



MCO HOME AS-9 9 In 1 Multi-Sensor User Manual

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9 In 1 Multi-Sensor AS-9

MCOHome A8-9 is a Z-Wave Plus-enabled multiple environmental monitoring sensor, with 3.5 inches TFT clear display that can monitor the air quality in time. It is built-in with Temperature, Humidity, PM2.5, CO2, VOC, PIR, Illumination, Noise, Smoke sensor. The device can be added to any Z-Wave network and is compatible with any other Z-Wave-certified device.



- Temperature: 0~50 C
- Humidity: 0%RH~99%RH
- PM2.5: 0~500ug/m3
- CO2: 0~5000ppm
- VOC: 0-64000ppb

- PIR: 0 or 1 Detection angle up to 120°
- Illumination: 0–40000 Lux
- Noise: 30dB~ 100dB
- Smoke: 0 or 1

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Specification

- Power Supply: DC12V, 50/60Hz
- Self-Dissipation: <3W
- Work Environment: -20~+60 °C <99%RH (Non-condensation)
- Dimension: 110* 110*32mm
- Hole Pitch: 60mm or 82mm
- Z-Wave Frequency: Operating frequency range, defined by the regulatory bodies {for Z-wave in Europe:
- 868.0 – 868.6 MHz, 869.7 – 870.0 MHz}
- Maximum Transmitting Power: +3dBm
- Housing: Tempered glass+ PC Alloy
- Installation: Wall-mounted (Vertical)



- Declaration of Conformity



Hereby, MCOHome declares that the device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU .

- WEEE Directive Compliance



The device marked with this symbol should not be disposed of with household waste. It is the user's responsibility to deliver the used appliance to a designated recycling point.

- Z-Wave Compliance



MCOHome sensor is a fully compatible Z-Wave Plus device.

Important Safety Instruction



Read the instructions before starting up the unit!



This product is not a toy. Keep out of reach of children and animals!



Do not expose the device to moisture, water or other liquids.



Do not place liquids near or on the device! Do not attempt to disassemble, repair or modify the device yourself



This product is for indoor use only. Do not use outdoors!



CAUTIONS!

Flush-mount only into a UL/ETL/CE certified plastic junction box. The minimum size should be 65*65*45mm, minimum Volume is 190cm³. Use Copper Conductors Only.



CAUTIONS!

Risk of Electric Shock – More than one disconnect switch may be required to de-energize the equipment before servicing.

Installation & Wiring

To protect yourself and others from danger and to protect the device from damage, please read the safety information before using it.



Important!

- A qualified electrician with an understanding of wiring diagrams and knowledge of electrical safety should complete installation following the instructions.
- Before installation, please confirm the real voltage complies with the device's specification. Cut off any power supply to secure the safety of people and device.
- During installation, protect the device from any physical damage by dropping or bumping. If happens, please contact the supplier for maintenance.
- Keep the device away from acid-base and other corrosive solids, liquids, gases, to avoid damage.
- Avoid overexertion during operation, to protect the device from mechanical damage.
- Read all instructions and documentation and save for future reference.

Location:

The device is suggested to be installed indoor, a place with around 1.5m height above the floor. It should be away from direct sunlight, any cover, or any heat source, to avoid false signal for temperature control.

Notice!

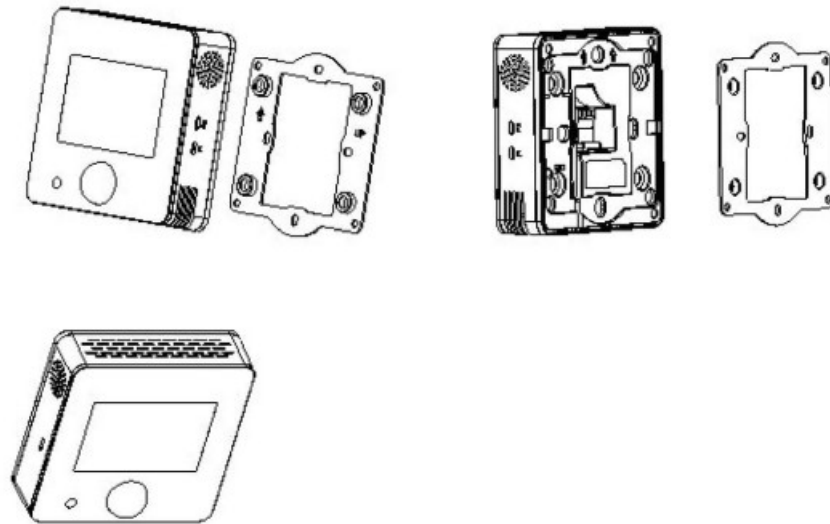
1. Device must be wall-mounted vertically. Do not lay it flat or upside down while working.
2. Do not mount it in a wind gap, or cover its bottom, which may affect the detected data.

