TH-3000

DIGITAL HUMIDITY/TEMPERATURE METER

Thank you for purchasing our Digital Humidity/Temperature Meter. Please read this instruction manual carefully before using to ensure the correct usage of this device.

Please keep this instruction manual for future reference.



Please note that misuse of this device may lead to injury to the user or damage to the device. Please observe all safety precautions and warnings in this instruction manual.

Customer Service -



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Safety Precautions

For safe usage of this device, please observe all statements regarding precautions and warnings in this instruction manual.

· /!\ ATTENTION -

1. Operation

- Do not use this device near machines that emit strong electromagnetic fields or objects that store static electricity.
- Do not drop or subject this device to strong impact.
- Do not use or store this device where it will be exposed to water or in places with wet conditions.
- Do not use or store this device where it can be exposed to direct sunlight, dust, high temperature and high humidity.
- See the battery case markings to ensure that the battery is properly installed.
- For accurate measurements, do not subject this device in measuring sudden change of temperatures.
- Remove the battery when the device will not be used for a long period of time.
- Do not attempt to disassemble or modify this device.

1. Operation Procedures

a. Humidity & Temperature Measurement

- 1.) Insert the Probe Plug into the Probe Input Socket.
- 2.) Press the Power button to turn on the meter.
- 3.) The LCD display will show the current measurement indicated by the unit of measurement symbol "%RH" and "°C".

 (The upper display shows the Humidity measurement, lower display shows Temperature measurement.)

b. Data Hold

- 1.) While measuring, press the [HOLD] button to hold the last measured value on the display. The display will also show the "HOLD" symbol.
- 2.) Press the [HOLD] button again to exit from the data hold function.

c. Data Record (Max / Min Reading)

- 1.) To start recording the measurement data, press the [REC] button once. The display will show the "REC" symbol on the display.
- While the "REC" symbol is on display, press the [REC] button once to display the Maximum measured data recorded. The "MAX" symbol will also show on the display.

Press the [REC] button once again to display the Minimum measured data recorded. The "MIN" symbol will also show on the display. To view back "Max"("Min") measured data, press [REC] button, alternately.

To clear the stored MAX/MIN values, while on the "MAX" display (if Maximum value is to be cleared) or on the "MIN" display (if Minimum values is to be cleared), press continuously the [HOLD] button until value is cleared and the display goes back to "REC" display.

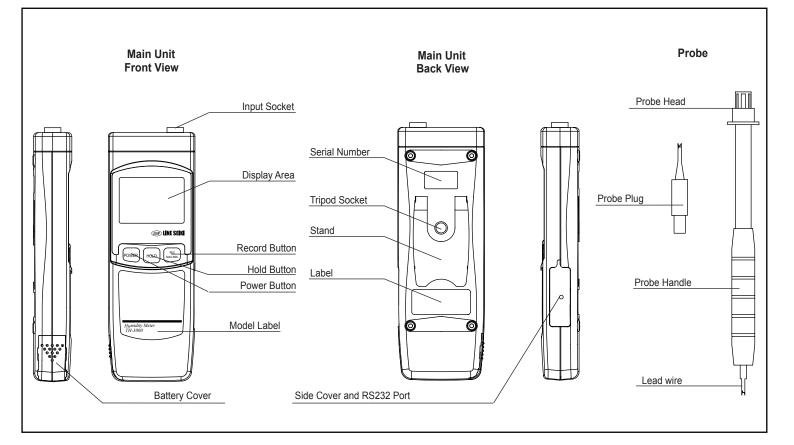
3.) To exit from Data Record function, press the [REC] button for at least 2 seconds and the display will go back to current measuring display.

d. Auto Power Off

This unit will automatically switch off if none of the buttons are pressed for approximately 10 minutes.

Note: The Auto Power Off feature is disabled during Data Record function.

