OPERATION MANUAL

WALL-MOUNT
HUMIDITY/TEMPERATURE
MONITOR & DATALOGGER

CE

Authorized Distributor
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Model: 88081

QUICK GUIDE

STEP❶

Power up meter by 4pcs AA batteries or 9VDC power adaptor. Press ⏻ to turn on.

STEP❷

Using USB cable to connect logger with USB port of Windows computer. Then, setup the logger step by step. If computer is not available, using keypad of the logger to setup the logging function.

STEP❸

Long press "START" till green REC LED flash and REC icon flash on LCD to indicate the logging is started.

STEP❹

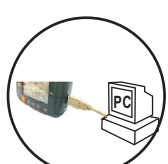
Put the logger in any place where humidity and temperature monitoring and recording are required.

STEP❺

Long press " STOP" till REC LED stop and REC disappears from LCD to indicate the recording is ended.

STEP❻

Connect the logger to USB port of Windows computer to read out the recorded data.



INDEX

INTRODUCTION

Thank you for purchasing this wall-mount humidity/temperature monitor & logger. This meter is designed with big monitor, audible/visible alarm and quick response sensor to help you monitor the air temp & humidity instantly. The 48K points memory capacity helps you to record data easily.

This datalogger is equipped with a user defined programming function. The measurement report output is in PDF file and an Excel file, special made computer software and USB driver are not required to install.

Please read this manual thoroughly before operation. You will find it is an easy to operate and a valuable instrument to measure & record the air temperature & humidity.

MATERIAL SUPPLIED

The standard package of this product contains:

- The meter x 1pc
- USB cable x 1pc
- Manual x1pc
- Plain paper box x1pc
- AA battery x 4pcs or 9V Adaptor x 1pc

The optional accessories are:

- 9V adaptor (>= 500mA. Depth:9mm, Inner dia.:1.35mm. Outer dia.:3.5mm)
- 33% & 75% calibration salt bottles, part number VZ0033AZ1, VZ0075AZ1 for RH calibration purposes.

NOTE: Suggest to use power adaptor for long term logging.

FEATURES

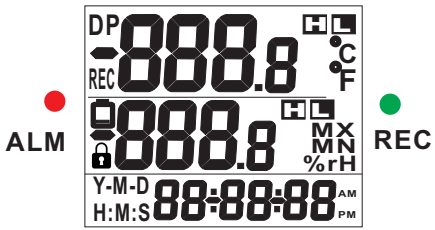
- High accuracy and quick response
- Big LCD display
- Up to 48000 points recording (24K points each parameters)
- Visual & audible alarming
- Easy to setup logging function through keypad and computer
- USB 2.0 plug and play. USB driver and software are not required.

- Easily generate PDF & Excel report.
- Wall-mount design for hanging on the wall and a detachable stand for desk mount.
- Tripod screw hole on the bottom of the logger
- Power up by 4pcs AA batteries or 9VDC port for long term use.

HARDWARE

1. NTC thermistor and capacitive humidity sensor
2. Buzzer
3. Red LED blinks every 10 seconds when over limit
4. Green LED blinks every 10 seconds during recording
5. LCD (Liquid Crystal Display)
6. Operation keypad
7. AA battery compartment
8. Wall mount hanging hole
9. USB2.0 plug & play connector. USB driver is not required.
10. DC 9V Port
11. Tripod Hole
12. Detachable desk mount holders

LCD DISPLAY



Dual LED indicator:

a. Red Low/High Alarm
Red LED blinks every 10 seconds when the measuring set limit value is exceeded during recording or monitoring mode.

b. Green REC
When the logging function is started, the green LED blinks every 10 seconds.

Big LCD Display:

c. The primary display shows the measured temperature in degree C or F.

d. The secondary display shows the measured relative humidity in %

e. REC icon flashes every second when logger is in logging mode.
While logger is programmed with start delay, REC displays but doesn't flash during the standby status.

f. DP means the dew point temperature.

g. H or L displays when set limit value is exceed.

h. MX or MN display when checking MAX or MIN value counted from previous reset moment.

i. Low battery icon appears on display when battery level is too low to accurately measure and log data.

j. Lock means the logger is locked and require password to unlock from computer.

k. Year/Month/Date and Hour/Minute/Second are displayed interchangeably at the bottom of the screen.

KEYPAD & PORT

Quick tip: Green text means to press this key longer time

-After installing batteries, press key to power on the logger. Press again to turn off.
-After the logger is programmed, press the Start/Stop button for 2 seconds to start logging. To stop logging, press the Start/Stop button again for 2 seconds.
-In the logging mode, short press key won't power off the logger but can turn display off to save power.

