PT100/PT1000 SERIES 铂热电阻传感器

BASIC INFORMATION 概述

The Pt100/Pt1000 sensor is used for precise temperature monitoring applications, where errors in measurement have to be excluded. The linear relationship of the resistor to temperature, simplifies its use in many electronic applications. The precision of the Pt100/Pt1000 allows its universal use for temperature monitoring, control and switching in windings, bearings, machines, motors, transformers and many other industrial applications.

铂热电阻是一种精确度高，灵敏度高的传感器，其线性温度阻值优于其他电阻式热传感器，性能稳定，可靠性强。产品分为小型电机用铂热电阻传感器、大型电机用铂热电阻传感器、高压电机用铂热电阻传感器。

GENERAL FUNCTION

The Pt100/Pt1000 sensor is a temperature dependent component.
The resistance of the Pt100/Pt1000 sensor rises linearly with the temperature.

PT100/PT1000传感器是温度元器件，它的阻值和温度变化成线性关系。

KEY BENEFITS 产品优势

- Very precise measuring: measuring temperature ±0.5℃
- Precise linear temperature–resistance characteristic
- Low weight
- Short response time
- 精密度高，测温公差±0.5℃
- 线性温度阻值精密
- 重量轻
- 反应时间快

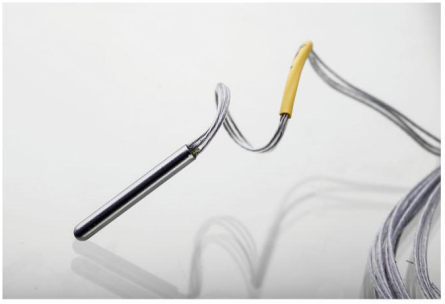
TECHNICAL DATA 技术参数

- Nominal resistance: 100Ω at 0℃（Pt100）,1000Ω at 0℃（Pt1000）
- Basic thermistor values: for platinum measuring resistors as in chart
- Measuring range: –40℃ to 200℃, other ranges on request
- Measuring current: max.1mA(no self–heating!)
- Circuit: 2–wire 3–wire or customized
- 标称电阻：0℃时100Ω（PT100），0℃时1000Ω（PT1000）。
- 基本热敏电阻值：如测量的铂电阻图表。
- 测温范围：-40℃~200℃，其他温度可定制。
- 测温电流：最大1mA
- 引线：2线，3线或定制。

INSTALLATION GUIDE 安装与使用

Embed the sensor to motor winding,compressing and banding together with the coil,then varnish it.Wire leads is elicited along the shell and fixed in the wiring inside the junction box. Use special Temperature controller for Pt100, Pt1000.

将传感器嵌在电机的绕组内部，压紧绑扎后同线圈一同浸漆，引线沿壳体引出，并固定在接线盒内。使用时，接专用的PT100、PT1000测温仪表。



TOLERANCE 等差允级

Temperature		–100	0	100	200	250	300
Resistance		60.25	100	138.51	175.86	194.10	212.05
Level A	℃	±0.35	±0.15	±0.35	±0.55	±0.695	±0.75
	Ω	±0.14	±0.06	±0.14	±0.20	±0.23	±0.27
Level B	℃	±0.8	±0.3	±0.8	±1.3	±1.58	±1.8
	Ω	±0.32	±0.12	±0.30	±0.48	±0.55	±0.64

CODE SYSTEM 订货示例

WZP—□—□—□—□

- 引线长度（mm）
- Z: 双引线
- D: 三引线
- T: 陶瓷封装
- B: 金属外壳封装
- 传感器直径x长度
- 铂热电阻传感器(Pt100)

PT100 REFERENCE TABLE 分度表

Temperature	0	10	20	30	40	50	60	70	80	90	100
Resistance	100.0	103.90	107.79	111.67	115.54	119.40	123.24	127.08	130.90	134.71	
Temperature	110	120	130	140	150	160	170	180	190	200	
Resistance	142.29	146.07	149.83	153.58	157.33	161.05	164.77	168.48	172.16	175.86	

Note: The resistance of Pt1000 is 10 times as Pt100

TECHNICAL DATA OF PLATINUM SENSOR 技术指标

Model	Temperature range	Graduation Number	Tolerance	Probe material	Size	Resistance at 0℃(Ω)	Thermal response time τ 0.5s
WZP–3×16–T	–40~200℃	Pt100	Level A Level B	Ceramic	ϕ3×16	100±0.06 100±0.12	<1
WZP–3×16–B	–40~200℃	Pt100	Level B	metal case	ϕ3×16	100±0.12	<2
WZP–4×32–T	–40~200℃	Pt100	Level A Level B	Ceramic	ϕ4×32	100±0.06 100±0.12	<2
WZP–4×32–B	–40~200℃	Pt100	Level B	metal case	ϕ4×32	100±0.12	<3