# Air Quality Monitor

EL-WEM & EL-WEM+

TALOS®

User Manual

Welcome to your Indoor Air Quality Monitor

This device measures the quality of the air around you, for your comfort and safety.

The status ring changes colour to show the current air quality level.

| Excellent | Good | Fair | Poor | Inadequate |

Please refer to the Quick Start Guide for information on setting up your device.

1 Getting to know your device

Top

Power Button

Status Ring

Setup Button

Bottom

Reset Button

Power Socket
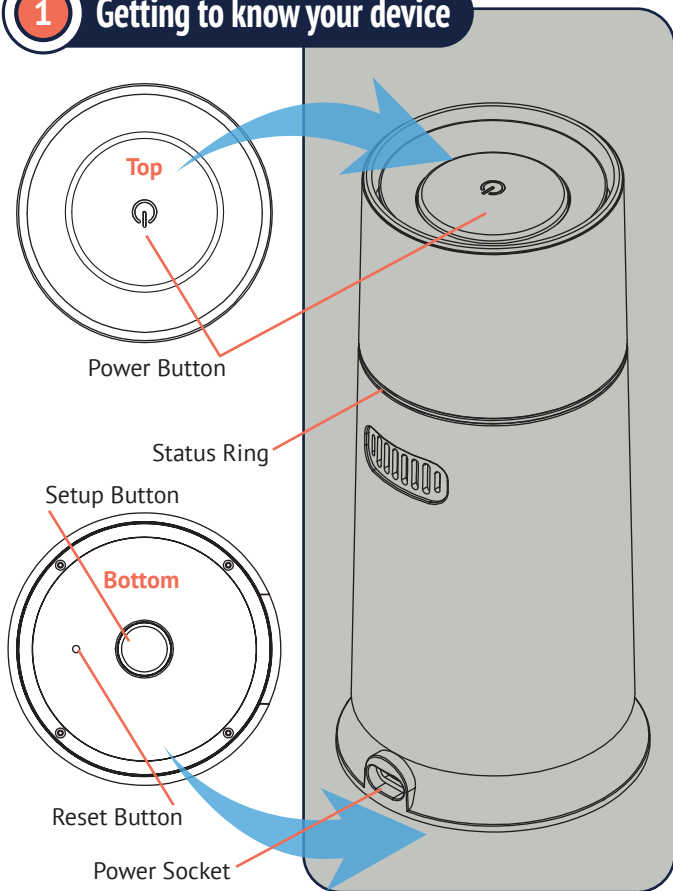
Power Button

Use this button to turn your device on and off. When the device is running, a quick press (less than 1 second) makes the device immediately send its data to the Cloud, makes an Audit Mark in the data record, and mutes the sounder if an alarm is active.

Reset Button

Pressing this will restart your device; all stored data and the configuration will be retained.

Setup Button

Pressing this for more than 4 seconds puts the device into Setup Mode, for connecting to the Cloud (refer to the Quick Start Guide for details).

Pressing this button for more than 10 seconds erases all stored data and configuration, and reverts to the default settings.

2 EasyLog Cloud

It only takes a few moments to connect your device to the EasyLog Cloud, giving you control over your device and access to your data from any internet-connected mobile device or computer.
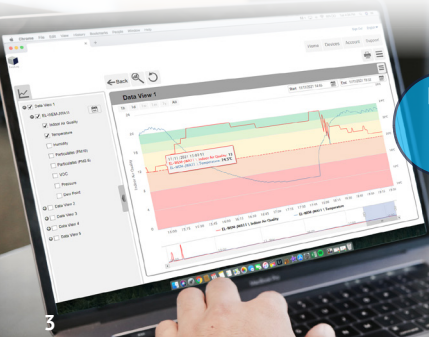
Data graphs showing instant events and long-term trends

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Receive email and SMS notifications for Air Quality alarms

