

TECHNICAL DATA

5623B Precision RTD Freezer Probe

Key features

- Fully immersible probe assembly to $-80^{\circ}/156^{\circ}\text{C}$
- NVLAP-accredited calibration, and ITS-90 coefficients included
- Accuracy to $\pm 0.05^{\circ}\text{C}$ over full range

Product overview: 5623B Precision RTD Freezer Probe

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. \times 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: 5623B Precision RTD Freezer Probe

Specifications	
Resistance	Nominal $100\ \Omega$ ($\pm 0.1\ \Omega$)
Temperature Coefficient	$0.003925\ \Omega/\Omega/^{\circ}\text{C}$ nominal
Temperature Range	-100°C to 156°C
Transition Temperature	-100°C to 156°C
Drift Rate	$\pm 0.01^{\circ}\text{C}$ per year maximum at 0°C , when used periodically at max temperature
Sheath Material	Inconel™ 600
Leads	PTFE-insulated, silver-plated stranded copper, 22 AWG.
Termination	Specify. See Models and Accessories.
Calibration	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.
Calibrated Accuracy† (k=2)	$\pm 0.05^{\circ}\text{C}$ over the full range
Cable Length	6.1 meters (20 ft)
Size	6.35 mm (0.25 in) dia. \times 152 mm (6 in)
†Includes calibration uncertainty and drift.	

Ordering information



5623B Precision RTD Freezer Probe

5623B-6-X

Freezer Probe, RTD 1/4" dia. x 6", -100 to 156°C

(17025 accredited calibration included. Traceable to NIST standards.)

X = termination. Specify "A" (INFO-CON for 914X), "B" (bare wire), "D" (5-pin DIN for Tweener Thermometers), "G" (gold pins), "J" (banana plugs), "L" (mini spade lugs), "M" (mini banana plugs), "P" (INFO-CON for 1523 or 1524), or "S" (spade lugs).

Fluke. *Keeping your world up and running.®*

Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Canada (800) 36-FLUKE
From other countries +1 (425) 446-5500
www.fluke.com

©2025 Fluke Corporation.
Specifications subject to change without notice.
04/2025

**Modification of this document is not permitted
without written permission from Fluke
Corporation.**