NoiseMeters
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CEL633B Environmental Sound Level Meter with Octaves

Features

- Data Logging with Time History Noise Profile stores
- Real-Time Octave Band Filters
- Voice Notes and Audio Recording
- Automatic Timers
- Measures Leq, Lavg, Min, Max, Ln, etc. Simultaneously
- Range: 20 to 140 dB(A)
- Data Markers and Back Erase

Applications

- Environmental Noise Surveys
- Occupational Noise Measurement

Overview

The CEL633B Sound Level Meter is for environmental noise measurement. This model has Octave Band filters, making it suitable for other specialist applications too.

The CEL633B sound level meter is available as Type 2 (CEL633B2), but most environmental noise monitoring applications demand the more accurate Type 1 (CEL633B1) specification. This meter also has everything needed for occupational noise measurement in line with the OSHA, MSHA, ACGIH and EU regulations, making it ideal for anybody involved in both environmental (outside the factory) and occupational (inside the factory) noise.

If the meter is to be left unattended in poor weather conditions then the **Outdoor Kit** should be used to offer protection against the elements. The Outdoor Kit also includes a rechargeable battery pack for longer term monitoring.

Standards

- ANSI S1.4 and ANSI S1.43 to Type 1 or Type 2
- IEC 61672 Class 1 or Class 2
- IEC60851 and IEC 60804 Type 1 or Type 2
- ANSI S1.11-2004 and IEC 61260 Class 0 (Octave Band Filters)

Octave Band Filters

The meter is fitted with real-time Octave Band Filter, which are sometimes needed for noise sources that may be tonal or for assessing hearing protector performance. As well as measuring the Leq and Lmax in each band, the CEL633B meter also measures the statistical parameters, Ln, in each of the Octave bands.

Average Sound Level and Statistical Parameters

The CEL633 has a very wide span, covering 20 to 140dB in a single range. This is particularly important when monitoring in an environment with generally low noise levels and occasionally high ones - for example when cars pass. The most useful parameter when measuring environmental and community noise is the Leq, the average sound level. The meter measures the periodic Leq and also includes five Ln values for statistical analysis of the noise.

Data Logging and Software

The CEL633B comes complete with data logging capability with measurements stored in the meter's large internal memory.

CasellaDrive

When connected to a Windows computer using the free CasellaDrive software, the meter acts like a memory stick (shows as a removable drive) so the measurements can be loaded into a spreadsheet or moved to your hard drive for long term storage. There is no need to buy special software.

Insight

Due to the large amount of data and the potential complexity of the measurements, we would recommend the use of the Insight software. It simplifies the process of downloading the measurements and stores them in a database, managed by person, place or process criteria. The Insight software is included with the sound level meter.

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Specifications

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The CEL633B data logging Integrating Sound Level Meter is available as either Type 1 (CEL633B1) or Type 2 (CEL633B2) as defined by the international sound level meter standards.

Measured Parameters

Frequency weightings	A, C and Z (simultaneous)
Time weightings	Fast, Slow and Impulse
Amplitude weightings	Q3, Q4 and Q5
Thresholds	70 to 90 dB (applies to Lavg)
Sound Level	LXY, LXYMax, LXYMin, LC-LA
Integrated	LXeq, Lavg, LAE
Peak	LXPeak
Takt Max	LTM3, LTM5, LXIeq
Statistical	5 x Ln values
Time History Level 1	Periods of 1 minute to 1 hour
Time History Level 2	Periods of 1 second to 30 mins
Octave Band Params	LXY, LXYMax, LXeq
Octave Bands	16Hz to 16kHz in 11 bands

Where X is frequency weighting A, C or Zand Y is time weighting Fast, Slow or Impulse

Sound Level Meter Standards

- ANSI S1.4 and ANSI S1.43 Type 1 or Type 2
- IEC 60651 and IEC 60804 Type 1 or Type 2
- IEC 61672 Class 1 or Class 2
- ANSI S1.11-2004 (Octave Band Filters)
- IEC 61260 Class 0 (Octave Band Filters)

Using a meter that meets these standards is essential for repeatable results and especially for any measurements that will be used for legal purposes.

Measurement range	20 to 140 dB (single range), 143 dB Peak
Display	320 x 240 pixel color TFT
Output to PC	USB Mini B
Batteries	3 x AA Alkaline (15 hours with backlight off)
External Power	9 to 14V DC at 250mA (2.1mm connector)
Dimensions	72 x 229 x 31mm, 295g 2.8" x 9.0" x 1.2". 10.4oz
Memory	2GB >1 year when logging set to 1 second
Timers	Duration 1s to 24h On/Off Timers: 6 sets with selectable times and repeat function.
Audio Recording	8kHz sampling, 60 hours recording 24kHz sampling, 10 hours recording

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Web Sites

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

Product shortcut:
https://www.noisemeters.ie/p/cel633b1/

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