



Electronic Development Labs, Inc.



Humidity & Temperature Kit

User Manual

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Congratulations

You have purchased a Wet/Dry bulb humidity and temperature kit that will give you long life and reliable service.

Contents

Please, open the case and familiarize yourself with the components of the kit. There is a checklist of all the items contained in the kit with part numbers for reordering as the need arises.

Your kit will contain:

1	Case with foam cutout	#CC-POLE/CASE
1	Fill bottle with needle	#WBDB-BOTTLE
1	17mm wrench	#WRENCH-17mm
1	Phillips screwdriver	#SCREWDRPH1
1	#10 Torx driver	#TORXDR10
1	Package of 10 Copper clips with 36" wick	#PKGCLIP-WICK
1	Insertion sensor with wick	#SPPT-1459BR1
1	Insertion sensor	#SPPT-1459AR1
1	Pole for Humidity sensor	#RTRTD-4POLER1
1	Pole for Roller probe	#TC-4POLE
2	Humidity block sensors	#SPPT-1843B (RTWBDB-LYC7)
1	Replaceable roller probe with swivel	#SPPT-1970
2	5" replaceable Roller probe bands	#R5-08
1	Versa-Temp 3 RTD instrument	#VT-3
1	EZ-Probe thermocouple instrument	#EZK-C

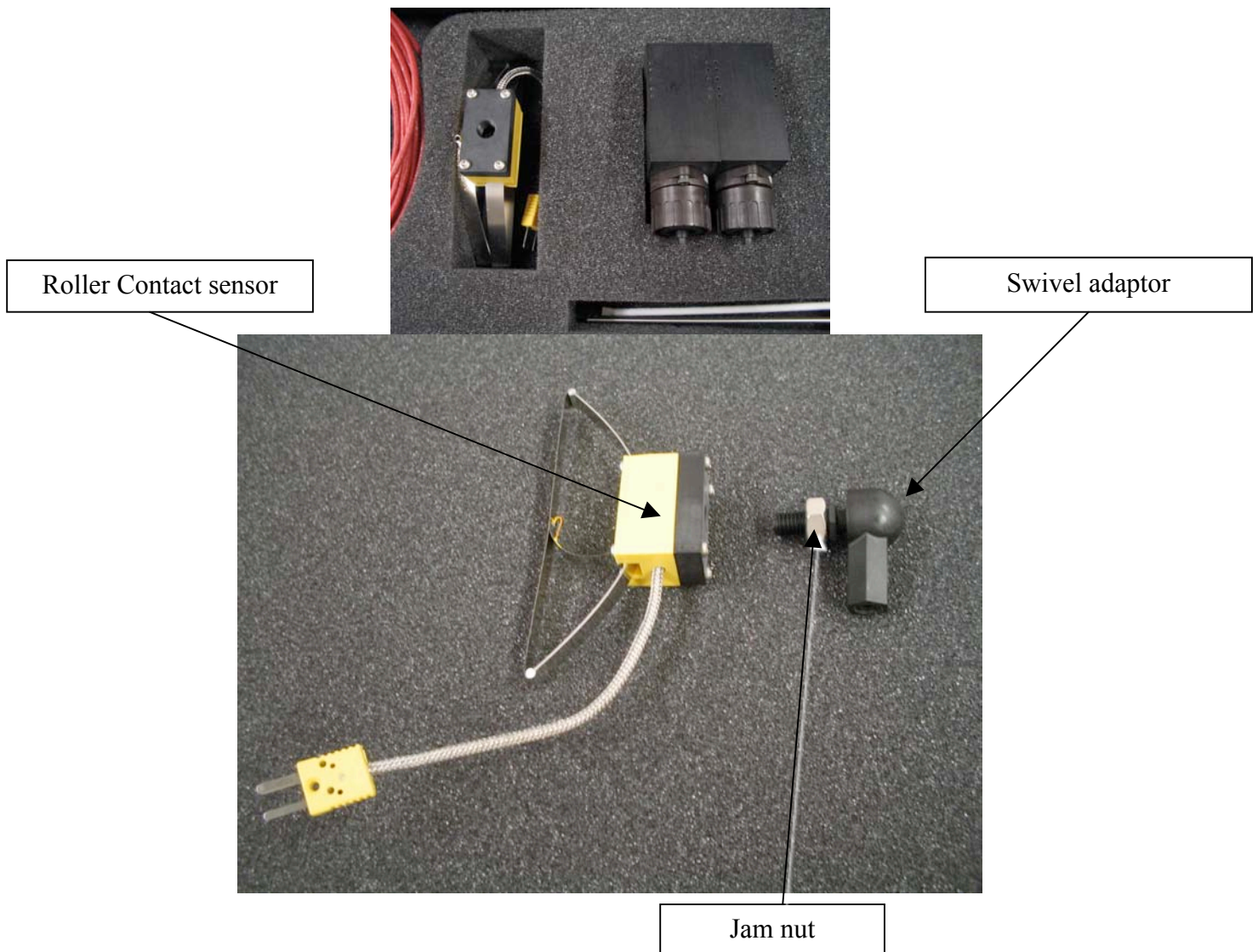
Verify that your packing list corresponds and has the appropriate check marks.

