

PT1000

Temperature Sensor

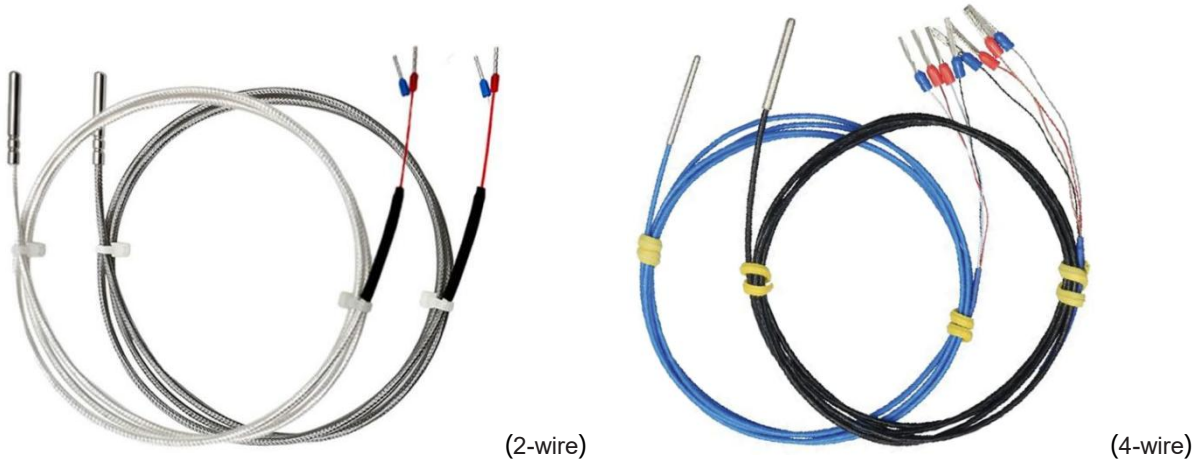
PRODUCT MANUAL

Striving for the Bright Future of Precision Optoelectronic Measurement.

01 Product Functions

PT1000 is a platinum resistance temperature sensor with a nominal resistance of 1000 Ω at 0℃.It is designed for precision temperature measurement and control in industrial and scientific research applications.

- Excellent long-term stability
 - High temperature measurement accuracy
 - Fast response time
 - Good vibration resistance
- Thermal shock resistance
 - Low self-heating effect
 - User customization supported



02 Specifications

Parameter	PT1000-200-200-2L	PT1000-0-600-2L
Accuracy Class	Class A	
Tolerance	$\pm(0.10+0.002\times t)^{\circ}\text{C}$	$\pm(0.15+0.002\times t)^{\circ}\text{C}$
Temperature Measurement Range	-200 ~ +200℃	0 ~ +600℃
Cable Length	1000mm (Customizable)	
Probe Dimensions	Φ4x30mm	
Wiring Configuration	2-wire	
Response Time	Water@0.5m/s=0.5s; Air@2m/s=10.0s	
Temperature Resistance	Probe: up to 600℃ Sensor cable: long-term operation up to 500℃ High-temperature customization available	

Parameter	PT1000-B-1-4L	PT1000-A-2-4L	PT1000-1/3B-2-4L	PT1000-1/10B-2-4L
Accuracy Class	Class B	Class A	Class 1/3B	Class 1/10B
Tolerance	$\pm(0.3+0.005\times t)^{\circ}\text{C}$	$\pm(0.15+0.002\times t)^{\circ}\text{C}$	$\pm(0.1+0.0017\times t)^{\circ}\text{C}$	$\pm(0.03+0.0005\times t)^{\circ}\text{C}$
Temperature Measurement Range	-200 ~ +200 $^{\circ}\text{C}$			
Cable Length	$\Phi 1\times 20\text{mm}$	$\Phi 2\times 20\text{mm}$	$\Phi 2\times 20\text{mm}$	$\Phi 2\times 20\text{mm}$
Probe Dimensions	4-wire			
Wiring Configuration	1000mm (Customizable)			
Response Time	Water@0.5m/s=0.5s; Air@2m/s=10.0s			

Wiring Configurations

Wiring Type	Wires	Key Features	Limitations	Applications
2-Wire	2	Simple wiring, low cost	Lead resistance introduces measurement error that cannot be eliminated	Low-precision, short-cable scenarios
4-Wire	4	Two wires supply constant current, two sense voltage; completely eliminates lead resistance error	Complex wiring, higher cost	High-precision temperature detection, laboratory measurement

03 Resistance-Temperature Table

Temperature ($^{\circ}\text{C}$)	Typical Resistance (Ω)	Temperature ($^{\circ}\text{C}$)	Typical Resistance (Ω)
-200	185.2	330	2226.8
-190	228.3	340	2262.1
-180	271.0	350	2297.2
-170	313.4	360	2332.1
-160	355.4	370	2367.0
-150	397.2	380	2401.8
-140	438.8	390	2436.4
-130	480.0	400	2470.9
-120	521.1	410	2505.3

-110	561.9	420	2539.6
-100	602.6	430	2573.8
-90	643.0	440	2607.8
-80	683.3	450	2641.8
-70	723.3	460	2675.6
-60	763.3	470	2709.3
-50	803.1	480	2742.9
-40	842.7	490	2776.4
-30	882.2	500	2809.8
-20	921.6	510	2843.0
-10	960.9	520	2876.2
0	1000.0	530	2909.2
10	1039.0	540	2942.1
20	1077.9	550	2974.9
30	1116.7	560	3007.5
40	1155.4	570	3040.1
50	1194	580	3072.5
60	1232.4	590	3104.9
70	1270.8	600	3137.1
80	1309.0	610	3169.2
90	1347.1	620	3201.2
100	1385.1	630	3233.0
110	1422.9	640	3263.8
120	1460.7	650	3296.4
130	1498.3	660	3327.9
140	1535.8	670	3359.3
150	1573.3	680	3390.6
160	1610.5	690	3421.8
170	1647.7	700	3452.8

180	1684.8	710	3483.8
190	1721.7	720	3514.6
200	1758.6	730	3545.3
210	1795.3	740	3575.9
220	1831.9	750	3606.4
230	1868.4	760	3636.7
240	1904.7	780	3667.0
250	1941.0	790	3697.1
260	1977.1	800	3727.1
270	2013.1	810	3757.0
280	2049.0	820	3786.8
290	2084.8	830	3816.5
300	2120.5	840	3846.1
310	2156.1	850	3875.5
320	2191.5	-	-

Version Change Log

Version	Change description	Change date	Reviewed by
1.0.0	Initial version	2026/10/13	YJH/WYR

Website & Store: www.sensefuture.com

Email: sales@sensefuture.com / rd@sensefuture.com

Tel: +86 755 888658289/18718688108

Address: Room 1308, Building A1, Sanhuan Technology
Building, Fenghuang Subdistrict, Guangming District,
Shenzhen, Gungdong, China



**Original Aspiration Shapes the Future;
Innovation Creates Value;
Sharing Brings People Together;**

**We look forward to win-win
cooperation with you!**