



**TEL-TRU Manufacturing Co.**

# **DIGI-TEL™ THERMOMETERS**



*Replacement for  
Liquid-in-Glass Thermometers*

**[www.teltru.com](http://www.teltru.com)**

Temperature + Pressure

Since  
1916



## Tel-Tru Manufacturing Company

408 St. Paul St., Rochester, New York 14605 USA

Phone: 585.232.1440 • 800.232.5335 • Fax: 585.232.3857 • E-mail: info@teltru.com • Web: www.teltru.com

# DIGI-TEL™ THERMOMETERS

## ► GENERAL INDUSTRIAL APPLICATIONS

- A direct replacement alternative for Liquid-in-Glass Thermometers, Bimetal Thermometers, and Gas or Vapor Actuated Remote Reading Thermometers
- Easy to read from a distance
- Rugged and heavy duty
- High accuracy
- Long life batteries
- Simple installation into existing thermowells



## ► RETORT APPLICATIONS

Meets the requirement of FDA Rule 21 CFR Part 113.40: Equipment used for thermally processed low acid foods packed in hermetically sealed containers, specifies the use of at least one temperature indicating device per retort. Requirements include:

- Accurate to  $\pm 1^{\circ}\text{F}$  ( $\pm .5^{\circ}\text{C}$ ) tested and traceable to NIST
- Certified calibration provided with every unit
- Identified with a tag number
- Shock and vibration tested
- Environmental protection vs. spray
- Integrated display and sensor assembly
- Resistant to electromagnetic interference



## ► DAIRY APPLICATIONS

Pasteurized Milk Ordinance (PMO) requires the following specifications for indicating thermometers:

- Accurate to  $\pm .5^{\circ}\text{F}$  tested and traceable to NIST
- Sealed and tamper-proof probe and sensor assemblies
  - Shock and vibration tested
  - Environmental protection vs. spray
  - Tamper-proof calibration method
  - Self diagnostic circuit-failure detection noted on display
- Meets 3-A Sanitary Standard 74-06 requirements





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# SPECIFICATIONS AND FEATURES

## ► DISPLAY

- Temperature range span -75/750°F or -60/400°C
- Accuracy  $\pm 0.5^\circ\text{F}$  from 0°F to 300°F
- Accuracy below 0°F and above 300°F, add  $\pm 0.0065^\circ\text{F}$  per degree
- Resolution 0.1°F or C
- Sample rate 3 sec.
- NIST traceable factory calibration
- High-visibility 1" tall LCD digital display
- Battery type
  - Factory Installed 5 year Lithium
  - Field Replaceable 2 year 3.6V 1/2 AA Lithium
- Error codes noted on display if problem is detected
- Microprocessor technology for improved stability, accuracy and PC based field calibration

## ► PROBE

- RTD sensor Pt1000 2-wire
- 316 Stainless Steel
- Stems 2 ½" to 24" x 0.25" diameter
- Connection fittings:
  - ½" NPT – standard
  - Available options:
    - ½" NPT Union,
    - ½" BSPT
    - 1¼ x 18 UNEF-2A with ⅝" stem and tapered bulb
    - Plain bushing if sliding union required
    - Tri-Clover 3-A sanitary flanges - sizes ¾" to 4"

## ► HOUSING

- 5" 304SS case with direct mounted 316SS sensor probe
  - Back connected
  - Bottom connected
  - Adjustable angle
- 4½" case polypropylene body with Teflon covered cable and remote sensor probe

## ► ENVIRONMENTAL

- Ambient operating temperature range -40°F to 176°F (-20°C to 80°C)
- Relative humidity  $\leq 90\%$  non-condensing
- Mechanical shock  $\leq 100$  g
- Vibration 5 to 60 Hz, 1G max
- Conforms to EU/EMC directive 2004/108/EC
- Enclosure rating IP66

## ► OTHER

- Weight 2 lbs
- Serial number on each unit for identification
- Warranty 5 years from shipment:
  - [www.teltru.com/t-warranty.aspx](http://www.teltru.com/t-warranty.aspx)**
- Certificate of Calibration – traceable to NIST – standard
- Factory recertification and maintenance program – optional
- Factory non-warranty repair service - including battery replacement for factory installed batteries

# DIGI-TEL INDUSTRIAL DIRECT THERMOMETERS, 5" CASE

Tel-Tru Electronic Thermometers offer a high visibility read-out, maximum accuracy, rugged convenience, and industry-leading value for your investment.