Safety

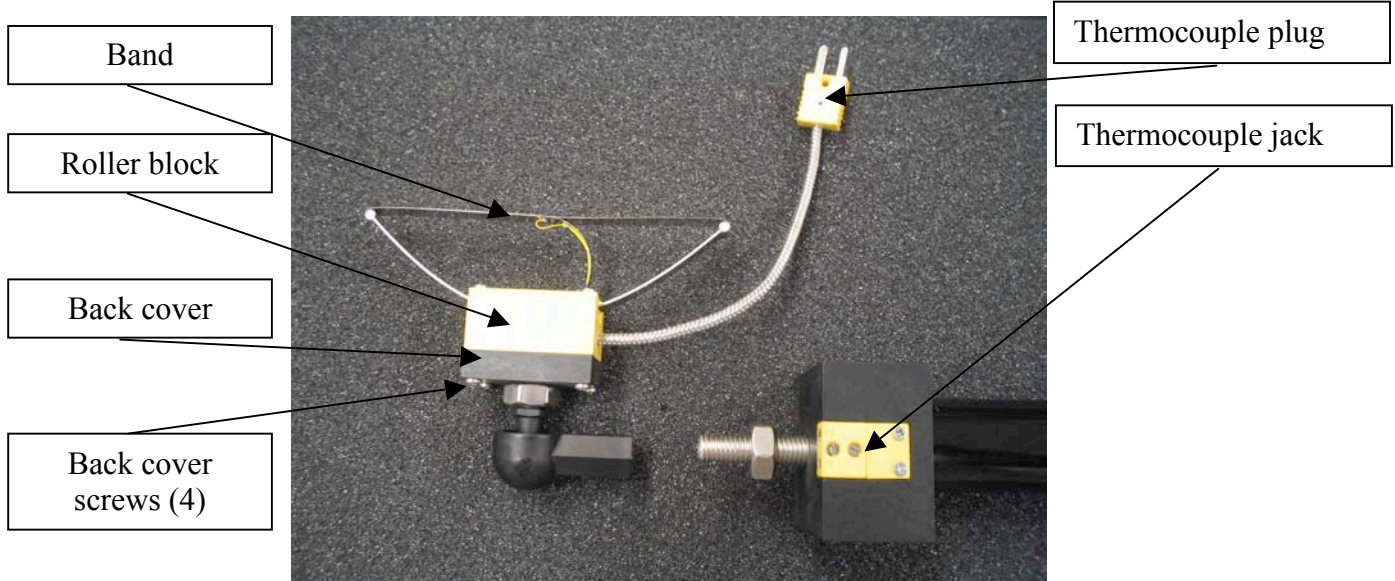
Please exercise caution whenever working around rotating machinery. These products are designed to remove all dangling leads and loose objects that could fall off or be snagged when working around moving objects. As you extend the telescopic pole, be aware of the lead that is pulled into the handle, do not let it form kinks or fall off the platform that you are working on, the opposite is true when you retract the telescopic pole.

