

TH-3000
DIGITAL HUMIDITY/TEMPERATURE METER

ATTENTION
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.

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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.

Safety Precautions

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

ATTENTION

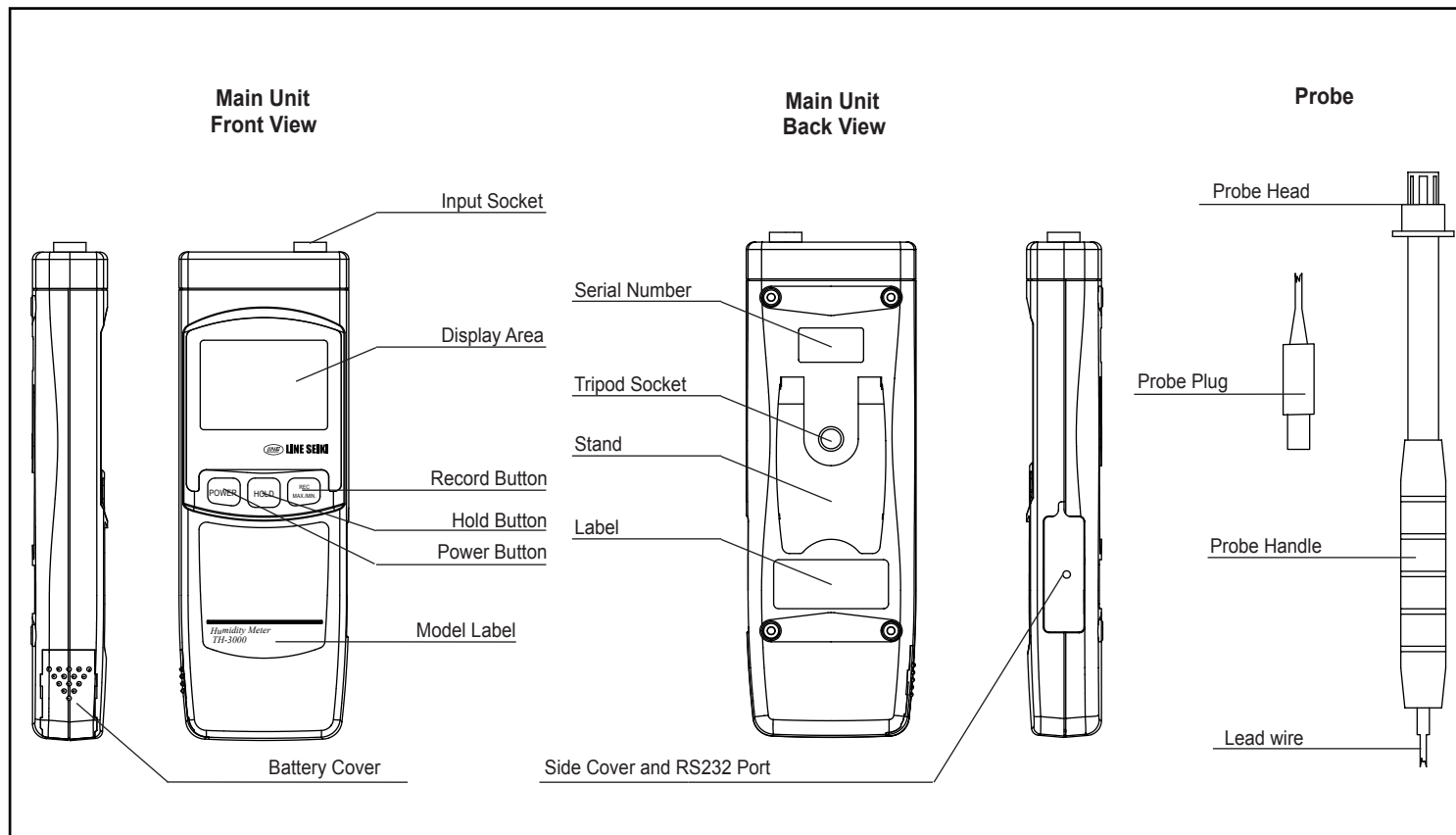
- 1. Operation**
- Do not use this device near machines that emit strong electromagnetic fields or objects that store static electricity.
 - Do not drop or subject this device to strong impact.
 - Do not use or store this device where it will be exposed to water or in places with wet conditions.
 - Do 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.)

