	16429.6	65	469.05
-14	15534.4	66	452.92
-13	14693.2	67	437.42
-12	13402.6	68	422.52
-11	13159.2	69	408.21
-10	12460.0	70	394.47
-9	11801.9	71	381.22
-8	11182.5	72	368.50
-7	10599.2	73	356.27
-6	10049.8	74	344.50
-5	9532.00	75	333.13
-4	9043.90	76	322.24
-3	8583.62	77	311.74
-2	8149.42	78	301.70
-1	7739.68	79	292.02
0	7352.90	80	282.64
1	6988.42	81	273.65
2	6643.38	82	265.00
3	6317.41	83	256.67
4	6009.39	84	248.61
5	5718.10	85	240.91
6	5442.68	86	233.35
7	5182.12	87	226.14
8	4935.54	88	219.27
9	4702.12	89	212.58
10	4481.09	90	206.13
11	4271.72	91	199.91
12	4073.33	92	193.91
13	3885.28	93	188.11
14	3706.99	94	182.52
15	3537.90	95	177.12
16	3377.47	96	171.91
17	3225.23	97	166.87
18	3080.70	98	162.01
19	2943.46	99	157.32
20	2813.11	100	152.78
21	2689.26	101	148.40
22	2571.54	102	144.17
23	2459.64	103	140.07
24	2353.22	104	136.11
25	2252.00	105	132.28

INTERCHANGEABLE TEMPERATURE PROBES

GENERAL PURPOSE PROBE MA401

Lead Resistance = 0.40Ω

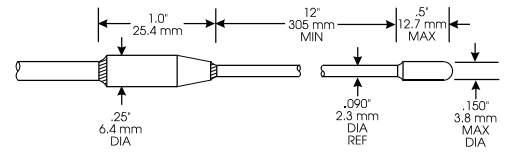
Molded tip with shielded vinyl jacketed cable, ideal for esophageal or rectal temperature measurements and short-term sub-soil or water measurements. Versatile and rugged, yet low cost.



MINIATURE PROBE MA402

Lead Resistance = 0.45Ω

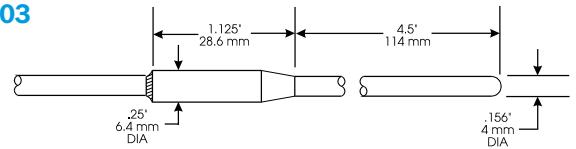
Molded tip, small size vinyl cable, ideal for esophageal, rectal or cuvette temperature measurements.



LIQUID IMMERSION PROBE MA403

Lead Resistance = 0.40Ω

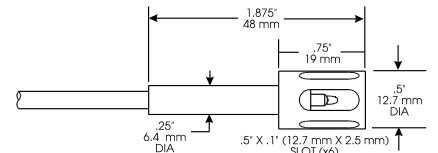
Immersible to end of sheath only. Rugged stainless steel sheath with vinyl extension leads. Often used for liquid immersion and surface measurements.



AIR TEMPERATURE PROBE MA405

Lead Resistance = 0.40Ω

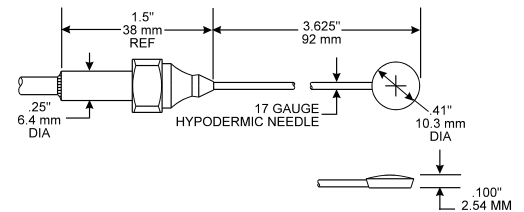
Open-end stainless steel housing protects exposed epoxy coated chip thermistor while providing fast response in the measurement of gas streams or control in remote air applications.



SURFACE TEMPERATURE PROBE MA408

Lead Resistance = 0.52Ω

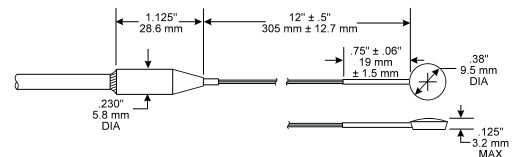
Epoxy-filled cup with stainless steel hypodermic needle and handle for surface temperature measurements.



SURFACE MEASUREMENT PROBE MA409A

Lead Resistance = 0.75Ω

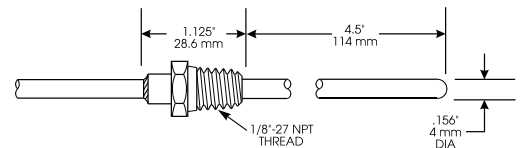
Epoxy-filled cup with rugged, yet flexible vinyl ribbon cable. Installs quickly to flat surfaces.



LIQUID IMMERSION PROBE WITH FITTING MA410

Lead Resistance = 0.40Ω

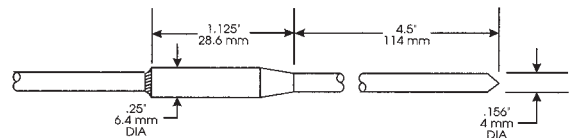
Closed-end stainless steel tube with threaded hex-head hub. Shielded, vinyl jacketed cable. A rugged design for temperature control, measurement of fluids.



PENETRATION PROBE MA418

Lead Resistance = 0.40Ω

Pointed tip, stainless steel housing easy insertion into soft or semi-solid materials, such as fruits, sand & soil.



.25" (6.4MM) PHONE PLUG

Standard right-angle phone plug available on most Type MA400 Temperature Probes

