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CEL-360 Logging Dosimeter

Introduction

The CEL-360 data logging noise dosimeter is the most versatile noise-sampling instrument in the CEL range of personal noise meters. It is the ideal instrument for the professional occupational hygienist who wants to know whether the overall limit was exceeded during a working day. The data logging time history profile function adds the vital information to the run data by storing the changing pattern of noise levels to show exactly when significant events occurred.

CEL-360 logging noise dosimeter

Key Benefits

- ❑ Comprehensive data logging function for complete results
- ❑ Easy to start and collect data
- ❑ Large non-volatile memory
- ❑ Up to 50 separate runs saved in non-volatile memory
- ❑ Up to 220,000 data points stored in time history memory
- ❑ Up to 10 key parameters stored for each interval
- ❑ Delayed start and stop times for automatic operation
- ❑ Pre-programmed setups to quickly start up and go
- ❑ Flexibility to customize units

Applications

The CEL-360 data logging noise dosimeter is very well suited to OSHA, ACGIH and ISO style workplace noise measurements in noise exposure assessments. It comes preprogrammed with 7 setups that suit almost all the world's major measurement protocols and has the capacity to be specifically configured by the user for special requirements if needed. The key to the usefulness of the CEL-360 is the comprehensive data logging function that stores up to 10 noise parameters at regular intervals during a run.

In this way the changing noise climate can be studied such that the noisiest times can be quickly seen in the graphical report and solutions targeted in the right area. This makes checking for OSHA compliance very much more useful since the CEL-360 answers the questions 'when' and 'how' did the noise exposure occur. The data logging measurements can be started immediately or they can be preprogrammed up to 1 month in advance so that runs can begin and end automatically without the need for onsite supervision.

Site boundary surveys can be easily accomplished at low cost using the enormous memory capacity of the CEL-360 to save up to 2 weeks data at 1-minute intervals. Transportation noise studies and construction site noise surveys can be tackled and further noise indices calculated once the profiled results are transferred to the CEL software package dB12, included with all CEL-360 dosimeters. The CEL-360 tackles all types of investigations of steady state or cyclical noise problems in the workplace or outdoors.

Operation and use

For standard measurements to the most popular protocols just turn on the CEL-360, perform an acoustic calibration, select the data logging mode and go. The instrument remembers the last used settings and remains ready to reuse them without needing to set them again. At the end of the

run these stored results can be brought back to the display and data can be read from the instruments memory by simply cycling through the different screens. For a quick and simple summary the CEL-360 can be connected to an office printer to get a single page hard copy.

For more extensive manipulation of the logged results every CEL-360 comes with a copy of the latest version of the graphical software package, dB12. This allows the time history profiles to be viewed and a variety of further calculations to be carried out to perform "what if" analyses.

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Technical Specifications for CEL-360 Logging Noise Dosimeter

International standards		Parameters measured	
Acoustic accuracy	ANSI S1.25-1992 Type 2 IEC 61252:1993	Displayed parameters	Lp, LAeq, LAE, Leql, Lav, Lmx, Lmn, 5 x LN%, actual noise dose%, 8 hr projected noise dose%, TWA (at both threshold levels), LEPd, duration of run, current date, time, run #, pause, run in progress, battery voltage, security level
Electro-magnetic	EN 50081-1:1992, EN 50081-2:1993, EN 50082-1:1992, EN 50082-2:1995		
Measurement ranges (for rms. levels)	High range 70 – 140 dB Med range 50 – 120 dB Low range 30 – 100 dB		
Peak ranges	Top 40 db of each range		
Measurements stored			
Separate runs	Maximum 50 stored	Data per profile interval	Up to maximum of 10
Max time history size	> 220,000 data points	**Physical characteristics**	
Factory setups	7 - OSHA, MSHA, DoD, ACGIH, ISO85, ISO90, METER	Battery pack	1 9V radio battery Duracell MN 1604
		Battery life	50 hours (approx.)
User setups	13 – programmed from pc	Size	4.8 x 2.6 x 1.2 in, 120 x 65 x 30 mm
Delayed start/stops	Up to max 16 pairs		
Threshold levels (dB)	2 (from 70 to 90 dB)	Weight	11 oz, 300 gm
Criterion level (dB)	1 (from 80 to 90 dB)		
User selectable day	Up to 23:59 for TWA calc.	Microphone assembly	Rugged Electret ¼ in microphone on 32 in cable with locking plug, field replaceable item
Frequency weightings	A, C for rms. C, Lin for peak		
Time weightings	Slow, Fast, Impulse, peak		
Exchange rates	3, 4, 5, 6 dB doubling	Optional stalk mic.	Electret ¼ in stalk, 3.1in

Ordering Information

CEL-360	Single CEL-360 logging noise dosimeter with CEL-6681 cable microphone assembly (includes CEL-6704 dB12 Windows software and C6671 RS232 cable)
CEL-110/2	ANSI Class 2 acoustic calibrator and microphone adaptor
CEL-6704	dB12 version 2.x control and download software for Windows (32 bit program)
C6671	RS232 interface cable from dosimeter to pc
CEL-6225	Small foam windscreen for use outdoors or in strong air flows
CEL-6682	Single instrument kit case with space for standard items
CEL-360/K1	Single noise dosimeter complete instrument kit with all above items in carrying case
CEL-6679	Multiple instrument kit case for up to 10 dosimeters and accessories
CEL-6648	Nylon belt pouch to protect instrument in dirty or oily environments
CEL-425	Optional stalk microphone assembly to convert standard CEL-360 noise dosimeter to hand-held CEL-360S sound level meter
CEL-360X	Standard CEL-360 noise dosimeter less cable and download software

Standard Multiple Instrument Kits

CEL-360/K5	5 pack kit of dosimeters including 5 CEL-360X logging noise dosimeters, 1 CEL-110/2 acoustic calibrator, 1 C6671 interface cable, 1 copy of dB12 version 2 Windows software for setup and download, 5 CEL-6225 foam windscreens, 1 CEL-6679 kit case
CEL-360/K10	10 pack kit of dosimeters including 10 CEL-360X logging noise dosimeters, 1 CEL-110/2 acoustic calibrator, 1 C6671 interface cable, 1 copy of dB12 version 2 Windows software for setup and download, 10 CEL-6225 foam windscreens, 1 CEL-6679 kit case

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