REED

Model ST-615

Digital Thermo-Hygrometer with remote or integral probe

Instruction Manual

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Introduction

This device measures relative humidity, air temperature (with probe), plus “K” type thermocouple wide temperature measurements. The large, easy-to-read backlit LCD includes primary and secondary displays plus numerous status indicators. Careful use of this meter will provide years of reliable service.

Features

- Semiconductor sensor for temperature measurements of 0°C to 40°C and 32°F~104°F plus type-K thermocouple wide temperature measurements of –20.0°C to 1000°C and –4.0°F~1832°F
- Humidity measurement from 0.1%RH to 100.0%RH with 0.1%RH resolution and fast time response. (The measuring range is from 0% to 100%, but above 98% and below 5% the deviation is not specified.)
- Fast response for Humidity measurement
- Data Hold and MAX Hold function
- Large dual digital LCD display with function indication

Specifications

Display: Dual LCD with Backlight and status Indicators

Sensor Type:

1 - Humidity: Precision capacitance sensor

Function	Range & Resolution	Accuracy
Humidity	5.0 to 98.0% RH	± 3.5% RH
Temperature (K-type) (probe accuracy not included)	-20.0 to 199.9°C	±(3.0% reading + 4°C)
	-20 to 1000°C	
	-4.0 to 199.9°F	±(3.0% reading + 7°F)
	-4 to 1832°F	

2 - Temperature: Thermistor (probe) and type “K” thermocouple

Response Time: Probe Temperature and Relative Humidity: 3 minutes

Accuracy note: Accuracy is specified for the following ambient temperature range: 64 to 82°F (18 to 28°C)

Sampling Rate: 2.5 samples per second

Operating Conditions: 32 to 122°F (0 to 50°C); < 80% RH non-condensing

Storage Conditions: 14 to 140°F (-10 to 60°C); <80% RH non-condensing

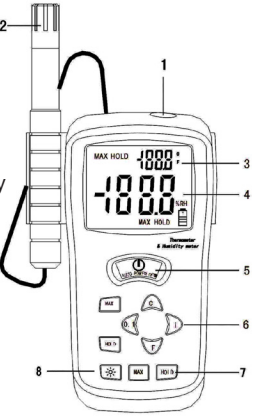
Power Supply: 9V Battery with auto power off (after 10 minutes)

Dimensions: 5.9 x 2.8 x 1.4” (150 x 72 x 35mm)

Weight: 210g

Meter Description

1. “K” type thermocouple input jack
2. Humidity/Air Temperature Probe
3. Temperature measurement reading display
4. Relative Humidity measurement reading display
5. Power ON/OFF button
6. Thermometer measurement buttons (6)
7. Relative Humidity function buttons (2)
8. Backlight function buttons



Display Descriptions

Probe temperature
°F/°C measurement reading

MAX (1) Probe temperature
°F/°C MAX Hold

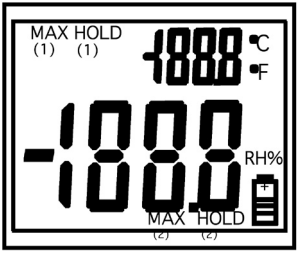
HOLD (1) Probe temperature
°F/°C Data Hold

% RH
measurement reading

MAX (2) % RH MAX Hold

HOLD (2) % RH Data Hold

LOW battery indicator



Operation

Power

Press the ⏻ button to turn power on or off.

Probe Humidity & air Temperature Measurements

1. Hold the probe in the area to be tested & allow adequate time for readings to stabilize.

2. Read the Relative Humidity (center of LCD) and Probe Temperature (top of LCD).

NOTE: Do not immerse the probe in liquid; it is intended for use in air on

Type- K Thermocouple Temperature Measurements

1. If you wish to measure the temperature in °F, set the function switch to the °F range. If you wish to measure temperature in °C, set the function switch to the °C range.

2. Insert the Temperature Probe into the Temperature Socket, making sure to observe the correct polarity.

3. Touch the Temperature Probe head to the part whose temperature you wish to measure. Keep the probe touching the part under test until the reading stabilizes (about 30 seconds).

Read the temperature in the display. The digital reading will indicate the proper decimal point and value.

WARNING: To avoid electric shock, be sure the thermocouple has been removed before changing to another measurement function.

Automatic Power OFF

To conserve battery life the meter automatically shuts off after 10 minutes.

°C or °F buttons

1. The user can select the Temperature units. Press the **°C** or **°F** button at the center of the meter.

0.1 or 1 buttons

1. 0.1 or 1 Temperature Resolution buttons at the center of the meter

2. The thermometer allows two choices of resolution:
   High resolution: 0.1°C or 0.1°F or Low resolution: 1°C or 1°F

Data Hold Buttons

1. Displays can be held (frozen) at any time by pressing the **HOLD** button. For Temperature, use the **HOLD** button on the left. For Relative Humidity, use the **HOLD** button on the under the button of the meter.

2. Press **HOLD** again to exit the mode.

MAX Buttons

1. Press the **MAX** button to display only the highest reading.
   For Temperature, use the **MAX** button on the left. For Relative Humidity, use the **MAX** button on the under the button of the meter.

2. Press the **MAX** button again to exit this mode.

Backlight Display

1. Press the backlight button to turn the display light on.

2. Press the button again to turn it off.

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.

Battery Replacement

The battery symbol appears on the lower right of the LCD when the 9V battery needs to be replaced. Replace the 9V battery as follows:

1. Turn the meter off and disconnect the air temperature probe.

2. Remove the large flat-head screw on the back of the meter to remove the probe holder.

3. Remove the rubber holster that surrounds the entire meter by pulling it over the top of the meter.

4. Remove the small Phillips head screw on the back of the meter.

5. Open the battery compartment and replace the 9V battery.

6. Re-assemble the meter before operating.

Notes