The Castle GA256 Personal Sound Exposure Meter Technical Data-sheet

Simplicity of use combined with maximum functionality, all in a pocket sized instrument, were key objectives for the development of the Castle GA256 Personal Sound Exposure Meter.

Castle Group are acknowledged experts in noise and vibration measurement with over 30 years experience. When you buy from Castle you buy with confidence.

Pocket Power

A feature packed, pocket instrument that is fully compliant with IEC 61252-1:2002. This meter gives simultaneous sound exposure (Lex) and maximum peak (Pmax) measurements, an essential feature for assessments to the Noise at Work Regulations 1989. It has a high-specification measurement microphone and is cased in tough, crack resistant ABS plastic. Designed to be worn by an employee for a full- or part-shift, the GA256 has an 'unbreakable' pocket clip and a lockable keypad. The results are given in a simple, clear format to give an immediate indication of an employee's daily exposure.

Feature-Packed

Designed for **Industrial Safety Officers** and **Safety Managers** for compliance with the Health and Safety as Work Act; Noise at Work regulation 1989. The Castle GA256 provides all the necessary information you need for completing Noise at Work risk assessments.

- Integrated Sound Exposure Level (Lex) (was Lep'd)
- Projected Lex (8 hour sound exposure)
- DOSE% and Projected DOSE% (8 hours)
- 'A' and 'C' frequency weighting (toggle)
- 'Slow' and 'Fast' Time weighting (toggle)
- Lmax - maximum Lp hold (rms.)
- Pmax - maximum peak level
- Simultaneous measurement of Lex, Lmax and Pmax
- Pa^2hr (Lex expressed in Pascals)
- Elapsed time (running time hrs, min, sec)
- Overload and Under-range indication
- Battery condition (Life approx. 24 hours)

A Tough Case for all Weathers...

The physical design and construction of the Castle GA256 casing is extremely tough and durable, made from a substantial thickness of ABS, crack resistant plastic, the GA256 will stand up to almost any industrial environment, a very important feature when this unit is out in the workplace.

Simplicity and Power...

Using the meter could not be simpler. The simple operating system uses logical keys to immediately display the information you need. The power of this little wonder means that it can measure simultaneous 'A' weighted levels as well as monitoring the Peak levels. This is a vital feature for many assessment tasks.

Future-Proof...

The built in software for this meter is designed to suit future upgrading for feature enhancements, legislative changes or instrument upgrades. Details are mailed to customers as soon as they become available. With the Castle Pocket meters, you will always be in step with the law and market requirements.

noise

vibration

INVESTOR IN PEOPLE

NQA ISO9001 REGISTERED COMPANY

UKAS QUALITY MANAGEMENT 015

Castle advanced sound solutions

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Specification

DESCRIPTION
GA256 Personal Sound Exposure Meter

APPLICABLE STANDARDS
IEC 61252-1:2002 (Personal Sound Exposure Meters)

MICROPHONE AND PREAMPLIFIER
Type 2 Pre-Polarised ½" (13.2 mm) Electret Condenser Microphone:
–32 dB ± 3 dB re 1V/Pa
Custom pre-amplifier design

DISPLAY
Back-lit LCD panel (8x1 Characters)
Alpha-Graphic display for measured results

LEVEL RANGE
Measuring Range:
75-140
Linear operating range (IEC61672-1):
67dB
1 Measurement Range (IEC61672-1):
75-140 - Reference Range

NOISE FLOOR
Typical 'A' Weighting 25 dB(A) rms.
'C' Weighting 30 dB(C) rms.

FREQUENCY WEIGHTING
'A' and 'C' to IEC 61672-1:2002 and IEC 60651:2001,

FREQUENCY RANGE
12.5 Hz - 20 kHz (including microphone)
1 Hz - 20 kHz (electrical characteristics)

TIME WEIGHTING
Slow, Fast and Peak (no time constant)

MEASUREMENT PARAMETERS
Lex (Sound Exposure Level), Plex (Projected Lex over 8 hours), DOSE% (Lex compared to criterion level as %) PDOSE% (Projected DOSE% over 8 hours, Pa^2h (Lex displayed in Pascal units) Lmax (maximum Level), Pmax (Max. Peak Level)
Other Displays: Elapsed time, Overload, Battery Life

CRITERION LEVEL
The level at which the 8 hour DOSE% = 100%
User selectable between: 80dB, 85dB and 90dB

EXCHANGE RATE
The rate at which the DOSE% doubles.
User selectable between: 3dB and 5dB

CALIBRATION
Software controlled 91.0 to 120.0 dB (1kHz) in 0.1 dB steps

PROCESSING
A to D Converter: 12-bit, 1kHz sampling
Controller: 8MHz, micro-controller

POWER REQUIREMENTS
Batteries: 1 x 6LR61 (size PP3), Life: >24 hours (alkaline batteries, continuous operation).

SIZE AND WEIGHT
Dimensions: 60mm (width) x 30mm (depth excluding pocket clip) x 135mm (height)
Microphone cable length: 800mm (including rubber sleeve and microphone)
Weight: 200gms (without battery)

MANUALS
Multi-language manuals*: French, German, Spanish and Italian.

ACCESSORIES
GA601 Single Level Calibrator:
KA010 Kit Case for GA256, GA601 and Accessories

Note: Items marked * will be available as upgrades in the near future.

In the interest of continued developments, Castle reserve the right to change the product specifications without notice