Therma-Stor LLC

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Owner's Manual — Humiport 10/20
Installation, Operation & Service Instructions

Read and Save These Instructions

The Phoenix Humiport line of ThermoHygrometers offers the restoration professional the optimum balance between cost, accuracy and response time.

The Phoenix Humiport 10 and 20 feature 2 point calibration and offer 2% accuracy for relative humidity and have the largest display in the industry. They also include a backlit display option and auto-off feature. The Phoenix Humiport 20 has a detachable probe with a coiled cord that extends over four feet to eliminate problems reaching difficult areas or reading the meter display when the probe is recording areas over your head or near the floor.

Each Humiport Meter offers a large display for easy reading, and all of the important restoration information including, temperature (either F or C), relative humidity (%), dew point (F or C) and the popular "grains per lb" mixing ratio. There is even an "altitude" input that makes sure the grains calculation is extremely accurate. A listing of altitudes by state and (some) cities is available at www. usephoenix.com, so you can set the meter to your specific area.

The Phoenix Humiport meters record conditions, calculate data and can display: MIN (minimum), MAX (maximum), AVG (average) and HOLD. The Phoenix Humiport 05 offers 3% accuracy for relative humidity between 5% – 95% and a temperature range of -4 to 122 degrees Fahrenheit.

Humiport 10

Displaying temperature and mixing ratio in grains per pound.

Humiport 20

The Phoenix Humiport 10/20
· Fast response
· Accurate +/- 2% RH
· Grains/lb display
· Dew point
· Large display
· Min/Max/Avg. and Hold functions
· Altitude input for gpp calculation

Specifications subject to change without notice.

TS-382

12/10

Table of Contents

Serial No. _____

Purchase Date _____/_____/_____

Dealer's Name _____

⚠WARNING

Read the operation and maintenance instructions carefully before using this the Humiport 10/20.

Do not measure near live electrical components.

Avoid using in temperature conditions outside of that recommended (overheating can lead to their destruction)

Calibration should only be adjusted when used with a recommended calibration source or known standard.

Allow approximately 2 minutes for stabilization when taking measurements in dramatically different environments.

IMPORTANT WARRANTY INFORMATION BELOW:

The plastic protection cap must be placed on the sensing head whenever the meter is not in use. Without this protection the sensing elements can be mechanically damaged or chemically contaminated. Meter failures due to damage or contamination of the sensing elements are not covered under warranty.

1 Appropriate Use

The measuring device must only be operated within the products specifications.

The measuring device must only be used under the conditions and for the purposes for which it was designed.

Modification to this device will void the warranty and may compromise the accuracy and safe operation of this device.

Before Initial Operation:

· Open the battery case on the back of the instrument.
· Pull out the insulating tape from the top of one of the batteries.
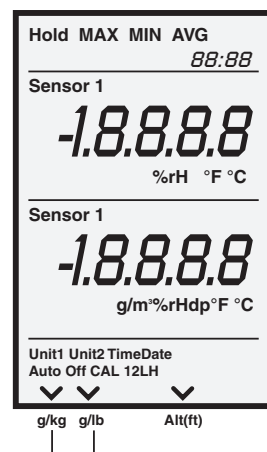· The Humiport is ready to use.

2 Humiport 10/20

The hand-held devices for measuring temperature and humidity have the following features:

· Large display with backlighting
· Three-way thumb wheel operation
· Rugged and easy to handle enclosure
· High accuracy

The Humiport 10 is equipped with a fixed probe whereas the Humiport 20 consists of a flexible probe connected to the main body through a cable.

3 The Humiport 10/20 Display

Hold MAX MIN AVG	◄	**Upper menu with date and clock**
88:88		
Sensor 1		
-1.8.8.8.8	◄	**Temperature reading**
%rH °F °C	◄	**Temperature Display Units (°C, °F)**
Sensor 1		
-1.8.8.8.8	◄	**Humidity reading**
g/m³%rHdp°F °C	◄	**Display value g/m³'%rH, dp°F, °C,g/Kg.gr/lb (gpp)**
Unit1 Unit2 TimeDate **Auto Off CAL 12LH** ∨ ∨ ∨	◄	**Lower menu for configuration and adjustment**
g/kg g/lb Alt(ft)		

4 Operation

The Humiport can be adjusted using the three-way "Thumb Wheel" on the left hand side of the device.

