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## OAKTON® 400-Series Flexible Thermistor Probes

Oakton thermistor probes offer excellent accuracy over the biological temperature range. Probes are accurate to  $\pm 0.2^\circ\text{F}$  from 32 to 150°F ( $\pm 0.1^\circ\text{C}$  from 0 to 70°C). Electrically isolated probes include a nondetachable 10-ft lead with phone plug (except as noted).

Water-resistant junctions between probe and lead should not be immersed; detachable leads are not water resistant.

**Note:** Time constant is the time required to reach 63.2% of a new reading. To determine how long it will take to reach 99% of a new reading multiply the time constant by five.

| Catalog number (Ind. No.)              | Description   | Temperature range                                   | Time constant                         | Price | Dimensions | Photo |
|--|---|---|---------------------------------------|-------|------------|-------|
| <a href="#">TW-08491-02</a><br>(401)   | General-purpose probe, immersible for short-term deep-water and sub soil readings. Vinyl sheath and tip. 10-ft lead   | -40 to 212°F<br>(-40 to 100°C)                      | 7 seconds                             |       |            |       |
| <a href="#">TW-08491-04</a>            | Like 0849-02 above, but with 50-ft lead   |   |                                       |       |            |       |
| <a href="#">TW-08491-03</a>            | Like 0849-02 above, but with 100-ft lead  |   |                                       |       |            |       |
| <a href="#">TW-08491-05</a><br>(402)   | Small flexible probe, vinyl sheath and tip  | -40 to 212°F<br>(-40 to 100°C)                      | 3.2 seconds                           |       |            |       |
| <a href="#">TW-08491-06</a><br>(403)   | Liquid-immersion probe 5/32 inch dia, stainless steel (316 SS). Immersible only to cap unless waterproofed.   | -40 to 302°F<br>(-40 to 150°C)                      | 3.4 seconds                           |       |            |       |
| <a href="#">TW-08491-07</a><br>(406)   | Like 08434-00 above, but with 1/8 inch dia probe  |   | 2.5 seconds                           |       |            |       |
| <a href="#">TW-08491-13</a><br>(404)   | Liquid-immersion probe, chemically inert for thermometric titrations. Pyrex® glass sheath.  | -40 to 302°F<br>(-40 to 150°C)                      | 4.2 seconds                           |       |            |       |
| <a href="#">TW-08491-17</a><br>(423)   | Small flexible probe for frozen food packages and cuvettes. Nylon and epoxy tip.  | -110 to 212°F<br>(-80 to 100°C)                     | 1.4 seconds                           |       |            |       |
| <a href="#">TW-08491-15</a><br>(44033) | Epoxy-encapsulated thermistor element. Maximum intermittent temperature is 212°F (100°C). Copper wire is 32 gauge; 3 inch long.   | -110 to 167°F<br>(-80 to 75°C)<br>at continuous use | 1 second in oil;<br>10 seconds in air |       |            |       |
| <a href="#">TW-08491-14</a><br>(416)   | Pipe-fitting probe for closed pipes or vessels. Probe and fitting are 316 SS; autoclavable except lead; lead is detachable via BNC connector. Not electrically isolated; 1 inch long. | -40 to 300°F<br>(-40 to 150°C)                      | 3.4 seconds                           |       |            |       |
| <a href="#">TW-08491-08</a><br>(405)   | Air temperature probe for test rooms, gas stream temperatures, and incubators. 316 SS cage around epoxy-encapsulated thermistor.  | -40 to 300°F<br>(-40 to 150°C)                      | 10 seconds                            |       |            |       |
| <a href="#">TW-08491-10</a><br>(409B)  | Attachable surface probe, recommended for skin or flat-surface temperature measurements. Epoxy-backed 316 SS disk. Vinyl-covered parallel leads.                                      | -40 to 212°F<br>(-40 to 100°C)                      | 1.1 seconds                           |       |            |       |
| <a href="#">TW-08491-09</a><br>(408)   | Surface probe for skin, flat surface, and soil temperatures. Disk is 316 SS; probe includes handle.   | -40 to 300°F<br>(-40 to 150°C)                      | 0.6 second                            |       |            |       |
| <a href="#">TW-08491-11</a><br>(427)   | Small surface probe. Not electrically isolated or autoclavable and with nondetachable lead. Epoxy-backed 316 SS disk on 24 inch PTFE lead.  | -40 to 300°F<br>(-40 to 150°C)                      | 0.3 second                            |       |            |       |
| <a href="#">TW-08491-16</a><br>(418)   | Penetration probe for insertion into semi-solids like fruits, soil, tobacco. No handle. All 316 SS, with vinyl-covered lead.  | -40 to 300°F<br>(-40 to 150°C)                      | 3.7 seconds                           |       |            |       |

[TW-17001-06](#) NIST-traceable calibration for thermistor probe

## Temperature Probes, Thermistors

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### OAKTON® 400-Series Thermistor Probes

These thermistor probes are specially designed for soil, liquid, air, or surface temperature applications. Use with any meter that accepts Oakton or 400-series probes. All probes are accurate to  $\pm 0.2^\circ\text{F}$  from 32 to 150°F ( $\pm 0.1^\circ\text{C}$  from 0 to 70°C).

