DB 300/1
Sound level meter

Integrating-averaging with storage function
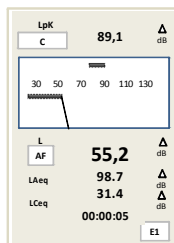
Class 1

CE

The **DB300/1** sound level meter extends the range of classical and intergrator sound level meters.

It respects the most recent international standards and brings to the user a high comfort in use.
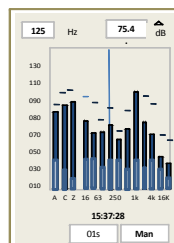
From the simple sound level measurement toe the frequency analysis in real time, **DB300/1** covers the most applications in the finding of solutions to get better the noise environment

DB300/1 stores the measurement datasets that can be then transferred in a computer with the LDB23 software.
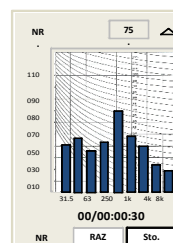
MAIN MEASURED VALUES

- Weighted noise level: **LXY**
- Equivalent continuous level: **LXeq**
- Peak pressure level: **LUpk**
- Noise exposure level: **LXE**

Real time analyser by octave bands –
16 Hz to 16 kHz

Values and and graphic representation of the **NR** comfort criteria

BUSINESS APPLICATION

- Environment
- Monitoring and emergences
- Industry
- Noise spectrum 1/1 octave – optional: 1/3 octave
- Noise of machines NR evaluation curves
- Process monitoring, conformity check
- Noise at workstation

I/O INTERFACE

- Detection of sensitive levels for alarm activation
- DC analogue output: 0-10 V : 0 -137 dB
- Ordered measurement start

AUDIO RECORDINGS ON THRESHOLD

- Audio recording of audio files on detection of LXeq or LUpk levels

DATA VISUALIZATION

DB300/1 is supplied with the **LDB23** software allowing data visalization and measurement report printing.

OTHER INFORMATION

- Maximum and minimum values, peak values
- Statistical distribution of the measured values: **L01 – L10 – L50 – L90 – L95**

• Standards and directives

Sound level meter: NF EN 61672-1 (2003) – NF EN 60651 (1979) – NF EN 60804 (2000) – CEI 61260
European directives: 2014/30/EU ECM; 2014/35/EU Low tension; 2011/65/EU RoHS II; 2012/19/EU WEEE

• Metrology

Accuracy: Class **1** - NF EN 61672-1
Microphone type: Electret – ½" - Sensibility : 45 mV/Pa
Measuring type: Free field
Measurement dynamic: Lp / Leq : 117 dB - Lpk : 57 dB
Single dynamic range Lp and Leq / Lpk: 20-137 dBA / 25-137 dBC (Z) **/** 83-140 dBC (Z) – **Leq**: 15-137dB (filters by octave bands 16 Hz-16 kHz)
X frequency weightings: A – C – Z
Multi-spectrum frequency analysis: Real time filters by octave bands : 16 Hz // 16 kHz – 1/3 octave optional bands: 12.5 Hz // 20 kHz
Y frequency weightings: **F** (fast) – **S** (slow) – **I** (impulse) – **U** (peak)

Logging time for short Leq (DI): 1/16s – 1/8s – 1/4s – 1/2s – 1s to 60 s (step of 1 s)
Measured values: LXY – LXYmax – LXYmin - LXeq,T – LXeq,DI – LXE – LXeq,DImax – LXeq,DImin
Statistic indices LXN on LAeq and LCeq samples: L01 – L10 – L50 – L90 – L95 – resolution 1 dB. Others on LDB23 software.
Simultaneous measured values: All according to LXY conventional mode or LXeq integrator mode.
Detection and percentage of overload: Graphic alarm and calculation of percentage during the storage.

• Sound level meter

Preamplifier	Removable – extensions of 3 – 5 – 10 m on request
Screen	Graphical display 240 x 160 pixels – LCD monochrome 16 levels – digital and analogue display – 3D effect on display
Keypad	8 sensitive keys
Clock	Permanent, saved by internal battery – accuracy better than 0.005%
Memory module	Removable Micro SD card 2Go
Environment	From 0°C to +50°C
Humidity	From 0 to 90% RH
Size (L x l x e)	270 x 70 x 40 mm
Weight (batteries included)	355 gr
Fixing	Insert at rear for fixing on tripod

• Operating

Measurement modes : conventional and start/stop integrator – integrating analyser with storage – NR comfort criteria – S1 + S2 calculator
Storage and measurement capacity
- Lp-Leq start/stop mode: unlimited
- Leq with storage mode: according to the elementary logging time (from 1/16e s to 60s)
- Memory capacity with frequency analysis by full octave bands :
  • Base Leq 1 s: 135 days to share from 1 to 999 periods.
  • Base Leq 1/16° s: 8 days to share from 1 to 999 periods.
Audi recordings on threshold
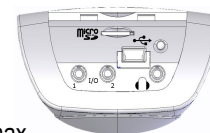Recording on detection of LXeq or LCpk programmable levels – Sampling: 12 kHz – 16 bits: total duration of recording: 45 mn – file format: *.wav

I/O interface
DC output: 0-10V / 0-137dB
Output for alarm activation: TTL level 3.3 V
Measurement start by electrical order: 0-5 V DC max

Measurement launching
By keypad or I/O mode

Power supply – Autonomy
Rechargeable Li-Ion battery: minimum autonomy: 24 hours at 20°C – 3 AA alkaline batteries can be also used (the autonomy is reduced) – mains adapter.

Guarantee: 2 years

SUPPLIED WITH

• Li-Ion battery – 3 x AA batteries coupling device – Windscreen
• Transport case
• USB charger - adapter
• Calibration certificate
• USB transfer cable
• User manual
• LDB23 software

OPTIONAL ACCESSORIES

• Extensions for preamplifier: 3 or 10 m
• Tripod
• Acoustic calibrator class 1 (NF EN 60942:2003) type: **CAL300**
• Jack cables for I/O interface
• **LDB300**: specific software for the industry, environment for elaborated data processing

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