

# Instruction Manual

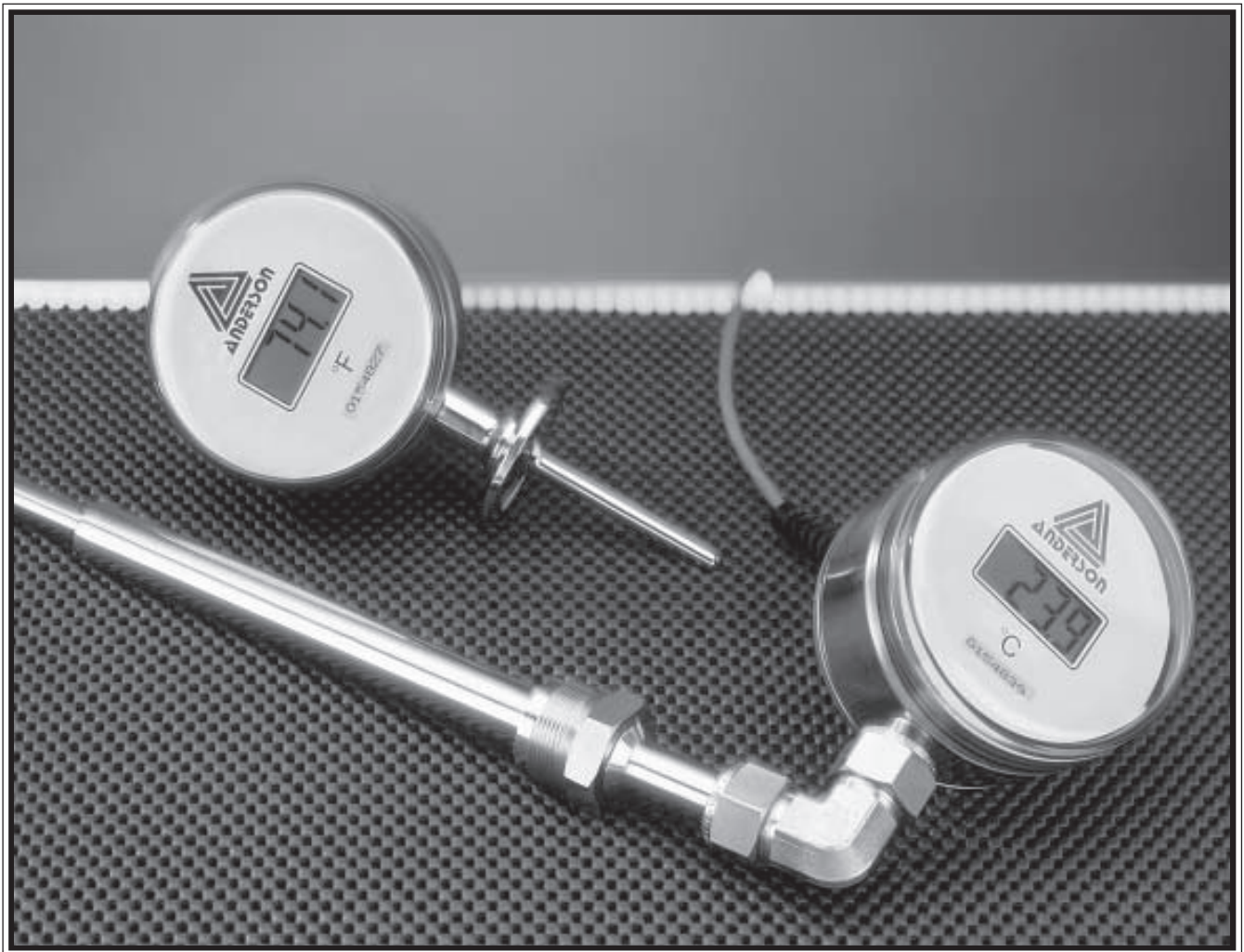


Anderson Instrument Co. Inc.  
156 Auriesville Road  
Fultonville, NY 12072  
1-800-833-0081  
Fax 518-922-8997

[www.andinst.com](http://www.andinst.com)

Instrument Model Number \_\_\_\_\_

Instrument Serial Number \_\_\_\_\_



## **DIGI-THERM SANITARY DIGITAL THERMOMETER**

Form Number AIC3530  
© Sept. 1994  
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## **Section 1 - Description and Specifications**

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### **DESCRIPTION**

The Anderson Digi-Therm Sanitary Digital Thermometer is a fully electronic battery powered device for use in monitoring process, storage, and cleaning/sanitizing temperatures in various applications. The unit is offered in a wide variety of configurations for ease of installation in existing as well as new systems. The simple to read .6" LCD display incorporates a "Low Battery" indicator to signal the need for replacement of the batteries.