## ► HOW TO ORDER:

Create detailed part number from chart below:

A	B	C	D	E	F	G	H								
N	D	5	A	X	0	9	1	1	1	P	2	2	0	2	2

Code	Description
<b>A</b>	<b>Case Size and Mounting - Industrial</b>
ND5A	5" Adjustable Angle
ND5B	5" Back Connect
ND5C	5" Bottom Connect 6:00 Probe
ND5D	5" Bottom 3:00 Probe
ND5E	5" Bottom 9:00 Probe
ND5F	5" Bottom 12:00 Probe
<b>B</b>	<b>Battery Option</b>
X	Factory Installed
B	Field Replaceable Battery
<b>C</b>	<b>Range</b>
09	-75/750°F
58	-60/400°C
<b>D</b>	<b>Accuracy</b> (at 0-300°F or -15-150°C)
21	±2°F (±1.1°C)
11	±0.5°F (±0.3°C)
<b>E</b>	<b>Lens</b>
1	Glass (Std)
3	Polycarbonate
<b>F</b>	<b>Probe Type and Diameter</b>
P22	316SS Blunt (Std), .250" Diameter
P32	316SS Pointed, .250" Diameter
P55	316SS 5/8" stem with 7/16" tapered bulb
<b>G</b>	<b>Probe Length*</b>
<i>Available for probe type P22 and P32 above</i>	
02	2.5"
04	4"
06	6"
09	9"
12	12"
15	15"
18	18"
24	24"
<i>Available for probe type P55 above only</i>	
<i>To fit nominal lengths of MIG thermowells</i>	
BE	3.5"
06	6"
09	9"
12	12"
<b>H</b>	<b>Connection</b>
6	1/2" NPT
2	1/2" NPT Union
7	1/2" BSPT
4	Plain Bushing
5	1-1/4" x 18 UNEF-2A Swivel Nut <i>(only available for probe type P55 above)</i>

## Optional Additional Items

Code	Description
96003602	Tagging, 316 stainless steel engraved
10000004-DT	Certificate of Compliance & Origin
<b>Contact Factory</b>	Non-Warranty Repair Service
96021301	Calibration Recertification Service
4906301	Interface cable and Software Kit <i>for field calibration</i>
96017901	Replaceable 2 year 3.6V 1/2 AA Lithium Battery



► ND5A



► ND5C



► ND5B

Calibration Certificate sold standard with every unit.

