



Free Bluetooth App available for Android and iOS

Description

The Electronic Engineers Level series (EEL) introduces affordable and compact wireless remote reading to the levelling industry, offering high accuracy, accessibility and rapid levelling to professional users. Alongside a digital display with numerical, graphical and multi-unit readings, the Bluetooth-enabled level allows measurements to be read on mobile devices via our free Android and iOS App. This ensures superior accessibility, even in low-light or difficult-to-reach locations. The innovative sensor technology guarantees high accuracy and high resolution over a wide ± 500 arc second range, while the extremely fast stabilisation time allows for fast and precise levelling. It features a rechargeable Li-ion battery (30 hrs use), and a highly stable sensor which is resistant to shock, vibration, temperature and long-term drift, enabling it to be used straight out of the box with confidence. If required, there is a simple calibration feature to restore optimum accuracy with minimal effort. This level is highly robust and features a precision ground granite base that eliminates issues of rusting and denting compared to standard cast-iron bases. It has flat and prismatic "V" surfaces, and is available in 125mm or 200mm base length options.

Features

- OLED Display with graphic and numerical modes for easy-to-read measurements
- Remote Bluetooth connectivity to free iOS and Android App provides superior accessibility, even in low light and hard to reach places
- High accuracy over wide ± 500 arc second measurement range
- Fast stabilisation and 0.2 arcsecond resolution, for quick and precise measurements
- Precision ground granite base with flat and prismatic 'V' surfaces can be used for levelling flat and cylindrical surfaces.
- The granite base will not corrode or distort and cannot be dented which ensures it will maintain precision over the life of the product.
- Highly robust and stable over time and temperature variation, with high resistance to shock and vibrations
- Selectable display units in arc seconds and mm/m
- Built-in Li-Po rechargeable battery with USB-C charging (30 hours continuous use)
- Absolute and Relative measurements
- Simple set-zero and calibration options
- Two base length options: 125mm and 200mm



Specifications

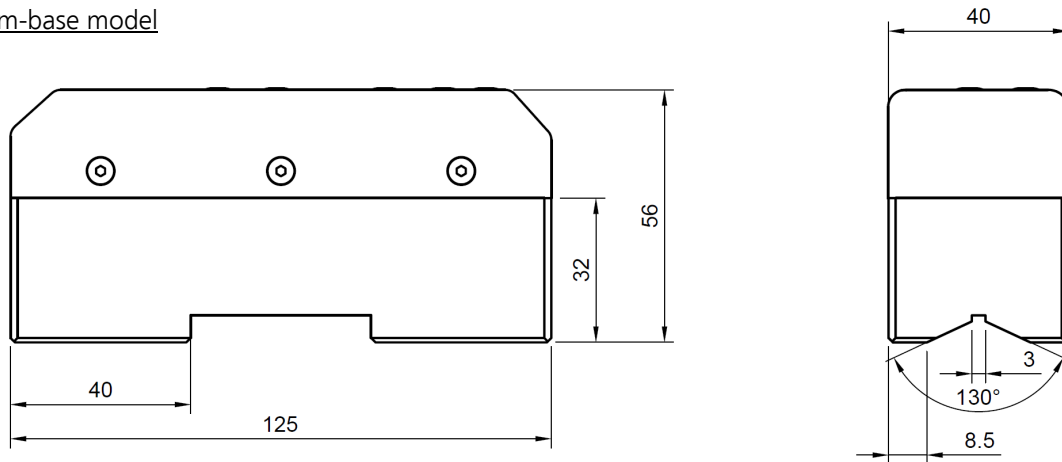
Parameter	Value	Unit
Measurement Range (Linear)	±300 ±1.45	"(arc Seconds) mm/m
Measurement Range (Non-Linear)	±500 ±2.42	"(arc Seconds) mm/m
Resolution	0.2 0.001	"(arc Seconds) mm/m
Temperature Drift	<0.5 <0.002	"/°C (arc seconds per °C) mm/m per °C
Long Term Stability	<1 <0.005	" (arc Seconds) mm/m
Bi-directional Repeatability	1	
Stabilisation Time	5 seconds	
Battery Life	~30 hours	Rechargeable Internal Battery (see page 5)
Operational Temperature Range	0 to 40°C	
Storage Temperature Range	-20 to 60°C	
Weight 125mm	1	Kg
Weight 200mm	1.6	Kg
Sensitivity Per Division	Various Settings (" and mm/m)	2", 4", 10", 20", 80" 0.01mm/m, 0.02mm/m, 0.05mm/m, 0.1mm/m, 0.4mm/m
Charging Connection Style	USB-C	Requires a 5V DC supply to charge. Note: If the EEL is connected to a charger, then it can be operated with a depleted battery.
Adjustable Low Pass Filter (frequency response)	0.0625 to 0.5Hz Default: 0.25Hz	User adjustable damping filter settings, accessible via the settings menu: 0.0625, 0.125, 0.25, 0.5Hz

Parameter	Notes
Measurement Range	Defines the linear measurement range of the internal sensor.
Resolution	The resolution of the device is the smallest measurable change in output.
Temperature Drift	When the level is in the null position, this is the maximum drift in position that will occur due to a change in temperature throughout the operating temperature range.
Accuracy	This is the maximum error between the measured and displayed value at any point in the linear measurement range.
Long term stability	The maximum change in zero bias of the device when used in normal operating conditions over a 1 year period.