The Digi-Therm may also be specified with a *secondary* RTD element. Specifications are 100 ohm, 3-wire, DIN standard (.00385 coefficient), with a sealed cable provided. The primary RTD supplies its signal to the Digi-Therm for processing and final display - locally. The secondary element allows an independent signal to be taken from the Digi-Therm to another device for remote indication, recording or controlling.

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### **SPECIFICATIONS**

Range:	0 to 300°F (-18° to 150° C)
Accuracy:	± 1°F (± 0.6°C)
Repeatability:	±0.2% of full scale (± 0.6°F)
Ambient Operating Limits:	40°F to 120°F (4.4° to 40°C)
Ambient Temperature Stability:	better than 0.1°C per 10°C ambient shift
Storage Temperature:	32° to 140°F (0 to 65°C)
Display:	0.6" high-contrast LCD
Resolution:	0.1°F or C
Display Update Rate:	2 seconds
Offset Adjustment:	Internal 5°F (2.8°C) typical
Battery Life:	12 months typical, with two field replaceable alkaline "AA" cells (included)
Mounting:	
Straight	Bottom (std.) or Top, Left, Right (optional)
90 degree	Back, Any Angle
Secondary RTD:	Optional 100 ohm, 3-wire DIN coefficient (.00385 ohms/ohm/°C)
Secondary RTD Wiring:	Internal terminal strip with 10' pre-wired cable standard
Materials:	
Case:	304 stainless steel
Crystal:	Polysulphone
Stem and Fittings:	316"L" grade stainless steel; All sanitary fittings comply with 3-A Sainitary Standards (#74-01)
Surface Finish (wetted parts):	Ra max = 8 micro-inches (0.2 microns) for direct immersion probes (electropolished)
Probe Styles:	See Ordering Matrix below. Consult factory for special or custom probes or lengths not listed.
Tagging:	Customer specified tags, permanently pin-stamped at no charge
Certifications:	Certificate of calibration included (pharmaceutical only)

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## Section 2 - Installation and Wiring

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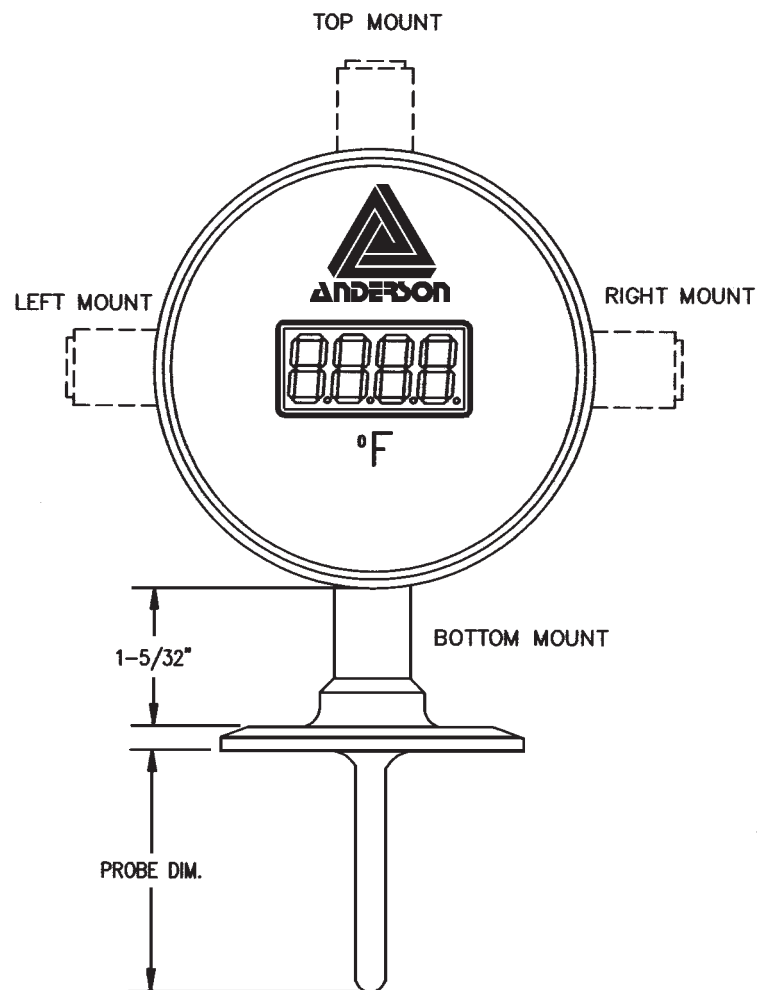
### 2.1 INSTALLATION

The Digi-Therm is shipped completely assembled and ready to use. It may be specified to be shipped with the batteries not included - recommended if unit is to be stocked as a spare. Otherwise, simply install the unit on the appropriate matching fitting.

