

# 6507 & 6535

## THERMISTOR AND LINEAR TEMPERATURE PROBES



### MODEL E AND A



The 6507 and 6535 temperature probes are designed for many applications of temperature measurement like air, water, soil, snow, ice, etc. They are fully sealed and can be used in fresh and sea water to a depth of 30 metres.

The thermistor temperature probes use a negative temperature coefficient (NTC) thermistor as their temperature sensor. The NTC thermistor is a high quality, precision curve matched element. Its operating temperature is from -100°C to 150°C.

Due to the type of cable being used, the measurement range of the standard thermistor temperature probe is from -30°C to 100°C. Accuracy of these probes is  $\pm 0.1^\circ\text{C}$  making them ideally suited to measuring temperature profiles in water.

The 6535 linear temperature probe is used for measuring temperatures between -17.8°C and 100°C. It outputs a DC voltage, the value of which is directly proportional to temperature.

The linear temperature probes integrate the LM34 precision Fahrenheit temperature sensor whose output voltage is linearly proportional to the Fahrenheit temperature. Probe operates from 5V to 30V, does not require any external calibration or trimming to provide typical accuracies of  $\pm 1\frac{1}{2}^\circ\text{F}$  ( $^\circ\text{C}$ ) over a full -40°F (-40°C) to 240°F (115.5°C) temperature range. Due to the type of cable being used, the measurement range is  $\sim -17.8^\circ\text{C}$  to 100°C.

The LM34 draws only 75 $\mu\text{A}$  from its supply so it has very low self-heating; furthermore it has low output impedance and linear output making interfacing of this probe very easy.

### 6507 SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
MATERIAL:	Stainless steel tube epoxy sealed
SIZE:	Diameter 6.40mm x 50mm long, different tube lengths available on request
WEIGHT:	350 grams
ELECTRICAL SPECIFICATIONS	
TEMPERATURE	
RANGE:	-30°+100°C
ACCURACY:	$\pm 0.1^\circ\text{C}$
OPERATING VOLTAGE:	5 VDC, from logger
TYPICAL CURRENT CONSUMPTION:	0.5mA at 5VDC
OUTPUTS:	1 analog 0-2.55VDC
CABLE:	10m or 20m 2 core cable shielded. Other cable length available on request

### 6535 SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
MATERIAL:	Stainless steel tube epoxy sealed
SIZE:	Diameter 8 mm x 100mm long, different tube lengths available on request
WEIGHT:	350 grams
ELECTRICAL SPECIFICATIONS	
TEMPERATURE	
RANGE:	-17.8°+100°C
ACCURACY:	$\pm 1.5^\circ\text{C}$
OPERATING VOLTAGE:	5 VDC, from logger
TYPICAL CURRENT CONSUMPTION:	150 $\mu\text{A}$ at 5VDC
OUTPUTS:	1 analog 0-2120mVDC (18mV/°C)
CABLE:	10m or 20m 4 core cable shielded. Other cable length available on request