Step 1: Remove the steel frame from the backside of the device, and then fix it onto the installation box with 2 screws.

Step 2: Wire the adaptor.

Step 3: Put the device back onto the steel frame, it will attach with the frame firmly by built-in magnets.

Step 4: Check the installation and power, the device is ready for work.



Operation

Power On/Off

Wire the adaptor and the device is powered on. It will display all detected information by the sensors.

Display Interface

Hold Key FI can switch among the following 4 display interfaces:

1. Data detecting: display all sensors' data
2. Network: Z-Wave Add/Remove
3. Parameter setting: e.g. data calibration, temp. format, restore default parameters, etc
4. Local time setting

Z-Wave Operation

Note: A Security Enabled Z-Wave Controller must be used in order to fully utilize the product

- Add & Remove the Z-Wave network
 - ▶ Activate Add/Remove mode in the gateway. When the device is powered on, hold FI to choose an interface for Add or Remove Z-Wave network.
 - ▶ Click F2 five times until C turns blue.
 - ▶ Hold F2 and the device enter into learning mode, then turns blue and the device is added to the Z-Wave network.
 - ▶ Follow the same step to remove the device from the network.
- Association Group

The device supports 1 association group:

AG Identifier	Max No de ID	Command Class	Trigger Situation
Ox01	1	COMMAND CLASS — S ENSO film — EVEL V5, SENSOR mucruivel REPORT VS	<p>The detected value will be reported according to:</p> <p>1, PM2.5 The value difference between current value and previous reported value > the setting value of parameter number 1, set value#0;</p> <p>2, CO2 The value difference between current value and previous reported value > the setting value of parameter number 2, set value#0;</p> <p>3, Temperature The value difference between current value and previous reported value > the setting value of parameter number 3, set value#0;</p> <p>4, Humidity The value difference between current value and previous reported value > the setting value of parameter number 4, set value*);</p> <p>5, VOC The value difference between current value and previous reported value > the setting value of parameter number 5, set value#0;</p> <p>6, Illumination The value difference between current value and previous reported value > the setting value of parameter number 6, set value#0;</p> <p>7, Noise The value difference between current value and previous reported value > the setting value of parameter number 7, set value#0;</p> <p>8, MR The current state is different from previous reported state, set value#0;</p> <p>9, Smoke The current state is different from previous reported state, set value#0;</p> <p>10, bSmoke Interval Report Timer set value: 10 and set value#0;</p> <p>11, PIR Interval Report Timer set value: 11 and set value#0;</p> <p>12, PM2.5 Interval Report Timer set value: 12 and set value*);</p> <p>13, CO2 Interval Report Timer set value: 13 and set value#0;</p> <p>14, Temperature Interval Report Timer set value: 14 and set value#0;</p> <p>15, Humidity Interval Report Timer set value: 15 and set value#0;</p> <p>16, VOC Interval Report Timer set value: 16 and set value#0;</p> <p>17, illumination Interval Report Timer set value: 17 and set value#0;</p> <p>18, Noise Interval Report Timer set value: 18 and set value#0;</p>

AG Identifier	Max No de ID	Command Class	Trigger Situation
		COMMAND CLASS DEVICE RESET LOCALLY, DEVICE RESET LOCALLY NOTIFICATION	Factory setting restored

Command Class Supported By The Device: (Support S2 unauthenticated level)

COMMAND _ CLASS _ VERSION,
 COMMAND _ CLASS _ MANUFACTURER _ SPECIFIC,
 COMMAND _ CLASS _ DEVICE _ RESET _ LOCALLY,
 COMMAND _ CLASS _ POWERLEVEL,
 COMMAND _ CLASS _ ASSOCIATION,
 COMMAND _ CLASS _ ASSOCIATION _ GRP _ INFO,
 COMMAND _ CLASS _ CONFIGURATION,
 COMMAND _ CLASS _ SENSOR _ MULTILEVEL,
 COMMAND _ CLASS _ FIRMWARE _ UPDATE _ MD

Command Class Supported By The Device: (Not support S2)

COMMAND_CLASS_ZWAVEPLUS_INFO,
COMMAND_CLASS_TRANSPORT_SERVICE_V2,
COMMAND_CLASS_SECURITY_2,
COMMAND_CLASS_SUPERVISION

Restore Factory Setting

1. Press & hold F1 to enter Z-Wave setting interface, then press & hold F1 again to enter parameters setting interface;
2. Press & hold F2 to enter setting interface and select "default";
3. Click F2 3 times and displays "OFF"→"ON"→"OK"→"OFF", factory setting is restored.

Data Calibration

Hold F1 to choose an interface for data calibration. Then hold F2 to switch among the sensors. Choose one and click F2, F1 to change the data. After finish, hold F1 can return data detecting interface.

