KIMO INSTRUMENTS

Technical Data Sheet

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

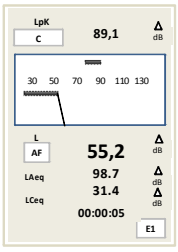
DB 300/1
Sound level meter

Integrating-averaging with storage function

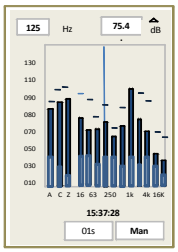
Class 1

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.

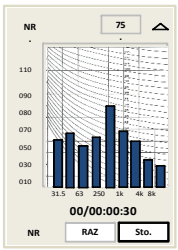
MAIN MEASURED VALUES



- 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

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

OTHER INFORMATION

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

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

DATA VISUALIZATION

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

TECHNICAL FEATURES

• Standards

Sound level meter : NF EN 61672-1 (2002) – NF EN 60651 (1979) – NF EN 60804 (2000) – CEI 61260
CE conformity : EN 61010 – EN 61000 generic and as per product standard

• 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 -10 °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 – 5 – 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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