Setup maps showing the position of EL-WEMs in rooms and buildings

Secure storage and instant access to your data

Mobile App and online dashboard available

Setup and manage individual users on your account

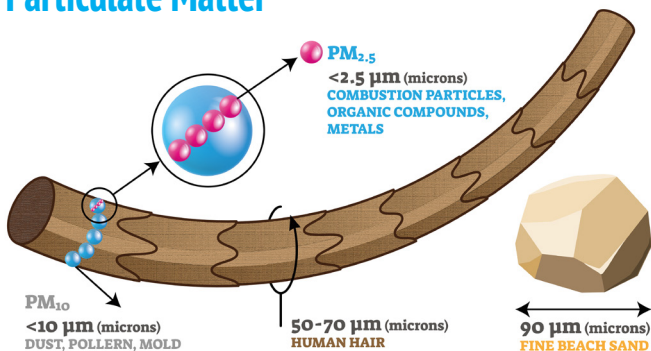**Visit easylogcloud.com and click Sign Up Now to find out more.**

3 What contributes to Indoor Air Quality

Air quality is a key contributor to feeling comfortable, and staying healthy, at work and in the home. The device uses a silent fan to sample the air around it, the internal sensors measuring five important factors.

Particulate Matter (PM)

Tiny particles that hang in the air include pollen, dust, mould spores and soot from engines and fires. In high concentrations these can cause allergic reactions and health problems. The AQ-1009 and AQ1010 measure two types: PM10 and the extremely small PM2.5.

Particulate Matter

PM$_{2.5}$
<2.5 μm (microns)
COMBUSTION PARTICLES,
ORGANIC COMPOUNDS,
METALS

PM$_{10}$
<10 μm (microns)
DUST, POLLERN, MOLD

50-70 μm (microns)
HUMAN HAIR

90 μm (microns)
FINE BEACH SAND

Temperature
Our bodies immediately sense if we are too hot or too cold, but temperature changes can also cause physical reactions that affect our susceptibility to viruses and other airborne diseases. Poor temperatures can also accelerate the growth of mould and bacteria on indoor surfaces.

Humidity
The amount of moisture in the air can affect how well our bodies can maintain a comfortable internal temperature. Low levels can lead to irritated skin and eyes, and high humidity can stimulate mould growth.

Volatile Organic Compounds (VOC's)
VOC's are gases and chemicals in the air that can have health effects. Many common chemicals and materials emit VOC's, sometimes over long periods of time. These include paint and varnishes, cleaning products and air fresheners, plastics, fabrics and many more.

Air Pressure
High atmospheric pressure can exacerbate joint pain and contribute to headaches and migraines. It can also have an effect on blood pressure and blood sugar levels.

4 **How can I improve air quality**

You can check to see the measurements taken by your device on the EasyLog Cloud website or App. The readings are colour coded so you can see exactly which parameters are best and worst. Readings marked orange or red are ones where you should take action to improve your air quality.

Temperature

If you have a heating or cooling system in your room, you should check the set temperature. Bear in mind the number of people using an indoor space can change the amount of heating or cooling needed. Opening or closing windows and doors, to encourage or prevent draughts, can also be an important step to take.

Humidity

Air conditioning systems and dehumidifiers are an excellent way to keep humidity at comfortable levels. Remember that humidity levels are often set by local atmospheric conditions so opening or closing windows and ventilators can also help control humidity.

Particulate Matter

Particulates will always have a specific source, so you should try to understand where these are coming from in order to control them. They are often in the form of soot created by combustion, so be aware of road traffic, outdoor fires and burning, and indoor fires, stoves and boilers. Particulates can also come from pollen, dust and mould spores, all of which also cause allergies, so it's important to keep your indoor spaces clean, and free from the damp conditions that can accelerate mould growth.

Volatile Organic Compounds (VOC's)

Like particulates, there will always be a specific source or sources of VOC's, and unfortunately these can often be everyday materials we have in homes and workplaces. These can include paint, varnishes and solvents, cleaning products and disinfectants, air fresheners, plastics, fabrics, inks and adhesives. As far as possible they should be stored in closed cupboards or containers away from the busiest indoor areas. You should also encourage air circulation by opening windows and internal doors, and using fans and ventilators where available.