Local Time Setting

Hold F 1 to choose an interface for local time setting. Then hold F2 to switch among "Hour-Minute-Second-Year-Month-Date". Click F2, F1 can change the data offlashing item. After finished, hold F 1 can return data detecting interface.

The Main Sensor Display Setting (Default sensor is CO2)

Enter the parameter setting interface, long press F2 to select parameter number "O", name "DPI", then short press F2 to select CO2 or PM2.5, long press F1 to confirm exit.

Parameter Table

Number	Name	Size	Description	Default	Possible value
1	PM25DeltaLevel	1	=0 Turn off report >=1 Report when change > n * $\mu\text{g}/\text{m}^3$	0	0-127
2	CO2DeltaLevel	1	=0 Turn off report >=1 Report when change > n * 5ppm	0	0-127
3	Temp_Delta_Level	1	report =0 Turn off rep >=1 Report when change > n*0.5 C	0	0-127
4	Humidity_Delta_Level	1	report =0 Turn off rep >=1 Report when change > n%	0	0-127
5	VOCDeltaLevel	1	=0 Turn off report >=1-127*5ppb Report change	0	0-127
6	LuxDeltaLevel		=0 Turn report off rep >=1 Report when change > n* 1 Lux	0	0-32767
7	dBDeltaLevel	1	=0 Turn off report >=1 Report when change > n*ldB	0	0-127
8	PIRDeltaLevel	1	=0 Turn off report =1 Report change	0	0-1
9	SMOICE_Delta_Level	1	=0 Turn off report =1 Report change	1	0-1

Number	Name	Size	Description	Default	Possible value
10	Smoke_Timer	2	Turn off report >= 35 Report every n*ls interval	60	0,35-32767
11	P1RTimer —	2	Turn off report >=35 Report every n* ls interval	60	0,35-32767
12	PM25 Timer	2	Turn off report >=35Report every n*ls interval	120	0,35-32767
13	CO2_Timer	2	=0 Turn off report* >=35 Report every n ls interval		0,35-32767
14	Temp_Timer	2	=0 Turn off report >=35 Report every n* ls interval	180	0,35-32767

15	Humidity_Timer	2	=0 Turn off report* =35 Report every n1 s interval		0,35-32767
16	VOC_Timer	2	Turn off report >=35 Report every n*1s interval	180	0,35-32767
17	Lux_Timer	2	=0 Turn off report* >=35 Report every n1s interval		0,35-32767
18	dB_Timer	2	=0 Turn off report* >=35 Report every n1s interval		0,35-32767
47	Temp. Unit	1	=0 C =1 F	0	0-1
50	T_OffSet	1	0 – 127:((n-100)/10)=(-10-2.7)C -128 – -1:((156+W/10)-(2.8-15.5)C	100	-128-127
51	RH_OffSet	1	n-20=(-20-20)%	20	0-40
52	CO2_OffSet	2	(n-500)-(-500-500)ppm	500	0-1000
53	PM2.5 OffSet	1	0 – 127:n-100=(-100-27)ug/m ³ -128 – -1:156+n=(28-155)ug/m ³	100	-128-127
54	Lux_OfSet	2	n-5000=(-5000-5000)lux	5000	0-10000
55	VOC_Correct	1	0 – 127:n-100=(-100-27)ppb -128 – -1 :156+n-(28-155)ppb	100	-128-127
56	dB Correct	1	(n-50)=-50-50	50	0-100
255	Write Only	1	85: Restore factory setting 170: Restore default parameters.	0	85,170

1-Year Limited Warranty


MCOHome warrants this product to be free from defects in material and workmanship under normal and proper use for one year from the purchase date of the original purchaser. MCOHome will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials.

THIS LIMITED WARRANTY DOES NOT COVER ANY DAMAGE TO THIS PRODUCT THAT RESULTS FROM IMPROPER INSTALLATION, ACCIDENT, ABUSE, MISUSE, NATURAL DISASTER, INSUFFICIENT OR EXCESSIVE ELECTRICAL SUPPLY, ABNORMAL MECHANICAL OR ENVIRONMENTAL CONDITIONS, OR ANY UNAUTHORIZED DISASSEMBLY, REPAIR, OR MODIFICATION.

This limited warranty shall not apply if: (i) the product was not used in accordance with any accompanying instructions, or (ii) the product was not used for its intended function. This limited warranty also does not apply to

any product on which the original identification information has been altered, obliterated, or removed, that has not been handled or packaged correctly, that has been sold as second-hand or that has been resold contrary to Country and other applicable export regulations.

Documents / Resources

	<p>MCO HOME AS-9 9 In 1 Multi-Sensor [pdf] User Manual</p> <p>AS-9, 9 In 1 Multi-Sensor</p>
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Manuals+.