-Press once to check the maximum or minimum measure counted from previous reset moment.
-Long press till " MX MN " flashes 3 times to reset the maximum and minimum data.

-Press to enter the setup mode.
-Press to confirm the setting
-Press longer time to quit setup mode

-Press to switch Dew Point & air humidity reading
-Press to adjust upward while in setup mode

- To mark an event manually during the logging period, press the MARK button for 2 seconds until the measured data flash three times. This MARK function is usually used when there is a transition, from one location to another. At most 8 marks will be identified in the PDF report.
- Short press this button any time can display the leftover battery life time for your quick reference. However, precise life time is still decided by condition & battery brand.

-Press to adjust downward while in setup mode.

OPERATION

NOTE:

1. Adobe Reader is required for report reading.
2. Please setup the logger and generate the PDF and Excel report at room temperature range.
3. The executable file for programming the logger is named as: ***PDF Logger Configuration Tool.exe***

This well designed meter allows many operation functions. While meter is powered ON, it is in monitoring mode and update data every 10 seconds. While the logging function is activated, the meter is switched into logging mode from original monitoring mode. In logging mode, measured data will be stored into internal memory chip for future download.

	Monitoring mode	Logging mode
LCD update	Every 10 second	Every 10 second(setup as cumulative alarm) Or Same as sampling rate (setup as non cumulative alarm)
REC LED	OFF	Blink every 10 seconds
Alarm LED	Blink while over limit. Auto stop while return to normal range.	Blink while over limit. Can't stop unless power off the meter or creating report on computer.
Buzzer alarm	ON while over threshold Auto stop while return to normal range.	ON while over threshold Can't stop unless power off the meter or creating report on computer.
Power ON/OFF	YES	NO. Must stop log first
MX/MN/RESET	YES	YES
SETUP	YES	NO. Must stop log first
Check Dew Point	YES	YES
Mark	NO	YES
Check Battery life	YES	YES

This meter is very easy to use. No need to install any special computer software or driver. Simply plug and play. The detail operation function are described with three main sections:

ONE, Configure the meter. Through Windows computer or keypad of meter

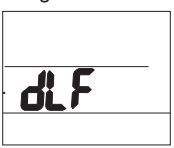
TWO, Leave it as monitoring mode or activate the logging function

THREE, Download the recorded data

STEP1 Configuring the data logger

It is possible to make configuration changes at anytime before the logging function is started. Once the logger is started, configuration changes cannot be made unless stopping and downloading data first.

If the logger has recorded data that not yet be downloaded to computer, you will see “dLF” appears while you attempt to enter setup mode through keypad. Please connect with computer to download first.



If the logger is locked with a Password, the Password is required to make configuration changes.

This logger provides you two options to setup the recording features. One option is through the computer and the other is through the keypad built on the logger. The later configure action will overwrite the previous setting unless the logger is locked by password through computer setting.

Option 1: Config through computer

- Press **ON** button to power on the logger
- Connect the data logger to a PC via the USB port. The green LED is ON while building the connection with computer.
- Windows folder management window will appear.
- If above is not working, click on Folder to view files.
- Open " **PDF Logger Configuration Tool. exe**".
- The default language is English. User may change it to one of six available languages. There are English, German, French, Italian, Spanish and Portuguese.

- User programmable parameters are as follows:

★Sampling rate

Select the sampling interval you need from 30 seconds to 2 hours.

★Start delay

Select the start delay from 0 min to 24 hours. For example: If the delay is 5 minutes, and the sampling rate is 10 minutes, the real time to log the first measurement is 5 minutes after the START button is pressed. All measures after the first measurement will be at a 10 minute (or selected) interval.

★Unit of Measurement

Select the unit that will be displayed on the PDF report and LCD. The selections are Metric or Imperial. In Metric, it is Celsius for temperature. In Imperial, it is Fahrenheit for temperature.

★Password

The Password function is default OFF. The user may enable it to prevent unauthorized reprogramming prior pressing the START button. A Password may have up to 16 alpha or numeric characters.

★Company Name

A user defined name, location or descriptor, all can be input as Company Name. It will be displayed on the PDF report as title, with a maximum of 20 characters.

★Alarm types

While in logging mode, regardless of the Alarm Type, if the alarm is triggered, it won't stop even the reading return to normal range or logging is stopped. The way to stop red alarm LED is to plug logger into computer to generate report or power off the logger.

