TEL-TRU Manufacturing Co.
DIGI-TEL™ THERMOMETERS

Replacement for
Liquid-in-Glass Thermometers

www.teltru.com

Temperature + Pressure | *Since 1916*

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 ± 1°F (± .5°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 ± .5°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

5 year WARRANTY

TRACEABLE TO NIST

CE

A3 74-06

SPECIFICATIONS AND FEATURES

➤ DISPLAY

- Temperature range span -75/750°F or -60/400°C
- Accuracy ±0.5°F from 0°F to 300°F
- Accuracy below 0°F and above 300°F, add ±0.0065°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

➤ ENVIRONMENTAL

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

➤ 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

➤ OTHER

- Weight 2 lbs
- Serial number on each unit for identification
- Warranty 5 years from shipment:
    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
A	**Case Size and Mounting - Industrial**	
	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	**Battery Option**	
	X	Factory Installed
	B	Field Replaceable Battery
C	**Range**	
	09	-75/750°F
	58	-60/400°C
D	**Accuracy** (at 0-300°F or -15-150°C)	
	21	±2°F (±1.1°C)
	11	±0.5°F (±0.3°C)
E	**Lens**	
	1	Glass (Std)
	3	Polycarbonate
F	**Probe Type and Diameter**	
	P22	316SS Blunt (Std), .250" Diameter
	P32	316SS Pointed, .250" Diameter
	P55	316SS 5/8" stem with 7/16" tapered bulb

G **Probe Length***

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"		

	Code	Description
H	**Connection**	
	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 *(only available for probe type P55 above)*

Optional Additional Items

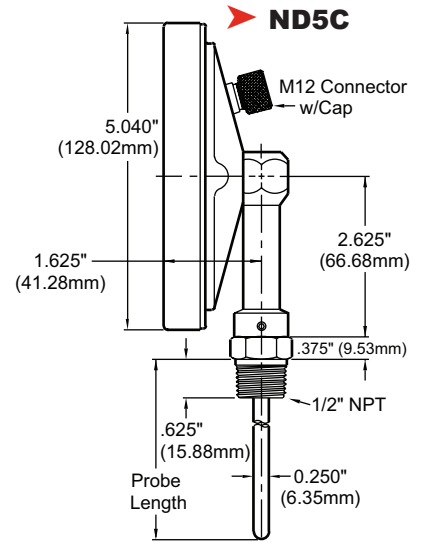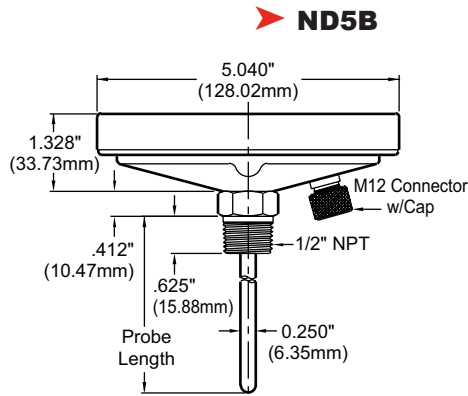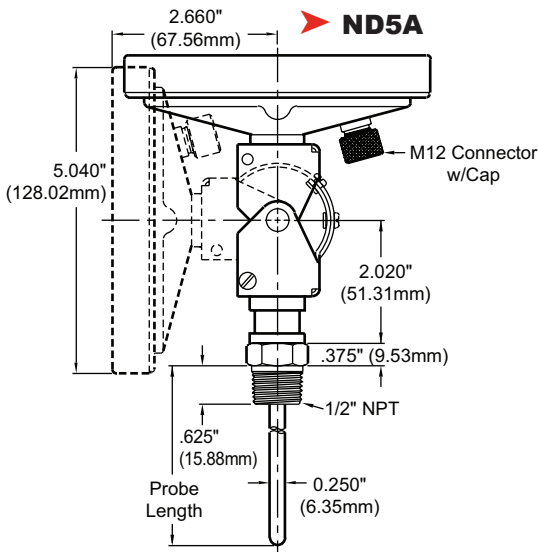| Code	Description
96003602	Tagging, 316 stainless steel engraved
10000004-DT	Certificate of Compliance & Origin
Contact Factory	Non-Warranty Repair Service
96021301	Calibration Recertification Service
4906301	Interface cable and Software Kit *for field calibration*
96017901	Replaceable 2 year 3.6V 1/2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

Calibration Certificate sold standard with every unit.