2. Parts



3. General Specifications

● Main Unit	
MODEL	TH-3000
SENSOR TYPE	Humidity: High Precision Thin Film Capacitance Sensor Temp. : Thermistor
MEASURING RANGE	Humidity: 10% - 95% RH Temp. : 0°C - 50°C
RESOLUTION	Humidity: 0.1% RH Temp. : 0.1°C
ACCURACY	Humidity: ≥ 70% RH ±(3% of reading + 1% RH) < 70% RH ±(3% RH) Temp. : ±0.8°C
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 CONSUMPTION	10mA max.
OPERATING TEMP./HUMIDITY	0°C - 50°C Main Unit: 80% RH max. / Probe: 95% RH max
DIMENSIONS	Main Unit : 200(H) x 68(W) x 30(D)mm Probe : φ26mm x 200mm (Head: φ15mm)
WEIGHT	Main Unit : Approx. 290g (Battery Included) Sensor Probe : Approx. 80g
CONTENTS	Instruction Manual, LR03 (1.5V) battery x 6 pcs. Sensor Probe x 1 pc.

4. RS-232 PC Serial Interface

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.

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

● Communication 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)

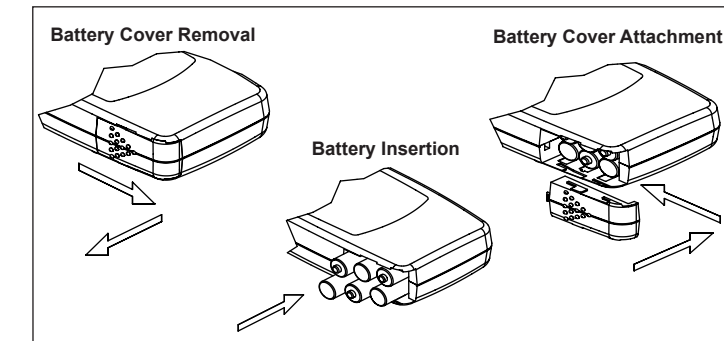
For Example:

HEX	02	34	31	30	31	30	31	30	30	30	30	32	34	32	0d	
	D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	D0
				°C	+	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.
 - 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.



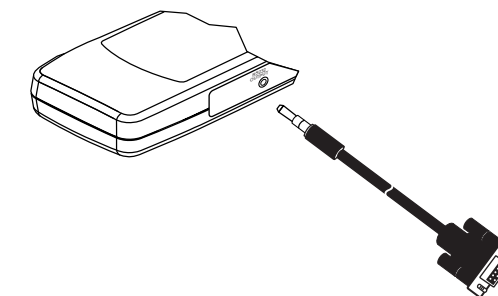
6. Storage

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)

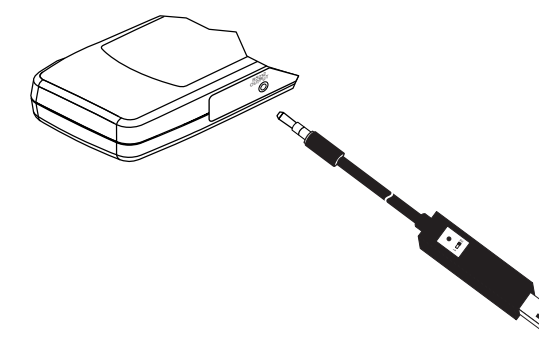
- Output Cable

UPCB-02(RS-232 cable)



PC input RS-232

UPCB-02(RS-232 → USB cable)



PC input USB

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