2. Parts



DIGITAL HUMIDITY/TEMPERATURE METER MANUAL

3. General Specifications Main Unit MODEL TH-3000 Humidity: High Precision Thin Film **SENSOR** Capacitance Sensor TYPE : Thermistor Temp. Humidity: 10% - 95% RH **MEASURING** Temp. : 0°C - 50°C RANGE Humidity: 0.1% RH RESOLUTION Temp. : 0.1°C Humidity: $\geq 70\%$ RH ±(3% of reading + 1% RH) < 70% RH ±(3% RH) **ACCURACY** : ±0.8°C Temp. SAMPLING TIME Approx. 0.8 sec. **FUNCTIONS** Data Hold, Data Record (Max/Min) DISPLAY LCD: 51mm x 32mm DATA OUTPUT RS-232 Serial Interface **POWER SUPPLY** LR03 (1.5V) battery x 6 pcs. **POWER** 10mA max. CONSUMPTION **OPERATING** 0°C - 50°C TEMP./HUMIDTY Main Unit: 80% RH max. / Probe: 95% RH max

4. RS-232 PC Serial Interface

DIMENSIONS

WEIGHT

CONTENTS

The Humidity and Temperature measured data graph can be checked and viewed in a computer through the RS-232 output option of the unit. Please use our Output Cable (UPCB-02, USB-01, sold separately) to connect to the PC.

Sensor Probe : Approx. 80g

Sensor Probe x 1 pc.

Main Unit: 200(H) x 68(W) x 30(D)mm

Main Unit: Approx. 290g (Battery Included)

Instruction Manual, LR03 (1.5V) battery x 6 pcs.

: φ26mm x 200mm (Head: φ15mm)

• Commu	Communication Setting										
Baud Rate	9600	Data bit	8 bit								
Parity	None	Stop bit	1 bit								

• Commu	nication Format
D15	STX (ASCII Code)
D14	4 (Fixed)
D13	Humidity (Upper Display) = 1 Temperature (Lower Display) = 2
D12 - D11	Annunciator for Display °C = 01 %RH = 04
D10	Polarity 0 = Positive, 1 = Negative
D9	Decimal Point (DP), position from right to left 0 = No DP, 1 = 1 DP, 2 = 2 DP, 3 = 3 DP
D8 - D1	Display Reading, D8 = MSB, D1 = LSB (Ex. if the Display is 1234, D8-D1 = 00001234)
D0	CR (ASCII Code)

For Example:

02 34 31 30 31 30 31 30 30 30 30 30 32 34 32 0d	HEX														
	02	34	31	30	31	30	30	30	30	30	30	32	34	32	0d

D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	D0
			°(2	+	DP		Display (value)							
STX	4	1	0	1	0	1	0	0	0	0	0	2	4	2	CR

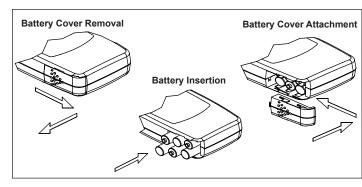
* The Output and Display change timing is real-time.

5. Battery Replacement

1.) When the Low Battery indicator appears on the display, it is necessary to replace the battery to maintain accurate readings.

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- 2.) Remove the battery cover as shown below.
- 3.) Insert six LR03 (1.5V) batteries as shown below.
- 4.) Attach the battery cover as shown below.
- * The instrument cannot measure accurately after low battery indicator is displayed. Please replace the battery immediately.



6. Storage

For proper storage, avoid places where the device can be exposed to direct sunlight, high humidity, high temperature, vibration and shock, dust, rust, corrosion, etc. Remove battery when the device will not be used for a long period of time.

7. Accessories (Sold Separately)

- Output Cable

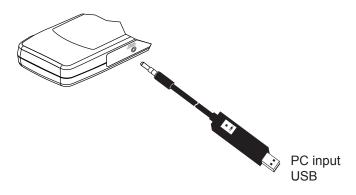
UPCB-02(RS-232 cable)



RS-232

PC input

UPCB-02(RS-232 → USB cable)



* The software for TH-3000 is not sold by us. Please program by customers themselves according to the communication format.

This manual was last revised Oct. 27, 2010. 4LU007A *Subject to change without prior notice. All Rights Reserved,Copyright © 2010,LINE SEIKI CO.,LTD.