➤ **ND5A**

➤ **ND5C**

➤ **ND5B**

➤ MODELS WITH FACTORY INSTALLED BATTERY:

➤ **ND5A**

2.660"
(67.56mm)

5.040"
(128.02mm)

M12 Connector
w/Cap

2.020"
(51.31mm)

.375" (9.53mm)

1/2" NPT

.625"
(15.88mm)

Probe
Length

0.250"
(6.35mm)

➤ **ND5B**

5.040"
(128.02mm)

1.328"
(33.73mm)

M12 Connector
w/Cap

1/2" NPT

.412"
(10.47mm)

.625"
(15.88mm)

Probe
Length

0.250"
(6.35mm)

➤ **ND5C**

5.040"
(128.02mm)

M12 Connector
w/Cap

1.625"
(41.28mm)

2.625"
(66.68mm)

.375" (9.53mm)

1/2" NPT

.625"
(15.88mm)

Probe
Length

0.250"
(6.35mm)

➤ MODELS WITH FIELD REPLACEABLE BATTERY:

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

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

➤ **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
A	**Case Size and Mounting - Sanitary**	
	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	**Battery Option**	
	X	Factory Installed
	B	Field Replaceable Battery
C	**Range**	
	09	-75/750°F
	58	-60/400°C
D	**Accuracy** (at 0-300°F or -15-150°C)	
	21	±2°F (±1.1°C)
	11	±0.5°F (±0.3°C)
E	**Lens**	
	1	Glass (Std)
	3	Polycarbonate
F	**Probe Type and Diameter**	
	P22	316SS Blunt (Std), .250" Diameter
	P32	316SS Pointed, .250" Diameter
G	**Probe Length***	
	IC	1.625"
	02	2.5"
	CH	4.5"
	AT	7.5"
	DC	10.5"
	EC	13.5"
	FJ	16.5"
	JQ	22.5"
H	**Connection**	
	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
Contact Factory	Non-Warranty Repair Service
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

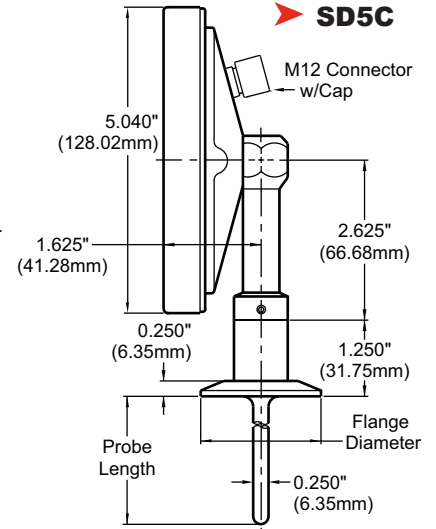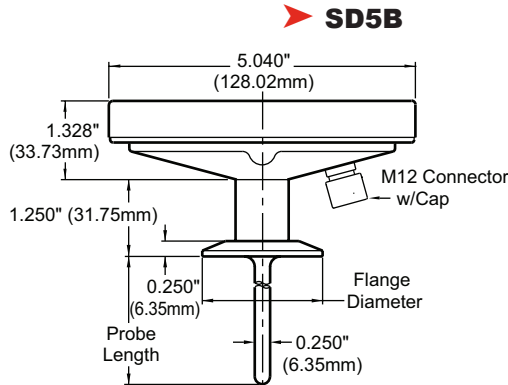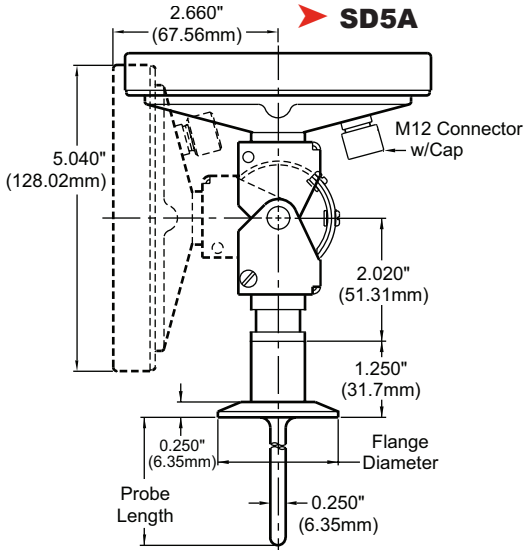Calibration Certificate sold standard with every unit.

