

Model 451 Miniature Tubular Probe



- 400 series nominal resistance response curve
- 2252.4 ohm Resistance @ 25°C (including lead wire resistance)
- Tested to $\pm 0.1^\circ\text{C}$, 0°C to 70°C for laboratory use
- Pressed Disk Ceramic Sensor
- High sensitivity to temperature change
- $\frac{1}{4}$ " phone plug connector
- 1 mm (0.042") tube diameter
- Rugged PVC cable

DESCRIPTION

400-series miniature stainless steel tubular probe.

FEATURES

- Fast response through SS tube wall
- Standard 400 series resistance response
- Standard $\frac{1}{4}$ " phone plug connector
- Reuse after cleaning

APPLICATIONS

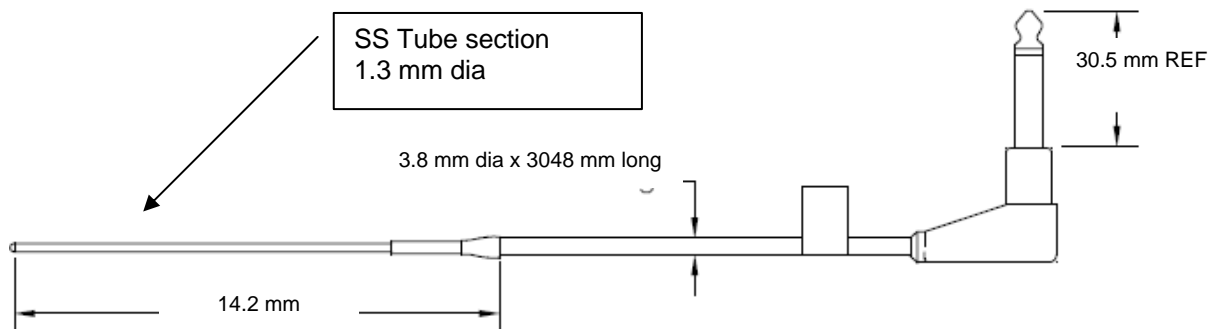
- Liquid temperature measurement
- Subsurface temperature measurement
- Laboratory vermin temperature measurement

PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C (including lead resistance)	Ohms	2252.4
Tolerance 0°C to 70°C	$^\circ\text{C}$	± 0.1
Beta Value 25/85	K	3976
Tolerance on Beta Value	%	0.4
Typical response time in stirred fluid	Seconds	< 4
Liquid immersion with 15VDC applied	Ohms	> 15Meg

Model 451 Miniature Tubular Probe

MECHANICAL DETAILS



TYPICAL PERFORMANCE CURVES

Temp °C	K-Ohms
0	7.3554
1	6.9894
2	6.6444
3	6.3194
4	6.0114
5	5.7194
6	5.4444
7	5.1834
8	4.9374
9	4.7034
10	4.4824
11	4.2734
12	4.0744
13	3.8864
14	3.7084
15	3.5394
16	3.3784
17	3.2264
18	3.0814
19	2.9444
20	2.8144
21	2.6904
22	2.5724
23	2.4604
24	2.3544

Temp °C	K-Ohms
25	2.2524
26	2.1564
27	2.0644
28	1.9774
29	1.8944
30	1.8154
31	1.7394
32	1.6674
33	1.5994
34	1.5334
35	1.4714
36	1.4124
37	1.3554
38	1.3014
39	1.2494
40	1.2004
41	1.1524
42	1.1074
43	1.0644
44	1.0234
45	0.9842
46	0.9466
47	0.9106
48	0.8762
49	0.8432

Temp °C	K-Ohms
50	0.8117
51	0.7815
52	0.7526
53	0.7249
54	0.6983
55	0.6729
56	0.6485
57	0.6252
58	0.6028
59	0.5813
60	0.5607
61	0.5409
62	0.5219
63	0.5037
64	0.4862
65	0.4694
66	0.4533
67	0.4378
68	0.4229
69	0.4086
70	0.3949

Model 451 Miniature Tubular Probe

ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
046451	451 CUVETTE PROBE	2252.4	20

* For quantities less than Minimum Order Quantity – contact distribution

NORTH AMERICA

Measurement Specialties, Inc.
910 Turnpike Road
Shrewsbury, MA 01545
Tel: 1-508-842-0516
Fax: 1-508-842-0342

Sales email:
temperature.sales.amer@meas-spec.com

EUROPE

Measurement Specialties, Inc
Ballybrit Business Park
Galway Ireland
Tel: +353-91-753238
Fax: +353-91-770789

Sales email:
temperature.sales.emea@meas-spec.com

ASIA

Measurement Specialties (China) Ltd.
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 51807
China
Tel: +86 (0) 755 33305088
Fax: +86 (0) 755 33305099

Sales email:
temperature.sales.asia@meas-spec.com

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.