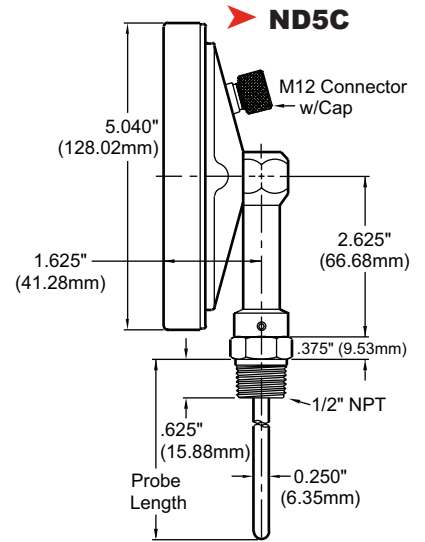
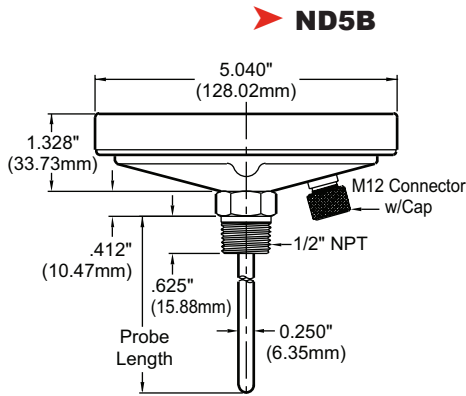
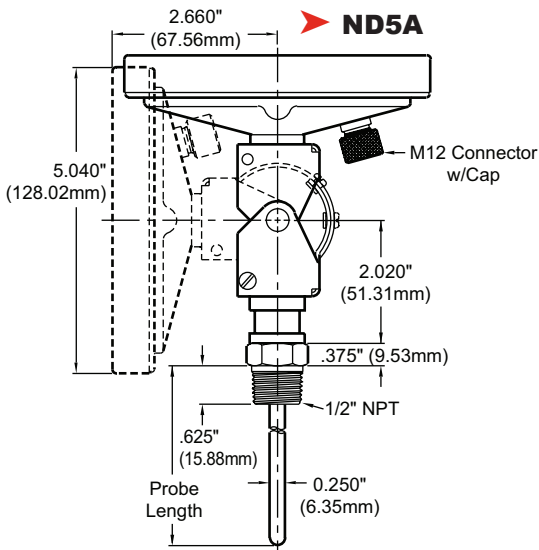


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**➤ MODELS WITH FACTORY INSTALLED BATTERY:**



**➤ MODELS WITH FIELD REPLACEABLE BATTERY:**



**➤ ND5CB-P55**  
5" Bottom Connect 6:00 Probe with Field Replaceable Battery, 5/8" stem with 7/16" tapered bulb



**➤ ND5BB**  
5" Back Connect with Field Replaceable Battery



**➤ ND5AB**  
5" Adjustable Angle with Field Replaceable Battery

# DIGI-TEL SANITARY DIRECT THERMOMETERS, 5" CASE

This heavy duty thermometer meets 3-A Standard Sanitary Standard 74-06 requirements for Sensors and Sensor Fittings and Connections Used on Milk and Milk Products Equipment.\* Other application markets include the food and beverage processing and pharmaceutical industries. No thermowell is required because a Tri-Clamp® sanitary fitting is integral to the thermometer, reducing installation and instrument costs.

## ► HOW TO ORDER:

Create detailed part number from chart below:

A	B	C	D	E	F	G	H											
S	D	5	B	X	0	9	2	1	3	P	2	2	0	2	3	-	1	0

Code	Description
<b>A</b>	<b>Case Size and Mounting - Sanitary</b>
SD5A	5" Adjustable Angle
SD5B	5" Back Connect
SD5C	5" Bottom Connect 6:00 Probe
SD5D	5" Bottom 3:00 Probe
SD5E	5" Bottom 9:00 Probe
SD5F	5" Bottom 12:00 Probe
<b>B</b>	<b>Battery Option</b>
X	Factory Installed
B	Field Replaceable Battery
<b>C</b>	<b>Range</b>
09	-75/750°F
58	-60/400°C
<b>D</b>	<b>Accuracy</b> (at 0-300°F or -15-150°C)
21	±2°F (±1.1°C)
11	±0.5°F (±0.3°C)
<b>E</b>	<b>Lens</b>
1	Glass (Std)
3	Polycarbonate
<b>F</b>	<b>Probe Type and Diameter</b>
P22	316SS Blunt (Std), .250" Diameter
P32	316SS Pointed, .250" Diameter
<b>G</b>	<b>Probe Length*</b>
IC	1.625"
02	2.5"
CH	4.5"
AT	7.5"
DC	10.5"
EC	13.5"
FJ	16.5"
JQ	22.5"
<b>H</b>	<b>Connection</b>
3-05	3/4" Tri-Clamp (316LSS) **
3-10	1 1/2" Tri-Clamp (316LSS) ***
3-20	2" Tri-Clamp (316LSS)
3-25	2 1/2" Tri-Clamp (316LSS)
3-30	3" Tri-Clamp (316LSS)
3-40	4" Tri-Clamp (316LSS)

