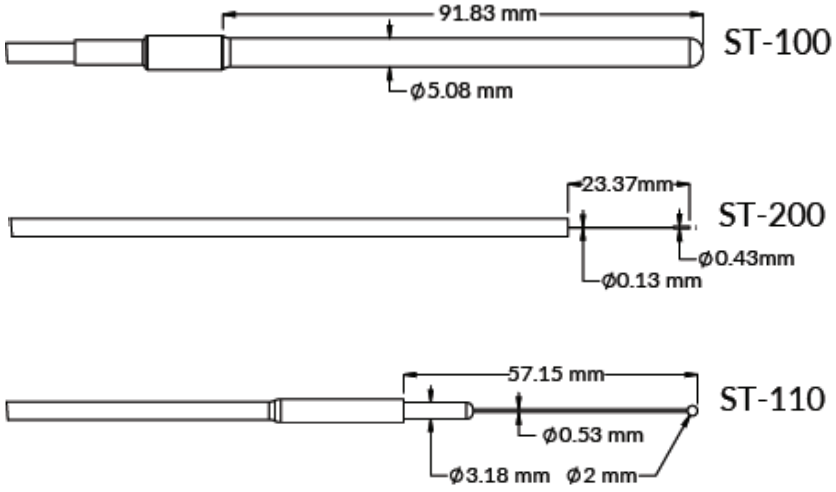
THERMISTORS

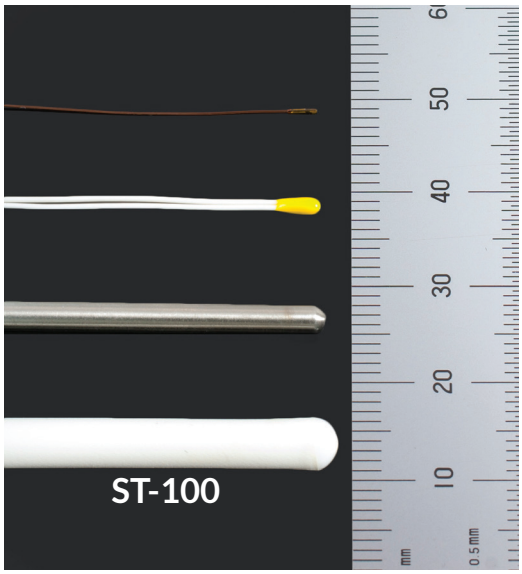
ST-100, ST-110, & ST-200

Dimensions



Features

The **ST-100** has a waterproof housing and is designed for measuring soil and water temperature. The **ST-110** minimizes solar load and thermal conduction to accurately measure air temperature. The **ST-200** measures delicate or small surfaces with a fast response time.



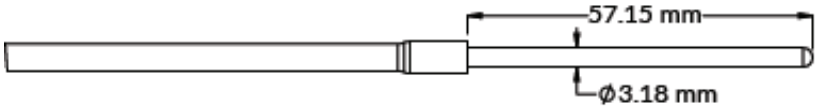
Product Specifications

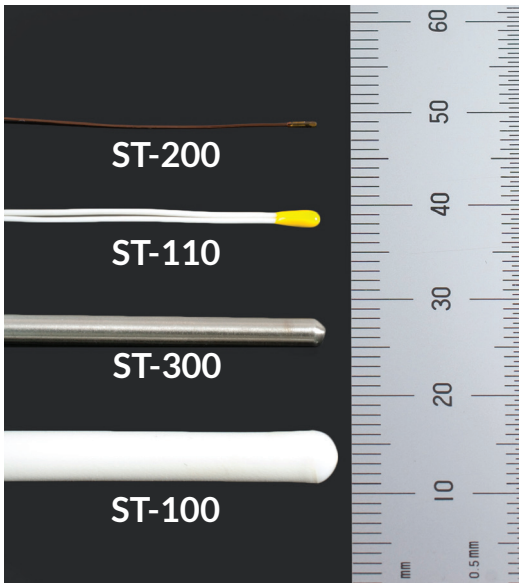
	ST-100	ST-110	ST-200
Measurement Range	-60 to 80 C		
Measurement Uncertainty	0.1 C (0 to 70 C) 0.4 C (-40 to 0 C)	0.1 C (0 to 70 C) 0.4 C (-40 to 0 C)	0.5 C (-40 to 70 C)
Measurement Repeatability	Less than 0.05 C	Less than 0.01 C	Less than 0.05 C
Long-term Drift	Less than 0.02 C per year		
Equilibration Time	30 s	4 s	1 s
Self-heating	Less than 0.01 C (typical, assuming pulsed excitation of 2.5 V DC), 0.08 C at 5 C (max. assuming continuous input excitation of 2.5 V DC)		
Operating Environment	-60 to 80 C; 0 to 100 % relative humidity		
Resistance at 25 C	10,000 Ω		
Input Voltage Requirement	2.5 V DC excitation (recommended)		
Output Voltage Requirement	0 to 2.5 V DC (assuming input excitation of 2.5 V DC)		
Current Draw	0.1 mA DC at 70 C (max. with steady excitation of 2.5 V DC)		
Dimensions	100 mm length, 6 mm diameter	80 mm length, 4 mm diameter	25 mm length, 1 mm diameter
Mass	60 g		
Cable	2 m of shielded, twisted-pair wire; additional cable available; TPR jacket (high water resistance, high UV stability, flexibility in cold conditions); pigtail lead wires		
Warranty	4 years against defects in materials and workmanship		

PLATINUM RESISTANCE THERMOMETERS (PRT)

ST-150 & ST-300

Dimensions





Features

ST-150 PRT

The ST-150 is a 1/8 inch, Class A PRT with an IP67 rating. White heat shrink is used on the cable behind the PRT to minimize heat transfer to the sensor. PRT sheath dimensions are 3.18 mm diameter and 57.15 mm length, minimizing thermal mass.

ST-300 PRT

The ST-300 is a high accuracy PRT designed to minimize solar load and thermal mass. White heat shrink is used on the cable behind the PRT to reduce solar load. PRT sheath dimensions are 3.18 mm diameter and 57.15 mm length, minimizing thermal mass.

Product Specifications

	ST-150	ST-300
Measurement Range	-40 to 70 C	
Measurement Uncertainty	0.15 C (-40 to 60 C) Class A	0.1 C (-40 to 60 C)
Measurement Repeatability	Less than 0.01 C	
Long-term Drift	Less than 0.05 C per year	
Equilibration Time	32 s	
Self-heating	Less than 0.01 C (typical, assuming pulsed excitation of 2.1 V DC); 0.09 C at 5 C (max. assuming continuous input excitation of 2.1 V DC)	
Operating Environment	-40 to 70 C; 0 to 100 % relative humidity	
Resistance at 0 C	100 Ω	
Input Voltage Requirement	Datalogger Dependent	2.1 V DC excitation (recommended)
Output Voltage Requirement	Datalogger Dependent	16 to 27 mA DC (excitation of 2.1 V DC)
Current Draw	Datalogger Dependent	0.21 mA DC (max. with steady excitation of 2.1 V DC)
Dimensions	57.15 mm length, 3.18 mm diameter	
Mass	95 g	
Cable	2 m of shielded, twisted-pair wire; additional cable available; TPR jacket (high water resistance, high UV stability, flexibility in cold conditions); pigtail lead wires	
Warranty	4 years against defects in materials and workmanship	

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