Assembly

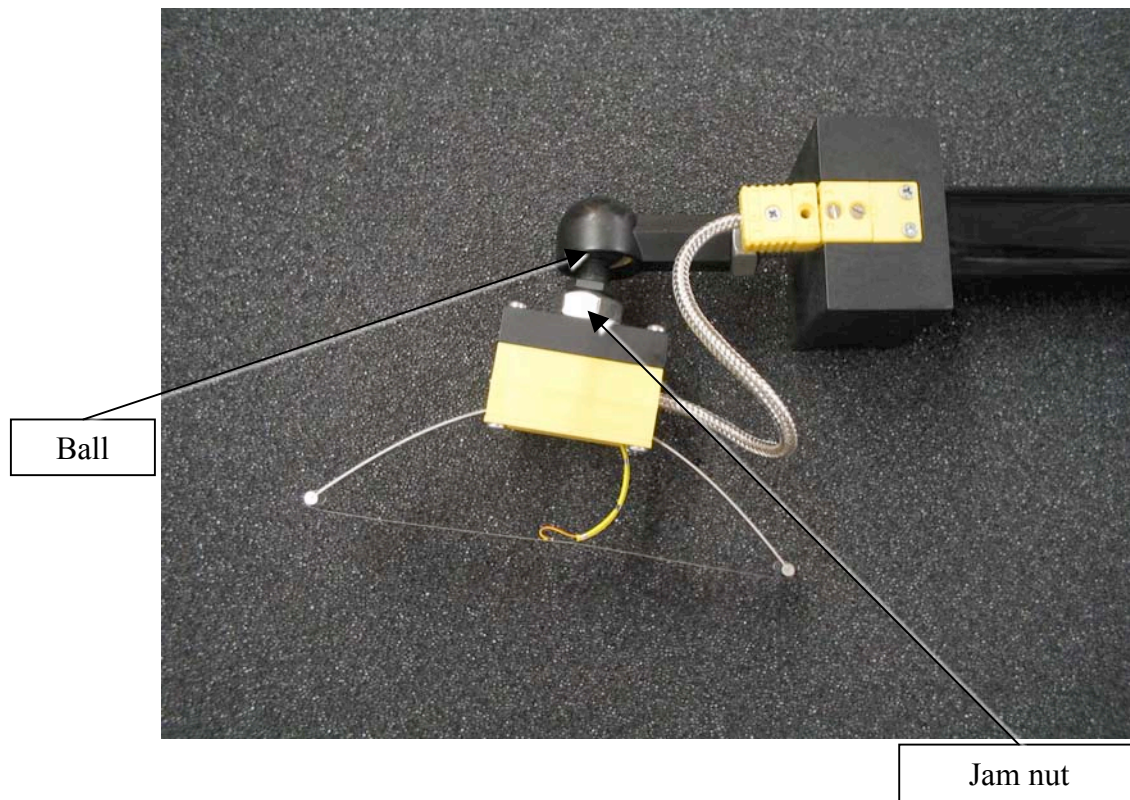
To assemble the Roller contact sensor assembly, remove the Roller contact sensor and screw in the swivel adaptor.



Screw the swivel adaptor into the Roller contact sensor until it is snug, then use the 17mm wrench to tighten the jam nut to lock it to the Roller contact sensor. Remove the TC-4POLE from the kit and screw the Roller contact assembly on to the screw at the end of the pole.



As you rotate the Roller contact assembly on to the screw at the end of the pole, you will be adjusting the tension on the ball in the swivel. The tighter you make it, the more resistance the swivel will offer to rotation, when you have it adjusted to your preference, lock it in position with the jam nut.



NOTE: Do not plug the Thermocouple plug in to the Thermocouple jack until you have adjusted the tension and locked all of the jam nuts.

Periodically, you will need to check the tension that you have set; long-term exposure to temperature, humidity, and vibration may cause the jam nut to loosen, or the locking assembly to change tension.

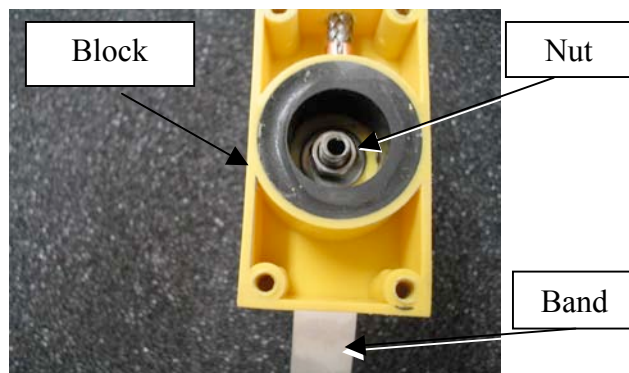
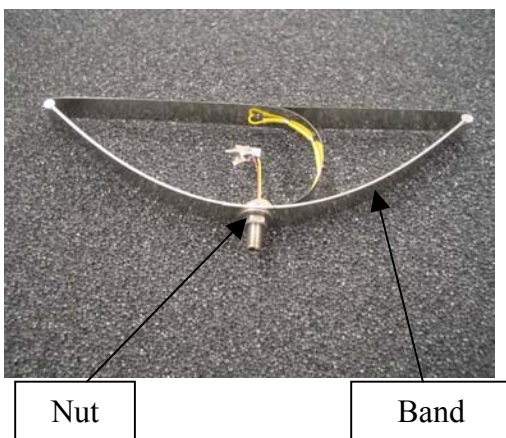


