

Appion®

RHT100™

RELATIVE HUMIDITY TEMPERATURE



⚠ WARNING TO REDUCE THE RISK OF INJURY OR PRODUCT DAMAGE,
READ OPERATION MANUAL PRIOR TO OPERATING PRODUCT.

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Introduction

The RHT100 provides extreme accuracy when measuring the moisture and air temperature being expelled from an A/C system. The RHT100 makes system diagnostics easier and more reliable.

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Safety

- Do not use the measuring instrument and probes to measure on or near live parts.
- Never store the measuring instrument together with solvents, and do not use any desiccants.
- Operate the measuring instrument only within the parameters specified in this manual.
- Do not expose the measuring device to temperatures outside of the stated operating temperatures.
- Use only specified batteries. (AA Batteries)
- Do not use leaky or damaged batteries.
- Batteries must only be changed in a non-hazardous area.
- Battery operating temperatures may vary by manufacturer. The batteries supplied with this unit are for storage and operating temperatures between 32°F - 104°F (0°C - 40°C).
- Dispose of batteries in accordance with any applicable local law and regulations.
- Do not dispose of the product or battery in a fire or heat above 212°F (100°C).

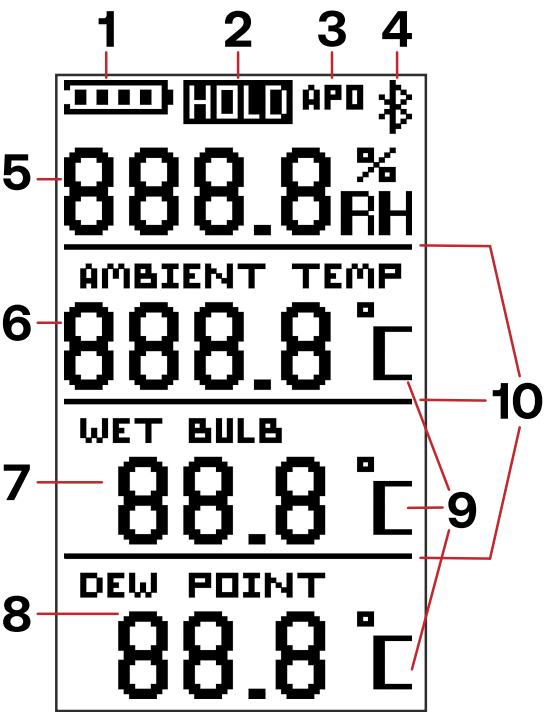
WARNING: Do NOT drill holes blindly for sensor probing purposes.

WARNING: Do NOT touch or insert any objects into the sensor housing openings. Doing so may permanently damage the sensor.

WARNING: Do NOT remove the sensor housing.

Display

- 1 - Battery Level Indicator
- 2 - Hold Indicator (Flashing)
- 3 - Auto Power Off Indicator
- 4 - Bluetooth Indicator
- 5 - Relative Humidity
- 6 - Ambient Temperature
- 7 - Wet Bulb
- 8 - Dew Point
- 9 - Units (Fahrenheit / Celsius)
- 10- Separation Lines (Flashing)



Controls

Backlight/Units

Power

Hold

Press	Backlight On/Off	Gauge Power On	Hold Values On/Off
	Both - Auto Power Off On/Off		
	Both - Bluetooth On/Off		
Hold	Units Selection	Gauge Power Off	

1. Quick **PRESS** a button for the “Press” function.
2. **HOLD** a button for 2 seconds for the “Hold” function.
3. Quick press **BOTH** buttons for the “Both” function.

Controls (cont.)

Power

- Quick Press
 - Gauge Power On
- Hold
 - Gauge Power Off

Backlight/Units

- Quick Press
 - Backlight On/Off

When the backlight is toggled on, the backlight stays on for 1 minute.
- 2 Seconds Hold
 - Units Selection

Pressing and holding the backlight button for 2 seconds toggles the temperature units.
- Backlight + Power
 - Bluetooth Toggle On/Off

Hold

- Quick Press
 - Hold Values On/Off
- Hold + Power
 - Auto Power Off Toggle On/Off

Using the RHT100

1. Power the gauge on.
2. Connect the gauge via Bluetooth to the Appion Central™ App (optional).
3. Hold the device in the area being monitored or use the flexible probe to insert the sensor tip directly in the air flow path of the system being monitored.
4. View the results on the backlit display or via the Appion Central™ App.

Appion Central™ Bluetooth Operation

Note: *Bluetooth communication requires a compatible device running the Appion Central™ App. Development of the Appion Central™ App is ongoing, and any information presented in this manual about the Appion Central™ App may not be up-to-date. Visit AppionTools.com or your device's App Store for the latest Appion Central™ App and additional information.*

1. With the RHT100 powered on, press the “Backlight/Units” button AND the “Power” button until the Bluetooth symbol illuminates on the RHT100 screen.
2. In the Appion Central™ App, navigate to “My Devices” and connect to the RHT100 as shown.
3. If the connection is lost due to exceeding the Bluetooth range, or due to loss of power, repeat Step 1, then “Reconnect” the RHT100 through the Appion Central™ App interface.

Note: *Bluetooth range may vary due to obstructions or interference. The Appion Central™ App will indicate when communication is lost.*

Note: *The RHT100 will continue to operate normally even if Bluetooth communication is lost.*

Appion Central™ App

Scan to download app and access user guide.



General Maintenance & Care

The RHT100 is a precision instrument that must be maintained to ensure proper function. Please follow the guidelines as listed.

