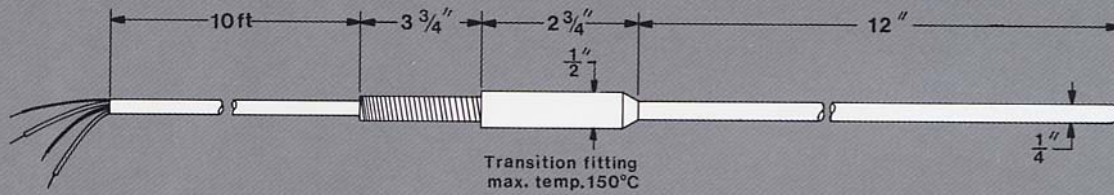


Secondary Standard Platinum RTD Sensor



Specifications

R₀: 100±0.1 ohm @ 0°C

Alpha: 0.003925 Ω/Ω/°C (Nominal)

Temperature Range: -200 to +500°C
(-328 to +932°F)

Construction: Sheath, Inconel; Cable, 4-wire,
Teflon on singles, Teflon overall, 22 gauge, stranded.

Insulation Resistance: 2000 Meg ohm @
100VDC @ 20°C

Immersion Depth: 102mm (4 inches) minimum

Pressure Rating: 1500 psi

Hysteresis: 0.01°C maximum

Hysteresis, measured at 0°C, is the "dead band" exhibited by the sensor when driven alternately from -183°C & +425°C

Response Time¹: 9 seconds

Self Heating²: 0.02°C/mW or a temperature rise of 0.002°C

Stability³: After periodic exposures to various upper temperature limits (20% of the time)

Temperature:	To 200°C	To 400°C	To 450°C	To 500°C
Drift Per Year:	0.01°C	0.02°C	0.05°C	0.10°C

Calibration Uncertainty: 1 mA excitation current

Temperature °C	-200	-100	0	+100	+200	+300	+400
Uncertainty± °C	0.028	0.036	0.009	0.017	0.023	0.032	0.043
Temperature °F	-328	-148	+32	+212	+392	+572	+752
Uncertainty± °F	0.053	0.068	0.016	0.032	0.044	0.058	0.077

Documentation: Each sensor is supplied with a printout of Resistance vs Temperature in both °C and °F. Ohms resolution is 0.001 ohms. Also supplied are the ITS-90 coefficients required for programming the 4200 series or Model 4312A instrument.

¹Response Time: Response time is for one time constant measured in water, flowing at 1 meter/second. One time constant is the time required for the sensor to reach 63.2 of a step change in temperature. Approximately five time constants are required for stabilization.

²Self Heating: Specified in well stirred water at 0°C. Temperature rise is based on a 1mA excitation current.

³Stability: Long term stability is measured at 0°C.

Model Numbers

Model	Calibration Range	Lead Termination
840-158-01	-100° to +500°C	Stripped & Tinned
840-158-03	-100° to +500°C	Gold Plated 1/4" Spade Lugs
840-157-01	0° to +500°C	Stripped & Tinned
840-157-03	0° to +500°C	Gold Plated 1/4" Spade Lugs
840-159-01	-200° to +500°C	Stripped & Tinned
840-159-03	-200° to +500°C	Gold Plated 1/4" Spade Lugs