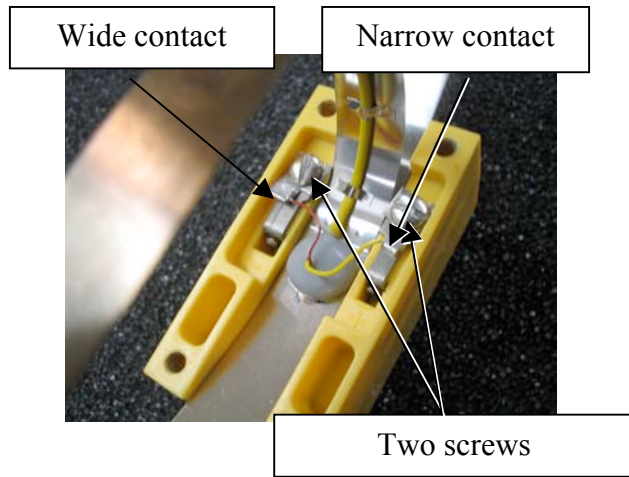
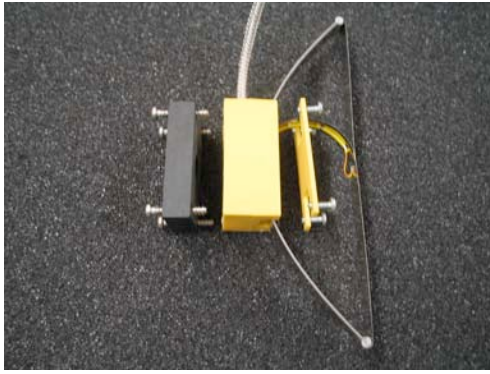
Band replacement

Removal

If you need to replace the band, follow these instructions:

- 1 Use the #10 Torx driver to remove the four screws holding the black piece (back cover) on the roller block.
- 2 Use the Phillips driver to remove the four screws holding the front cover.
- 3 Loosen the two screws holding the wires from the band. You do not need to remove these screws.
- 4 Remove the nut from the back of the Roller block with a 1/4" nut driver.
- 5 Gently, pull the wires and the band out of the Roller block.





Installation

- 1 Remove the nut from the screw on the band.
- 2 Push the screw through the center hole in the block and seat the Band in the groove.
- 3 Use a 1/4" nut driver to tighten the nut.
- 4 Carefully, separate the wires and place the lugs under the screws.

NOTE: *The Red wire is on the WIDE contact and the Yellow wire is on the NARROW contact. DO NOT REVERSE!!!*

- 5 Tighten the two screws, do not let the lugs touch the metal strap from the band.
- 6 Install the two cover plates. These screws should be snug, not tight.



Operation

Roller contact sensors measure round, rotating or stationary objects. Once the Roller contact assembly is mounted to the pole, (page 4) you should plug the end of the cable (yellow mini-plug) into the EZ probe instrument. Slide the ON/OFF to the ON position and select your units, either °F or °C. Extend the pole as necessary and apply to object under test.

HUMIDITY

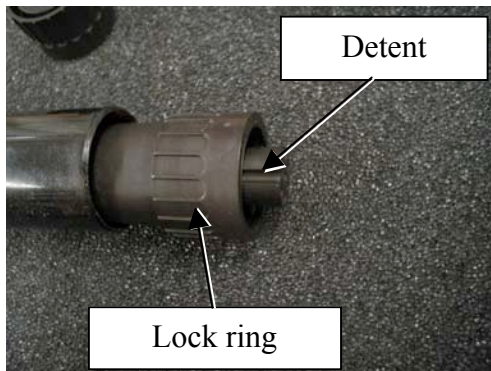
Introduction

This kit measures Humidity by the Wet/Dry bulb RTD temperature method. Depending upon location and environment you can choose between the telescopic pole with block or two 6" long insertion sensors.

