



✓RoHS

## HIGH HUMIDITY ENVIRONMENTS MINI PROBE (MRBD)

### SPECIFICATIONS

- High degree of resistance to moisture and high humidity environments (Standard IEC 60068-2-3. Storage in Damp Heat, Air temperature @ +50°C, Relative Humidity 95% for 56 Days)
- Smaller than regular BetaCURVE Interchangeable Series
- Fast time response
- Suitable for encapsulation into small housings or special enclosures
- Various lead lengths available

NTC Thermistor soldered to 32 AWG Solid Silver Plated Copper Wire with PTFE Insulation. Unit is potted in a polyimide tube with thermally conductive epoxy.

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### FEATURES

- High degree of resistance to moisture and high humidity environments (Standard IEC 60068-2-3)
- Rapid Time Constant  
(400 milliseconds in liquids).
- Standards supplied with  $\pm 0.2^{\circ}\text{C}$  tolerance  
( $0^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ).
- Custom tolerances available on request
- Temperature range  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$

### APPLICATIONS

- Reduced size allows localized and rapid temperature sensing
- Small Biomedical probes and catheter assemblies
- Temperature monitoring in Communication systems
- Micro-flow sensing
- Instrumentation and specialist probes

### PERFORMANCE SPECS

Parameters	Units	Value
Nominal Resistance at $+25^{\circ}\text{C}$	Ohms	10000
Resistance tolerance from $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$	$^{\circ}\text{C}$	$\pm 0.2$
Alpha Value at $+25^{\circ}\text{C}$	$\%/^{\circ}\text{C}$	- 4.39
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	$\pm 0.5$
Time response in Liquids	milliseconds	400
Dissipation Constant in still air	$\text{mW}/^{\circ}\text{C}$	0.5

### MECHANICAL DETAILS

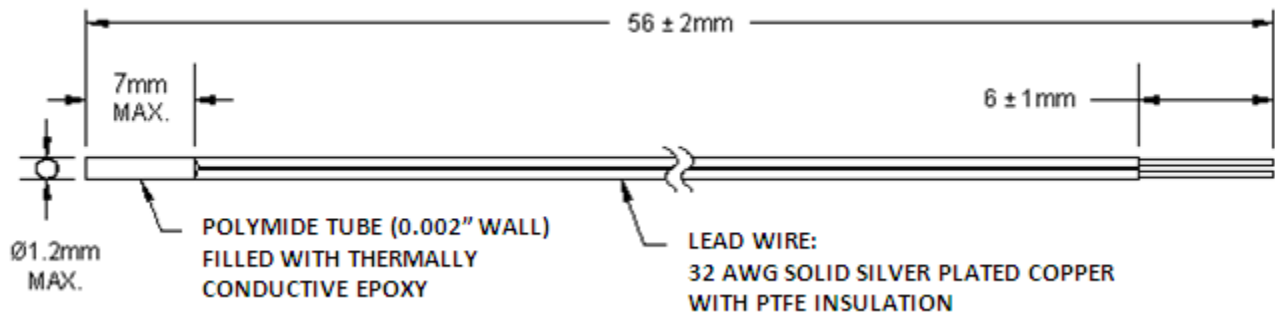


Figure 1: Mini BetaCURVE Thermistor Probe (MRBD) – High Humidity environments

## HIGH HUMIDITY ENVIRONMENTS MINI PROBE (MRBD)

### RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
-40	336,109
-39	314,563
-38	294,534
-37	275,905
-36	258,571
-35	242,434
-34	227,404
-33	213,399
-32	200,344
-31	188,168
-30	176,807
-29	166,202
-28	156,298
-27	147,045
-26	138,396
-25	130,309
-24	122,743
-23	115,663
-22	109,034
-21	102,825
-20	97,008
-19	91,554
-18	86,440
-17	81,642
-16	77,139
-15	72,912
-14	68,941
-13	65,210
-12	61,703
-11	58,406
-10	55,304
-9	52,385
-8	49,638
-7	47,051
-6	44,614
-5	42,317

Temp. °C	Ohms
-4	40,152
-3	38,110
-2	36,184
-1	34,367
0	32,651
1	31,031
2	29,501
3	28,054
4	26,688
5	25,395
6	24,173
7	23,016
8	21,921
9	20,885
10	19,903
11	18,973
12	18,092
13	17,257
14	16,465
15	15,714
16	15,001
17	14,325
18	13,682
19	13,073
20	12,493
21	11,943
22	11,420
23	10,923
24	10,450
<b>25</b>	<b>10,000</b>
26	9,572
27	9,165
28	8,777
29	8,408
30	8,056

Temp. °C	Ohms
31	7,721
32	7,402
33	7,097
34	6,807
35	6,530
36	6,266
37	6,014
38	5,774
39	5,544
40	5,325
41	5,116
42	4,916
43	4,724
44	4,542
45	4,367
46	4,200
47	4,040
48	3,887
49	3,741
50	3,601
51	3,467
52	3,339
53	3,216
54	3,098
55	2,985
56	2,877
57	2,773
58	2,674
59	2,579
60	2,487
61	2,399
62	2,315
63	2,234
64	2,157
65	2,082

Temp. °C	Ohms
66	2,011
67	1,942
68	1,876
69	1,813
70	1,752
71	1,693
72	1,637
73	1,582
74	1,530
75	1,480
76	1,432
77	1,385
78	1,341
79	1,298
80	1,256
81	1,216
82	1,178
83	1,141
84	1,105
85	1,070
86	1,037
87	1,005
88	974
89	945
90	916
91	888
92	862
93	836
94	811
95	787
96	764
97	741
98	720
99	699
100	678

## ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C	MOQ
10K3MRBD1	Mini BetaCurve Thermistor Probe (MRBD)	10000	1000 *

\* For quantities less than Minimum Order Quantity – contact distribution

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