

Pipe Clamp Temperature Sensor



- Radius contact on brass housing to optimize thermal response
- Suitable for Fast time response applications
- Clamp provides a tight fit to the pipe without the need for additional fastening and is easily field mounted
- Supplied with cable and connector
- Designed to fit Ø 23.5mm pipe
- RoHS Compliant

DESCRIPTION

This assembly consists of a thermistor mounted in a brass housing to provide the user with fast and accurate thermal response. The device is potted in a Delrin housing using epoxy resin.

FEATURES

- Suitable for fast time response applications
- Suitable for use in high humidity and high moisture conditions
- Custom tolerances available on request
- Available in a range of R/T curves
- Temperature range from -40°C to +105°C
- Supplied with cable and connector

APPLICATIONS

- Central heating systems
- Gas combi boilers
- Refrigeration units
- Solar collectors
- Domestic showers

PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ +25°C	Ohms	10,000
Tolerance @ +25°C	%	± 2
Beta Value 25/85	K	3976
Tolerance on Beta Value	%	± 2
Time Response in application	Seconds	<3
Dissipation Constant	mW/°C	5
Insulation Resistance (Min. of 100Mohms for 1 Sec.)	Volts	500

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MECHANICAL DETAILS

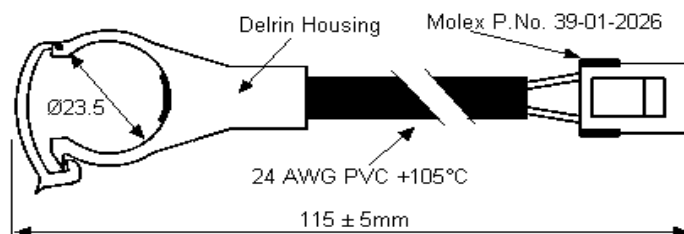


Figure 1: Pipe clamp temperature sensor

RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
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-40°C	336,108.9
-39°C	314,563.2
-38°C	294,533.7
-37°C	275,905.0
-36°C	258,570.8
-35°C	242,433.7
-34°C	227,404.0
-33°C	213,399.4
-32°C	200,344.0
-31°C	188,167.9
-30°C	176,806.9
-29°C	166,201.8
-28°C	156,297.9
-27°C	147,044.8
-26°C	138,396.1
-25°C	130,308.9
-24°C	122,743.5
-23°C	115,663.2
-22°C	109,034.4
-21°C	102,825.5
-20°C	97,007.7
-19°C	91,554.1
-18°C	86,439.8
-17°C	81,642.0
-16°C	77,139.1
-15°C	72,911.6
-14°C	68,940.9
-13°C	65,210.1
-12°C	61,703.3
-11°C	58,405.9
-10°C	55,304.2

Temp. °C	Ohms
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-9°C	52,385.5
-8°C	49,638.0
-7°C	47,050.8
-6°C	44,613.6
-5°C	42,316.9
-4°C	40,151.8
-3°C	38,110.1
-2°C	36,184.1
-1°C	34,366.7
0°C	32,651.0
1°C	31,030.9
2°C	29,500.5
3°C	28,054.4
4°C	26,687.5
5°C	25,395.1
6°C	24,172.6
7°C	23,015.9
8°C	21,921.2
9°C	20,884.8
10°C	19,903.2
11°C	18,973.4
12°C	18,092.2
13°C	17,256.9
14°C	16,464.9
15°C	15,713.7
16°C	15,000.9
17°C	14,324.5
18°C	13,682.4
19°C	13,072.6
20°C	12,493.3
21°C	11,943.0

Temp. °C	Ohms
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22°C	11,419.9
23°C	10,922.7
24°C	10,449.8
25°C	10,000.0
26°C	9,572.0
27°C	9,164.7
28°C	8,777.0
29°C	8,407.7
30°C	8,056.1
31°C	7,721.0
32°C	7,401.7
33°C	7,097.3
34°C	6,807.1
35°C	6,530.3
36°C	6,266.2
37°C	6,014.3
38°C	5,773.8
39°C	5,544.2
40°C	5,325.0
41°C	5,115.6
42°C	4,915.6
43°C	4,724.4
44°C	4,541.7
45°C	4,367.0
46°C	4,200.0
47°C	4,040.2
48°C	3,887.4
49°C	3,741.1
50°C	3,601.1
51°C	3,467.0
52°C	3,338.7

Temp. °C	Ohms
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53°C	3,215.8
54°C	3,098.0
55°C	2,985.2
56°C	2,877.0
57°C	2,773.3
58°C	2,673.9
59°C	2,578.6
60°C	2,487.1
61°C	2,399.4
62°C	2,315.2
63°C	2,234.4
64°C	2,156.8
65°C	2,082.3
66°C	2,010.8
67°C	1,942.1
68°C	1,876.0
69°C	1,812.6
70°C	1,751.6
71°C	1,693.0
72°C	1,636.6
73°C	1,582.4
74°C	1,530.2
75°C	1,480.1
76°C	1,431.8
77°C	1,385.3
78°C	1,340.6
79°C	1,297.5
80°C	1,256.1
81°C	1,216.1
82°C	1,177.7
83°C	1,140.6

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84°C	1,104.9	90°C	916.0	96°C	763.6	102°C	640.0
85°C	1,070.5	91°C	888.3	97°C	741.2	103°C	621.8
86°C	1,037.3	92°C	861.5	98°C	719.6	104°C	604.2
87°C	1,005.3	93°C	835.8	99°C	698.6	105°C	587.1
88°C	974.4	94°C	810.9	100°C	678.4		
89°C	944.7	95°C	786.8	101°C	658.9		

ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
10K3D591	Pipe clamp temperature sensor	10,000	1000*

* For quantities less than Minimum Order Quantity – contact distribution

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