

Hart Scientific 5612 - 5614

Specifications

Resistance	Nominal 100W ($\pm 0.1W$)
Temperature Coefficient	0.003925 ohms/ohm/ $^{\circ}C$ nominal
Temperature Range	$-200^{\circ}C$ to $420^{\circ}C$ (transition and cable temperature $150^{\circ}C$ maximum)
Transition Temperature	$5^{\circ}C$ to $200^{\circ}C$
Drift Rate	$\pm 0.01^{\circ}C$ at $0^{\circ}C$ per year maximum, when used periodically to $400^{\circ}C$
Sheath Material	Inconel™ 600
Leads	Teflon™-insulated, silver-plated stranded copper, 22 AWG
Termination	Four gold-plated spade lugs are standard. Other options available. See Ordering Information.
Hysteresis	$< 0.01^{\circ}C$ at $0^{\circ}C$ using $-196^{\circ}C$ and $420^{\circ}C$ as the end points
Immersion Effects	Reading will not vary more than $0.005^{\circ}C$ when the probe immersion is varied between 4 inches and 10 inches in an ice bath (5614).
Calibration	Includes NIST-traceable calibration and table with R vs. T values in $1^{\circ}C$ increments from $-183^{\circ}C$ to $500^{\circ}C$. The 5614 and 5612 are calibrated to $420^{\circ}C$ and the 5613 to $300^{\circ}C$. ITS-90 coefficients included.
Probe Accuracy (includes calibration uncertainty and short-term stability)	$\pm 0.018^{\circ}C$ at $-196^{\circ}C$ $\pm 0.018^{\circ}C$ at $0^{\circ}C$ $\pm 0.019^{\circ}C$ at $200^{\circ}C$ $\pm 0.023^{\circ}C$ at $420^{\circ}C$
Time Constant	Nine seconds typical for 63.2% response to step change in temperature in water flowing at 3 feet per second
Size	5612-0.187" dia. x 9" 5613-0.187" dia. x 6" 5614-0.25" dia. x 12"
High Flexibility Cable Option	Standard 5612, 5613, and 5614 PRTs come with a 6-foot white Teflon cable that withstands temperatures from $-100^{\circ}C$ to $250^{\circ}C$. For super-flexible black PVC cable that can be exposed to temperatures from $0^{\circ}C$ to $90^{\circ}C$, add "-B" to the model number. (A 5614 PRT with spade lug terminations and PVC cable would be ordered as "5614-S-B.") No additional charge is added for PVC cable.