

Ω OMEGA™ **User's Guide**



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THDP–10 Series
Temperature/Humidity/Dew Point Meter
with Optional Data Logging Function



omega.com info@omega.com

Servicing North America:

U.S.A.
Headquarters:

Omega Engineering, Inc.

Toll-Free: 1-800-826-6342 (USA & Canada only)

Customer Service: 1-800-622-2378 (USA & Canada only)

Engineering Service: 1-800-872-9436 (USA & Canada only)

Tel: (203) 359-1660

Fax: (203) 359-7700

e-mail: info@omega.com

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FEATURES

- 1) Temperature measurement: Ambient Temp. Dew Point Temp. Wet Bulb Temp. (THDP-10), Heat index, WBGT temperature measurement (THDP-10-DL).
- 2) Hold function: Freeze current readings on LCD.
- 3) High/Low Temp. & RH alarm threshold setting.
- 4) Function: Maximum, Minimum, Average and Recall.
- 5) Auto power off function: Save power energy when not used.
- 6) Temperature unit: Switchable.
- 7) Battery low indicator.
- 8) 99 points manual recording (THDP-10).
- 9) On line recording up to 64,000 points to PC (THDP-10-DL).
- 10) Dimension: 160x60x40mm (Meter), Sensor tip (31mm)
- 11) Power : AAA Volt battery x 3 pcs

MATERIAL SUPPLIED

- 1) Meter.
- 2) User manual.
- 3) USB cable. (THDP-10-DL).
- 4) AAA batteries x 3 pcs.
- 5) Plain box.
- 6) Free software download from website. (THDP-10-DL).

SPECIFICATION

Model	THDP-10	THDP-10-DL
Temp. range	-20.0~50.0℃ (-4.0~122.0°F)	
Accuracy	±0.6℃	
RH% range	0.1~99.9%	
Accuracy	±3%@25℃(10~90%),others ±5%	
DP/WB Temp.	YES	
HI/WBGT Temp.	NO	YES
HI/LO Alarm	YES	
Memory	Manual 99 points	Online 64,000 points
USB interface	NO	YES
Operating Temp. &RH%	0~50℃, <80%RH (non-condensing)	
Power	AAA x 3 pcs	
Meter size	160x58x32mm(Meter), Sensor tip(31mm)	

KEYPAD (CONTROLS)

PWR: Turn on or off, bell icon (audible alarm function) activates/inactive.

HOLD: Freeze current readings. Forward review or Increase digit.

BKLT: Back review or decrease digit.

MAX/MIN: Review Max. Min. AVG readings and move to right digit in alarm threshold setting.

MODE: Toggle Temp. DP, WB (THDP-10), WBGT, HI (THDP-10-DL) mode. Move to left digit in alarm threshold setting.

Long press to review memorized recording. (THDP-10).

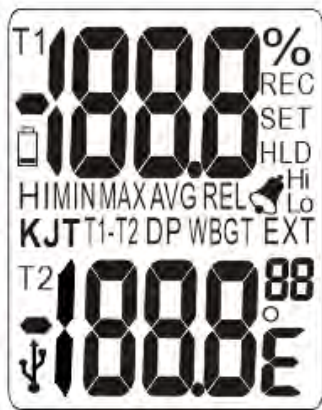
SET: Long press to enter Hi, Lo alarm threshold setting.

Under Hi and Lo alarm setting mode, short press to toggle Temp. or RH setting mode.

Long press to save current temp. and humidity readings.

UNIT: Toggle Temperature unit °C and °F. Under Hi and Lo alarm setting mode, short press to toggle HI or LO setting mode.

LCD FULL DISPLAY



OPERATION

(1) POWER ON/OFF

Short press "PWR" button to turn on the meter, press and hold for 2 seconds to turn off the meter.

(2) MAX/MIN/AVG

Short press **MAX/MIN** button to cycle display Maximum, Minimum, Average readings of Temperature and RH since powered on.

(3) CHANGE DEGREE °C/°F

Short press **UNIT** button to switch °C and °F.

(4) DP/WB/Hi/WBGT

Short press **MODE** button to toggle current temperature, DP (Dew point), WB (Wet bulb temperature) (THDP-10), HI (Heat index), WBGT(THDP-10-DL) at the second layer.

(5) FREEZE READING

Short press "**HOLD**" button under normal measurement, "**HLD**" icon shows on screen to freeze current readings.

(6) DISABLE AUTO-POWER OFF

Meter will turn off automatically in 20 minutes when no use, to disable auto power off function, when meter power off, press **HOLD+PWR**, LCD shows "n", the auto power-off function is disabled.

