

Comparison of CEL-310, 320 and 360 Noise Dosimeters

Introduction

Casella USA can offer a range of personal noise dosimeters to suit almost every application. Common features include compliance with relevant ANSI and ISO / IEC requirements for noise measurement devices. From the simplicity of the CEL-310 Badge to the flexibility of the CEL-360 Logging Noise Dosimeter including the basic CEL-320 Convertible sound meter and dosimeter there is an instrument to suit the job in hand.

Applications

Dependant on model chosen:

- ❑ OSHA surveys
- ❑ Compliance measurements
- ❑ General occupational noise measurements in industry
- ❑ Medium term outdoor noise surveys
- ❑ Community noise assessments
- ❑ Hand held sound level meter measurements

Ordering information

- ❑ CEL-310K1 Noise Dose Badge kit with Reader unit and software
- ❑ CEL-320/K1 Noise dosimeter kit with calibrator and software
- ❑ CEL-360/K1 Logging noise dosimeter kit with graphic software
- ❑ CEL-320S/K1 Sound level meter kit with memory
- ❑ CEL-360S/K1 Logging sound level meter kit with software
- ❑ Multiple kits also available



CEL-310 Noise Dose Badge



CEL-320 Convertible Noise Dosimeter / Sound level meter



CEL-360 Convertible Logging Noise Dosimeter/ Sound level meter

Key benefits of CEL-310

- ❑ Light weight and small
- ❑ Weighs less than 2 oz.
- ❑ Less than 2" in diameter
- ❑ Integral microphone capsule
- ❑ Wireless communication with Reader through Infra red link
- ❑ Data logging memory for time history recording of Leq
- ❑ Complies with OSHA or ISO measurement protocols
- ❑ Measures Dose%, 8 hour projected Dose%, TWA, Lav, Peak detector at 140 dB

Key benefits of CEL-320

- ❑ 3 measurement ranges
- ❑ Use as a personal dosimeter or as a sound level meter
- ❑ Complies with OSHA, MSHA, DoD, ACGIH and ISO protocols
- ❑ Integral LCD display
- ❑ Measures Dose%, 8 hour projected Dose%, TWA, Lav, Lmax, Lmin, Lpk, 5 LN%
- ❑ Can be configured by the user
- ❑ Exchange rates 3, 4, 5 & 6
- ❑ Slow and Fast and Impulse
- ❑ A and C weightings

Key benefits of CEL-360

- ❑ All the benefits of the CEL-320 plus the following;
- ❑ Set of 16 pairs of timers for automatic measurements
- ❑ Set date and time of recording up to 1 month in advance
- ❑ Select interval timers from 1 sec to 1 hour
- ❑ Up to 220,000 data appoint profile memory
- ❑ Up to 10 different noise parameters per time interval
- ❑ Use for short to medium term environmental noise logging

CASELLA USA
CEL DOSIMETER RANGE
OVERVIEW OF FEATURES

Characteristic	CEL-310	CEL-320	CEL-360
ANSI accuracy S1.25 1992	Type 2	Type 2	Type 2
Dynamic range (dB)	50	70	70
Measurement range for dose (dB)	80 - 130	70 - 140	70 - 140
Other measurement ranges (dB)	-	30 – 100, 50 – 120	30 – 100, 50 – 120
Frequency weightings	A	A or C	A or C
Time weightings for rms.	Slow or none	Slow, Fast or Impulse	Slow, Fast or Impulse
Time weighting peak	140 dB limit	Top 40dB of range	Top 40dB of range
Amplitude weightings (Exchange rate Q)	5 or none	3, 4, 5 or 6	3, 4, 5 or 6
Threshold levels (dB)	80	70 to 90 (x1dB)	70 to 90 (x1dB)
Criterion level (dB)	80, 85, 87 or 90	80 to 90 (x1dB)	80 to 90 (x1dB)
Criterion time (hours)	8, 12, 16 or 24	1 min to 24 hrs	1 min to 24 hrs
Actual noise dose %	Yes	Yes	Yes 2 values
8 hour projected noise dose %	Yes	Yes	Yes 2 values
Current sound level (Lp)	-	Yes	Yes
Time average level (dB)	Yes	Yes	Yes
Sound exposure level (LAe)	-	Yes	Yes
Time weighted Average level TWA (dB)	Yes	Yes	Yes
Maximum level (Lmx)	Yes	Yes	Yes
Minimum level (Lmn)	-	Yes	Yes
Peak level (Lpk)	140 dB limit	Yes	Yes
LN% level (0.1 to 99.9%)	-	5	5
Overload indicator	Yes	Yes	Yes
Under range indicator	-	Yes	Yes
Pause during run	-	Yes	Yes
Pre-configured setups	1	7	7
User configured setups	1	13	13
Microphone configuration	Built in	Cable or stalk	Cable or stalk
Replaceable microphone if damaged	-	By user	By user
Built in display	-	Yes	Yes
Needs external reader unit	Yes	-	-
Use as a sound level meter	-	Yes	Yes
Use as an environmental monitor	-	-	Yes
Delayed start and stop timers	-	-	16 sets
Settable up to 1 month in advance	-	-	Yes
Fixed duration recording then stop	-	-	5 min to 24 hr
Profiles for time history recording	Yes	-	Yes
Profile intervals	1 min only	-	1 sec to 1 hr
Parameters per profile interval	1	-	10
Software lockout against tampering	-	Yes	Yes
Keypad lockout	Not necessary	Yes	Yes
Cable for communication	No - infrared	Yes	Yes
Windows software for download	Yes	Yes	Yes
Windows recalculation software	Yes	-	Yes
Battery pack	Rechargeable, fixed in unit	9 V, field replaceable	9 V, field replaceable
Battery type	NiCad only	NiCad or Alkaline	NiCad or Alkaline
Battery life (hours)	24	50	50
Weight (oz)	1.6	11	11
Size (in)	1.9 x 1.6	4.8 x 2.6 x 1.2	4.8 x 2.6 x 1.2