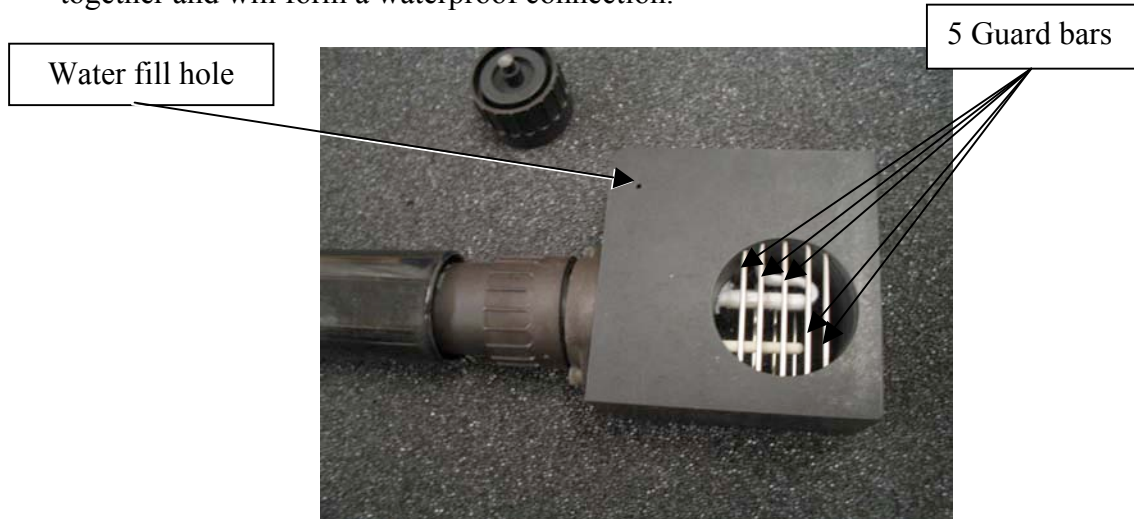


Assembly

Remove the block from the case and unscrew the protective cap. Remove the pole from the case and line up the detent key (pole) with the male detent key (block).

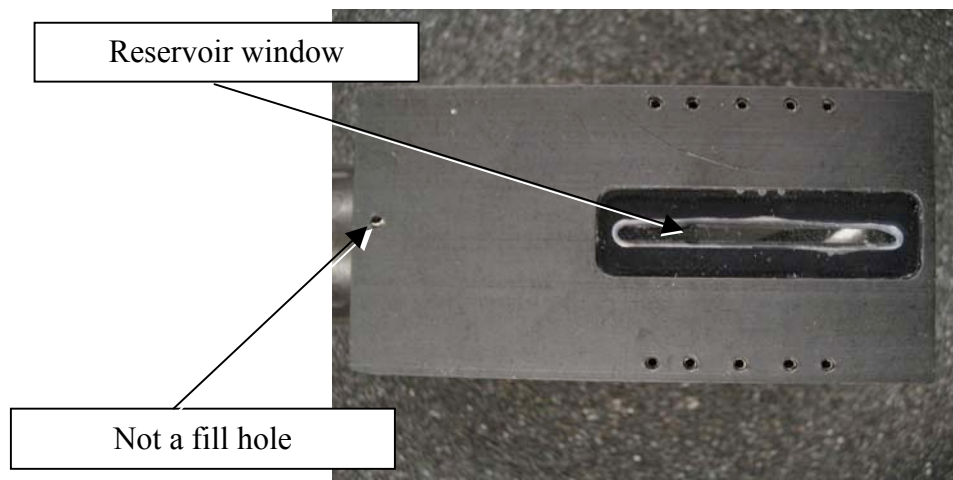


Push the block into the connector on the end of the pole and rotate the lock ring to tighten. **Do not rotate the block**, only turn the lock ring and the connector will come together and will form a waterproof connection.



Filling

Remove the bottle from the case and unscrew the top. In the bottle, you will find a needle adaptor that will fit on the cap. Fill the bottle with fresh clean water; ideally, you should use deionized or distilled water, this will reduce mineral deposits on the wick.



Fill the reservoir until the window shows it to be full, or until water comes out of the fill hole. The small hole above the window is not a fill hole it is a pin.

