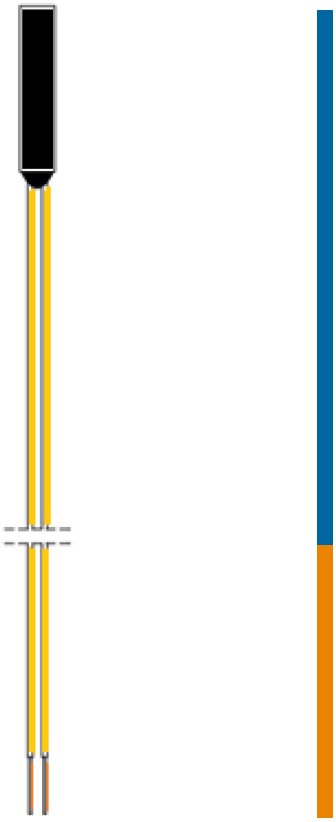


PT RECTANGLE MOTOR TEMPERATURE SENSOR

- Epoxy Resin Encapsulation
- Teflon® Insulated Lead-wire
- Wide Temperature Design

Product Description

The temperature sensors are mainly used to monitor the temperature of the stator winding, transfer the temperature of the objects into a resistance output. Pt thermistors connected to Teflon® wire, sensor assembly encapsulated by epoxy resin and plastic housing.

Features

- PT thermistor
- Temperature range: -40°C ~+200℃
- Insulation resistance: ≥100Mohm
- High-pot strength: >2300VAC
- Plastic housing encapsulation
- Lead Wire: Teflon®

Applications

- Motor stator
- Industrial system
- Air conditioning systems
- White Goods

Sensor specifications

Assembly Encapsulation	Plastic housing
Sensor Dimension	4.3*2.4*17
Temperature Coefficient of Resistance	3850 ppm/°C
Temperature Range	-40°C~+200°C
Resistance Accuray	Class A or Class B
Operating Current	PT100 Max. 1.0mA
	PT1000 Max. 0.3mA
Insulation Resistance	≥100MΩ, 500 VDC, at room temperature
Dielectric Strength	2300VAC, 0.5mA Max, at room temperature
Response time	$t_{50\ in\ water}$<3s
Wire Size	22AWG

Recommended Storage Conditions

The recommended storage conditions.

Parameter	Symbol	Min	Typical	Max	Units
Storage Temperature Range	T_{store}	-20	+25	+85	**°C**

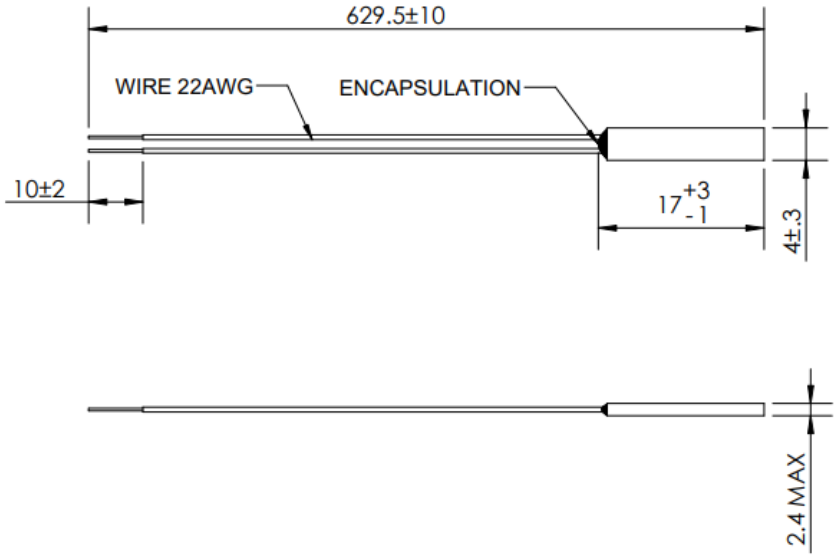
Installation Tips

- For the sensor assembly to accurately track temperature, it should be installed as deep as possible into a well or holder to let the sensor head as closer as measurement point.
- Don’t grip the sensor head with high pressure.

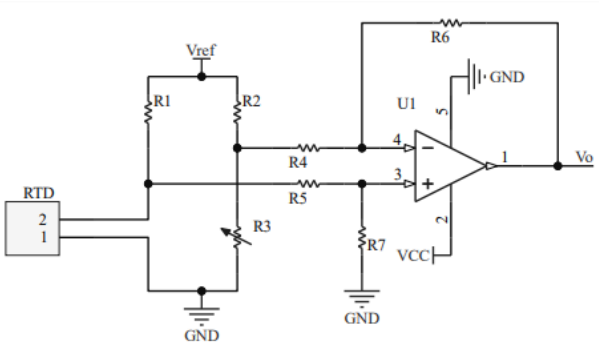
Compliance

- RoHS and Reach Compliance

Diagrams and Dimensions



Circuit Suggestion



Calculation Formulas

The calculation formulas of these Pt-RTD according to DIN EN 60751:

Condition	Formulas
For T ≥ 0°C	$R(t) = R(0) * (1+At+Bt^2)$
For T < 0°C	$R(t) = R(0) * [1+At+Bt^2+C(t-100)t^3]$
Coefficients	A = 3.9083E-03, B = -5.775E-07, C = -4.183E-12

Tolerances: class F0.15 (A): ± (0.15+0.002*|T/°C|) °C (-50 ~ +300 °C)

Tolerances: class F0.3 (B): ± (0.3+0.005*|T/°C|) °C (-70 ~ +500 °C)

Customize parameter

Model Sensor	Resistance [Ω] @ +0ºC	Tolerance
1	100	class F0.15 (A)
2	100	class F0.3 (B)
3	1,000	class F0.15 (A)
4	1,000	class F0.3 (B)

Total Length	Wire color
---- Define 'L' Length in mm	Yellow

Ordering Information

Description	Stocked Part Number
L = 629.5±10 mm / PT100 CLA / Yellow cable	20016310-00
L = 629.5±10 mm / PT1000 CLA / Yellow cable	20017374-00

Change History

Date	Version	Change Description
2022-08-08	A	Initial Release
2023-02-16	A1	Updated the part number

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