1. Store the RHT100 in a cool, dry environment when not in use. The recommended storage temperature (without batteries) is -4 °F to 140°F / -20 °C to 60° C.
2. Inspect the sensor housing openings before operating to ensure no objects or materials are obstructing the sensor housing openings.
3. Do not insert any objects or materials into the openings of the sensor housing. Doing so may damage the sensor.
4. The flexible probe is designed to bend and move as needed. However, do not twist, pull, or overextend the flexible probe. Doing so may permanently damage the sensor.

NOTICE

Do not insert any objects or materials into the openings of the sensor housing. Doing so may damage the sensor.



NOTICE

The flexible probe is designed to bend and move as needed. However, do not twist, pull, or overextend the flexible probe. Doing so may permanently damage the sensor.

Specifications

Weight:

4.02 oz (114 g) *without batteries

Gauge Body Dimensions:

10.23 x 1.9 x 1 in. (260 x 48.25 x 25.4 mm)

Flexible Probe Dimensions:

Length: 4.2 in. (107 mm)

Diameter: .38 in. (9.75 mm)

Units:

Fahrenheit (°F), Celsius (°C)

Gauge Operating Temperature:

-4 °F to 131 °F (-20 °C to 55 °C) *limited by battery performance

Storage Temperature:

-4 °F to 140 °F (-20 °C to 60 °C) *without batteries

Battery Type:

2x AA

Battery Life:

Bluetooth On: 500 hours at 77 °F (25 °C)

Bluetooth Off: 1000 hours at 77 °F (25 °C)

Wireless Range:

1000 ft (305 m) *line of sight

Auto Power Off Time:

15 minutes (Selectable On/Off)

Specifications (cont.)

Sensor Response Time:

Temperature:

18 °F in 1 Second (32 °F to 158 °F) / 10 °C in 1 Second (0 °C to 70 °C)

Relative Humidity:

20% RH 3-5 Seconds 40% to 80% RH at 77 °F (25 °C)

Sensor Operating Range:

Temperature:

-40 °F - 212 °F / -40 °C - 100 °C

Relative Humidity:

0% - 100% RH

Resolution:

Temperature:

.1 °F / .1 °C

Relative Humidity:

.1% RH

Temperature Sensor Accuracy:

± 0.9 °F (-40 °F to 32 °F) / ± 0.5 °C (-40 °C to 0 °C)

± 0.36 °F (32 °F to 158 °F) / ± 0.2 °C (0 °C to 70 °C)

± 0.9 °F (158 °F to 212 °F) / ± 0.5 °C (70 °C to 100 °C)

Relative Humidity Sensor Accuracy:

$\pm 4.5\%$ RH <10% RH at 77 °F (25 °C)

$\pm 3.5\%$ RH 10% to 20% RH at 77 °F (25 °C)

$\pm 2.5\%$ RH 20% to 80% RH at 77 °F (25 °C)

$\pm 3.5\%$ RH >80% RH at 77 °F (25 °C)

Regulatory Information

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including the interference that may cause undesired operation.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Caution

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Industry Canada Radio Equipment

This device complies with Industry Canada license exempt RSS-210 standard. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference that may cause undesired operation of the device.

Équipement radio d'Industrie Canada

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Warranty Information

Appion Inc. (Hereinafter Appion) warrants that this equipment will, under normal and anticipated use, be free from defects in materials and workmanship for a period of one (1) year from the date of purchase by Purchaser from an Appion-authorized distributor.

The complete Manufacturer's Limited Warranty is available online at AppionTools.com.

All warranty services must receive Appion Factory Authorization and an RGA number prior to any action. Contact your local Appion authorized distributor to obtain the RGA number and shipping instructions. To help us provide the best service, be sure to have the following information available:

- Serial number of the equipment
- Purchase date of the defective unit
- A detailed description of the problem

Appion offers technical troubleshooting customer support for the lifetime of every product. Regardless of your warranty status, you can always contact us for assistance. Our website includes additional technical information that can help you experience the fullest potential of our products, making your job quicker and easier.

Appion RHT100 Warranty Registration Card

Please complete this card and return it within 10 days of purchase with a copy of your sales receipt.

Your Name	Your Company
Street Address	Phone Number
City	State Zip
Email Address	Serial Number
Place of Purchase	Date of Purchase
<p>How did you learn about our products? (Please only check one)</p> <p><input type="checkbox"/> Wholesaler _____</p> <p><input type="checkbox"/> Recommended By: _____</p> <p><input type="checkbox"/> Magazine</p> <p><input type="checkbox"/> Newspaper Ad</p> <p><input type="checkbox"/> Internet</p> <p><input type="checkbox"/> Other: _____</p>	<p>Please select your primary line of business. (Check all that apply)</p> <p><input type="checkbox"/> Automotive</p> <p><input type="checkbox"/> Commercial</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Service</p> <p><input type="checkbox"/> Installation</p> <p><input type="checkbox"/> Other: _____</p>
<p>Register by <u>Mail</u>:</p> <p>Appion Inc. 2800 South Tejon Street Englewood, CO 80110 USA</p> <p>Register by <u>Email</u> or <u>Fax</u>:</p> <p>1. Scan this page AND a copy of your sales receipt. 2. Email to: Sales@AppionInc.com or Fax this page and your sales receipt to: 1-303-937-1599</p>	<p>What features most interested you? (Check all that apply)</p> <p><input type="checkbox"/> High Production</p> <p><input type="checkbox"/> Low Cost</p> <p><input type="checkbox"/> Low Maintenance</p> <p><input type="checkbox"/> Portability</p> <p><input type="checkbox"/> Ease of Use</p> <p><input type="checkbox"/> Other: _____</p>



Scan for Product Registration

QR Code Index



Appion Central™ App Download



Product Registration



Product Videos



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