ebm-papst IAQ Monitor

Quick Start Manual

Safety Information

- Only use the provided charger and cable for USB-C.
- For 12-32V DC supply, operation is only permitted with a double isolated power supply.
- For indoor use only!
- Not suitable for ceiling installation!
    - Please visit https://reset.build/standard/air for further RESET requirements.
- Unplug the monitor from the outlet before servicing!
- DO NOT clean with liquid!
- DO NOT use in wet or damp areas!
- DO NOT exceed the recommended electrical ratings!

Support

In case you have any problems, please contact https://www.ebm-papst-neo.com/support/.

Manufacturer

ebm-papst neo GmbH & Co. KG

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74673 Mulfingen
Germany

info@epneo.com

Made in Thailand and China

Version 1.0 • Release 2023-02-07 • S. Berge
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Product Overview

The ebm-papst IAQ Monitor is a powerful air quality monitor measuring particulate matter ($PM_{2.5}$), carbon dioxide (CO_2), volatile organic compounds (TVOC), temperature and humidity including a customizable colored LED bar.



Figure 1: ebm-papst IAQ Monitor + accessories (depending on order)

Package Contents

The ebm-papst IAQ Monitor package contains the following:

Order Information				
Material Number	**8350000147**	**8350000148**	**8350000162**	**8350000163**
Description	ebm-papst IAQ Monitor UK	ebm-papst IAQ Monitor	ebm-papst IAQ Monitor EU	ebm-papst IAQ Monitor US
Accessories	UK USB power supply adapter, 2m USB-A/USB-C cable, Safety Lock	Safety Lock	EU USB power supply adapter, 2m USB-A/USB-C cable, Safety Lock	US USB power supply adapter, 2m USB-A/USB-C cable, Safety Lock

Table 1: Order Information

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Specifications

General Specifications	
Name	ebm-papst IAQ Monitor
Model	EPAQM-1
Material Number	8350000148 (Modbus Model)
Enclosure Dimensions	130 x 130 x 36 mm
Enclosure Color	Signal White RAL 9003
Enclosure Material	ASA Plastic (PW-957 Kibilac)
Weight	300 gr
Wireless Connectivity	Wi-Fi 2.4 GHz
Input	12-32V DC (optional: 5V DC over supplied USB-C Power Supply)
Color-LED bar	configurable
Certifications	RESET™ Air, FCC, CE, RoHS, WEEE
IP Protection Class	IP20
Operating Temperature	0° to 50° Celsius

Table 2: General Specifications

Sensor Modules Accuracy	
$PM_{2.5}$ (laser scattering principle)	±10% @ 100~500 µg/m³, ±10 µg/m³ @ 0~100 µg/m³
CO_2 (NDIR)	Range 0 - 10.000ppm, ± 40 ppm ± 3%, automatic baseline calibration
TVOC (multi-pixel gas sensor)	0 - 1,000 ppm of ethanol equivalents, accuracy: 15%
Temperature	-40 to 125°C ±0.3°C @ 0-90 °C
Relative Humidity	Range 0 - 100% RH ±2% @ 0-100% RH

Table 3: Sensor Modules Accuracy

Cable specifications

The following table lists information about the connection cable (depending on the order) included in the package:

USB-C cable specifications	
Cable Type	USB-C to USB-A
Color	white
Length	2m

Table 4: Cable Specifications

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Mounting instructions

The monitor should be placed away from doors, windows ventilation or HVAC registers, and avoid direct sunlight. Please ensure that the monitor is mounted on the wall in the correct orientation and with unobstructed air flow at the bottom and top of the monitor.

Screws and wall anchors are recommended for wall mounting or you can use strong tape (e.g. ‘command strip’). The monitor enclosure cable management allows for use of a wall socket above or below the monitor. The monitor must remain plugged in with power at all times to ensure uninterrupted operation of the device.