\*\*used on both 1/2" and 3/4" lines \*\*\*used on both 1" and 1 1/2" lines

## Optional Additional Items

Code	Description
96003602	Tagging, 316 stainless steel engraved
10000004-DT	Certificate of Compliance & Origin
<b>Contact</b>	Non-Warranty Repair Service
<b>Factory</b>	
96021301	Calibration Recertification Service
4906301	Interface cable and Software Kit for field calibration
96017901	Replaceable 2 year 3.6V 1/2 AA Lithium Battery

\*Tri-Clamp is a registered trademark of Alfa Laval Inc. Corporation

Calibration Certificate sold standard with every unit.



► SD5A



► SD5C



► SD5B



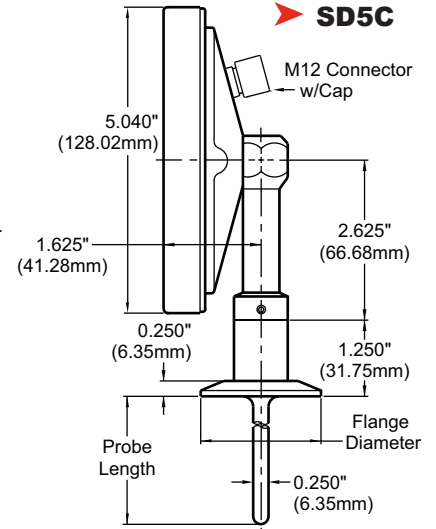
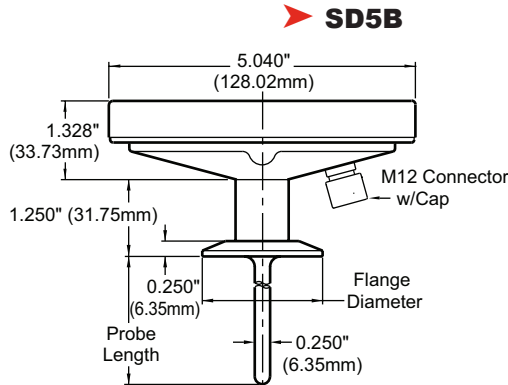
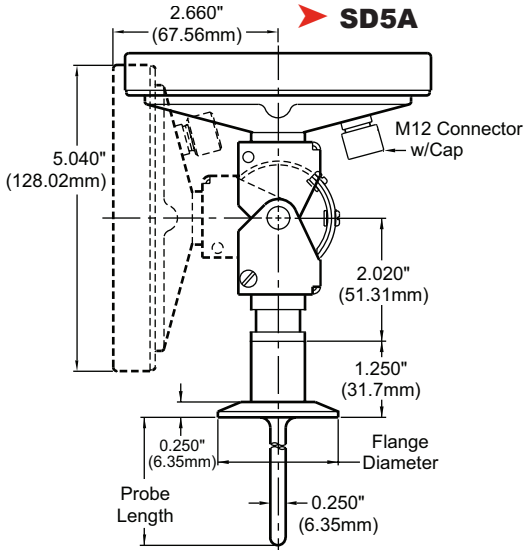


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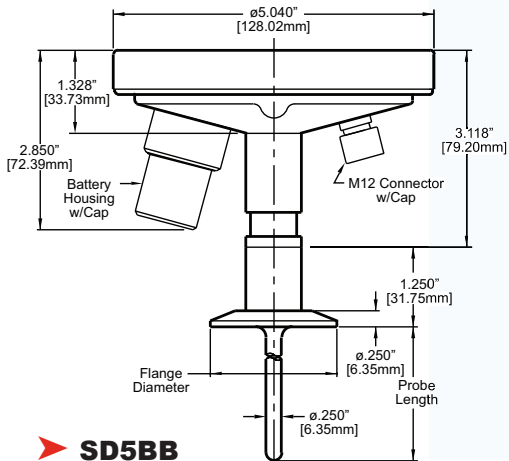
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**➤ MODELS WITH FACTORY INSTALLED BATTERY:**



**➤ MODELS WITH FIELD REPLACEABLE BATTERY:**

**➤ SD5AB**  
5" Adjustable Angle with Field Replaceable Battery



**➤ SD5CB**  
5" Bottom Connect 6:00 Probe with Field Replaceable Battery



# DIGI-TEL INDUSTRIAL REMOTE THERMOMETERS, 4½" CASE

The Tel-Tru ND4R Industrial Remote display is protected from volatile materials, high vibration, or other environmental conditions when mounted remotely from the sensor.

