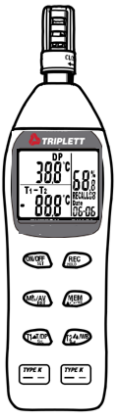
User Manual

TRIPLETT

RHT37

Dual Input Hygro-Thermometer Psychrometer



Introduction

Congratulations on your purchase of the Triplett RHT37 Dual Input Hygro-Thermometer/Psychrometer. This displays humidity, dew point, wet bulb, temperature and temperature differential. The triple backlit LCD can be changed to display humidity, temperature, dew point or humidity, temperature and wet bulb or humidity, temperature and Type K thermometer. The RHT37 can also display the temperature difference between Type K T1 and T2 or air temperature and Type K or Type K and dew point.

Description

METER DESCRIPTION



1. Humidity Sensor & Air Temperature Sensor
2. Triple LCD Display
3. On/Off; Set Mode
4. Min/Max/Average; Reset Min/Max
5. Air, T1, Air-T1, Dew Point
6. T1 probe input
7. T2 probe input
8. T1-T2, T2, T1-Dew Point, Wet Bulb
9. Store Current Reading; Backlight
10. Hold; Recall Mode
11. RS232 port

Note: Battery compartment is located on the rear of the instrument.

Display Description

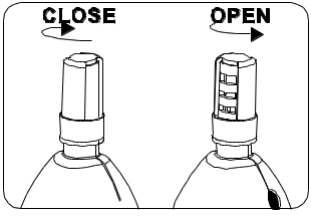


1. Air, T1, Air-T1, Dew Point, Low Battery
2. Temperature °C/°F
3. T2, T1-T2, T1-Dew Point, Wet Bulb
4. Temperature °C/°F
5. Date (month, day, year), Time (24 hour clock)
6. Memory Store/Recall Location
7. Relative Humidity %
8. Maximum, Minimum
9. Hold, Average

Operation

Open the Protective Sensor Cap

Twist the protective sensor cap, located at the top of the meter, counter-clockwise a quarter of a turn to expose the sensors.



Turn Power ON or OFF

Press the **[ON/OFF]** button to turn power on or off. The meter will perform a short self-test when turned on.

Taking measurements

1. Hold the probe in the area to be tested.
2. Allow adequate time for readings to stabilize.
3. The Relative Humidity measurement appears in the right display along with the date and time.
4. Air Temperature appears in the top left display.
5. Wet Bulb is in the lower left display.
6. Pressing the **[T1T/DPSEL]** button toggles the top left display between Air temperature, T1 temperature, Air-T1, and DP (Dew Point).
7. Pressing the **[T2▲WB]** button toggles the lower left display between WB (Wet Bulb), T1-T2, T2, and T1-DP (Dew Point).

SETUP

When the meter is off, press and hold the **[ON/OFFSET]** button for more than 2 seconds to enter setup mode. Prnt will appear on the display.

3. Selecting temperature units of measure (C/F)

Momentarily press the **[T1T/DPSEL]** button until "unit" appears in the display.
Press the **[MEM]** button to toggle between C or F.
Press the **[T2▲WB]** button to confirm the setting and return to normal operation.

1. Setting the Date/Time (24 hour clock)

Press the **[T1T/DPSEL]** button to select Year, Month, Day, Hour and Minute in sequence.

Press the **[MEM]** button to change the settings.
Press the **[T2▲WB]** button to confirm the date/time setting and return to normal operation.

Data Hold

Press the **[RECHOLD]** button momentarily to freeze the displayed reading. The '**HLD**' icon will appear on the upper right-hand side of the display.
Press the **[RECHOLD]** button again to return to normal operation.

Minimum (MN) Maximum (MX) Average (AVG) Function

The MIN/MAX/Average mode allows the user to view only the lowest (**MN**), highest (**MX**) or average readings. Press the **[Min/AVRST]** button once and **MN** appears on the display. The display is now showing the lowest humidity and temperature readings in memory. Press the **[Min/AVRST]** button again and **MX** appears on the display. The display is now showing the maximum humidity and temperature readings in memory. Press the **[Min/AVRST]** button again to display the average (**AVG**) readings in memory. To exit the MIN/MAX/AVG mode, press the **[Min/AVRST]** button. To clear the current min/max/avg readings in memory, press and hold the **[Min/AVRST]** button for more than two seconds.

