SECONDARY REFERENCE THERMISTOR PROBES

Secondary Reference Thermistor Probes
Range 0°C to 100°C
Accuracy and stability to ±0.02°C
Includes NIST-traceable calibration

Hundreds of thousands of thermistors are sold every year, but only a few have the stability necessary for use as high-accuracy thermometry standards. If you're looking for economical lab-grade thermistor probes for accurate work across a narrow temperature range, Hart's 5600 series of thermistor probes are the best you can buy.

A thermistor offers several advantages over a PRT as a reference thermometer in some applications. First, there's size. A thermistor is much smaller than a PRT element, and so it can be built into a much larger variety of probe shapes and sizes. The smaller element contributes to much faster response times, too.

If your application involves frequent handling, a thermistor is less susceptible to mechanical shock than a PRT. The bottom line may be better accuracy in fieldwork.

Higher base resistance and larger resistance coefficients make it easier to achieve precision readings. Better resolution and accuracy are possible for a lower cost.

These probes come in a complete assembly ready for use, and they make an excellent match with the uncertainties of our thermometer readouts: the 1504 Tweener, the 1521 and 1522 Handheld Thermometers, the 1529 Chub-E4, the 1560 *Black Stack*, and the 1575 and 1590 Super-Thermometers.

These probes are accurate to ±0.01°C, and each comes with a NIST-traceable calibration and a resistance versus temperature table printed in 0.1°C increments.

The 5600 series covers the temperature range of 0°C to 100°C. No other sensor can match the accuracy and price combination of Hart's 5600 series of high-accuracy thermistor probes. Try one and you'll agree.

Specifications	
Resistance	Nominal 10,000Ω at 25°C
Range	0°C to 100°C
Calibration	R vs. T table with 0.1°C increments, interpolation equation furnished
Accuracy	Table and equation are accurate to ±0.01°C
Stability	Better than ±0.01°C per year
Repeatability	Better than ±0.01°C
Size and Construction	See table on opposite page.
Termination	Gold-plated spade lugs are standard. Other options available. Specify when ordering.
Instrumentation	Use with Hart Model 1504, 1521, 1522, 1529, 1560, 1575, or 1590 thermometers.

Ordering Information

5665-X	Miniature Immersion Probe
5666-6-X	6" Penetration Probe
5666-9-X	9" Penetration Probe
5610-6-X	6" Immersion Probe
5610-9-X	9" Immersion Probe
5611-X	Silicone-Bead Probe
5611T-X	Teflon Probe
2601	Protective Case

X = termination. Specify "B" (bare wire), "S" (spade lugs), "D" (5-pin DIN for Tweener Thermometer), or "I" (INFO-CON for 1521 or 1522 Handheld Thermometer).

Get the latest product information at www.hartscientific.com

Read about our NVLAP accreditation on page 3.

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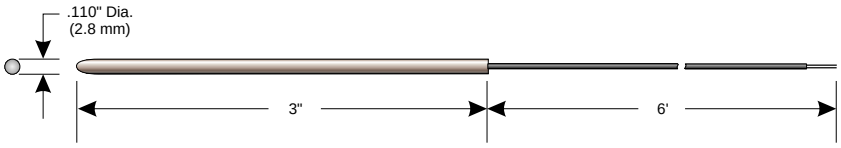
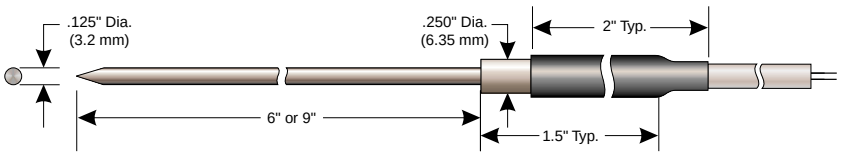
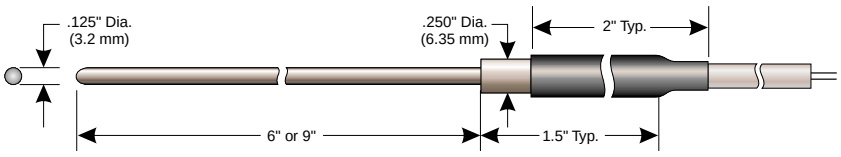
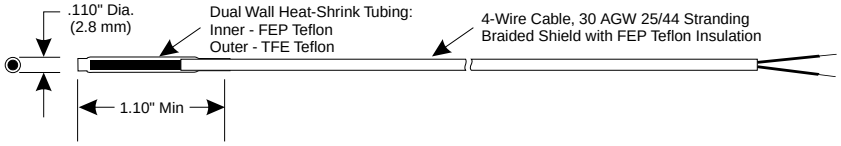
Model		Applications	Construction
5665	**Miniature Immersion Probe** 	Liquid and soil immersion	T304 SST Diameter: 0.110" Sheath Length: 3" Lead Length: 6'
5666-6	**Penetration Probe** 	Liquid immersion, soil and food penetration	T304 SST Diameter: 0.125" Sheath Length: 6" Lead Length: 6'
5666-9			T304 SST Diameter: 0.125" Sheath Length: 9" Lead Length: 6'
5610-6	**Immersion Probe** 	Immersion, calibration standards	T304 SST Diameter: 0.125" Sheath Length: 6" Lead Length: 6'
5610-9			T304 SST Diameter: 0.125" Sheath Length: 9" Lead Length: 6'
5611	**Silicone-Bead Probe** 	Immersion in most liquids (except silicone oils), pharmaceutical, faster response	2-Wire Silicone Coated Diameter: 0.070" Sheath Length: 0.55" Lead Length: 6'
5611T	**Teflon Probe** 	Immersion in most liquids, pharmaceutical	4-Wire, Teflon coated Diameter: 0.110" Sheath Length: 1.10" Lead Length: 6'

Technical Tip

Handle Your Probe Correctly

Good thermometer handling procedures help maintain calibration accuracy. Here are a few pointers.

- Don't subject a PRT to physical shock or vibration.
- Don't bend a probe that is not designed for bending.
- Don't subject a thermometer to sudden extreme temperature changes.
- Don't install compression fittings on a probe sheath.
- Don't subject a thermometer to temperatures outside its range.
- Don't subject a thermometer's transition junction, handle, or lead wires to temperatures outside their ranges (which likely differ from the thermometer's range).
- Don't immerse the probe past the bottom of its handle.
- Do immerse a probe to at least its minimum immersion depth.
- Do allow the thermometer time to stabilize before taking readings.
- Do use the proper current to prevent self-heating errors.