## ► HOW TO ORDER:

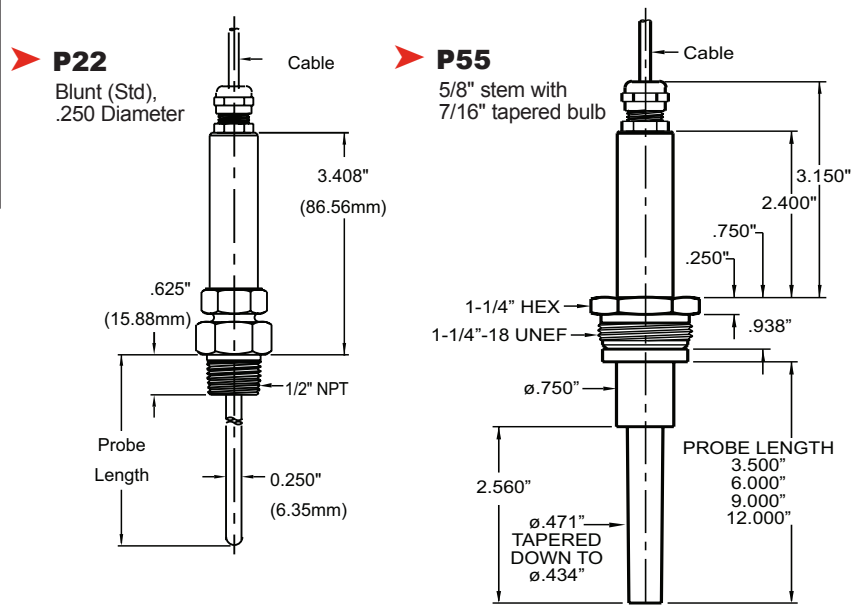
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
N D 4 R	B	0 9	2 1	5	P 2 2	0 2	2 -	C 1 0 0 5

Create detailed part number from chart below:

Code	Description	
<b>A</b>	<b>Case Size and Mounting - Industrial ND4R</b> 4.5" Remote Mount	
<b>B</b>	<b>Battery Option</b> B Field Replaceable Battery	
<b>C</b>	<b>Range</b> 09 -75/750°F 58 -60/400°C	
<b>D</b>	<b>Accuracy</b> (at 0-300°F or -15-150°C) 21 ±2°F (±1.1°C) 11 ±0.5°F (±0.3°C)	
<b>E</b>	<b>Lens</b> 5 Glass, Shatterproof (Std) 3 Polycarbonate	
<b>F</b>	<b>Probe Type and Diameter</b> P22 316SS Blunt (Std), .250" Diameter P32 316SS Pointed, .250" Diameter P55 316SS 5/8" stem with 7/16" tapered bulb	
<b>G</b>	<b>Probe Length</b> Available for probe types P22 and P32 above	Available for probe type P55 above only To fit nominal lengths of MIG thermowells
	02 2.5"	
	04 4"	
	06 6"	
	09 9"	BE 3.5"
	12 12"	06 6"
	15 15"	09 9"
	18 18"	12 12"
	24 24"	
<b>H</b>	<b>Connection</b> 2 1/2" NPT Union 5 1-1/4" x 18 UNEF-2A Swivel Nut (only available for probe type P55 above)	
<b>I</b>	<b>Cable Length</b> -C1005 5 feet -C1010 10 feet -C1015 15 feet -C1020 20 feet -C1025 25 feet -C1030 30 feet -C1040 40 feet -C1050 50 feet -C1075 75 feet -C1100 100 feet	

## Optional Additional Items

Code	Description
<b>96003602</b>	Tagging, 316 stainless steel engraved
<b>10000004-DT</b>	Certificate of Compliance & Origin
<b>Contact Factory</b>	Non-Warranty Repair Service
<b>96021301</b>	Calibration Recertification Service
<b>4906301</b>	Interface cable and Software Kit for field calibration
<b>96017901</b>	Replaceable 2 year 3.6V 1/2 AA Lithium Battery



Calibration Certificate sold standard with every unit.