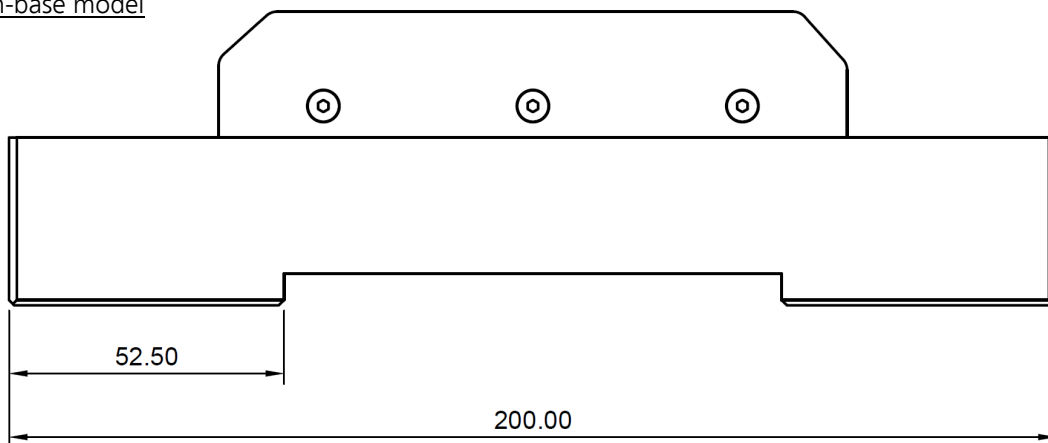


Dimensions

125mm-base model



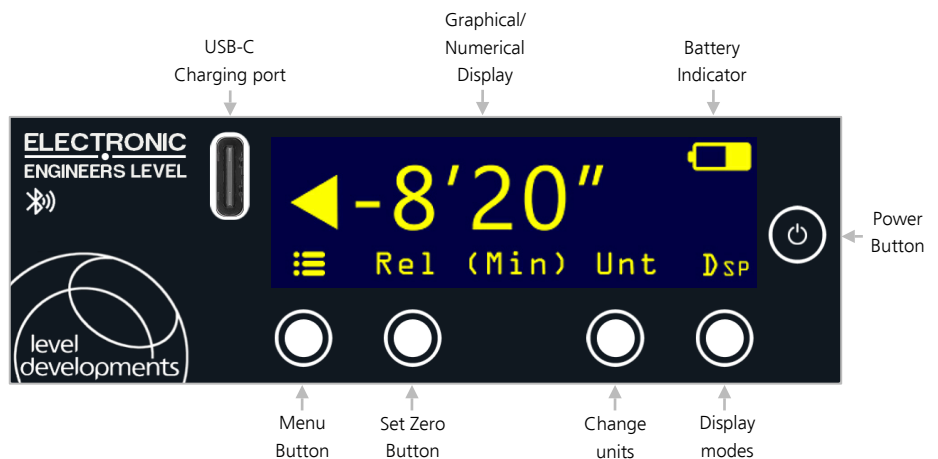
200mm-base model



Screen Interface and Button Functions

The device features an OLED display with multiple display modes (graphic or numerical), and units of measurement options (mm/m or arc minutes and seconds). The button layout and functions are shown below:

Note: While the EEL is in graphic mode, the unit button changes the sensitivity scaling, whereas in numerical mode it changes the unit of measure. The unit of measure is saved into memory, and transferred between modes when the display mode is changed





Bluetooth Connectivity for Remote Measurement

The EEL features a wireless Bluetooth interface, enabling remote connectivity to a Bluetooth-enabled smartphone via the relevant app (see next section). This facilitates easy accessibility for measurements, even in hard-to-reach or visually obstructed areas. When the EEL is switched on, it will scan for nearby Bluetooth devices, requiring the phone's Bluetooth to be switched on for connection.



