Hart Scientific 1502A & 1504 Thermometer Readouts

Specifications	1502A	1504
Temperature Range†	−200°C to 962°C (−328°F to 1764°F)	Any thermistor range
Resistance Range	0Ω to 400Ω, auto-ranging	0Ω to 1 MΩ, auto-ranging
Probe	Nominal R_{TPW}: 25Ω to 100Ω RTD, PRT, or SPRT	Thermistors
Characterizations	ITS-90 subranges 4, 6, 7, 8, 9, 10, and 11 IPTS-68: R_0, α, δ, a_4, and c_4 Callendar-Van Dusen: R_0, α, δ, and β	Steinhart-Hart thermistor polynomial Callendar-Van Dusen: R_0, α, δ, and β
Resistance Accuracy (ppm of reading)	0Ω to 20Ω: 0.0005Ω 20Ω to 400Ω: 25 ppm	0Ω to 5 KΩ: 0.5Ω 5 KΩ to 200 KΩ: 100 ppm 200 KΩ to 1 MΩ: 300 ppm
Temperature Accuracy†**, typical (meter only)**	±0.004°C at 100°C ±0.006°C at 0°C ±0.009°C at 100°C ±0.012°C at 200°C ±0.018°C at 400°C ±0.024°C at 600°C	±0.002°C at 0°C ±0.002°C at 25°C ±0.004°C at 50°C ±0.010°C at 75°C ±0.020°C at 100°C (Using 10 KΩ thermistor sensor, α=0.04. Does not include probe uncertainty or characterization errors.)
Operating Temperature Range	16°C to 30°C	13°C to 33°C
Resistance Resolution	0Ω to 20Ω: 0.0001Ω 20Ω to 400Ω: 0.001Ω	0Ω to 10 KΩ: 0.01Ω 10 KΩ to 100 KΩ: 0.1Ω 100 KΩ to 1 MΩ: 1Ω
Temperature Resolution	0.001°C	0.0001°C
Excitation Current	0.5 and 1 mA, user selectable, 2 Hz	2 and 10 μA, automatically selected
Measurement Period	1 second	
Digital Filter	Exponential, 0 to 60 seconds time constant (user selectable)	
Probe Connection	4-wire with shield, 5-pin DIN connector	
Communications	RS-232 serial standard IEEE-488 (GPIB) optional	
Display	8-digit, 7-segment, yellow-green LED; 0.5-inch-high characters	
Power	115 VAC (±10%), 50/60 Hz, 10 A, nominal 230 VAC (±10%), 50/60 Hz, 10 A, nominal, specify	
Size	5.6" W x 7.1" D x 2.4" H (143 x 181 x 61 mm)	
Weight	2.2 lb. (1.0 kg)	
Probes from Hart	5612, 5613, 5614, 5627, 5626, 5628, 5622	5640-44, 5610-65

†Temperature ranges and accuracy may be limited by the sensor you use.