# DIGI-TEL SANITARY REMOTE THERMOMETERS, 4½" CASE

The Tel-Tru SD4R Sanitary Remote display is protected from volatile materials, high vibration, or other environmental conditions when mounted remotely from the sensor.

➤ **HOW TO ORDER:**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
S	D	4	R	B	0	9	1	1
3	P	2	2	0	2	3	-	1
0	-	1	0	-	C	1	0	0
5								

Create detailed part number from chart below:

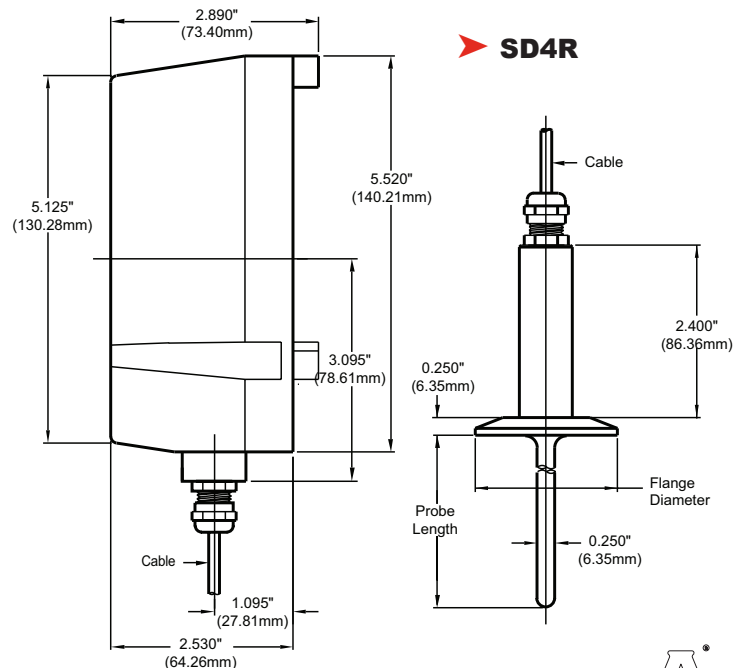
Code	Description
<b>A</b>	<b>Case Size and Mounting - Sanitary SD4R</b> 4.5" Remote Mount
<b>B</b>	<b>Battery Option</b> B Field Replaceable Battery
<b>C</b>	<b>Range</b> 09 -75/750°F 58 -60/400°C
<b>D</b>	<b>Accuracy</b> (at 0-300°F or -15-150°C) 21 ±2°F (±1.1°C) 11 ±0.5°F (±0.3°C)
<b>E</b>	<b>Lens</b> 5 Glass, Shatterproof (Std) 3 Polycarbonate
<b>F</b>	<b>Probe Type and Diameter</b> P22 316SS Blunt (Std), .250" Diameter P32 316SS Pointed, .250" Diameter
<b>G</b>	<b>Probe Length</b> IC 1.625" 02 2.5" CH 4.5" AT 7.5" DC 10.5" EC 13.5" FJ 16.5" JQ 22.5"
<b>H</b>	<b>Connection</b> 3-05 3/4" Tri-Clamp (316LSS) * 3-10 1 1/2" Tri-Clamp (316LSS) ** 3-20 2" Tri-Clamp (316LSS) 3-25 2 1/2" Tri-Clamp (316LSS) 3-30 3" Tri-Clamp (316LSS) 3-40 4" Tri-Clamp (316LSS)
<b>I</b>	<b>Cable Length</b> -C1005 5 feet -C1010 10 feet -C1015 15 feet -C1020 20 feet -C1025 25 feet -C1030 30 feet -C1040 40 feet -C1050 50 feet -C1075 75 feet -C1100 100 feet