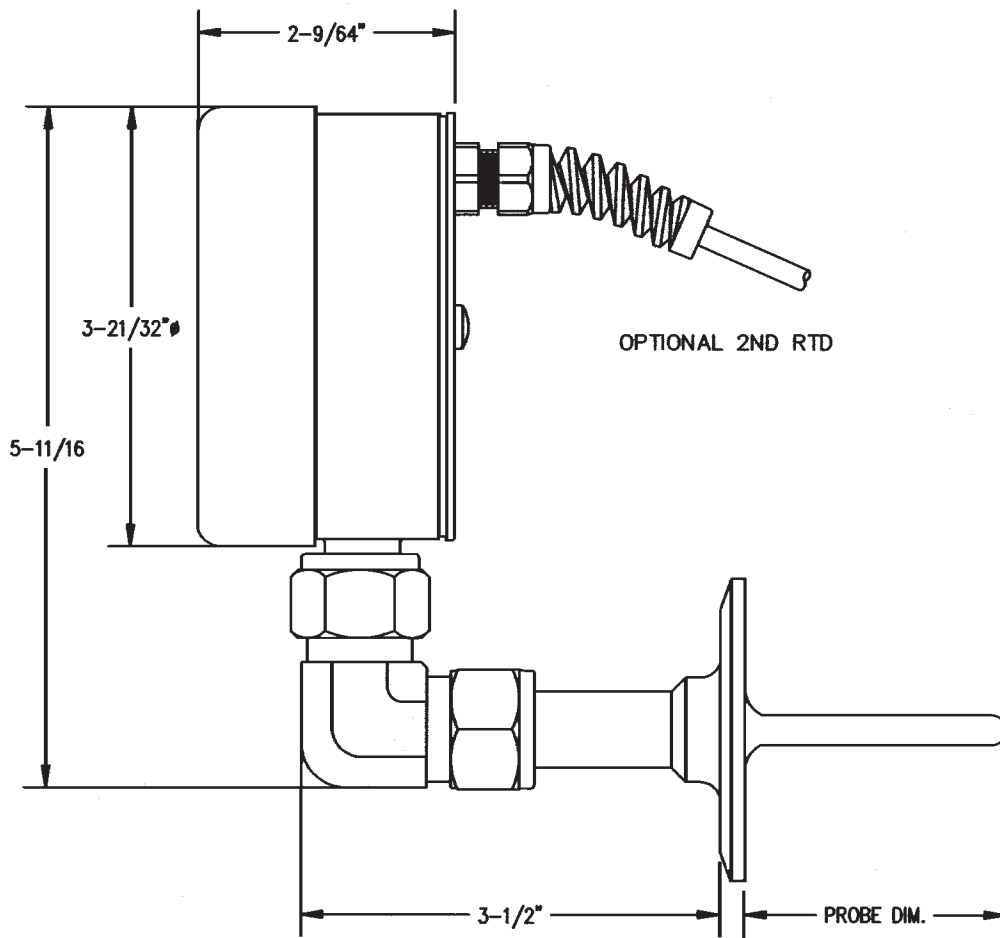
**CAUTION:** If unit is supplied with an *elbow* fitting, it may be loosened slightly to allow adjustment of the angle. However, **DO NOT** twist more than 180° or wire damage may occur.

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Figure 1 - Front View, Bottom, Top or Side Mount



**Figure 2 - Side View, 90° Adjustable Angle (with secondary RTD option)**



**2.2 SECONDARY RTD OPTION**

If specified with the optional secondary RTD, the element will be pre-wired internally. The signal will be accessible via the sealed cable exiting the rear of the battery housing. The following are wire color codes.

Green Wire:	Signal/Return
Red Wire:	Common
White Wire:	Common
Black Wire	Not Used

It is recommended that NO splices be made in the secondary RTD signal cable. Corrosion of a splice may result in signal loss at the receiver.

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## **Section 3 - Maintenance and Troubleshooting**

The Digi-Therm components are completely sealed to prevent damage from moisture, as well as to inhibit vibration related failures. Basic maintenance and troubleshooting tips are as follows:

