

## Guardian Environmental Monitor - Noise, Dust, Vibration



### Features

- Noise - Sound Level, Class 1
- Dust - Particulate PM10, PM2.5, PM1.0
- Vibration - PPV, triaxial geophone
- Web hosted reporting
- Easy self-install
- Connection via mobile network (supplied configured and running)

### Applications

- Construction Sites & Demolition Sites
- Boundary Monitoring
- Roadside Traffic Monitoring
- City Environment Monitoring
- Compliance Monitoring
- Planning Guidance

### Overview

The Guardian is a multi-agent environmental monitor with options for noise, particulate (dust) and ground vibration monitoring. The monitor automatically uploads all measurements via the cell network to the cloud. Reports are accessed using a web browser and alerts can be sent by email or text message.

### Sensors - Noise, Dust, Vibration

The **Guardian** can be fitted with any combination of the three main sensor types: noise, dust or vibration. It can also be fitted with wind speed and direction sensors, which are of particular interest when measuring dust or noise.

You choose which sensors you need and the unit is delivered fully assembled - it just needs power.

See the **Sensors** tab above for more information.

### Mobile Connection

The measurements are uploaded to the web servers over a standard mobile connection.

An eSIM, which is an electronic version of the old SIM chip, is fitted so you don't even have to sort out a phone contract. The **Guardian** will connect to the strongest signal from a selection of networks.

### Browser Based Reporting

The monitors automatically send the measurements to a cloud server, where they are kept for long-term storage and reporting.

Users simply log in to a web site to view the results, produce reports and set up alerts.

Reports can be exported or emailed for local or other off-cloud storage.



## Guardian Environmental Monitor - Noise, Dust, Vibration

### Specifications

#### Technical Specifications

The exact specifications for the Guardian Environmental Monitor depend on the options that are fitted. These options, or sensors, include noise (sound level), dust (particulate, PM10, PM2.5, PM1.0) and ground vibration.

#### General Specifications

Enclosure Protection	IP65
Operating Humidity	<5% to 100%
Logger	Built in. Transmission by GPRS
Power	100 to 250 VAC
Mounting	Wall or 50 mm Pole Mounting
Dimensions	400 x 300 x 150 mm
Weight	< 13 kg

#### Noise Measurement

Standards	IEC 61672-1 Class 1, ANSI S1.4 Type 1
Parameters Measurement Range	LAeq, LAmax, LA10, LA90
Calibration	20 to 140 dB RMS
	Use CEL120/1 Acoustic Calibrator

#### Particulate

Sensitivity	1 &micro;g/m3
Zero Stability	±2 &micro;g/m3
Size Fractions	Simultaneous PM10, PM2.5 and PM1.0
Inlet	Heated to reduce moisture

#### Vibration

Transducer Type	Geophone
Number of Channels	3-axis
Frequency Range	2 to 250 Hz
Measurement Range	±200 mm/s
Resolution	0.01 mm/s
Environmental Rating	IP65

#### Wind Speed and Direction

##### Wind Speed

Range	0 to 60 m/s
Accuracy	±2%
Resolution	0.01 m/s
Threshold	0.01 m/s

##### Wind

##### Direction

Range	0 to 359° (no deadband)
Accuracy	±3%
Resolution	0.1°

#### Head Office

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#### Web Sites

Main site:  
<https://www.noisemeters.ie>

Product shortcut:  
<https://www.noisemeters.ie/p/celg-n/>

Tech Support:  
<https://support.noisemeters.com>