

# 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

# Pipe Clamp Temperature Sensor

## MECHANICAL DETAILS

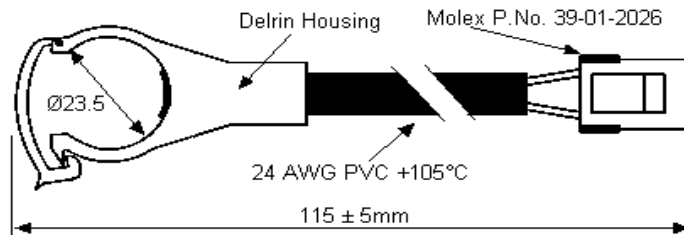


Figure 1: Pipe clamp temperature sensor

## RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
----------	------

-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
----------	------

-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
----------	------

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
----------	------

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

# Pipe Clamp Temperature Sensor

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	$\Omega$ @25°C	MOQ
10K3D591	Pipe clamp temperature sensor	10,000	1000*

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

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.