Single: an alarm is triggered immediately when the measured value exceeds the alarm threshold.

Cumulative: an alarm is not triggered when the measured value exceeds the alarm threshold, but only once the overall average value during alarm delay duration exceeds the alarm threshold.

Disable: No alarm function during the logging process

★Alarm delay

The preset alarm delay interval for a single alarm type is always ZERO. The adjustable alarm delay interval for a cumulative alarm type can be 5 minutes to 2 hours.

★Alarm Limits
Select the alarm threshold values. For example: if 2 - 8 deg C is selected, it means that an alarm warning will occur below 2 deg C, or above 8 deg C.
The programmable alarm limit of each parameter is limited to one decimal.
To summarize, to activate a alarm when 30 min average value of hazardous alarm delay period is higher than 8℃or lower than 2℃, please program the alarm delay as 30 mins, alarm type as cumulative and range as 2~8℃
NOTE: Above are valid both "monitoring" and "logging" mode.
NOTE: The value of Low threshold can't exceed the setting of high threshold

★Time zone
Before programming the logger the user must assure that the PC is set for the correct time zone. The logger will auto synchronize to the time zone of the PC, when "Save" is pressed. Time zone changes over the transit distance are not adjusted in the logged data.

The default value of above parameters are:
Sampling rate: **5 min**
Start delay: **0 min**
Temp. Unit: **°C**
Password: **disable**
Company Name: **blank**
Language: **English**
Alarm Type: **Disable**
Alarm delay: **0 min**
Alarm Limits:
-Temp.: **blank**
-Humidity: **blank**

Once all the programming is done, **MUST** press "Save" to confirm the setting and then you may close the setup window and remove the logger from PC USB port.

Option 2: Through meter keypad while computer is not available

- Press **ON** button to power on the logger
- Short press "**SET**" key to enter set mode.

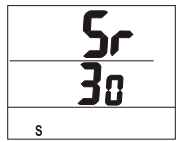
There are 8 parameters in set mode:
-Sampling rate :
'**Sr**' & '**P1**' show on the screen .
-Start delay:
'**Sd**' & '**P2**' show on the screen.
-Alarm type:
'**ALn**' & '**P3**' show on the screen.

-Alarm delay:
'**ALd**' & '**P4**' show on the screen.
-Alarm buzzer:
'**ALb**' & '**P5**' show on the screen.
-Alarm threshold:
'**ALt**' & '**P6**' show on the screen
-Unit setting:
'**Unt**' & '**P7**' show on the screen
-Real time:
'**rtc**' & '**P8**' show on the screen

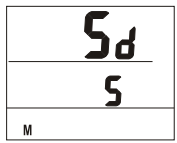
Press "**Up**" /"**Down**" to choose the mode.
Press "**SET**" to enter each mode.
Press "**ESC**" longer to escape to previous status.

The programmable parameters are listed below:

★Sampling rate
Select the sampling interval you need from 30 seconds to 2 hours.

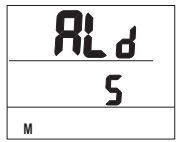


★Start delay
Select the start delay from 0 min to 24 hours. For example: If the delay is 5 minutes, and the sampling rate is 10 minutes, the real time to log the first measurement is 5 minutes after the START button is pressed. All measures after the first measurement will be at a 10 minute (or selected) interval.



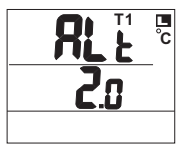
★Alarm types
While in logging mode, if the alarm is triggered, it won't stop even the reading return to normal range or logging is stopped. To stop alarm, must generate report or power off the logger.
Single: an alarm is triggered immediately when the measured value exceeds the alarm threshold.
Cumulative: an alarm is not triggered when the measured value exceeds the alarm threshold, but only once the overall average value during alarm delay duration exceeds the alarm threshold.
Disable: No alarm function during the logging process

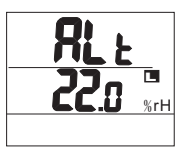
★Alarm delay
This is for **Cumulative alarm type only.**
The adjustable alarm delay interval for a cumulative alarm type can be 5 minutes to 2 hours.



★Buzzer ON/OFF
The buzzer is default as ON. However, for power saving issue or this meter will be used in a place where noise is not accepted, user may turn off the alarm buzzer. This setting is only available through meter keypad.