Backlight Display

Press the **[M^{in}/AVRST]** and **[MEM]** buttons together to turn on the backlight. It will remain on for ten seconds.

Automatic Power OFF

With the meter off, press and hold down the **[ON/OFFSET] + [RECHOLD]** buttons for more than 1 second to enter auto power off settings.
Press the **[MEM]** button to select non-sleep (n) or 2, 5, 10, 20, 40 and 60 minutes autosleep.
Press **[T2▲WB]** to confirm the selection.

Manual Datalogging

Manual datalogging allows the user to store and recall up to 99 readings with the press of a button.

4. Press the **[MEM]** button to manually store a single reading into memory. The display will flash 3 times and the memory location number will be displayed below the humidity reading.
5. To view stored readings, press and hold the **[REC$_{HOLD}$]** button for 2 seconds and “RECALL” will blink next to the memory location number on the display.
6. Press the **[MEM]** button to manually increment through the stored readings.
7. Press **[REC$_{HOLD}$] + [MEM]** for more than 1 second to clear the memory.
8. Press **[REC$_{HOLD}$]** for more than 1 second to return to normal operation.

Note: In RECALL mode, pressing the **[M^{in}/AV$_{RST}$]** button for min/max/avg readings will auto search the stored readings in memory and display the minimum, maximum and average values of the stored readings.

RS-232 PC Communications Interface

The meter is equipped with an RS -232 PC interface jack (3.5mm phono) for connection to a PC for Data Acquisition.

Specifications

Function	Range and Resolution	Accuracy
Humidity	0.0 to 100.0% RH	±3% RH (10 to 90%) @ 23°C
Temperature (air)	-20 to 50°C (-4.0 to 122.0°F)	±1°C (±1.8°F)
Temperature (external K)	-200 to 1370°C (-328 to 2498°F)	±(0.3% rdg + 1°C (1.8°F))

Display	Triple LCD
Sensor Type	Humidity: Precision capacitance sensor Internal Temperature: Thermistor External Temperature: K-Type Thermocouple
Response Time	60 seconds typical
Dew Point	-68 to 50°C (-90.4 to 122.0°F) (calculated from RH and Air temperature measurements)
Wet Bulb	-21.6 to 50°C (-6.88 to 122.0°F) (calculated from RH and Air temperature measurements)
Low Battery Indicator	Yes
Overrange Indicator	E2 (air) E5 (T1), E8 (T2)
Underrange Indicator	E3 (air), E6 (T1), E9 (T2)
Operating Conditions	-20 to 50°C (-4 to 122°F); < 99% RH non-condensing
Storage Conditions	-40 to 85°C (-40 to 185°F); <99% RH non-condensing
Power Supply	4 x 1.5V 'AAA' batteries
Battery Life	Approx. 300 hours
Dimensions / Weight	230 x 57 x 44mm (9 x 2.2 x 1.7"); 153g (5.3 oz.)

Maintenance

Cleaning and storage

1. The meter should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.
2. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart earlier in this manual).

Battery Replacement

When the battery power falls low, the symbol will appear on the LCD. Replace the four (4) 1.5 'AAA' batteries by removing the rear battery compartment cover and accessing the battery compartment. Observe polarity when placing the batteries in the compartment. Ensure that the compartment cover is securely fastened when finished.



Never dispose of used batteries or rechargeable batteries in household waste. As consumers, users are legally required to take used batteries to appropriate collection sites, the retail store where the batteries were purchased, or wherever batteries are sold.

Disposal: Do not dispose of this instrument in household waste. The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment.

Warranty

Triplett / Jewell Instruments extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries are not covered by this warranty

Copyright © 2021 Triplett

www.triplett.com