Digi-Stem® Digital RTD Reference Thermometer for Retorts & Temperature Critical Applications

- Exclusive Continuous Self-Checking Technology
- Trustworthy Alternative to Mercury-in-Glass
- Designed in compliance with the FDA Final Rule Change for 21 CFR Part 113

www.palmerwahl.com

ISO 9001:2008 CERTIFIED

Continued Innovation Since 1836
The Wahl® DST600 is the new standard against which all other temperature indicating devices are compared.

- Trustworthy Alternative to Mercury-in-Glass
- Exclusive Continuous Self-Checking Technology to ensure accuracy and reliability
- Exclusive Adjustable Meter Update Rate
- User Selectable °F or °C
- Ambient operation at -40°F to 158°F
- Unique Probe ID Feature prevents use of unauthorized probes
- Long Battery Life - 2 years nominal
- Adjustable Angle, Rigid, or Remote configurations available
- Programmable “R0” for “matching” sensor to meter
- User friendly Single Point Software Calibration
- Tamper Resistant - all adjustments require software
- Exclusive Quick Disconnect Connector option on Remote Cables
- NIST Traceable Certificate of Conformance - Optional

Innovative New Technology!

Mercury-in-Glass (MIG) thermometers, the only standard for years, may now be replaced with other technologies under the FDA’s Final Rule for 21 CFR Part 113.

Wahl’s DST600 is a digital 4-wire RTD thermometer, designed and manufactured using high reliability components to meet the Final Rules mandate that the Temperature-Indicating device be accurate to 1°F, and not be affected by EMI or environmental conditions.

The Wahl DST600 also meets the current USDA 9CFR318.305 for canned meat and 9CFR381.305 for canned poultry products.

Continuous Self Checking Accuracy

The Wahl DST600 meets and exceeds the FDA rules by incorporating self-checking technology which continuously verifies the accuracy of the electronics, and indicates any out-of-tolerance conditions. This assures that its accuracy and ability to function properly during processing are not compromised. Test temperatures are set at 180°F (82.2°C) and 250°F (121.1°C). Out-of-tolerance conditions will be displayed as an error, and immediately indicate to the operator if accuracy is not maintained, preventing under- or over-processing of product. The Wahl DST600 is the best reference standard against potential health hazards!

Drop-in Direct MIG Replacement

The Wahl DST600 offers the highest precision temperature measurement technology with many unique features - making it the best choice for your processing needs. It has a field replaceable battery with a 2 year life, and provides a trustworthy alternative to MIG style thermometers with drop-in direct replacement. It is available with MIG standard tapered bulb chambers, or in a variety of probe configurations. The Wahl DST600 also features a 1” high LCD display - readable from 30 feet away!
**Probe Selection and Measurement**

**Optional Quick Disconnect for Calibration Convenience**

Optional Quick Disconnect for both probe and meter connections offers convenient calibration for the user. This industry leading, and time saving capability allows the probe and meter to be removed and taken to the calibration lab and calibrated as a system - *without removing the installed cables.*

**Why Calibration is important for your Instruments**

- Product Safety and compliance with FDA Standards.
- Increase customer satisfaction with consistent products.
- Ensure traceability throughout entire manufacturing process by maintaining accuracy records.
- Register your product for our Calibration eMinder Service to be reminded when calibration is due. Go to: www.palmerwahl.com/register

**Complete Calibration Services Available**

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

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**Sanitary Probe:** Authorized 3-A Sanitary Standard 74-06 for 1.5" to 3.0" diameter tube sizes with tri-clamp fitting for milk, food and pharmaceutical processing.

**Spring Loaded Probe:** Maintains a positive force against the bottom of thermowells; not for direct immersion in fluids; assembly is not sealed. Allows approximately 1 inch of travel.

**Brazed Probe:** Discontinued.

**Welded Probe:** Sealed for immersion in fluids; for use in thermowells, sanitary, and high-pressure applications.

**1-1/4"-18 Swivel Nut Fitting with 1/4" Diameter Stem** - for use with union connections (no thermowells) for quick response.

**1-1/4"-18 Swivel Nut Fitting & Tapered Bulb** - Direct replacement for existing MIG’s. Requires use with thermowell.

**PVC Cable**

*Note:* some connections include 1/2" of threads when measuring probe length. Contact Customer Service for information.
Calibration and Programming Software and Accessories

Probe ID and Probe RØ

Probe ID - The unique Probe ID feature verifies that only the authorized probe is connected to the meter. If an unauthorized probe is connected, the meter will display “Prb”, indicating the need to perform the probe authorization and probe calibration functions. Probe ID is not available on Remote probes with connectors with cable length over 25 meters.

NO OTHER SYSTEM HAS THIS SAFETY FEATURE!