(7) TURN ON/OFF ALARM FUNCTION

After setting up the threshold, short press **PWR** button, the bell icon shows on screen for alarm is activated. Short press **PWR** button again to disable alarm function.

When it is under low power, the low battery icon shows on the screen, recommend to replace with new battery.

(8) HI. LO ALARM SETTING

High, Low alarm threshold function:

(Meter is default Hi RH%: 70% , Lo RH%: 20%, Hi Temp.: 40°C ,Lo temp: 10°C)

1. Press and hold **SET** button for 2 seconds, enter Temperature alarm setting.
First set up high temperature alarm, screen shows "SET HI", the last digit (decimal digit) at second layer is flashing, short press **HOLD** button to increase, **BKLT** to decrease, select to left digit by pressing **MODE**(←) and to right digit by pressing **MAX/MIN**(→).
The last digit is flashing again for change selection.
2. Short press **SET** button to toggle RH% or Temp. values setting, the last digit of RH% or temp. is

flashing for changing digit.

3. Short press **UNIT** button to enter LO alarm setting, follow the same step as you set for temperature.
4. Press and hold **SET** button to save and back to normal measurement mode.

(9) RECORD 99 POINTS (THDP-10 only)

Short press **SET** button to save current readings (temp. and humidity), **REC** icon shows next to RH% readings and record number shows next to temperature readings about 2 seconds then disappear. Meter may store up to 99 points.

Recall recorded data: long pressing **MODE** button to review memorized recording, keep pressing **HOLD** button to review next data, press **BKLT** button to view the reading from back number. Long pressing **MODE** button again to return measurement mode.

CLEAR MEMORY:

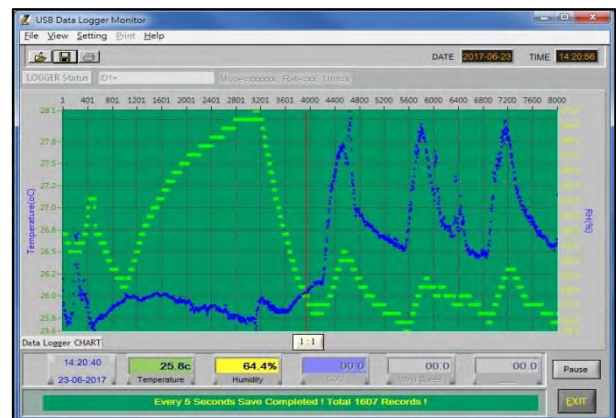
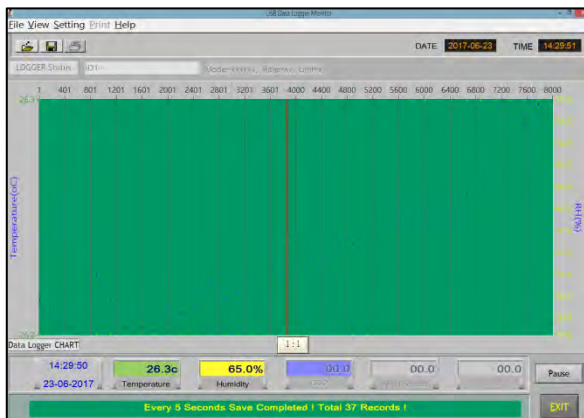
Under 99 points history recording mode, long pressing **SET** button to clear the memory.

(10) USB ON LINE LOGGING FUNCTION (THDP-10-DL only)

1. Download free software from website.
2. Install USB driver (Step1)
3. Install MIC online logging software(Step2)
4. Plug supplied USB cable onto meter first, turn on the software, PC automatically detect COMM port to USB.
5. Now meter's readings on line upload to PC software, you may select sample rate from 5 secs ,10 secs ,15 secs.... up to 6 hours, and maximum record point up to 64,000 points. Data can be saved as .txt or csv. format for further analysis.

