Thermistors | ST-100, ST-110, and ST-200

apogee®
INSTRUMENTS
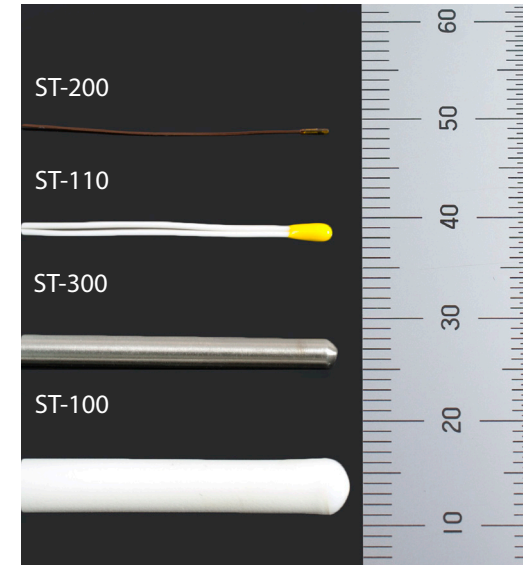Logan, UT

ST-100 Thermistor

The ST-100 is a high accuracy thermistor (± 0.1 C from 0 to 70 C) mounted in a waterproof housing, designed for continuous measurement of air, soil, or water.

ST-110 Thermistor

The ST-110 is a high accuracy thermistor (± 0.1 C from -40 to 60 C) designed to minimize solar load and thermal conduction. White heat shrink is used on the cable behind the thermistor to reduce solar load. Constantan wire is used to minimize thermal conduction down the wire towards the thermistor.

ST-200 Fine-Wire Thermistor

The ST-200 is an accurate (± 0.2 from 0 to 70 C) fine wire (0.45 mm tip, 0.15 mm wire) thermistor designed for measurement of delicate surfaces or small samples with a fast response time, less than 1 second.

	ST-100	ST-110	ST-200
Measurement Range	-50 to 70 C		
Measurement Uncertainty	0.1 C (0 to 70 C) 0.2 C (-25 to 0 C) 0.4 C (-50 to -25 C)	0.1 C (0 to 70 C) 0.15 C (-35 to 0 C)	0.2 C (0 to 70 C) 0.4 C (-50 to 0 C)
Measurement Repeatability	Less than 0.05 C	Less than 0.01 C	Less than 0.05 C
Long-term Drift (Non-stability)	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 (maximum assuming continuous input excitation of 2.5 V DC)		
Operating Environment	-50 to 70 C; 0 to 100 % relative humidity		
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 (maximum, 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	5 m of shielded, twisted pair wire; additional cable available in multiples of 5 m; santoprene rubber jacket (high water resistance, high UV stability, flexibility in cold conditions); pigtail lead wires		
Warranty	4 years against defect in materials and workmanship		

Dimensions

ST-100

92.0 mm

Ø 5.0 mm

ST-110

58.0 mm

Ø 3.0 mm

Ø 0.5 mm

Ø 2.0 mm

ST-200

23.0 mm

Ø 0.1 mm