



ENGLISH

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Combining multiple sensing elements in one device to provide more detailed air quality signals.



The environmental sensor platform (AQM) creates new possibilities for the measurement of indoor air quality. With robustness against contamination by siloxanes resulting in unique long-term stability and accuracy. The AQM range further combines multiple sensing elements in one device to provide more detailed air quality signals.

Monitoring Features & Options:

- eCO2
- H2
- CO2 (option)
- Temperature
- Humidity
- TVOC
- NOX (option)
- Sound (option)
- Light (option)
- PM0.5 (option)
- PM2.5 (option)



Overview

The unprecedented combination of long-term stability and technology makes the AQM a perfect choice for indoor air quality monitoring in mobile, smart home and appliance applications.

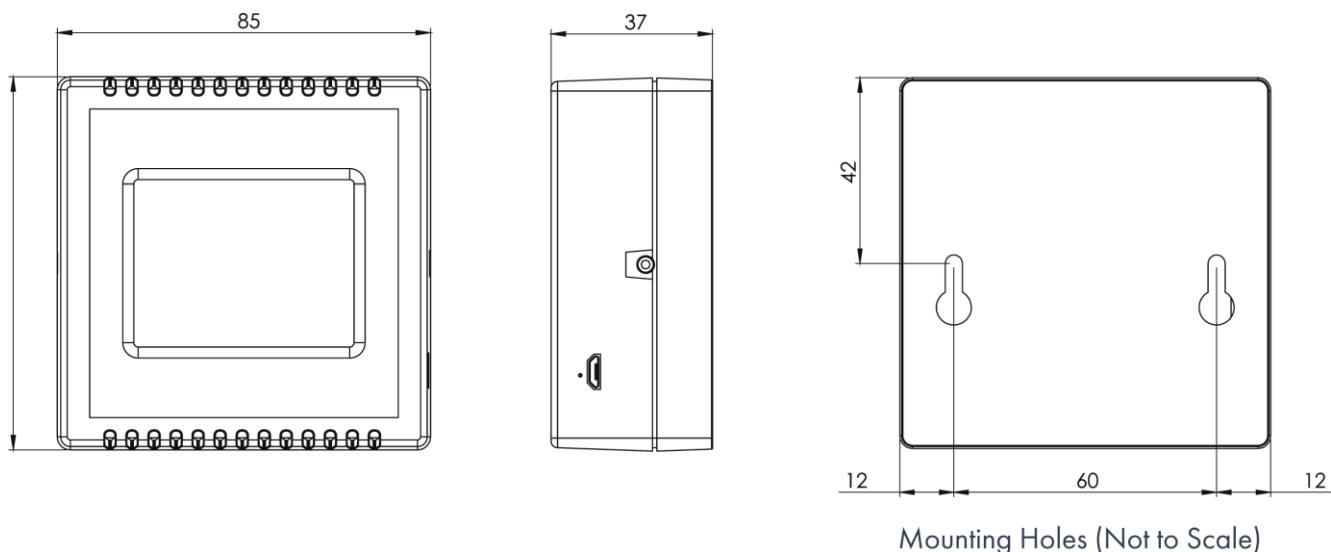
Environmental conditions have a major impact on our well-being, comfort and productivity. AQM range of sensor solutions provide detailed and reliable data on key environmental parameters such as humidity, temperature, volatile organic compounds (VOCs), particulate matter (PM2.5) and CO₂. Environmental Sensing opens up new possibilities to create smarter devices that improve our comfort and well-being as well as increase energy efficiency in a wide variety of applications.

Placement and Installation

People spend 90% of their time indoors where concentrations of gaseous pollutants are significantly higher than outdoors. The widespread use of new products and building materials, as well as improved insulation for energy efficiency, has resulted in increased concentrations of volatile organic compounds (VOCs). These VOCs originate mainly from paints and solvents, carpets and furniture, and cleaning agents and are also emitted by humans. Elevated VOC levels can have a negative impact on well being, comfort, and cognitive abilities.

Exposure to high levels of VOCs can be avoided or significantly reduced by regular ventilation, air purification and removal of strong VOC sources. The Total VOC (TVOC) concept has been established as a practical time and cost-effective method of surveying indoor environments for contamination. The AQM range of sensors enables measurement of TVOC levels and thus helps to increase the efficiency of ventilation and air purification and increases awareness of VOC sources and indoor air pollution.

Dimensions



Technical Overview

Model	AQM001		
Type	Air Quality Monitoring Unit		
Dimensions	85mm x 85mm x 37mm		
Enclosure	Plastic, Wall Mounted, White		

Absolute Maximum Ratings (Ta=25C)

Parameter	Rating	Unit	Remarks
Supply Voltage	5.5	V	*1
Supply Current	500	mA	*1
Operating Temperature	0 to 50	C	
Storage Temperature	- 25 to 65	C	

EU Adaptor

Parameter	Rating	Unit	Remarks
Supply Voltage	110-240	V AC	
Supply Current	0.15	A	
Output Voltage	5	V DC	
Output Current	1	A	

Interface Characteristics

Parameter	Rating	Unit	Remarks
Display	2.2" (240-320)		QVGA
Wifi Freq	2412-2472	Mhz	
Wifi Power	16.62	dBm	(802.11b)
BT Freq	2402-2480	Mhz	
BT Power	8.31	dBm	BT
BT Power	6.67	dBm	BTLE

Portal Uplink

MQTT	tcp port	1883	*2
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Detection Characteristics (Ta = 25C)

Parameter	Rating	Unit	Remarks
eCO2	0-60,000	ppm	H2 Based CO2 1.3% drift pa
CO2 (option)	0-2000	ppm	True CO2 based sensor
Temperature	-20 to 85	C	+/- 1C
Humidity	0 to 100	% RH	non condensing
TVOC	0-30,000	ppb	1.3% drift pa
NOX (option)	0 to 10	ppm	resolution 20ppb
Sound (option)	-26dBFS	Sensitivity	Background Sound pressure level
Light (option)	0 to 100	%	Indicative reading for ambient light
PM0.5 (option)	0-300	count per sec	0.5um or larger
PM2.5 (option)	0-300	count per sec	2.5um or larger

Notes

*1 Using approved & supplied adaptor only

*2 Subject to change