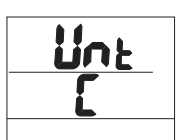
★Alarmt threshold
Select the alarm threshold values. For example: if 2 - 8 °C is selected as temp. control range it means that an alarm should occur below 2°C or above 8°C. So, setup the high temp. alarm value as 8 and low temp. alarm value as 2.
The programmable alarm limit of each parameter is limited to one decimal.
The value of low threshold can't exceed the setting of high threshold.
High/Low threshold of temperature and humidity are both programmable





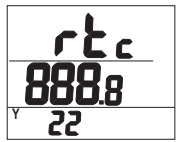
NOTE:
Above alarm threshold setting are valid both for "monitoring" and "logging" mode. The difference of these two mode is listed in page 5. This meter allows user great flexibility to monitor temperature and humidity with alarm feature regardless the meter is recording data or not.

★Unit of Measurement
Select the unit that will be displayed on the PDF report and LCD. The selections are Metric or Imperial. In Metric, it is Celsius for temperature. In Imperial, it is Fahrenheit for temperature.

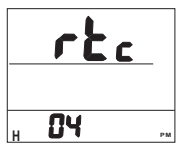


★Real Time Setting

It is important to input your local time before you running the logger function. Wrong time setting will cause you fail to get correct data.



Press "**Up**" or "**Down**" to adjust the setting value.
Press "**SET**" to save the real time setting. Repeat above steps to finish the whole setting.
Long press " **ESC**" to return to main menu if you don't want to save the real time setting.



STEP2 Start Logging

- After configuration, you may leave the meter in monitoring mode or press "**START**" key for 2 seconds when you want to start the logging mode.

-"REC"icon will appear and flash on LCD to indicate the logging is started. Measured parameters update on LCD every 10 seconds or every sampling rate.

- If Logger is programmed as Start delay, after pressing the start key, the "REC" will appear (but no flash to show the logging is activated but in standby status.

-During the logging, the green LED will blink every 10 seconds

-If the red LED is triggered, it won't stop even the reading return to normal range or logging is stopped. The way to stop red alarm LED is to plug logger into computer to generate report or power off the logger.
NOTE:
In monitoring mode, alarm auto stop when reading returns to normal.

- To place a bookmark manually during the delivery transition, long press" **MARK**" key until measured reading flashes three times.

-Short press **MAX/MIN** key any time to review the maximum and minimum data counted from previous reset moment.

-Press **"RESET"** key longer to reset the maximum and minimum data. " " appears on LCD to indicate it is done.

MX
MN

-Press "Bat." key can review the approximate leftover battery life time.

STEP3 Download Data

-Press "**STOP**" key for 2 seconds to stop the logging.

-Plug logger into PC USB port can also stop logging.

- Open the file "PDF Logger Configuration Tool. exe

- Choose function "Convert to PDF" or " Convert to Excel" to generate the report in preferred format. The default language is English. The user may change the content to one of 6 alternate languages.

- Select the preference location to save the generated report to.

- The created excel report contains all data shown in PDF report except the graph. Due to the excel file is user editable, please use generated PDF report as the main report result.

NOTE:
The generated "excel" file is a tab-delimited ASCII text file which can be easily read by many programs. However, when opening the file in Microsoft Excel, a warning message may be displayed because the file is named ".csv" but the contents are like a ".txt" file. It can be safely opened.

Data logger 2200001

Spécifications de l'appareil			
Date de fabricat.	31 Mar. 2022	**Début**	19:43,07 Apr. 2022
Lot de fabrication	2203001	**Fin**	11:26,11 Apr. 2022
Version firmware	V1.0	**Durée**	3Days 15Hrs. 44Min. 0Sec.
fuseau hor. orig.	UTC+8	**Intervalle mesure**	30 Seconds
Fichier créé	14:39,12 Apr. 2022	**Temporisation**	0 Seconds

HUMIDITY CALIBRATION

Please follow below steps to calibrate the humidity accuracy of the meter.

1.Turn off the meter, plug the meter probe into 33% salt bottle and press "**START/STOP**" +"**SET**"+"**MARK**" at the same time over 2sec to enter to calibration mode.

2."**32.8%**" will flash on the monitor. 60 minutes after, the flashing stops to indicate the calibration of 33% is finished.

3. Move the meter probe to the 75% salt bottle and press "**SET**" longer time to enter 75% calibration.

4. "**75.3%**" will flash on the monitor.

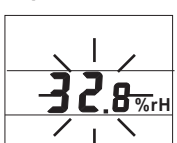
5. 60 minutes after, the flashing stops means the whole calibration has been completed and the calibration data have been saved in memory.

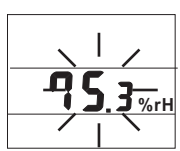
6. After step5, press "**SET**" longer time to return to normal display .