➤ **SD5A**

➤ **SD5C**

➤ **SD5B**

3
74-06

➤ MODELS WITH FACTORY INSTALLED BATTERY:

➤ **SD5A**

2.660"
(67.56mm)

5.040"
(128.02mm)

M12 Connector
w/Cap

2.020"
(51.31mm)

1.250"
(31.7mm)

0.250"
(6.35mm)

Flange
Diameter

Probe
Length

0.250"
(6.35mm)

➤ **SD5B**

5.040"
(128.02mm)

1.328"
(33.73mm)

1.250" (31.75mm)

M12 Connector
w/Cap

0.250"
(6.35mm)

Flange
Diameter

Probe
Length

0.250"
(6.35mm)

➤ **SD5C**

M12 Connector
w/Cap

5.040"
(128.02mm)

1.625"
(41.28mm)

0.250"
(6.35mm)

2.625"
(66.68mm)

1.250"
(31.75mm)

Flange
Diameter

Probe
Length

0.250"
(6.35mm)

➤ MODELS WITH FIELD REPLACEABLE BATTERY:

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

ø5.040"
[128.02mm]

1.328"
[33.73mm]

2.850"
[72.39mm]

Battery
Housing
w/Cap

M12 Connector
w/Cap

3.118"
[79.20mm]

1.250"
[31.75mm]

ø.250"
[6.35mm]

Flange
Diameter

Probe
Length

ø.250"
[6.35mm]

➤ **SD5BB**
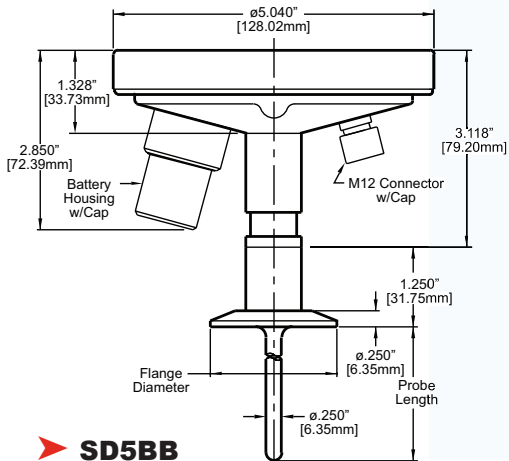
➤ **SD5CB**
5" Bottom Connect
6:00 Probe with Field
Replaceable Battery

74-06

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.
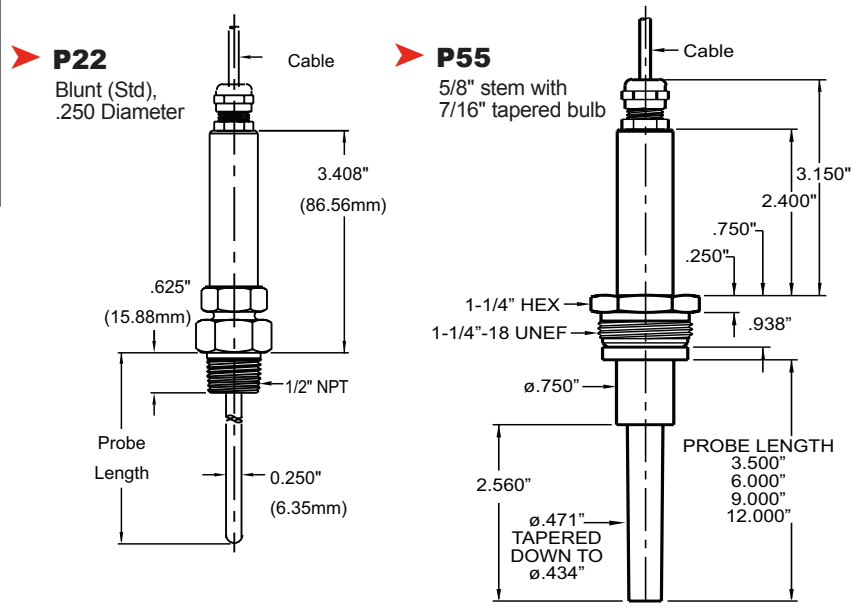
► HOW TO ORDER:

