Wireless Humidity/ Temperature Monitor

800254

Remote Wireless Sensor
800255

Instruction Manual

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Environmental Measurement Instruments

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INTRODUCTION

This Sper Scientific Thermometer/Hygrometer (Model 800254/800255) can track temperature and relative humidity (RH) at several locations, using up to three remote wireless sensors. The base display unit tracks minimum and maximum temperature and relative humidity for each site. A customizable alarm function for temperature and RH can be set individually for each sensor and the display unit.

FEATURES

• Thermometer/Hygrometer may be used with up to 3 remote sensors

• Minimum/maximum temperature tracking

• Minimum/maximum relative humidity tracking

• Customizable high and low alarm settings for temperature and RH

• Monitors temperature in °F or °C

MATERIALS SUPPLIED

• Thermometer/Hygrometer Display Unit (model 800254 only)

• Two AAA batteries for display unit

• Remote Wireless Sensor

• Two AA batteries for wireless sensor

• Instruction Manual

FRONT PANEL DESCRIPTION

Thermometer/Hygrometer Display Unit
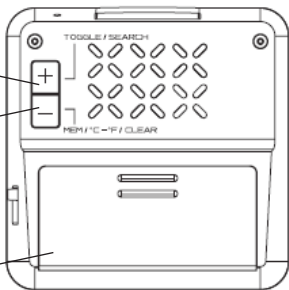
Temperature and RH alarm set button

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TEMP & RH ALARM SET

800254

Channel Selector

Channel

Base
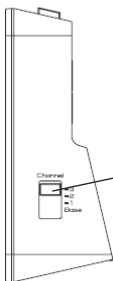
+ (up/toggle/ search) button

TOGGLE / SEARCH

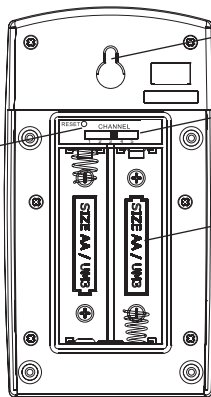- (down/memory/ clear) button

MEM / °C ~°F / CLEAR

Battery Compartment

Remote Wireless Sensor
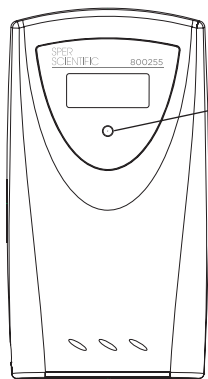
LED transmission/low battery indicator

Wall-mount recessed hole

Channel Selector

Reset button

Battery Compartment

LCD DISPLAY

Low battery indicator

Temperature reading

Signal icon

RH reading

Channel setting

MAX
MIN

MAX
MIN

CH.3
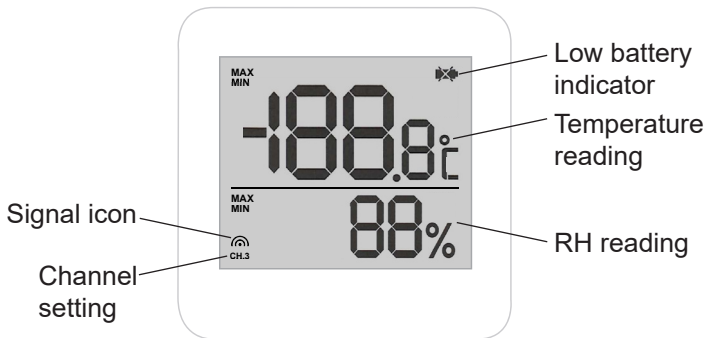
SETUP

Note….

The remote units are suitable for outdoor use, but should be placed out of snow, rain, and direct sunlight.

1. Install the batteries as specified in **Battery Installation and Replacement** on p.14. For first time use, simply remove the plastic strips from the battery housing to activate the batteries. Always install the batteries for the remote sensors before installing batteries in the display unit.
2. Toggle **CHANNEL** to select channel 1, 2, or 3.

Note...

The reset button must be pressed in order to change the channel at the sensor.

3. Position the remote sensor up to 20-30 meters from the display unit. The LED on the remote sensor will flash when it transmits a reading.
4. Building materials and locations can affect the range of the devices. Test various configurations to achieve the best result.

Temperature Units

Press and hold **−** for two seconds to toggle between °C and °F.

Note….

The sensor units will always display in Fahrenheit. Only the base unit can display in °C or °F.

Alarm

The alarm thresholds are individually customizable for each remote sensor as well as the base unit.

1. Toggle **CHANNEL** on the base display unit to select "Base" or channels 1, 2, or 3.
2. Press **ALARM SET** on the top of the display to enter Alarm Set Mode. The high and low temperature settings will display.
3. Press and hold **ALARM SET** for 3 seconds. The high temperature alarm setting flashes.
4. Use the **+** and **−** keys to adjust the setting.
5. Press **ALARM SET** to confirm the setting. The low temperature alarm setting flashes.
6. Use the **+** and **−** keys to adjust the setting.
7. Press **ALARM SET** to confirm the setting.