Up and down movement of the wheel is used to navigate through different menu items on the screen. Items that flash intermittently on the screen are items that can be adjusted. Pressing the wheel inward will act as a "click" or selection of the highlighted item.

When the unit is first turned on, moving the wheel up or down will select the upper or lower menus on the screen.

3.1 Three Positions of the Thumb Wheel

▶ Press or "click" in the middle position

▲ Turn up

▼ Turn down

Quickly press ▶ to switch unit on.

Press and hold ▶ for 2 seconds at start-up to switch on and activate the display backlight. (Can only be activated from an off condition.)

Press and Hold ▶ again for 2 seconds to turn off.

▲ Activate the upper menu with HOLD MAX MIN AVG.

Select with ▲, activate selection with ▶, or interrupt with ▼ or by not pressing the wheel for 20 seconds.

▲ Activate the lower menu for configuration and adjustment.

Select with ▼, activate selection with ▶, or interrupt with ▼ or by not pressing the wheel for 20 seconds.

5 Upper Menu

The following functions can be selected in the upper menu:

HOLD MAX MIN AVG

Once the upper menu is activated ▲, select the function with ▲ and ▼; confirm by ▶. The selected function remains displayed once it is entered while the other functions are not visible. Once a selection has been made, press ▶ to exit the menu.

The flashing upper menu can be interrupted with or by not pressing the thumb wheel 20 seconds.
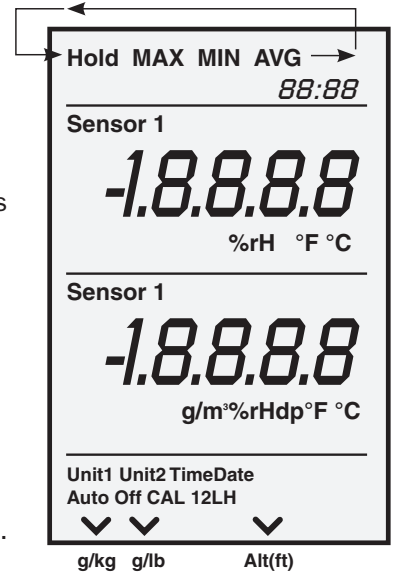
HOLD: The current value on the display will remain.

MAX: Displays the maximum value since the unit was turned on.

**MIN:** Displays the minimum value since the unit was turned on.

AVG: The arithmetical average value is displayed since the unit was turned on.

6 Lower Menu

The following functions can be selected in the upper menu:

Unit1 - Unit2 - TimeDate - AutoOff - CAL 1 2 LH

Select with ▼. The selected function flashes and is confirmed by means of ▶. The menu can be cancelled by ▲ or by not pressing the wheel for 20 seconds.

SENSOR 1

20.0
°F°C

SENSOR 2

80.0
°F°C

12:00

30:12

00:59

20:0
°C

0:0
°C

CAL 1
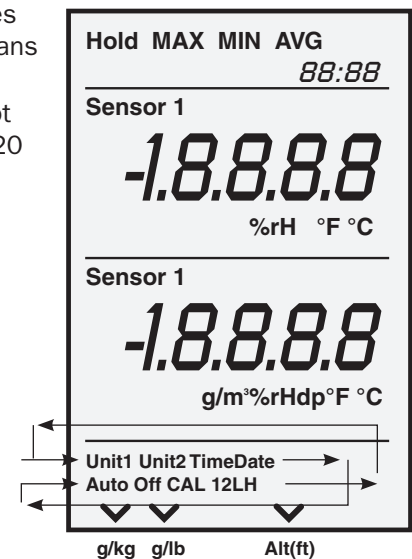
Unit1: This selects display value of temperature on the upper numeric display. You have a choice of °C and °F. You can select with ▲ and ▼; confirm by ▶.

Unit2: This selects the humidity value displayed on the lower numeric display. Click the wheel down to scroll through the display options that include b/m³, %r.h. dp°C, dp°F as well as g/Kg and gr/lb (gbb) identified the downward pointing arrow at the bottom of the screen.