Probe RØ - The Wahl DST600 includes an exclusive compensation feature utilizing a programmable RØ calibration coefficient for increased accuracy. This allows the meter and probe to be “matched” to each other, and along with the Probe ID feature, guarantees an accurate and secure system.

DST600 Calibration Software

DSTCAL Calibration Software Kit - This software allows the user to configure the following parameters:

- Sample/Display Rate - Factory default at 2/seconds. Adjustable from .25 seconds to 10 seconds in .25 second intervals. Slower update rates extend battery life.
- Probe RØ - Compensation feature which allows calibration of meter to be “matched” to probe.
- Probe Authorization - Allows user to change probes and authorize the new probe to operate with the existing meter.
- Meter Calibration - calibrates the meters resistance measurement circuits using precision resistances.
- System Calibration - used to calibrate a sensor’s RØ value to a meter using a standard ice bath.

Software Accessories

DST600 Fixed Probe Calibration Cable - 13500-03 Extends the probe leads when performing system calibrations on fixed probe systems. Allows the meter to be conveniently placed on the benchtop, while the probe is installed in an ice bath.

DST600 Interconnect Calibration Cable - When probe wiring is difficult to remove, simply disconnect the probe and meter from the cable, and use the 2 meter interconnect cable for performing lab calibration.

12370-002 - 2 meter length, 6 conductor cable for use in calibration when installed remote cable cannot be easily removed.
### DST 600 RTD Meter Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>DST600</th>
<th>DST600R</th>
<th>DST600I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Standard</td>
<td>Selectable Resolution</td>
<td>AA Battery for International shipments</td>
</tr>
<tr>
<td>Meter Range</td>
<td>-50° to 500°F (-45.5° to 260°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale</td>
<td>User Selectable for °F or °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter Accuracy</td>
<td>± 0.1°F/C, over 1-year period (@ Tamb = 23°C ± 5°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter and Probe Accuracy</td>
<td>Temp ≤ 300°F (148.8°C) = ± 0.3°F (± 0.2°C), Temp &gt; 300°F (148.8°C) = ± 0.25% of reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>1.0” 4-digit LCD display with icons for °F, °C and Low Battery, Readable up to 30 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display Resolution</td>
<td>0.1°F/C</td>
<td>User Selectable 1/0.1°F/C</td>
<td>0.1°F/C</td>
</tr>
<tr>
<td>Sample/Display Rate</td>
<td>2 seconds standard, adjustable in .25 second intervals from .25 to 10 seconds</td>
<td>3 seconds standard, adjustable in .25 second intervals from .25 to 10 seconds</td>
<td></td>
</tr>
<tr>
<td>Ambient Operating Temperature Range</td>
<td>-40° to 158°F (-40° to 70°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature Coefficient</td>
<td>Maximum of 0.003%/°C over Ambient Operating Temperature Range from 23°C ± 5°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td>10% to 100% RH non-condensing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td>1 Lithium Thionyl Chloride “C” Battery, User Replaceable</td>
<td>1 AA Battery, User Replaceable</td>
<td></td>
</tr>
<tr>
<td>Battery Life</td>
<td>2 years nominal at 2 second update interval</td>
<td>1 year nominal at 3 second update interval</td>
<td></td>
</tr>
<tr>
<td>Enclosure</td>
<td>Stainless Steel and Polycarbonate (NEMA 4X)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosure Dimensions/Weight</td>
<td>Dimensions: 5.3” W x 4.3” H x 2.7” D (13.5 x 10.9 x 6.9 cm). Weight: 2 lbs. (1kg)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor/Probe</td>
<td>• Sensor - 4-wire RTD, R0 = 100Ω, Alpha = .00385 Ω/Ω/°C with serial ID chip</td>
<td>• 304 or 316L Stainless Steel Probe construction</td>
<td>• Remote Probes with rugged IP68 connection system.</td>
</tr>
<tr>
<td></td>
<td>• Adjustable Angle Stem Probes</td>
<td>• Rigid Stem Probes</td>
<td>• Sanitary Fittings in compliance with 3A Sanitary Standard 74-06</td>
</tr>
<tr>
<td></td>
<td>• Remote Probes with rugged IP68 connection system.</td>
<td>• Sanitary Fittings in compliance with 3A Sanitary Standard 74-06</td>
<td></td>
</tr>
<tr>
<td>Sensor Cables</td>
<td>All Remote Cables are shielded, 6 conductor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIST Calibration</td>
<td>Optional NIST Traceable Certificate of Conformance at 3 points: 180°F, 220°F, 250°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programming &amp; Calibration Software</td>
<td>Optional: DSTCAL Calibration Software</td>
<td></td>
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</tbody>
</table>

