Models DST620, DST621, DST660, DST661

Innovative New Technology!

The **DST620** features all the benefits of our DST600 series, including local display, with the addition of a second RTD wired to an internal 4-20mA transmitter. The DST620 has a dual port enclosure. The second RTD and transmitter are entirely independent, powered by customer provided 24VDC loop power. This allows the primary RTD sensor to function as a reference thermometer.[3] The independent second sensor is ideal for output to a recorder or control panel. Users access the transmitter via a ½" NPT Female connector via the second (side) port on the side of the case.

Specify burnout high or low and the temperature set points for the 4mA and 20mA settings when ordering.

The **DST660** is identical to the DST620 but features a Stainless Steel H-Frame for increased RFI protection in harsh environments.

The **DST621** features all of the benefits of our DST600 Series, including local display, with the addition of a second RTD wired to an internal 4-20 mA programmable transmitter. The unit features a dual port enclosure. The second RTD and transmitter are entirely independent, powered by customer provided 24VDC loop power. This allows the primary RTD sensor to function as a reference thermometer.[1] The DST621 has a dual port enclosure, with a Turck® 4 pin connector on the second (side) port, for watertight access to the transmitter.

Specify burnout high or low and the temperature set points for the 4mA and 20mA settings when ordering.

The **DST661** is identical to the DST621 but features a Stainless Steel H-Frame for increased RFI protection in harsh environments.

DST620   DST660

1/2" NPT Female Connection on right side of Meters

DST621   DST661

Turck 4-pin Connection on right side of Meters

FEATURES

Safety & Security

• Wahl DST600 series digital RTD thermometers use high precision, high reliability components.

• LCD screen with easy to read 1" high digits. Resolution to 1/10 of 1°.

• Self-checking technology continuously verifies the accuracy of the electronics and indicates any out-of-tolerance condition by displaying an Error message on the LCD screen.

• Tamper Resistant. All reference thermometer (TID) adjustments require DSTCAL, our user friendly single point calibration software (sold separately). Not needed for output RTD.

• User selectable °F or °C.

• Adjustable meter update rate.[2] Two years nominal battery life with default update rate.

• Meets the FDA Final Rule 21 CFR Part 113 for replacing traditional mercury-in-glass thermometers.

  - Ideal for low acid canned food processing in hermetically sealed containers.

• USDA Accepted Equipment - meets current USDA 9CFR318.305 for canned meat and 9CFR318.305 for canned poultry products.

Probes

• Probe ID feature prevents the use of unauthorized probes. The programmable R0 allows a specific probe and meter to be matched. Only the probe calibrated with the meter can be used, to be used to ensure accuracy.[3] Using an unauthorized probe will display an Error (Prb) message on the LCD screen.

• The programmable R0 allows any initial tiny probe error to be offset in the meter.

• Sanitary probes are in compliance with 3A Sanitary Standard.

