

# RESISTANCE TEMPERATURE DETECTOR (RTD) SPECIFICATIONS

## Standard Assemblies

ACROLAB RTD Assemblies utilize wire wound platinum elements with a reference resistance of 100 Ohms at 0°C and a temperature coefficient of 0.00385 Ohms/Ohm/°C. ALL ACROLAB RTD probes are of the "filled tube" or "MgO" construction, providing long operating life in high vibration and/or temperature applications.

### TYPICAL 100 OHM PLATINUM ELEMENT TOLERANCES

TEMPERATURE	CLASS B (0.12%) TOLERANCE		BAND 1 (0.1%) TOLERANCE		CLASS A (0.06%) TOLERANCE		BAND 3 (0.03%) TOLERANCE		BAND 5 (0.01%) TOLERANCE		
	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	
-200	-328	1.30	2.34	1.10	1.98	0.55	0.99	0.42	0.76	0.37	0.67
-100	-148	0.80	1.44	0.68	1.22	0.35	0.63	0.25	0.45	0.20	0.36
0	32	0.30	0.54	0.26	0.47	0.15	0.27	0.08	0.14	0.03	0.05
100	212	0.80	1.44	0.68	1.22	0.35	0.63	0.25	0.45	0.20	0.36
200	392	1.30	2.34	1.10	1.98	0.55	0.99	0.42	0.76	0.37	0.67
300	572	1.80	3.24	1.52	2.74	0.75	1.35	0.59	1.06	0.54	0.97
400	752	2.30	4.14	1.94	3.49	0.95	1.71	0.76	1.37	0.71	1.28
500	932	2.80	5.04	2.36	4.25	1.15	2.07	0.93	1.67	0.88	1.58
600	1112	3.30	5.94	2.78	5.00	1.35	2.43	1.10	1.98	1.05	1.89

## Element Types

Single platinum elements of 100 Ohms at 0°C and duplex elements of two 100-Ohm elements inside the same sheath are both available as standard. Elements of other resistive materials such as copper and nickel are available upon request.

## Element Types

Excitation current and voltage 2mA @24 VDC

## Time Constant

The time required to sense 63 % of a step temperature change from 25°C to 80°C in water flowing at 3 ft/sec. "The time constant for a 3/16" OD SS sheath diameter is 2.0 seconds typical."

## Temperature Range

The standard temperature range is -100°C to 260°C (-148°F to 500°F). Higher ranges available (up to 550°C) on request.