Note:

a)You can exit calibration without saving by pressing "START/STOP" +"SET" key for more than 5 seconds before step 5.

b)To get high accuracy, strongly suggest you to do the calibration at 23±2 C Temperature environment.





TROUBLESHOOTING

1.Power on but no display or meter doesn't work .

a)Make sure the time of pressing "**START/STOP**" key is more than 100 mS to turn on LCD display.
b)Check the batteries are in place, good contact and correct polarity.
c)Replace new batteries and try again.
d)Move the batteries for one minute and put them back again

2.Calibration failure.

a)Make sure the calibration bottle is under good sealing status when the meter's probe is plugged into the salt bottle.
c)Make sure the free air temperature is within 23±2 C when calibration is processed.

3. Error Codes.

a)E02: The value is underflow. Put it in room temp. to recover
b)E03: The value is overflow. Put it in room temp. to recover
c)E04: Caused by E02 or E03 of temp. Solve E02/E03 first
d)E11: RH calibration error. Need to re-calibrate.
e)E32: IC read/write error. Need to return the meter to dealer for repair.
f)E33: Circuit error in measurement portion. Need to return the meter to dealer for repair.

4. Why alarm LED is flashing but recorded data is OK?

Alarm detection works every 10 seconds but data logging are possibly programmed as every 2 hours. In this condition, if alarm happens between two logging points, it might lead the recorded data is OK but alarm LED is flashing, especially if the alarm mode is set as “Single”.

To program the alarm function as cumulative can reduce this situation

5. Why my datalogger could not record second time?

After you download the data, please go back to configure page to re-check all the setting and then press “SAVE” to confirm.

Then, once you long press the start key again to record, you will see green LED blink to indicate the recording is started and the new record will overwrite the kept old data in the logger memory IC.

SPECIFICATION

Model	88081
Temp. range	NTC thermistor, -30~70°C , -4~158°F
Temp. resolution	0.1°C , 0.1°F
Temp. Accuracy	+/-0.5°C
Humidity range	Capacitor, 0.1~99.9%rH
Humidity resolution	0.1%rH
Humidity Accuracy	+/-3% (at 25°C, 10~90%), others +/-5%
USB Interface	YES. USB2.0 plug & play
Sampling points	24K: T & 24K:RH
Meter size	120(L)*93(W)*42(T) mm
LCD size (mm)	51(H)x63(W)
Operating temp.	-20~70°C, but the probe can measure down to -30°C ; room temperature for PC mode
Operating RH%	Humidity < 90%
Storage temp.	-20~50°C
Storage RH%	Humidity < 90%
Weight	~200g
Battery	AA bat.x4pcs or 9VDC adaptor 3 months life time while alarm beeper is OFF 2 months life time while alarm beeper is ON
Sampling interval	30 seconds, 5,10,30,60,90,120 minutes
Start delay	0, 5,30,45,60, 90,120 minutes and 24 hours
Alarm range	Programmable from -20 to 70°C and 0.1 to 99.9 %RH
Alarm delay	0, 5,30,45,60, 90,120 minutes
Alarm type	Single Event, Cumulative, Disable
Operation keys	5 Keys
LED indicator	REC, High / Low alarm
Buzzer alarm	YES, > 70dB at 10cm distance
Standard package	Meter, AA batteries, manual, paper box,USB cable
Optional Accessory	RH calibration salt kit, 9VDC universal adaptor

WARRANTY

The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty covers normal operation but does not cover battery, misuse, abuse, alteration, tampering, neglect, improper maintenance, or damage resulting from leaking batteries. Proof of purchase is required for warranty repairs. Warranty is void if the meter used to be taken apart .

RETURN AUTHORIZATION

Authorization must be obtained from the supplier before returning items for any reason. When requiring a RA (Return Authorization), please include data regarding the defective reason, the meters are to be returned along with good packing to prevent any damage in shipment and insured against possible damage or loss.

Accuracy, the Zenith of
Measuring / Testing Instruments !

Hygrometer/Psychrometer
Thermometer
Anemometer
Sound Level Meter
Air Flow meter
Infrared Thermometer
K type Thermometer
K.J.T. type Thermometer
K.J.T.R.S.E. type Thermometer
pH Meter
Conductivity Meter
T.D.S. Meter
D.O. Meter
Saccharimeter
Manometer
Tacho Meter
Lux / Light Meter
Moisture Meter
Data logger
Temp./RH transmitter
Wireless Transmitter .....

More products available !

2022/04