Enclosure

• Stainless Steel H-Frames included in DST660 and DST661 meters

Certifications

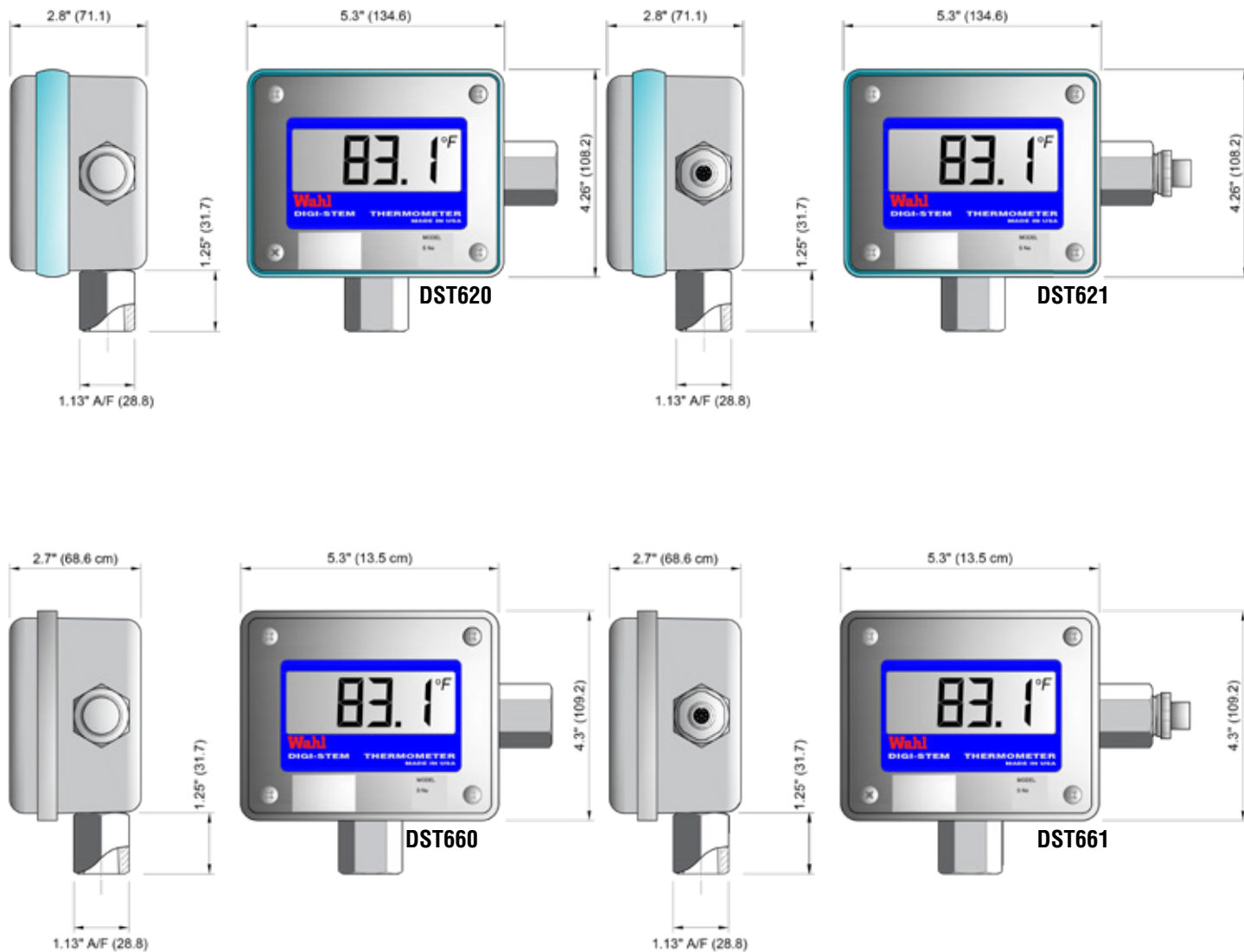• NIST Traceable Certificate of Conformance is available.

FOOD PROCESSING APPLICATIONS, OR IDEAL FOR ANY APPLICATION WHERE ACCURACY IS CRITICAL.

The Wahl **DST600** Series was designed with food processing applications in mind. The DST600 Series meets and exceeds the FDA requirements, ensuring that its accuracy and ability to function properly during critical processing is not compromised. The DST600 Series also meets current USDA 9CFR318.305 for canned meat and 9CFR381.305 for canned poultry products. With high reliability components, combined with its accuracy and safety features, the DST600 is ideal for low acid canned food processing in hermetically sealed containers and any application where accuracy is critical.

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[1] Primary RTD and LCD Screen are battery powered. (TID)

[2] Default update rate is 2 seconds unless otherwise specified at time of order.

[3] Probe ID feature is available on rigid probes and remote probes with a cable of 25 meters or less. Probe ID can be disabled upon request at time of order.