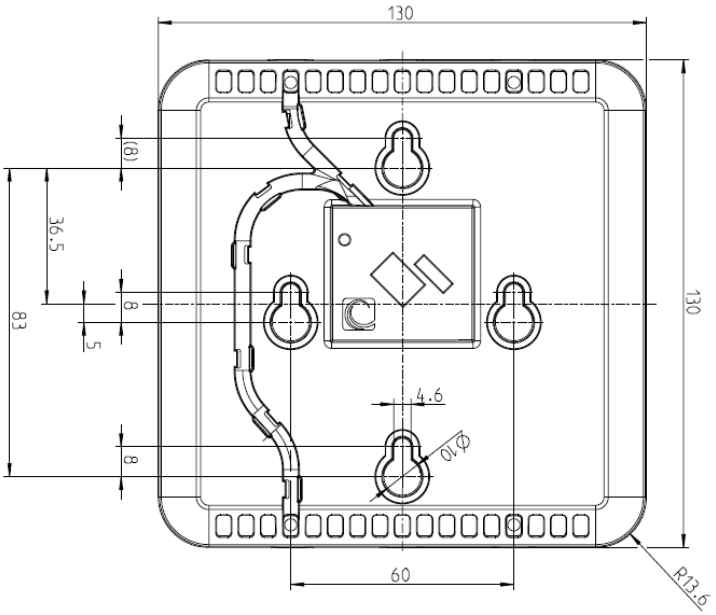


Table 5: Wall mounting

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Wi-Fi / IT Infrastructure Requirements

Please note the following:

- ebm-papst IAQ Monitor only supports 2.4GHz WiFi.
- ebm-papst IAQ Monitor does not support WPA 2 Enterprise authentication.
- ebm-papst IAQ Monitor does not support Wi-Fi authentication through captive portals. It needs a regular SSID with a password.
- In case you need to white list the MAC address of the monitor, the serial number printed on the back of the device corresponds to the MAC address.

Wi-Fi Connection

When the monitor is powered on for the first time, it requires an initial connection to your Wi-Fi network. To configure the connection to your Wi-Fi network, the monitor needs to be set into a Configuration Mode. In the Configuration Mode it will open an access point where you can connect directly with your phone to enter your Wi-Fi network credentials.

Please follow these steps to activate the Configuration Mode:

1) Push the RESET button on the backside of the monitor by using a non-conductive pin of about 2mm diameter and keep it pushed.
2) Plug in the Power Supply.
3) The LED test of the monitor LEDs will be executed and the monitor will flash through the different LED colors.
4) After the LED test is finished, release the RESET button.
5) If a WiFi network has been configured before, the monitor will attempt to connect to this network.
6) If this network is not found or no network has been configured before, the monitor will start the Configuration Mode after 5 seconds.
7) The Configuration Mode remains active for 15 minutes.
8) To establish a connection with your phone to access the internal configuration page of the monitor, open the QR code reader of your phone and scan the QR Code “Add to WiFi/APP on the back of the monitor.
9) The phone should now connect automatically to the access point of the monitor and open the browser of your phone with the configuration page of the monitor, where you can enter the WiFi credentials of your WiFi network.

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IAQ-Connect App

In order to connect the monitor to the ebm-papst IAQ APP, open the app and click on the “Scan QR Code” button. Now scan the QR code “Add to WiFi/APP” on the monitor’s label. To download the App and to find further documentation for the IAQ Monitor, you can visit https://ebm-papst-neo.com/IAQ or scan the QR Code “Quick Start” on the back of the IAQ Monitor.

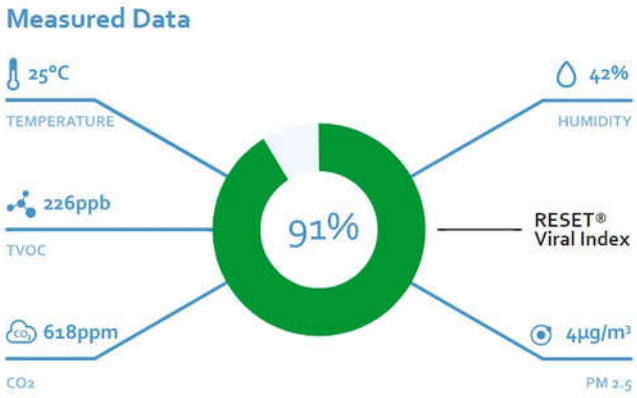


Figure 2: Measured Data Overview (App)

IAQ Monitor Dashboard

In order to connect the monitor to the IAQ Monitor dashboard, scan the QR code “Add to WiFi/APP” on the monitor’s label.

If you have any issues with connecting the monitor, please contact us at https://www.ebm-papst-neo.com/support/.



Figure 3: IAQ Monitor Dashboard (example)

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Test Report

The test report of the monitor can be downloaded from https://ebm-papst-neo.com/IAQ.

CE Information of Conformity

Hereby, ebm-papst neo GmbH & Co. KG informs that the radio equipment type Wireless Local Area Network Device is in compliance with Directive 2014/53/EU.

WEEE Statement



All products bearing this symbol are waste electrical and electronic equipment (WEEE as in directive 2012/19/EU) which should not be mixed with unsorted household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment, appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. Please contact the installer or local authorities for more information about the location as well as terms and conditions of such collection points.

FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

FCC 20cm Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contains: FCC ID: 2AC7Z-ESP32WROVERE.

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