5 IAQ Rating Index

Indoor Air Quality is scored out of 20, by adding together scores for four measured parameters. The total score

IAQ Rating	Excellent	Good
IAQ Score	18 or more	16 or more

The IAQ score is calculated as follows:

	Temperature °C	Humidity % RH
5 points	18 ≤ T ≤ 21	40 ≤ RH ≤ 60
4 points	17 ≤ T < 18 21 < T ≤ 22	30 ≤ RH < 40 60 < RH ≤ 70
3 points	16 ≤ T < 17 22 < T ≤ 23	20 ≤ RH < 30 70 < RH ≤ 80
2 points	15 ≤ T < 16 23 < T ≤ 24	10 ≤ RH < 20 80 < RH ≤ 90
1 point	T < 15 T > 24	RH < 10 RH > 90

- Example: Temperature 10°C (1 point), Humidity 9% (1 point), VOC 220 (1 point), PM10 96 (1 point) = 4 points total, IAQ rating is Inadequate.

determines the IAQ rating, on five levels, from Excellent down to Inadequate. The status ring colour on your device matches the IAQ rating.

Fair	Poor	Inadequate
12 or more	8 or more	Less than 8

VOC Index	PM10 µg/m³
VOC < 50	PM < 33
51 ≤ VOC < 100	33 ≤ PM < 58
101 ≤ VOC < 150	58 ≤ PM < 75
151 ≤ VOC < 200	75 ≤ PM < 91
VOC ≥ 201	PM ≥ 91

- You can find a copy of this table, including Temperature in °F, by clicking the ? help icon next to the measurement readings in the EasyLog Cloud.

6 Do Not Disturb Mode

Your device contains an alarm sounder that you can activate from the EasyLog Cloud, to give an audible warning if the IAQ level is Poor or Inadequate. There is also an option to set a time period each day when the status ring and sounder are inactive.
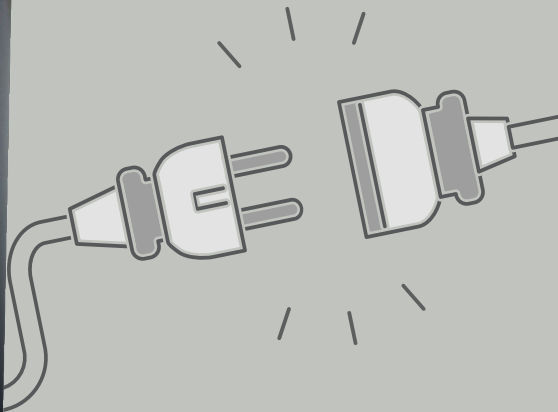
7 Back-up Battery

The device contains a back-up battery that can power the unit if mains power is lost.

The battery is intended as an emergency backup only and should not be used to power your device for long periods.

The battery cannot be accessed or changed by the user and is recharged automatically when mains power is restored.

EasyLog

8 WiFi Network Features

After you've connected the device to your WiFi network, if the power button starts flashing it means the monitor has been unable to connect to the network to upload data. The device will automatically try to reconnect, but you should also check if your WiFi network is available. If you want to perform an immediate upload to the Cloud and your network is available, do a short press of the power button. This will create an audit mark in the event record. To reconfigure the WiFi settings (e.g. to change your device to use a different WiFi network), press the Setup button on the base of the unit for 4 seconds.

9 Also available: High Accuracy EL-WEM+

The EL-WEM+ monitors two additional parameters for even more accurate Indoor Air Quality measurements:

- Carbon Dioxide (CO_2), a key indicator of air circulation and freshness

- PM1 particulates, the smallest and most damaging class of particle pollution

You can find the EL-WEM+ and many other monitors and data loggers: **taloslightningdetectors.com**

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