Create detailed part number from chart below:

A	B	C	D	E	F	G	H	I
ND4R	B	09	21	5	P22	02	2	-C1005

	Code	Description
A	**Case Size and Mounting - Industrial**	
	ND4R	4.5" Remote Mount
B	**Battery Option**	
	B	FIeld Replaceable Battery
C	**Range**	
	09	-75/750°F
	58	-60/400°C
D	**Accuracy**	(at 0-300°F or -15-150°C)
	21	±2°F (±1.1°C)
	11	±0.5°F (±0.3°C)
E	**Lens**	
	5	Glass, Shatterproof (Std)
	3	Polycarbonate
F	**Probe Type and Diameter**	
	P22	316SS Blunt (Std), .250" Diameter
	P32	316SS Pointed, .250" Diameter
	P55	316SS 5/8" stem with 7/16" tapered bulb

G **Probe Length**

Available for probe types P22 and P32 above		Available for probe type P55 above	
02	2.5"	To fit nominal lengths of MIG thermowells	
04	4"		
06	6"		
09	9"	**BE**	3.5"
12	12"	**06**	6"
15	15"	**09**	9"
18	18"	**12**	12"
24	24"		

	Code	Description
H	**Connection**	
	2	1/2" NPT Union
	5	1-1/4" x 18 UNEF-2A Swivel Nut *(only available for probe type P55 above)*
I	**Cable Length**	
	-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
96003602	Tagging, 316 stainless steel engraved
10000004-DT	Certificate of Compliance & Origin
Contact Factory	Non-Warranty Repair Service
96021301	Calibration Recertification Service
4906301	Interface cable and Software Kit *for field calibration*
96017901	Replaceable 2 year 3.6V 1/2 AA Lithium Battery

Calibration Certificate sold standard with every unit.

► **ND4R**

► **P22 Probe**

► **P22**
Blunt (Std),
.250 Diameter

Cable

3.408"
(86.56mm)

.625"
(15.88mm)

1/2" NPT

Probe Length

0.250"
(6.35mm)

► **P55**
5/8" stem with
7/16" tapered bulb

Cable

3.150"
2.400"
.750"
.250"

1-1/4" HEX
1-1/4"-18 UNEF

.938"

ø.750"

2.560"

ø.471"
TAPERED DOWN TO
ø.434"

PROBE LENGTH
3.500"
6.000"
9.000"
12.000"

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:**

A	B	C	D	E	F	G	H	I

S D 4 R | B | 0 9 | 1 1 | 3 | P 2 2 | 0 2 | 3 - 1 0 - C 1 0 0 5

Create detailed part number from chart below:

	Code	Description
A	**Case Size and Mounting - Sanitary**	
	SD4R	4.5" Remote Mount
B	**Battery Option**	
	B	Field Replaceable Battery
C	**Range**	
	09	-75/750°F
	58	-60/400°C
D	**Accuracy**	(at 0-300°F or -15-150°C)
	21	±2°F (±1.1°C)
	11	±0.5°F (±0.3°C)
E	**Lens**	
	5	Glass, Shatterproof (Std)
	3	Polycarbonate
F	**Probe Type and Diameter**	
	P22	316SS Blunt (Std), .250" Diameter
	P32	316SS Pointed, .250" Diameter
G	**Probe Length**	
	IC	1.625"
	02	2.5"
	CH	4.5"
	AT	7.5"
	DC	10.5"
	EC	13.5"
	FJ	16.5"
	JQ	22.5"
H	**Connection**	
	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)
I	**Cable Length**	
	-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
96003602	Tagging, 316 stainless steel engraved
10000004-DT	Certificate of Compliance & Origin
Contact Factory	Non-Warranty Repair Service
96021301	Calibration Recertification Service
4906301	Interface cable and Software Kit *for field calibration*
96017901	Replaceable 2 year 3.6V 1/2 AA Lithium Battery

Calibration Certificate sold standard with every unit.

