

# 5623B Precision RTD Freezer Probe

## Highlights

### Fully immersible probe assembly to –100°C

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- NVLAP-accredited calibration, lab code 200706-0, 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 Fluke Calibration.

## Description

The 5623B, 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 –100 °C. The entire assembly withstands temperatures over its full range (–100 °C to 156 °C), which is ideal for verification of freezers or autoclaves where a thermo-well isn’t available. The 5623B assembly can be fully immersed in fluids when the application may require use in a liquid bath. The 5623B is available in a 6.35 mm (0.25 in) dia. x 125 mm (6 in) 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 5623B is just right as a secondary standard for calibration of other process sensors.

Most Fluke Calibration readouts make an excellent companion for the 5623B. We recommend the use of the 1523, 1524, 1502A, 1529, or 1560 thermometer readouts.

With each 5623B, you receive a full NVLAP-accredited calibration report. This report includes test data and ITS-90 calibration coefficients to enter into your Fluke Calibration thermometer readout.

## Specifications

Specifications	
<b>Resistance</b>	Nominal 100 $\Omega$ ( $\pm 0.1 \Omega$ )
<b>Temperature Coefficient</b>	0.003925 $\Omega/\Omega/^\circ\text{C}$ nominal
<b>Temperature Range</b>	–100 °C to 156 °C
<b>Transition Temperature</b>	–100 °C to 156 °C
<b>Drift Rate</b>	$\pm 0.01^\circ\text{C}$ per year maximum at 0 °C, when used periodically at max temperature
<b>Sheath Material</b>	Inconel™ 600
<b>Leads</b>	PTFE-insulated, silver-plated stranded copper, 22 AWG.
<b>Termination</b>	Specify. See Models and Accessories.
<b>Calibration</b>	Includes manufacturer’s NVLAP-accredited, lab code 200706-0, calibration and table with R vs. T values in 1 °C increments from –80 °C to 156 °C. ITS-90 coefficients included.
<b>Calibrated Accuracy† (k=2)</b>	$\pm 0.05^\circ\text{C}$ over the full range
<b>Cable Length</b>	6.1 meters (20 ft)
<b>Size</b>	6.35 mm (0.25 in) dia. x 152 mm (6 in)

†Includes calibration uncertainty and drift.

## Models and Accessories

Model Name	Description
5623B-6-X	Freezer Probe, RTD 1/4" dia. x 6", –100 to 156°C (17025 accredited calibration included. Traceable to NIST standards.)  <i>X = termination. Specify “B” (bare wire), “D” (5-pin DIN for Tweener Thermometers), “G” (gold pins), “I” (INFO-CON for 1521 or 1522), “J” (banana plugs), “L” (mini spade lugs), “M” (mini banana plugs), “P” (INFO-CON for 1523 or 1524), or “S” (spade lugs).</i>

## Accessories common to all models:

Accessory	Description
<a href="#">2601</a>	Probe Carrying Case, Plastic



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