

Applications Note 904 Low Cost Accurate Thermometer

Question: Is there an easy to use, low cost, accurate thermometer?

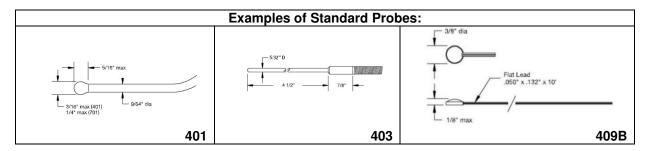
Answer: Coupling a thermistor sensor with a Doric 450TH makes a versatile, accurate thermometer for general medical, industrial and laboratory use. The measurement is speced over the entire temperature range of the probe from 0 °C to 70 °C (32 °F to 158 °F). This range covers many of the required day to day temperature measurements in medicine and laboratories.). Wider range probes are available to cover -25 °C to 100 °C (-14 °F to 212 °F). For wider ranges the same system is available with an RTD or TC, with a slight decrease in accuracy.



The best part of this combination is the wide range of off-the-shelf probes. Special probes are readily available as well. A low cost general purpose probe and the 450TH thermometer will deliver

0.3°C accuracy (0° to 70°C, 32° to 158°F) for under \$ 400. The probes plug into the 450TH using a standard 1/4" phone plug for easy interchangeability.

Probes come with a 10' lead. Many configurations are available from general purpose to surface mount. Many probes are available from stock (as is the 450TH thermometer). A complete listing of standard probes may be found here: www.AdvIndSys.com/YSIMedicalProbes.htm



Custom probes are also available in many configurations. Some of the available custom probes are shown here: www.AdvIndSys.com/YSIIndProbes.htm

The Doric 405TH is hand held for ease of use. Its rugged front panel is easily cleaned and immune to most spills. °C and °F readings are available from front panel push pads. A hold function may be activated for hard to reach locations. Additional information is available here: http://www.AdvIndSys.com/Doric450-THThermistorThermometer.htm.

A typical system might look like this:

Doric 450TH \$ 295.00 401 Probe \$ 58.50 Total System \$ 353.50

Additional Applications Notes and Tables are available at www.AdvIndSys.com/ApplicationsNotes.htm