Android & iOS Mobile Application

The EEL is compatible with a dedicated Level Developments application which is available for both Android and iOS platforms. This app allows for remote reading of the level using Bluetooth connectivity, provided the mobile phone is Bluetooth-enabled and within range. To download the app, search for 'Level Developments Electronics Engineers Level' in your mobile's app store. Alternatively, (if viewing this document on a smartphone), touch the relevant app store link below. Once installed, press the 'Connect to Bluetooth' symbol at the top of the screen (as indicated below) to find the EEL listed among the available devices, then touch the EEL's device ID to establish a direct connection. The app interface and functions are shown below:

The image shows a smartphone screen displaying the EEL app interface. Callouts on the left and right point to various features:

- Connect to Bluetooth (Icon turns Blue when connected)**: Points to the Bluetooth icon and the device ID 'EEL-123456_DF29'.
- EEL battery status**: Points to the 75% battery indicator.
- Scale graphic display**: Points to the ruler graphic with markings from 400 to 0 and back to 400.
- Bubble position graphic**: Points to the yellow circle on the ruler.
- Zoom/scale setting for ruler graphic**: Points to the 'zoom' slider.
- Reading from EEL**: Points to the large digital display showing '-150.0'.
- Measurement unit**: Points to the 'seconds' label below the reading.
- Measurement unit selection**: Points to the 'mm/m' and 'seconds' toggle switch.

At the bottom of the screen, there is the Level Developments logo and the text 'level developments Better by Design'. Below the phone, there are two app store download buttons: 'Download on the App Store' and 'GET IT ON Google Play'.

Notice:

A smartphone is not supplied with the Electronic Engineers Level



Granite Base with Prismatic V-surfaces



The EEL uses a precision ground granite base with flat feet and prismatic 'V' surfaces for levelling and measuring on both flat and cylindrical surfaces. It is available with 125mm or 200mm length options for suitability in a wide range of applications. The high-quality granite material eliminates common issues seen in cast-iron/metal bases, such as corrosion, denting and distortion. This ensures accuracy is maintained over the life of the product. In most cases, if the granite base is damaged, a small piece of the surface will chip away instead of creating a high spot (as seen in metal deformation), this ensures that the EEL remains stable and is not resting or rocking over a deformation.

Battery Information

The device uses a lithium-ion rechargeable battery for continuous use for up to 30 hours. Connecting the EEL device to the power supply provided will charge the internal battery whilst simultaneously providing power to the device itself, if necessary. This enables full operation even when the battery is discharged.

The table below shows the specifications for the internal lithium polymer battery.

Parameter	Rating	Unit	Notes
Battery type	Lithium-ion	NA	Rechargeable Lithium-ion Polymer Battery
Output Voltage	3.7	V	
Storage capacity	1,900	mAh	0.2C Discharge
Discharge time	≤30	Hours	In continuous use (without Bluetooth enabled)



Caution:

Do not attempt to open or service the battery pack, it should be replaced by Level Developments staff only. Do not crush, puncture or short external contacts. Keep battery away from children. Do not dispose of battery in fire or water. **Improper use of the battery pack can cause fire.**

USB-C Charging Connector

The internal battery is charged using the USB (Type-C) connection located on the top of the level. Each level is supplied with a USB-A to USB-C type cable for charging. Please note that an AC-DC wall-adaptor is not provided, but the EEL can be used with any standard 5V USB charging port. Please also note that the USB port is for charging only, this product does not feature a USB interface.



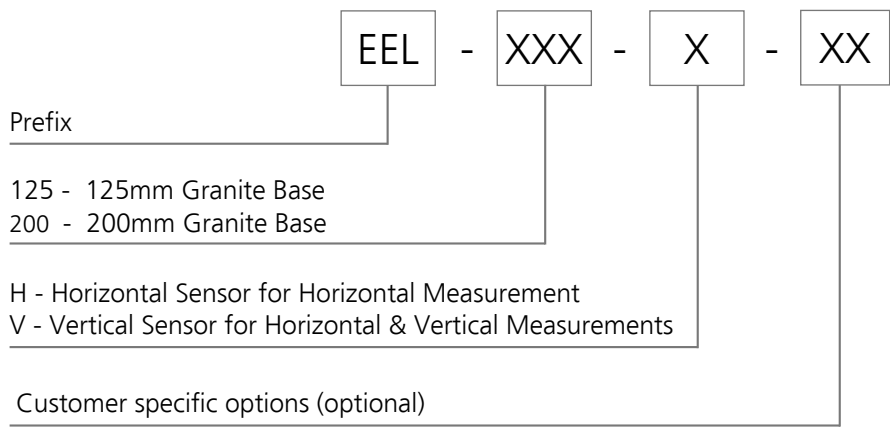


Protective Case

Each level is supplied with a padded aluminium case for protection, storage, and convenient transport in everyday use. The internal padding is thick and the case construction is robust, ensuring durability throughout the product's life span. With the case's protection and inherent stability of the EEL's design, it can be used straight out of the case with no need for calibration or setup.



Part Numbering



The standard configuration for the EEL is EEL-200-H

Example:

- EEL** - Electronic Engineers Level Device
- 200** - 200mm Granite Base
- H** - Horizontal Sensor for Horizontal Levelling Measurements