You can select with ▲ and ▼; confirm by ▶.

Time: Set time. Once activated, hours and minutes are set in sequence by using ▲ and ▼ and confirm by ▶.

Date: Set date. Once activated, the ay, month, and year are set in sequence by using ▲ and ▼ and confirm by ▶.

AutoOff: The AutoOff function enables the user to define and set a period of time (in minutes) for the instrument to automatically switch off. "OFF" will appear if the timer is set to less than 1 minute. This means that the unit can only be turned off manually. Once activated, adjust with ▲ and ▼ and confirm by ▶.

One point calibration of temperature and humidity.

CAL1: This selection gives the user the possibility to adjust an offset for sensor 1 (temperature). This is a single point calibration. The offset value appears on the lower display and the temperature value appears on the upper display when in CAL 1 mode. The offset can be adjusted up to ±10°C or ±°F. Once activated, adjust with ▲ and ▼ and confirm by ▶.

**Factory calibration can be restored by adjusting the offset to 0.0.**

CAL2: This selection gives the user the possibility to adjust an offset for sensor 2 (rel. humidity). This is a single point calibration. The offset will be adjusted based on a lower calibration anchor point of 11% RH. Single point calibrations should be performed in the range of 30% to 95% RH.

Note: The value on the lower display should be set to % RH before using CAL2.

The offset value appears on the upper display and the RH value appears on the lower display when in CAL2 mode. The offset can be adjusted up to ±10% RH. Calibrations cannot be performed using other humidity values (e.g. DP - dew point). Once activated, adjust with ▲ and ▼ and confirm by ▶.
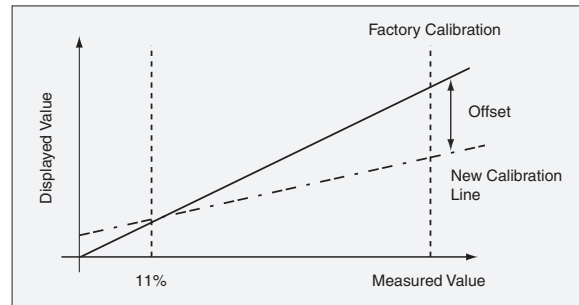
⊙ IMPORTANT

Important: Humidity calibrations should only be performed by knowledgeable individuals using the proper calibration equipment.

Two-Point Calibration for Relative Humidity

A two-point calibration involves adjusting the sensor at a lower and upper concentration of relative humidity.

Note: The lower display should be set to %R before attempting a two-point calibration.

00:0
%rH

80:0
%rH

CAL2L, CAL2H: The lower adjustment value can be calibrated in menu CAL2L whereas the upper adjustment value can be calibrated in menu CAL2H. The lower value should lay between 10% to 40% RH (preferably 33% RH.) And the higher value should lay between 60 to 90% RH (preferably 76% RH).

The calibration of each point can be adjusted a maximum of ±10% RH in increments of 0.1% RH.
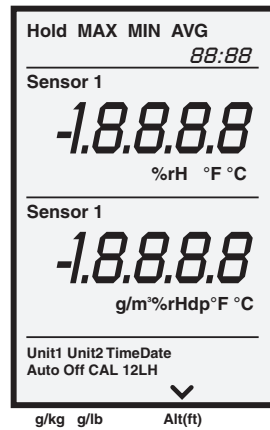
⊙ IMPORTANT

Important: A two-point calibration should only be performed by a reputable calibration laboratory.

The original factory calibration can be reset by adjusting the offset for CA2L and CAL2H to 0.0% RH.

7 Measuring the Humidity Ratio

The Humiport can calculate and display humidity or mixing ratio in g/Kg or gr/lb (gpp). In order to properly calculate this value the air pressure or altitude must be known. To display the correct humidity ratio value, the local altitude must be set to within ±200 ft. of the local altitude.

To adjust altitude, first make sure the display on the lower display (sensor 2) is set to gr/lb (gpp). Now scroll through the lower menu items and select the lower right arrow on the screen above the Alt. (ft) label on the case. Move the wheel up and down to adjust the altitude. You can adjust the altitude with ▲ and ▼ and confirm by ▶.