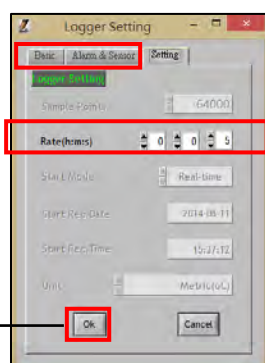
ON LINE DATALOGGING PC SOFTWARE SCREEN

Please install USB driver and Datalogger software in your computer, once USB connects with meter and PC, meter automatically detects correct COM port and meter real time transmits data to PC screen, you will see some dots on the screen, more dots, more clear to see a curve. After recording for a while, you can see clear curve as below:



(1) Logger setting:

Locked: no function ←



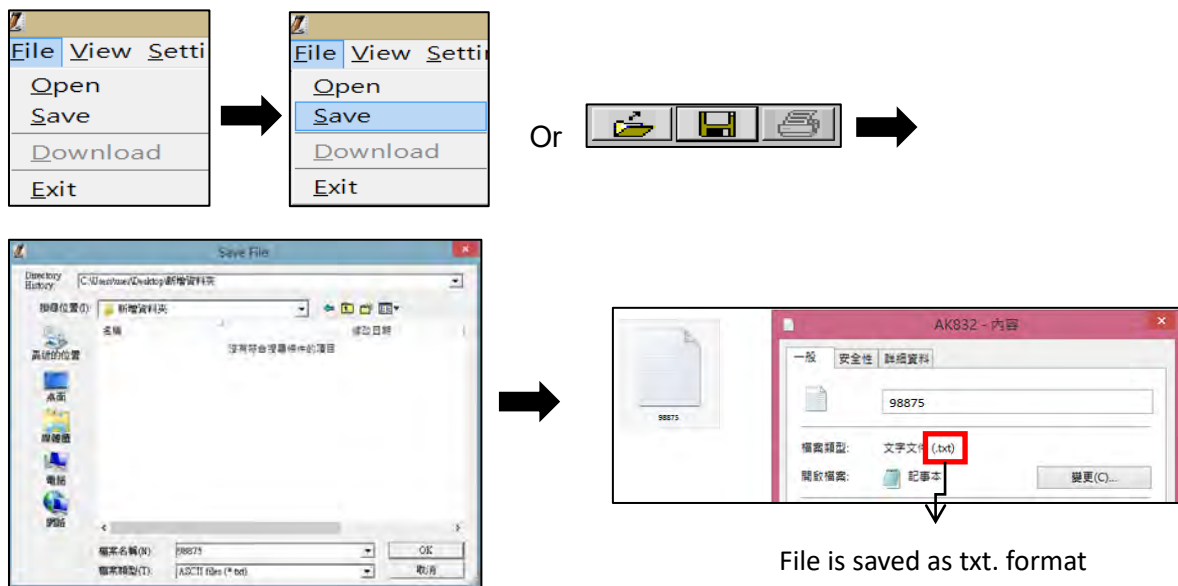
Sample rate:

Selectable from 5 seconds to 6 hours

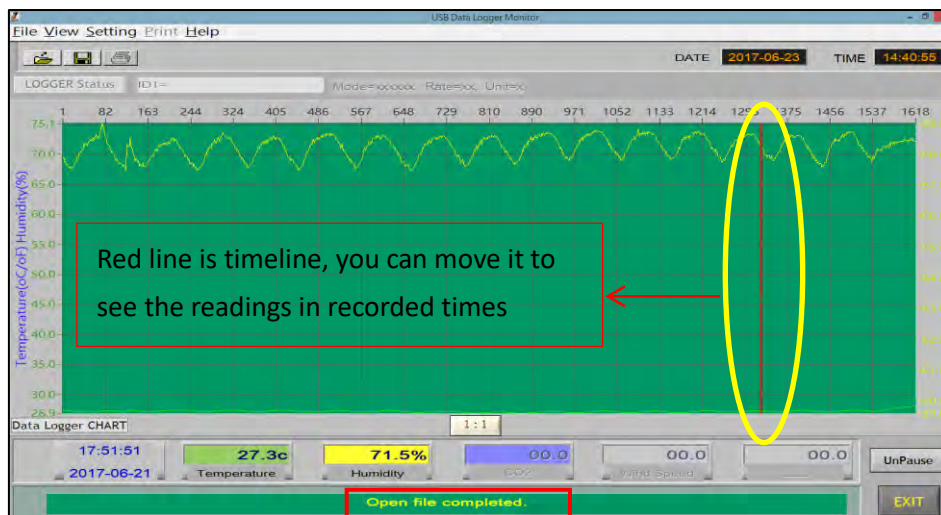
Press OK to start recording ←

(2) Save Data (txt. Format)

Save data: Press **File** in tool bar, then click **Save File** to save data in designated folder or press **Floppy icon** to save data.



(3) Open File

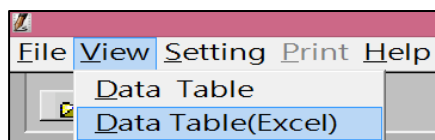


(4) View Data Table

The diagram illustrates the process of viewing the data table. It starts with the 'View' menu in the software interface, which includes options like 'Data Table' and 'Data Table(Excel)'. An arrow points to the 'Data Table' option. Another arrow points to the 'Data Table' window, which displays a list of recorded data points. The table has columns for 'No.', 'Date', 'Time', 'Temp.(°C)', and 'RH(%)'.