All integral-handle probes include a 5-ft coiled cable with 1/4" phone plug. All permanent, special-purpose probes (except 93823-00) include a vinyl-covered 10-ft (3.0-m) lead with 1/4" phone plug. Temperature range is for the probe only. Probes with a plastic handle have a maximum temperature of 275°F (135°C) before being affected.



| Catalog number  | Description  | Temperature range           | Time constant | Price | Dimensions                                    | Photo |
|---|--|-----------------------------|---------------|-------|---|-------|
| <b>Integral-handle probes</b> with sturdy 5.25"L glass-filled nylon handle  |  |                             |               |       |   |       |
| <a href="#">TW-93824-00</a>   | General-purpose immersion probe, 316 SS sheath   | -22 to 212°F (-30 to 100°C) | 4 seconds     |       | 10" length, 0.188" dia                        |       |
| <a href="#">TW-93824-12</a>   | General-purpose PTFE coated 316 SS probe   | -22 to 212°F (-30 to 100°C) | 7 seconds     |       | 10" length, 0.200" dia                        |       |
| <a href="#">TW-93824-30</a>   | Penetration probe, 316 SS sheath   | -22 to 212°F (-30 to 100°C) | 6 seconds     |       | 4" length, 0.188" dia                         |       |
| <b>Special-purpose probes</b> (longer lead lengths are available by special order, please call our Application Specialists) |  |                             |               |       |   |       |
| <a href="#">TW-93823-00</a>   | Deep water/soil probe. Weighted and insulated for continuous use underwater. Probe is rubber-coated 316 SS with waterproof PVC over PTFE-covered 50-ft lead. | -22 to 212°F (-30 to 100°C) | 5 seconds     |       | 1/4" dia, 9/16" dia, 2" + 3" + 50 ft          |       |
| <a href="#">TW-93823-05</a>   | Air/gas probe. Exposed element is in a perforated protective shield. Sheath is 316 stainless steel.  | -22 to 212°F (-30 to 100°C) | 2 seconds     |       | 1/4" dia, 3 3/4" + 10 ft                      |       |
| <a href="#">TW-93823-01</a>   | Surface temperature probe. Epoxy covered sensor is in a screw-mount 1/4" thick aluminum housing. Easy to mount on flat surfaces.                             | -22 to 212°F (-30 to 100°C) | 8 seconds     |       | 1" height, 1/4" mounting hole, 13/16" + 10 ft |       |

**INNOCAL®**  
INNOVATIVE CALIBRATION SOLUTIONS

[TW-17001-06](#) NIST-traceable calibration for thermistor probe

### MORE online!

If you need a different style thermistor probe, Cole-Parmer can help. Visit our online custom probe configurator. Go to . . . [ColeParmer.com/ProbeConfigurator](http://ColeParmer.com/ProbeConfigurator)

### 500-Series Miniature Flexible Thermistor Probes

Use with any meter that accepts 500-series probes—includes a conversion chart to convert meter reading to actual temperature. All probes are accurate to  $\pm 0.2^\circ\text{F}$  from 32 to 150°F ( $\pm 0.1^\circ\text{C}$  from 0 to 70°C). The 10-ft (3.0-m), vinyl-covered shielded lead withstands temperatures to 158°F (70°C).

| Cat. no. (YSI no.)                | Description   | Temperature range       | Time constant | Price | Dimensions   | Photo |
|-----------------------------------|---|-------------------------|---------------|-------|--|-------|
| <a href="#">TW-08456-02</a> (555) | Nontoxic nylon-coated probe. Feeds through 17-gauge thin-wall hypodermic needles. Not autoclavable; electrically isolated (nondetachable lead). | 32 to 158°F (0 to 70°C) | 0.2 second    |       | 0.03" Nylon tube (0.7 mm), 1/4" dia, 19 3/4" + 1 3/16" |       |
| <a href="#">TW-08457-02</a> (554) | Nontoxic PTFE-insulated probe with PTFE tubing and partially exposed thermistor. Not autoclavable; electrically isolated.                       | 32 to 158°F (0 to 70°C) | 0.2 second    |       | 0.04" PTFE tube (1 mm), 1/4" dia, 19 3/4" + 1 3/16"    |       |