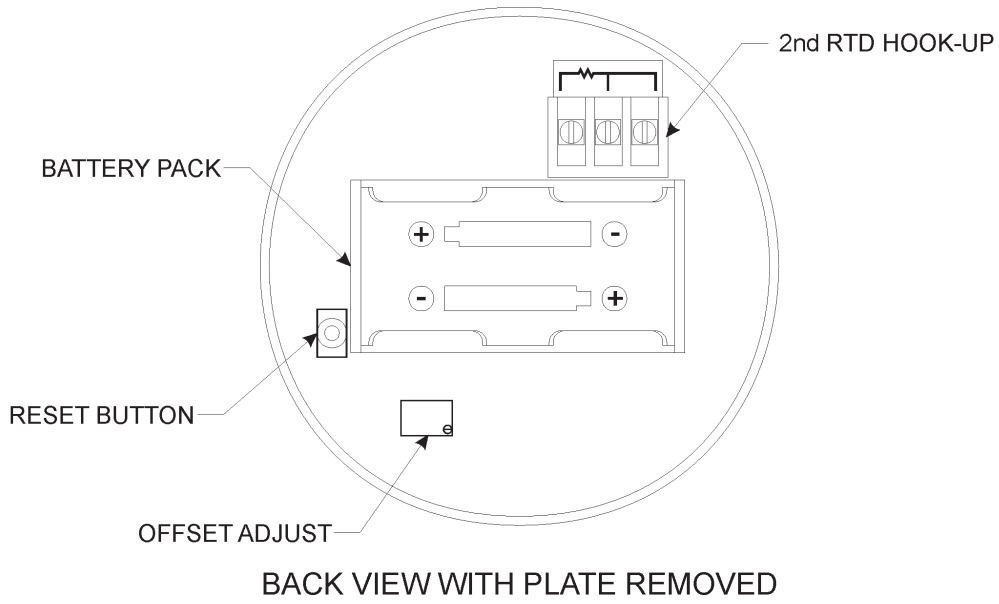
<b><u>Symptom</u></b>	<b><u>Corrective Action</u></b>
Low Battery indicator illuminated:	<ul style="list-style-type: none"><li>• Replace batteries - (readings will remain within specifications up to point of lost display). Depress RESET to activate.</li></ul>
No display on LCD:	<ul style="list-style-type: none"><li>• Replace batteries. Depress RESET to activate.</li></ul>
Readings not accurate:	<ol style="list-style-type: none"><li>1. Place Digi-Therm in agitated bath at normal process temperature.</li><li>2. Use certified lab thermometer for comparison.</li><li>3. Allow to stabilize for 2-3 minutes.</li><li>4. Adjust <i>Offset</i> potentiometer as shown in Figure 3.</li><li>5. Contact factory if unable to adjust properly.</li></ol>
Readings from secondary RTD element not accurate.	<ul style="list-style-type: none"><li>• Check all cabling connections</li><li>• Verify NO splicing has been done to cabling</li><li>• Verify calibration of signal receiver being used.</li><li>• Contact factory if above checks are correct.</li></ul>

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## **Section 4 - Service and Parts**

Other than procedures outlined in Section 3, no field service can be performed on the Digi-Therm. Please contact Anderson Technical or Customer Service if additional assistance is required.

Figure 3 - Digi-Therm Internal Rear View



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## ***Warranty and Return Statement***

These products are sold by The Anderson Instrument Company (Anderson) under the warranties set forth in the following paragraphs. Such warranties are extended only with respect to a purchase of these products, as new merchandise, directly from Anderson or from an Anderson distributor, representative or reseller, and are extended only to the first buyer thereof who purchases them other than for the purpose of resale.

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### ***Warranty***

These products are warranted to be free from functional defects in materials and workmanship at the time the products leave the Anderson factory and to conform at that time to the specifications set forth in the relevant Anderson instruction manual or manuals, sheet or sheets, for such products for a period of two years.

**THERE ARE NO EXPRESSED OR IMPLIED WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES HEREIN AND ABOVE SET FORTH. ANDERSON MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE PRODUCTS.**

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### ***Limitations***

Anderson shall not be liable for any incidental damages, consequential damages, special damages, or any other damages, costs or expenses excepting only the cost or expense of repair or replacement as described above.

Products must be installed and maintained in accordance with Anderson instructions. Users are responsible for the suitability of the products to their application. There is no warranty against damage resulting from corrosion, misapplication, improper specifications or other operating condition beyond our control. Claims against carriers for damage in transit must be filed by the buyer.

This warranty is void if the purchaser uses non-factory approved replacement parts and supplies or if the purchaser attempts to repair the product themselves or through a third party without Anderson authorization.

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### ***Returns***

Anderson's sole and exclusive obligation and buyer's sole and exclusive remedy under the above warranty is limited to repairing or replacing (at Anderson's option), free of charge, the products which are reported in writing to Anderson at its main office indicated below.

Anderson is to be advised of return requests during normal business hours and such returns are to include a statement of the observed deficiency. The buyer shall pre-pay shipping charges for products returned and Anderson or its representative shall pay for the return of the products to the buyer.

Approved returns should be sent to:

ANDERSON INSTRUMENT COMPANY INC.  
156 AURIESVILLE ROAD  
FULTONVILLE, NY 12072 USA

ATT: REPAIR DEPARTMENT