\*used on both 1/2" and 3/4" lines      \*\*used on both 1" and 1 1/2" lines

### Optional Additional Items

Code	Description
<b>96003602</b>	Tagging, 316 stainless steel engraved
<b>10000004-DT</b>	Certificate of Compliance & Origin
<b>Contact Factory</b>	Non-Warranty Repair Service
<b>96021301</b>	Calibration Recertification Service
<b>4906301</b>	Interface cable and Software Kit <i>for field calibration</i>
<b>96017901</b>	Replaceable 2 year 3.6V 1/2 AA Lithium Battery

Calibration Certificate sold standard with every unit.





## Tel-Tru Manufacturing Company

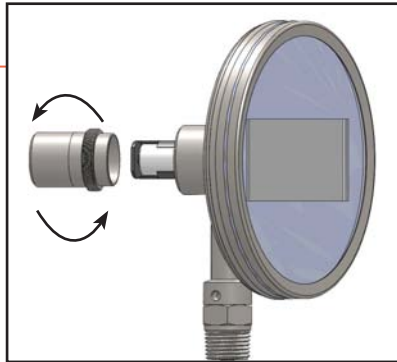
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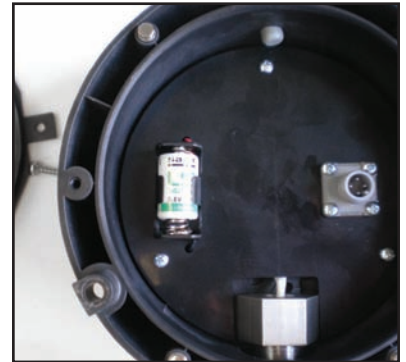
### ► CHANGING BATTERIES

Replace battery with a 3.6V ½ AA Lithium battery (Saft LS 14250 or equivalent), with negative terminal at spring end of battery holder.

Full instructions available at:  
[www.teltru.com/images/document/digitel/01204010.pdf](http://www.teltru.com/images/document/digitel/01204010.pdf)



Direct Mount



Remote Mount

### ► PROGRAMMING SOFTWARE - OPTIONAL

- Field calibration
- User-selectable display resolution

Full instructions available at: [www.teltru.com/images/document/digitel/01204019.pdf](http://www.teltru.com/images/document/digitel/01204019.pdf)

## COMPANION PRODUCTS

### ► CHECK-SET® THERMOMETER CALIBRATOR

*Environmental Safety and Health Professionals, Quality Assurance Managers and HACCP Coordinators in food processing/smoking, preparing/cooking, holding/serving and cooling/storage are using Check-Set Thermometer Calibrators to verify the accuracy of their dial and digital thermometers.*

#### CHECK AND CALIBRATE AT YOUR CRITICAL TEMPERATURE POINT

- 40°F and 160°F / 5°C and 90°C - Dual cold and hot units.
- 40°F - Low temperature holding.
- 140°F - High temperature holding.
- 160°F - Temperature at which E. Coli and other pathogens are killed.
- 212°F - Point of boiling water
- Each unit serialized and certified traceable to the National Institute for Standards and Testing.
- Built in circuitry to warn if unit is more than 1°F out of calibration.
- Optional factory re-certification and maintenance program.

#### GENERAL CHECK-SET THERMOMETER CALIBRATOR

##### SPECIFICATIONS: For complete information see:

<https://www.teltru.com/s-46-calibrator.aspx>

Accuracy:	±0.2°F
Stability:	±0.06°F to ±0.09°F
Heating Time:	Approximately 3 – 8 minutes (varies with temperature set point)
Stem Diameter:	Varies by model
Voltage:	90 to 130 VAC, 50/60 Hz
Power:	25 – 45 Watts
Weight:	8.9 to 9.2 lbs.
Housing Mat.:	Stainless Steel 304SS
Size:	3-1/16" H x 6-5/8" W x 10-7/8"D (78 mm x 168 x 276 mm)