### DST600 Series Software and Accessories

<table>
<thead>
<tr>
<th>DSTCAL</th>
<th>DST600 Series Calibration Software Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>12370-002</td>
<td>DST600 Series Interconnect Calibration Cable - 2 meter length, 6 conductor</td>
</tr>
<tr>
<td>13500-03</td>
<td>DST600 Series Fixed Probe Calibration Cable</td>
</tr>
</tbody>
</table>

### DST600 Series Meter Accessories and NIST Traceable Certificate of Conformance

<table>
<thead>
<tr>
<th>DSA3030</th>
<th>Wall Mount Bracket (for Remote Mount units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSA3031</td>
<td>Wall Mount Bracket (for Remote Mount units) with Grounding Lug</td>
</tr>
<tr>
<td>DSA3032</td>
<td>Security Screw Kit (Screws, washers, security wire seal, instructions, installed when purchased with meter)</td>
</tr>
<tr>
<td>DSA3033</td>
<td>Security Wire Seals, Tamper-Resistant, 10/pack, Toolless, 8”, SS Wire</td>
</tr>
<tr>
<td>DSA3062</td>
<td>Spare Lithium Thionyl Chloride “C” Battery, 3.6V, for all DST meters except FM version</td>
</tr>
<tr>
<td>12234-03</td>
<td>Spare “AA” size Lithium Thionyl Chloride Battery for “I” versions</td>
</tr>
<tr>
<td>DS-M</td>
<td>Calibration &amp; Firmware Upgrades (Upgrades if applicable, included in price)</td>
</tr>
<tr>
<td>13146X</td>
<td>90 Degree Elbow for Rigid stem units, Specify X: Back Connection(B), Left(L) or Right Side(R) Mount</td>
</tr>
</tbody>
</table>

*Upgrades if applicable, are included in price

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PALMER Wahl

America’s First Manufacturer of Industrial Temperature and Pressure Instrumentation

Wahl designs and manufactures to the most stringent quality standards. We provide certified, traceable calibration data in support of companies who require meeting ISO 9001:2008, FAA and FDA quality standards. Calibrations to both IPTS-68 and ITS-90 are available.

CALIBRATION SERVICES

STANDARD CERTIFICATION: Unit is calibrated to factory specifications using NIST traceable equipment.

Certificate of Conformance - Statement that our product meets published specifications. Included on the packing list with each shipment.

“Long Form" Certificate of Conformance - Available upon request, includes Certificate of Conformance with customer’s PO number, items shipped, and any product serial numbers for products included in the shipment.

Calibration Sticker - (or tag) Advising you of the date your instrument(s) was/were calibrated, and the suggested date for the next calibration. This is provided with most products at time of purchase, and when you return a product for calibration.

NIST TRACEABLE TEST REPORT: Unit is calibrated to factory specifications using NIST Traceable equipment. Provides instrument test data with details of standard instruments used to perform the calibration.

“As Received” and "As Left" Test Data are provided, as appropriate, with any out-of-tolerance conditions noted, and a unique test number assigned.

NIST Traceable Calibration Sticker provides the date your instrument(s) was/were calibrated, technician performing the calibration, suggested date for the next calibration, and references the unique test number shown in the Test Report. Our Quality Management System is certified to conform to ISO9001:2008. We maintain a calibration system in conformance with ANSI/NCSL Z-540 and MIL-STD-45662A.

Why you need to Calibrate your Instruments

• Increase customer satisfaction with consistent products.
• Comply with quality standards.
• Improve product quality.
• Ensure traceability throughout your entire manufacturing process.
• Palmer Wahl can calibrate your equipment for you. We also offer a complete line of Calibrators to integrate all the necessary functions for adjustment and maintenance of your process.
• We make it easy to use our products and services, and Palmer Wahl is there to help every step of the way.

REPAIR AND OTHER SERVICES

REGISTER YOUR PRODUCT: Registration is fast and easy. In about a minute you can register your product for Warranty Protection and our Calibration Reminder Service to keep your QC Program in compliance. Go to: www.palmerwahl.com/register

REPAIR and OTHER SERVICES: Palmer Wahl offers repair and calibration services on most products we sell. The customer will receive a written estimate for approval before proceeding with work. Repair pricing includes Standard Certification as listed above.

Detailed Repair Report - Available upon request, this report provides details of evaluation and repairs made.

Custom Points - Palmer Wahl will calibrate your instruments at your specified temperature or pressure points.

Special Requests - When calibrating your instrument, our experienced personnel will help you to achieve the level of quality you require in your facility. Note: Before returning your product to us, please contact us to obtain a Return Merchandise Authorization Number, (RMA). Call Customer Service at 1-800-421-2853 or go to www.palmerwahl.com and click on: Service > Product Return Request.

Wahl Digi-Stem Thermometers are available from: