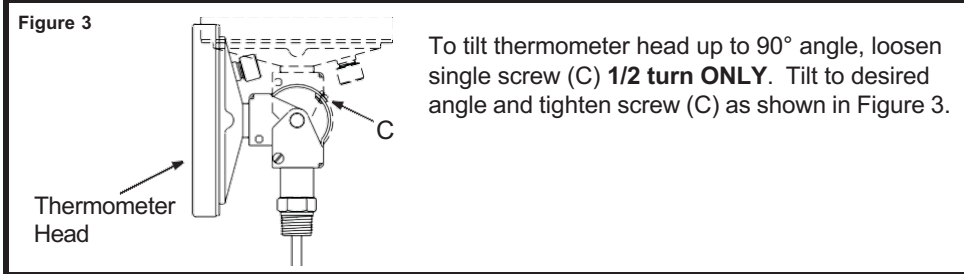
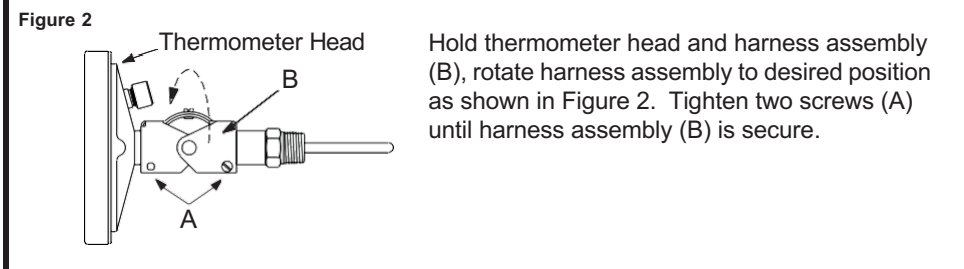
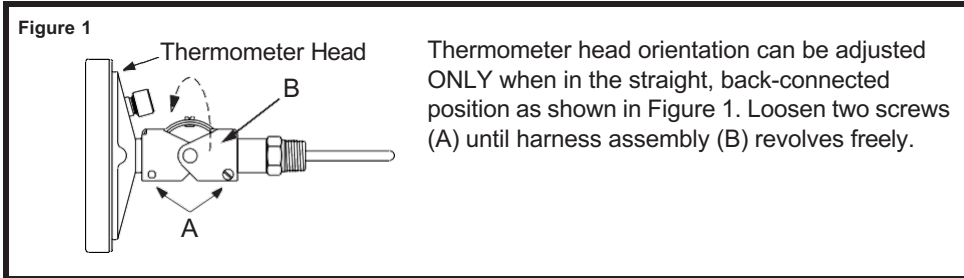
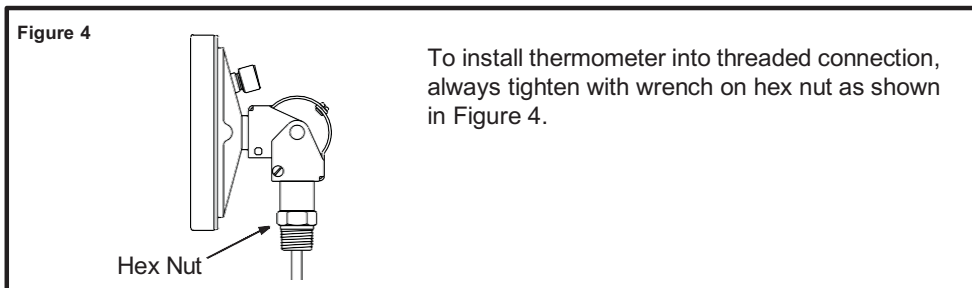


# Instructions for Repositioning and Installing Adjustable Angle Thermometers

Thermometer head orientation can be adjusted by rotating the harness assembly up to 360°.



**CAUTION: When installing, NEVER use thermometer head or harness assembly as a handle for tightening. SEVERE DAMAGE to thermometer will result.**



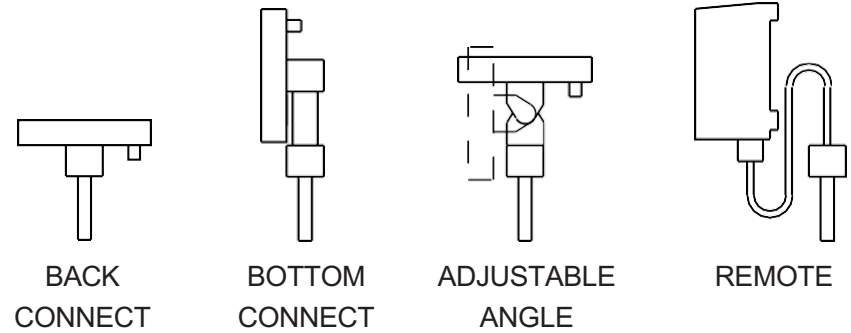
**Tel-Tru Manufacturing Company**  
408 St. Paul Street, Rochester, New York 14605 USA  
Phone: 585.232.1440 • 800.232.5335  
E-mail: info@teltru.com • Web: www.teltru.com



**TEL-TRU MANUFACTURING CO.**  
Temperature + Pressure Instruments

1204010 RevA

# DIGI-TEL™ THERMOMETER Operating and Calibrating Instructions



## GENERAL INFORMATION

- For accurate reading, thermometer must be immersed at least one inch into an agitated liquid or certified reference device.
- Integrated diagnostic routines continually check the validity of the sensor output.
- The battery model has an expected service life of five years. Loop powered models do not use batteries.
- Certificate of calibration included with each thermometer.
- Services are available including battery replacement (on models with factory replaceable batteries).

## CAUTION

- Any severe shock to the thermometer, dropping, bending of the stem or head, etc., can possibly impair its accuracy.
- When installing thermometer into threaded connection, always tighten with wrench on hex nut (NEVER use the thermometer head or harness assembly as a handle for tightening).

## CALIBRATING INSTRUCTIONS

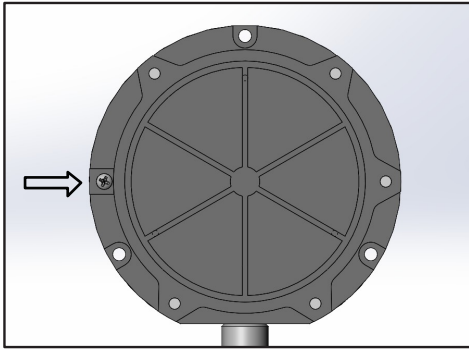
- 1) A master thermometer with a high degree of accuracy should be used for calibrating.
- 2) Place thermometer to be calibrated alongside a master thermometer. Immerse both thermometers into an agitated liquid for at least three minutes. Compare temperatures.  
**IMPORTANT:** For accurate reading, thermometer must be immersed at least one inch into an agitated liquid or certified reference device, such as a Check-Set® Thermometer Calibrator.
- 3) Refer to the Tel-Tru Digi-Tel Configuration software for calibration instructions.
- 4) An M12 connection is used with the Tel-Tru Digi-Tel Configuration software.

## DISPLAY ERROR CODES

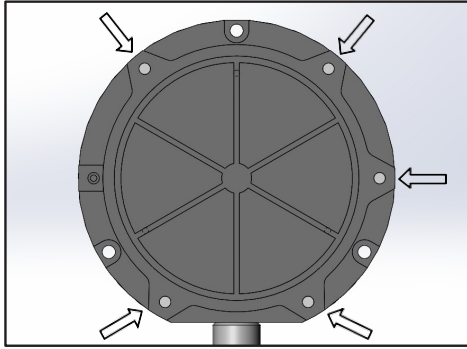
- Display "Err 1" if the RTD is open.
- Display "Err 2" if the RTD is shorted.
- Display "Err 3" if an error is detected on the board.
- Display "LO" if there is a valid reading, but it is too low to be displayed, due to decimal place setting.
- Display "HI" if there is a valid reading, but it is too high to be displayed, due to decimal place setting.
- Display toggles between "bATT" and actual reading if the battery voltage drops below 3.2 volts.