8. Press **ALARM SET**. The high and low humidity settings will display.

9. Press and hold **ALARM SET** for 3 seconds. The high RH alarm setting flashes.

10. Use the **+** and **–** keys to adjust the setting.

11. Press **ALARM SET** to confirm the setting. The low RH alarm setting flashes.

12. Use the **+** and **–** keys to adjust the setting.

13. Press **ALARM SET** to confirm the setting.

14. Press **ALARM SET** to return to Normal Mode.

Note…

When pressing **+** or **–** to adjust a value, you can scroll more quickly by holding the button down.

• When the temperature or RH has reached a level beyond the alarm threshold setting, the alarm will activate.

• To turn off the alarm after it has been activated, press **ALARM SET**. If **ALARM SET** is not pressed, the audible alarm will stop automatically in 2 minutes but the display will continue to flash until **ALARM SET** is pressed.

• The alarm will automatically reset once the temperature or RH value has returned to within the acceptable range by at least 0.9° F or 5% RH. Subsequent readings outside of the selected range will trigger the alarm.

MEASUREMENT PROCEDURES

To select the input source for display, toggle **CHANNEL** to select "Base" or channel 1, 2, or 3. The toggle is located on the side of the base unit.

1. Select "Base" to display the temperature and RH readings at the indoor thermometer/hygrometer display unit.
2. Select channel 1, 2, or 3 to display readings from the remote sensors. The temperature, relative humidity, signal icon, and channel number appear.
3. The signal icon indicates the signal receiving status of the main display unit:

Signal Icon Display	
ⓦ	When the icon is flashing, the unit is searching for a signal.
ⓦ	Readings are registered securely.
`--.-°C`	No signal has been found. Check that the correct channel has been selected and the remote unit has been properly placed.
▲ ▼	Min/Max mode

Maximum/Minimum Mode

1. Press **–** to display the maximum temperature and humidity readings. "MAX" will display.
2. Press **–** to display the minimum temperature and humidity readings. "MIN" will display for several seconds, and then the meter will return to Normal Mode.
3. To clear the memory, press and hold **–** for 2 seconds while in Minimum/Maximum Mode. The unit will immediately begin recording new values for the maximum and minimum temperature and RH.

TROUBLESHOOTING

Error on Display	Cause
Blank lines appear in place of temperature and humidity readings.	No readings have been received from the remote unit for more than 2 minutes. Check that the correct channel has been selected and the remote unit is properly placed.
HHH appears in place of temperature or humidity readings.	The temperature or RH is above the measurable range.
LLL appears in place of temperature or humidity readings.	The temperature or RH is below the measurable range.

Note…

If the temperature or humidity readings continue to display as blank lines, you can press and hold **+** for 2 seconds to start a search for all channels. While the unit is searching, the signal icon will flash.

BATTERY INSTALLATION AND REPLACEMENT

Note…

Always insert the batteries for the remote wireless sensors before doing so on the display unit.

The LED on the remote sensor will flash twice to indicate a low battery. The indoor thermometer/hygrometer will display a low-battery indicator when battery replacement is needed in either the sensor or main unit.

1. Unscrew the four screws from the battery compartment of the remote sensor. Take care to put the screws in a safe place while you are working.
2. Remove the old batteries. Toggle **CHANNEL** to select channel 1, 2, or 3.
3. Insert two AA 1.5 V batteries, taking care to ensure correct polarity.
4. Replace the battery cover and reinstall the screws.
5. Repeat the process if necessary for up to two additional sensors.
6. Slide open the battery compartment cover of the display unit.
7. Remove the old batteries and insert two AAA 1.5 V batteries, taking care to ensure correct polarity.
8. Replace the battery cover.

SPECIFICATIONS

THERMOMETER/HYGROMETER INDOOR DISPLAY UNIT			
	Range	**Resolution**	**Accuracy**
Operating Temperature	-10°C to 60°C 14°F to 140°F	0.1°C 0.2°F	±1°C ±2°F
Operating RH%	0 to 95% @ 25°C (77°F)	1% RH	±5%
Dimensions	3½" x 3½" x 1" (85 x 85 x 35 mm)		
Weight	3.6 oz (102 g)		

REMOTE WIRELESS SENSOR			
	Range	**Resolution**	**Accuracy**
Operating Temperature	-20°C to 70°C -4°F to 158°F	0.1°C 0.2°F	±1°C ±2°F
Operating RH%	10 to 95% @25°C (77°F)	1% RH	±5%
RF Transmission Frequency	433 MHz		
RF Transmission Range	30 meters in open area		
Temperature Sensing Rate	43 to 47 seconds		
Dimensions	4½" x 2½" x 1 (115 x 65 x 35 mm)		
Weight	4 oz (113 g) with batteries		

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for a period of **five (5) years** from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will void the warranty. To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
8281 E. Evans Rd., Suite 103
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days of purchase.

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