DST620

DST621

DST660

DST661

DST620 / DST660 & DST621 / DST661 Series RTD Meter Specifications Temperature Indication Device with RTD and Local Display		
Standard Series	DST620	DST621
All Stainless Steel, RFI	DST660	DST661
Isolated Secondary Sensor	4-20mA Transmitter	
	1/2" NPT Female Connector	Turck 4 pin Connector
Selectable Resolution	add "R" to end of Model number for User Selectable 1° / 0.1° resolution	
Battery for international Shipments	add "I" to end of Model number For 1 3.6 volt Lithium Thionyl Chloride "AA"Battery	
Panel Mount	add "P" to end of Model number	
Quick Disconnect**	add "Q" to end of Model number	
Display Specifications		
Meter Range / Scale	-50° to 500°F (-45.5° to 260°C) / User Selectable for °F or °C	
Meter Accuracy	± 0.1°F/C, over 1-year period (@ Tamb = 23°C ± 5°C)	
Meter and Probe Accuracy	Temp ≤ 300°F (148.8°C) = ± 0.3°F (± 0.2°C), Temp > 300°F (148.8°C) = ± 0.5% of reading	
Display	1.0" 4-digit LCD display with icons for °F, °C and Low Battery, Readable up to 30 ft.	
Display Resolution	0.1°F/C / Optional "R" Model: User Selectable 1.0° or 0.1°F/C	
Display Update Rate	"2 seconds standard, adjustable in .25 second intervals from .25 to 10 seconds Optional "I" Model: 3 seconds standard, adjustable in .25 second intervals from .25 to 10 seconds"	
Ambient Operating Environment	-40° to 158°F (-40° to 70°C) 10% to 100% RH non-condensing	
Ambient Temperature Coefficient	Maximum of 0.003°/°C over Ambient Operating Temperature Range from 23°C ± 5°C	
Sensor/Probe	• Sensor - 4-wire RTD, R0 = 100Ω, Alpha = 0.00385 Ω/Ω/°C w/ serial ID chip • Remote Probes (IP68 connection system)***　• Rigid Stem Probes • 304 or 316L Stainless Steel Probe　　• Sanitary Fittings (3A Sanitary Std 74-06) • Adjustable Angle Stem Probes • Models 610, 611, 620, 621 - 3/8" & 1/2" OD Shank & Tapered Bulbs only	
Sensor Cables	PVC insulation, shielded, 6 conductor, 105°C rating	
Battery User Replaceable	1 Lithium Thionyl Chloride "C" battery / Optional "I" Model: 1 Lithium Thionyl Chloride "AA" Battery	
Battery Life	1+ year nominal at 2 second update interval. Up to 10 years if set on 10 second update rate.	
NIST Calibration	Optional NIST Traceable Certificate of Conformance at: 180°F, 220°F, 250°F. Optional User Specified Points	
Programming & Calibration Software	Optional: DSTCAL Calibration Software	
Secondary RTD Specifications		
RO	100 ohms per DIN EN 60751	
Accuracy	Class A per DIN EN 60751	
Temperature Coefficient	TCR = 3850 ppm/k	
Connection	4-wire	
Transmitter Specifications		
Programming	PC Programming*	
Power Supply Requirements	10 to 35 Volts DC	
Range	-58° to 500°F (-50° to 260°C)	
Accuracy	Greater of 0.1°C or 0.05% of input span	
Fault Monitoring	Programmable High (> 21.6 mA), Programmable Low (< 3.5 mA)	
Enclosure	DST620, DST621 Series: Stainless Steel Enclosure with Polycarbonate H Frame and Window (NEMA 4X) DST660, DST661 Series: All Stainless Steel Enclosure and H Frame with Polycarbonate Window (NEMA 4X)"	
Dimensions / Weight	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)	

*Factory Programmable or optional Cable required.