Note: *Never poke anything through the Guard bars; the RTD's are very fragile!*

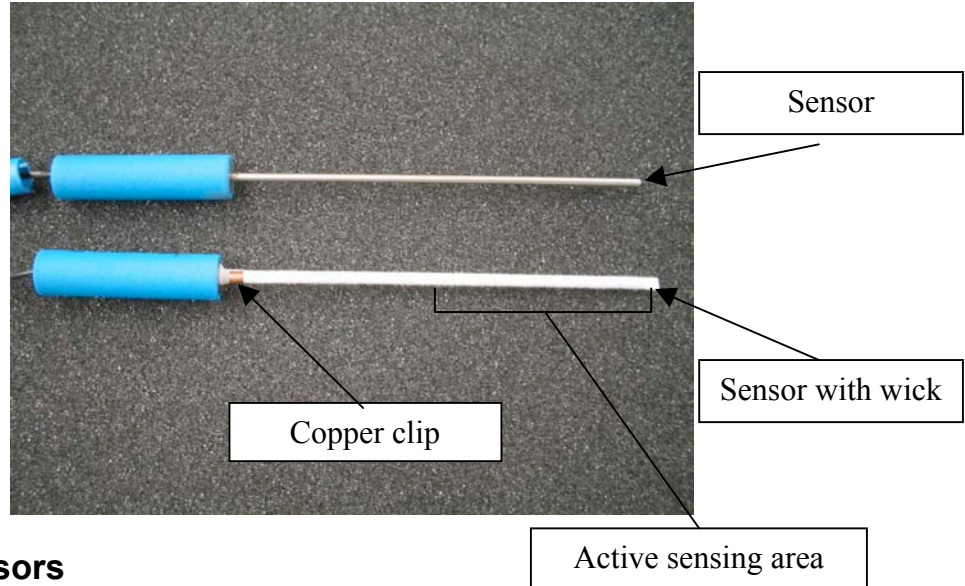
Operation

Once the Humidity system is assembled, plug the two DIN connectors into the jacks at the top of the Versa-Temp 3 instrument and turn the instrument on.



NOTE: As of 10/2008 the VT-II has been replaced with the VT-3. The instruments operate the same, but the VT-3 uses DIN connectors instead of the three-pin RTD plugs.

Adjust the length of the telescopic pole and start taking your readings.



Insertion sensors

As an alternative to using the block, you can plug in the RTD insertion sensors and dampen the sensor that has the attached wick. The wick is held in place with a Copper clip and it has a closed end, the wick should not be loose or bunched up. The wet sensor will dry out quickly; so do not take extended readings. RTD sensors have an active sensing area; do not bend them in that region.

NOTE: *The higher the temperature and the lower the humidity, the faster these products will evaporate the water.*

Operation of the Versa-Temp

Plug either one or two sensors into the jacks at the top of the instrument, and push the Red button (#1) to turn the instrument ON, a second push turns the instrument OFF. To select either °F or °C use the button next to the ON/OFF switch (#2), each push will toggle the units. The next step is to set the RTD type on each channel; the RTD type must be set to Pt385. To set the RTD type, use the Type buttons (#5), for the main display (upper) and #0 for the second (lower) display. Each push of the button toggles the display.

NOTE: *These instruments must be set to Pt385 for proper operation.*



To get the difference of the two bulbs to be displayed, press the T1/T2/T1-T2 button #4 or #- . The choice depends on whether you want the difference displayed on the top (main) display or the smaller bottom (second) display. Each push of these buttons toggles the readings from displaying T1, T2, or the difference of T1 – T2.

On the bottom right side of the display is a running time clock since the unit is turned on. If you are in an area where the display is difficult to see you should turn the display lighting on using the Yellow button (#3), this will light the display for easy reading.

NOTE: When the backlighting is ON, the power usage is dramatically increased and battery life is shortened.

To use the Min/Max feature press the Min/Max button #6, this button will scroll through Max, Min, Avg, and regular readings. Once the Min/Max button is pushed, the upper left of the display will show "RECORD" in small letters. You cannot turn the instrument Off when it is in this mode, hold the Min/Max key #6 for 3 seconds and the instrument will beep and return to normal operating mode.

If the low battery indicator shows on the display, you should change the battery. This instrument uses a standard Alkaline 9 volt battery. Remove the rubber boot, and remove the two screws holding the battery cover, remove the old battery and replace. Reverse the above steps to close.

Additional information on operation and specifications is in the accompanying booklet.

Technical support

If the need should arise, you can call, e-mail, or fax for help. The phone number is 1-434-799-0807 or 1-800-342-5335 (1-800-DIALEDL), fax to number 1-434-799-0847, or e-mail to custserv@edl-inc.com, or service@edl-inc.com.

Sales

If you need replacement parts, please use the list on page 1 and contact our sales staff at 1-434-799-0807 or 1-800-342-5335 (1-800-DIALEDL), fax them at 1-434-799-0847, or if you find it more convenient, please feel free to e-mail them at sales@edl-inc.com.

