

# 5623A Precision RTD Freezer Probe



- Fully immersible probe assembly to  $-200^{\circ}\text{C}$
- NIST-traceable calibration and ITS-90 coefficients included
- Accuracy to  $\pm 0.05^{\circ}\text{C}$  over the full range

If you need a precision measurement at low temperatures, do not look any further than Hart Scientific.

The 5623A, precision “freezer probe,” is specially sealed from the sensing element to the end of the probe cable, preventing ingress of moisture when exposed to temperatures as low as  $-200^{\circ}\text{C}$ . The entire assembly withstands temperatures over its full range ( $-200^{\circ}\text{C}$  to  $156^{\circ}\text{C}$ ), which is ideal for verification of freezers or autoclaves where a thermo-well isn't available. The 5623A assembly can be fully immersed in fluids when the application may require use in a liquid bath. The 5623A is available in a 0.25" (6.35 mm) dia.  $\times$  6" (125 mm) long Inconel™

sheath. With accuracy (that includes calibration uncertainty and short-term drift) of  $\pm 0.05^{\circ}\text{C}$  over its full range, the 5623A is just right as a secondary standard for calibration of other process sensors.

Most Hart Scientific readouts make an excellent companion for the 5623A. We recommend the use of the 1521, 1522, 1502A, 1529, or 1560 thermometer readouts.

With each 5623A, you receive a full calibration report traceable to NIST and compliant with ANSI/NCSL Z540. This report includes test data and ITS-90 calibration coefficients to enter into your Hart Scientific thermometer readout. Contact Hart if you need a NVLAP-accredited calibration.

**Hart Scientific. Total Temperature Solutions.**

**Call your Hart representative today.  
Or visit Hart on the web at  
[www.hartscientific.com](http://www.hartscientific.com)**

Specifications subject to change.

Specifications	
Resistance	Nominal $100\Omega$ ( $\pm 0.1\Omega$ )
Temperature Coefficient	0.003925 ohms/ohm/ $^{\circ}\text{C}$ nominal
Temperature Range	$-200^{\circ}\text{C}$ to $156^{\circ}\text{C}$
Transition Temperature	$-200^{\circ}\text{C}$ to $156^{\circ}\text{C}$
Drift Rate	$\pm 0.01^{\circ}\text{C}$ per year maximum at $0^{\circ}\text{C}$ , when used periodically at max temperature
Sheath Material	Inconel™ 600
Leads	Teflon™-insulated, silver-plated stranded copper, 22 AWG.
Termination	Specify. See ordering information.
Calibration	Includes manufacturer's NIST-traceable calibration and table with R vs. T values in $1^{\circ}\text{C}$ increments from $-200^{\circ}\text{C}$ to $156^{\circ}\text{C}$ . ITS-90 coefficients included. Optional accredited calibration available from Hart.
Probe Accuracy (includes calibration uncertainty and short-term stability)	$\pm 0.05^{\circ}\text{C}$ over the full range
Cable Length	20' (609.6 cm)
Size	0.25" (6.35 mm) dia. $\times$ 6" (152 mm)

## Ordering Information

5623A-6-X Freezer Probe, RTD 1/4" dia.  $\times$  6",  $-200$  to  $156^{\circ}\text{C}$   
2601 Probe Carrying Case

X = termination. Specify "B" (bare wire), "D" (5-pin DIN for Tweener Thermometers), "G" (gold pins), "I" (INFO-CON for 1521 or 1522 Handheld Thermometers), "J" (banana plugs), "L" (mini spade lugs), "M" (mini banana plugs), or "S" (spade lugs).

## Hart Scientific, A Fluke Company

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