➤ **SD4R**

➤ **SD4R**

2.890" (73.40mm)
5.125" (130.28mm)
5.520" (140.21mm)
3.095" (78.61mm)
Cable
1.095" (27.81mm)
2.530" (64.26mm)

Cable
0.250" (6.35mm)
2.400" (86.36mm)
Probe Length
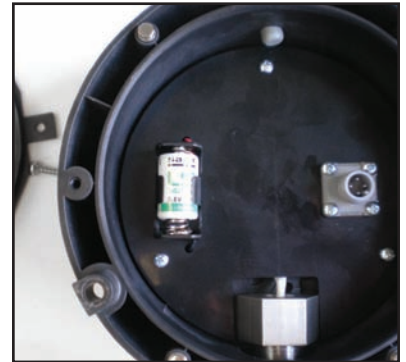0.250" (6.35mm)
Flange Diameter

3-A®
3
74-06

➤ 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
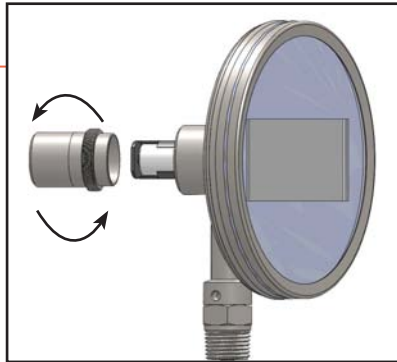
Direct Mount

Remote Mount

➤ PROGRAMMING SOFTWARE - OPTIONAL

- Field calibration
- User-selectable display resolution

Full instructions available at: www.teltru.com/images/document/digitel/01204019.pdf

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)

➤ THERMOWELLS

We recommend thermowells for pressure, corrosive fluid, and high velocity applications.

Tel-Tru thermowells are machined from solid bar stock for standard or high velocity requirements in a large selection of materials and coatings. They are designed and manufactured to assure perfect alignment with the sensor stem.

For complete dimensions, sizes, available materials, optional features and configurations, see the Thermowell catalog at: **www.teltru.com/catalogs.asp**

Technical data on pressure and temperature ratings and maximum fluid velocity can also be found at: **www.teltru.com/t-ThermowellTech.aspx**

SEE TEL-TRU THERMOWELL CATALOG

For complete dimensions, sizes, available materials, optional features and configurations. For technical data on pressure and temperature ratings and maximum fluid velocity see http://www.teltru.com

THREADED
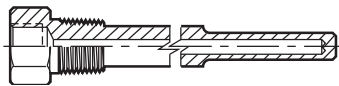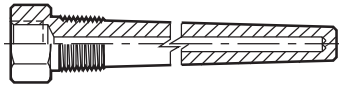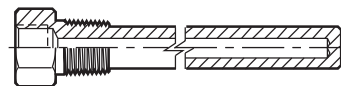
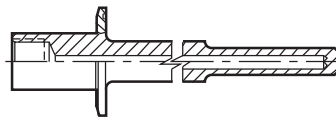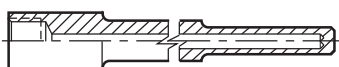*Stepped*   *Tapered*   *Straight*   *Limited Space*
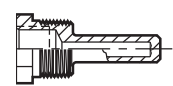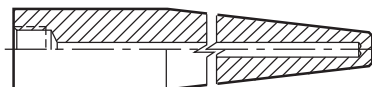
FLANGED
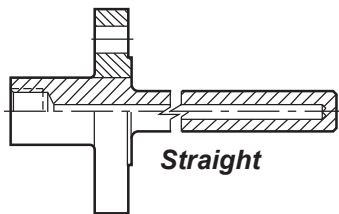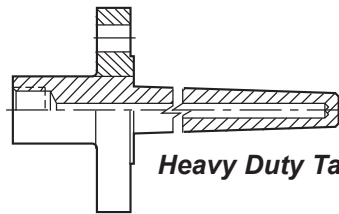
Straight   *Heavy Duty Tapered*

SANITARY

WELDED

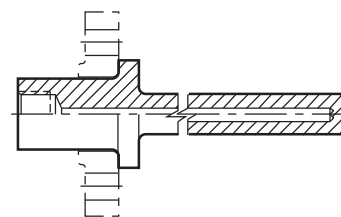*Socket Weld*   *Weld-In*

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