No.	Date	Time	Temp.(°C)	RH(%)
1	2017-06-21	15:46:10	27.4	68.1
2	2017-06-21	15:46:15	27.4	69.5
3	2017-06-21	15:46:20	27.4	69.2
4	2017-06-21	15:46:25	27.4	68.7
5	2017-06-21	15:46:30	27.4	68.3
6	2017-06-21	15:46:35	27.4	68.9
7	2017-06-21	15:46:40	27.4	68.0
8	2017-06-21	15:46:45	27.3	68.3
9	2017-06-21	15:46:50	27.3	68.4
10	2017-06-21	15:46:55	27.3	68.1
11	2017-06-21	15:47:00	27.3	68.1
12	2017-06-21	15:47:05	27.3	68.0
13	2017-06-21	15:47:10	27.3	68.0
14	2017-06-21	15:47:15	27.3	67.7
15	2017-06-21	15:47:20	27.3	67.9
16	2017-06-21	15:47:25	27.3	67.6
17	2017-06-21	15:47:30	27.3	67.9
18	2017-06-21	15:47:35	27.3	67.8
19	2017-06-21	15:47:40	27.3	67.9
20	2017-06-21	15:47:45	27.2	67.9

Save Data Table: Select View to save Data Table as Excel file. A pop-window will show once you press Data Table (Excel).



No.	Date	Time	Temp.(C)	RH(%)
1	2017/6/21	15:46:10	27.4	69.3
2	2017/6/21	15:46:15	27.4	69.5
3	2017/6/21	15:46:20	27.4	69.2
4	2017/6/21	15:46:25	27.4	68.7
5	2017/6/21	15:46:30	27.4	68.9
6	2017/6/21	15:46:35	27.4	68.9
7	2017/6/21	15:46:40	27.4	68.8
8	2017/6/21	15:46:45	27.3	68.3
9	2017/6/21	15:46:50	27.3	68.4
10	2017/6/21	15:46:55	27.3	68.1
11	2017/6/21	15:47:00	27.3	68.1
12	2017/6/21	15:47:05	27.3	68

The reading keeps updating while you still in excel status. If you don't close excel after you save the file, the reading also updating automatically.

(5) Data Table (Excel)

	A	B	C	D	E
1	No.	Date	Time	Temp.(C)	RH(%)
2	1	2017/6/23	14:50:06	26.4	69.1
3	2	2017/6/23	14:50:11	26.4	68.4
4	3	2017/6/23	14:50:16	26.4	67.7
5	4	2017/6/23	14:50:21	26.4	68
6	5	2017/6/23	14:50:26	26.4	68.6
7					
8	7	2017/6/23	14:50:36	26.4	68.6
9	8	2017/6/23	14:50:41	26.4	69
10	9	2017/6/23	14:50:46	26.4	69.3
11	10	2017/6/23	14:50:51	26.4	69.1
12	11	2017/6/23	14:50:56	26.4	69
13	12	2017/6/23	14:51:01	26.4	69



Saved file



Blank part is interval of the saved file and not saved file



Not saved file
(Keep updating)

NOTE: Select temperature unit $^{\circ}\text{C}$ $^{\circ}\text{F}$ before start online recording function. During recording, **DO NOT** press **UNIT** button. The software records the current temperature unit which shows on LCD.

WARRANTY

This instrument is warranted for two years from the date of purchase (One year limited warranty applies to cables). A Return Authorization letter must be issued before returning for any reason. This warranty does not apply to defects resulting from action of the user such as misuse, abuse, alteration neglect, improper wiring, improper maintenance or repair, or unauthorized modification, damage resulting from leaking batteries, operation outside of specification.

During the warranty period the manufacturer reserved the right to decide either to repair or replace the product. The meters are to be returned along with good packing to prevent any damage in shipment and insured against possible damage or loss.

The two year's warranty doesn't apply to:

- Accessories and batteries (not covered by warranty)
- Claim is not acceptable for improper use (including adaptation to particular applications not foreseen in the instructions manual) or improper combination with incompatible accessories or equipment or by previous attempts for repair carried out by none skilled or unauthorized personnel.
- Sensor damaged by user improper use; watering, burning, condensation....

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 25 months from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal two (2) year product warranty to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA'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. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA 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 OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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