For altitude in your area you can do a web search using your city name and the work "elevation" or use the City Altitude Guide available from Phoenix Restoration.

Display illustration:

Hold MAX MIN AVG
88:88

Sensor 1

-1.8.8.8.8

%rH °F °C

Sensor 1

-1.8.8.8.8

g/m³%rHdp°F °C

Unit1 Unit2 TimeDate
Auto Off CAL 12LH
⌄

g/kg g/lb   Alt(ft)

8 Changing The Battery

If the symbol "BAT" appears on the display, the batteries have to be changed within a few hours. Open the battery case on the back of the instrument. Remove the empty batteries and insert new ones. Ensure batteries are inserted to provide the correct polarity.

ⓘIMPORTANT

Important: The Humiport can be damaged if the batteries are inserted incorrectly and reverse polarity results.

Use only EC LR6 AA batteries. Do not uses rechargeable batteries. Use only high quality batteries.

9 Maintenance And Adjustments

Clean the device with a damp cloth as necessary. Do not use any cleaning fluids, use just plain water to dampen the cloth. Do not touch the sensor. Ensure the unit is off while cleaning.

When used for indoor environmental measurement, we recommend annual calibration. Recalibration should be carried out more frequently in a harsh environment.

Recalibration should only be performed by a calibration laboratory, or by using a standard calibration method such as use of saturated salt solutions. Regardless of the method, calibrations should occur at a minimum of two %RH concentrations. Humidity sensor can also be calibrated to another recently calibrated humidity sensor.

Phoenix Restoration (Therma-Stor LLC) offers calibration services for all types and makes of hand held temperature and humidity monitors. For more information on the Phoenix Calibration service call 1-800-533-7553.

10 Specifications

Measurement Range:

RH	0 to 95% RH
Temp	-4 to 122°F (-20 to 50°C)

Calculated Values:

Dew Point	°F, °C
Humidity Ratio	grams/Kg dry air, grains/lb dry air (gpp)

Accuracy:

RH	±2% RH
Temp	±0.5°F at 32 to 103°F otherwise ±0.9°F
	(±0.3°C at 0 to 40°C otherwise ±0.5°C)

Resolution:

RH	0.1%
Temp	0.1°F, (o0.1°C)

Response Time:

RH	T90 <6.0 seconds

General:

Supply Voltage	4-1.5V Battery
Battery Life	500 hours (typical)
Working Temp Range	32 to 122°F (0 to 50°C)
Storage Temp Range	-4 to 140°F (-20 to 60°C)
CE Compatiblility	EN61000-6-2, EN50147-3

Weight: 0.5 lbs. (200 g)

11 Warranty And Repair

The Humiport is warranted against defects in material of workmanship for a period of one year. The warranty does not cover calibration drift, use beyond the stated specifications or mishandling resulting in damage to the unit.

If you believe your Humiport has a defect in workmanship, contact Phoenix Restoration to arrange for a replacement unit.

If you have damaged your Humiport and you feel it may need repair or replacement you can also contact Phoenix Restoration to learn about their product repair services. Do not send units requiring repair or replacement to Phoenix without first obtaining an RMA number. Packages received without a RMA number will be returned to the sender unopened.

Contact Phoenix Restoration at 1-800-533-7553.

Phoenix Humiport 05/10/20 Limited Warranty

Warrantor:

Therma-Stor LLC
4201 Lien Rd
Madison, WI 53704
Telephone: 1-800-533-7533

Phoenix Restoration (Phoenix) warrants this unit to be free of defects in materials and workmanship for a period of 12 months from date of purchase. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of Phoenix's control. Components which wear are not warranted, including but not limited to switches, displays, batteries and calibration. Phoenix's warranty does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification.

If the unit should malfunction, it must be returned to the factory for evaluation. Phoenix Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by Phoenix, if the unit is found to be defective according to the warranty it will be repaired or replaced at no charge. If the product is found not to be covered by the warranty, the customer will be offered the opportunity to purchase a replacement, refurbished unit.

Phoenix is pleased to offer suggestions on the use of its various products. However, Phoenix neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by Phoenix, either verbal or written. Phoenix warrants only that the parts manufactured by it will be as specified and free of defects. PHOENIX MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

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