**This is only when ordering a meter without Probe. If ordering a Remote Probe with Quick Disconnect DO NOT ORDER a DST6XXQ

*** Remote probes can be hard wired on or have optional IP68 quick disconnects at one or both ends (allows cables to be run through conduit or

　tied into wiring harnesses allowing meter end probe to be disconnected for calibration check).

Models

Code	Step 1 - order Digi-Stem DST610, DST611, DST620, or DST621 Series RTD Meter (NIST Certificate optional)
DST620	RTD Meter, LCD, 4-20mA Transmitter, 1/2" NPT Female Conduit Connection, LCD, Battery Powered Display, ("C" size incl) -50° to 500°F (-45.5° to 260°C)
DST621	RTD Meter, LCD, 4-20mA Transmitter, Turck 4 pin Connector, LCD, Battery Powered Display, ("C" size incl) -50° to 500°F (-45.5° to 260°C)
DST660	RTD Meter, LCD, All SS, RFID, 4-20mA Transmitter, 1/2" NPT Female Conn, LCD, Battery Power Display, ("C" incl) -50° to 500°F (-45.5° to 260°C)
DST661	RTD Meter, LCD, All SS, RFID, 4-20mA Transmitter, Turck 4 pin Connector, LCD, Battery Powered Display, ("C" size incl) -50° to 500°F (-45.5° to 260°C)

Meter Options

Code	Battery Options	
I	International Shipping, ("AA" Battery included)	**Note: Battery Options** - DST Meters come standard with a "C" cell battery, ready for ground shipment in the contiguous 48 states and some areas of Canada. For air shipments, either an "I" model with a "AA" battery, or "NB" model with no battery is required to avoid additional charges in compliance with transportation regulations regarding "C" cell lithium metal batteries.
NB	No Battery included. Requires local purchase of "C" battery	
Code	**Options**	
P	Panel Mount, Bottom Back Stem Connected	
Q	Quick Disconnect at Meter end, Probe end, or both ends (Specify at Step 3)	

Optional Accessories

DST610/611, 620/621, 650/651, 660/661 Series Software and Accessories	
DSTCAL	DST600 Series Calibration Software Kit (USB Cable, DST/USB Interface Module, and Digi-Stem Serial Interface Cable)
12075-XX	DST611/DST621 Output Field-Wireable Conn Cable, Straight: -07 (4-6mm), -08 (6-8mm)
	Right Angle: -09 (4-6mm), -10 (6-8mm)
12361-XXX	DST611/DST621 Mating Cable with Connector. XXX = length in meters (002, 004, 006, etc) (single ended male connector)
12380-002	DST600 Series Interconnect Calibration Cable, 2 meter length - 10 Conductor, for Remote Probes
DST600 Series Meter Accessories and NIST Traceable Certificate of Conformance	
DSA3030	Wall Mount Bracket (for Remote Mount units)
DSA3031	Wall Mount Bracket (for Remote Mount units) with Grounding Lug
DSA3032	Security Screw Kit (Screws, washers, security wire seal, instructions. Installed when purchased with meter)
DSA3033	Security Wire Seals, Tamper Resistant, 10/pack, Toolless, 8", SS Wire
DSA3062	Spare Lithium Thionyl Chloride "C" Battery, 3.6V, for all DST meters except FM version
12234-03	Spare Lithium Thionyl Chloride 3.6V "AA" Battery for "**I**" versions
	Calibration and Firmware Upgrades[2]
	NIST Traceable Certificate of Conformance of System & Firmware Upgrades[2]
13146X	90 Degree Elbow [3] for Rigid Stem models, Specify: Back Connection (B), Left (L) or Right Side (R) Mount
12415-14	Transmitter Programming Kit for DST620 and DST621 meters with INOR Transmitters (White #12415-08, -09)

[2] Upgrades if applicable, are included in price.
[3] For Back, Left, or Right Side Mounting specify Code B, L, or R - Rigid Stem, under Mounting Style, 90 Degree Elbow accessory, and specify code as shown above.