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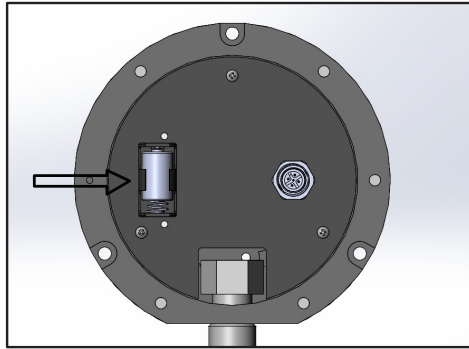
## Digi-Tel D4RB Battery Replacement Instructions



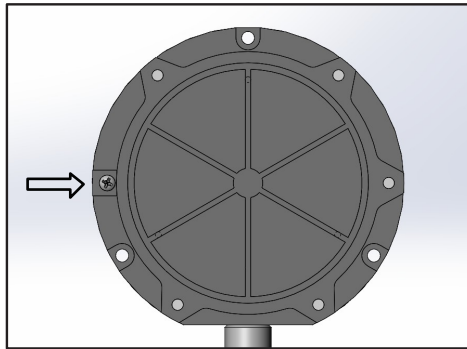
1. Place thermometer face down and remove screw from back of case.



2. Carefully pry back of case from 5 case pins.

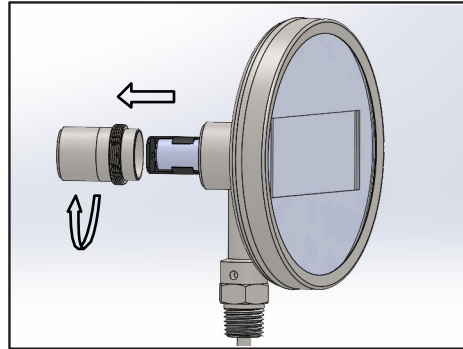


3. Remove battery from battery holder and replace with a 3.6V ½ AA Lithium battery (Saft LS 14250 or equivalent), with “-” terminal at spring end of battery holder.

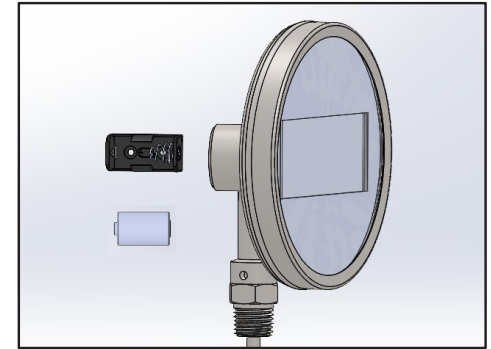


4. Reinstall back of case and secure with screw.

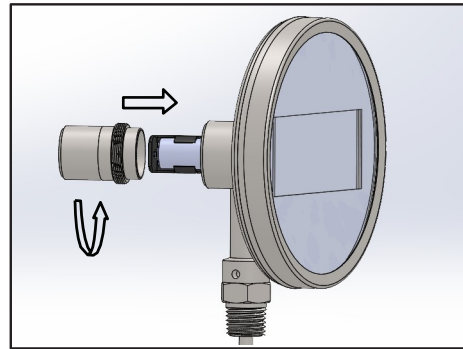
## Digi-Tel D5xB Battery Replacement Instructions



1. Unscrew and remove cover. Gently pull out battery holder from body.



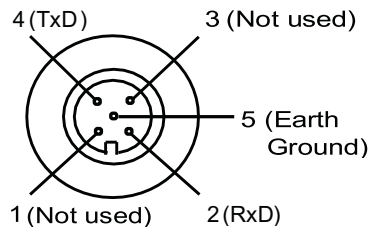
2. Remove battery and replace with a 3.6V ½ AA Lithium battery (Saft LS 14250 or equivalent), with “-” terminal at spring end of battery holder.



3. Gently push battery holder into body. Replace cover and screw on until fully sealed

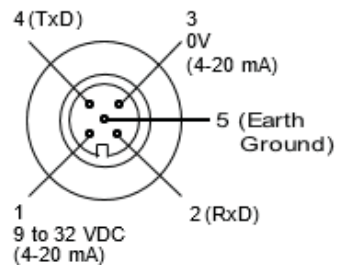
### Battery Powered M12 Connector

• Calibration use only



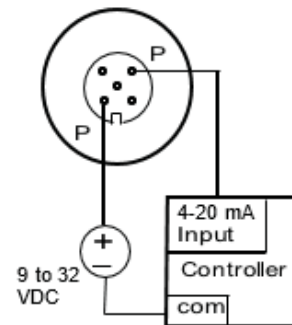
### Loop Powered M12 Connector

• Power  
• Calibration



### Sample Wiring Diagram

for loop powered models:



### Optional Grounding Instructions

for loop powered models:

- Install thermometer with the process connection in direct mechanical contact with building/chassis ground.
- Use pin 5 on M12 cable to ground process.
- If the process is already grounded, do not use pin 5.