Sound Level Meter

DB30-6228-B1/B2
DB30-6228-C1/C2
DB30-6228-D1/D2
DB30-6228-E1/E2
DB30-6228-F1/F2

Application

This series of sound level meters is a digital multi-functional acoustic measuring instrument, specifically designed for various types of noise assessment. It can measure multiple parameters including frequency-weighted sound pressure level, time-weighted sound pressure level, equivalent continuous sound level, exposure sound level, and statistical sound level. The instrument provides 8 operating modes for users to select from: general sound level measurement, integral average, parallel measurement, statistical analysis, 24-hour measurement, 1/1 octave band, 1/3 octave band, and indoor noise mode. Additionally, the instrument is equipped with a low-frequency frequency weighting function, which is suitable for the measurement of secondary radiated noise.

Features

*High-precisionmeasurement,largememory

*Optionalrecording,scheduledshutdown,GPSpositioning,and Blu etooth

*Explosion-prooftypewithdualprotection

*Longstandbytime.

*spectrumdisplayunit。

Specifications

a) performance grade	Class 1 or Class 2 as specified in GB/T 3785.1-2010/IEC 61672-1:2013.
b) Electromagnetic Field Radiation and Anti-jamming Classification	Class X as specified in GB/T 3785.1-2010/IEC 61672-1:2013.
c) frequency weighting	A-weighting; C-weighting; Z-weighting; Low (low frequency). Note: When A-weighting is selected and low-frequency (√) weighting is also chosen, low-frequency A-weighting can be applied to measure secondary radiation noise. Generally, low-frequency weighting is not required for measurements. Please keep the "Weighting" option set to low-frequency (×) weighting in the settings.
d) time weighting	F (fast); S (slow); I (pulse).
e) frequency range	10 Hz~20 kHz (Level 1); 20 Hz~12.5 kHz (Level 2)
f)nominaloperatingmode	The nominal working mode is microphone without wind shield.
g)Reference environmental conditions	Air temperature: 23℃; relative humidity: 50%; static pressure: 101.325 kPa;
h)Microphonetype	The free-field frequency response measuring microphone has a nominal diameter of 12.7 mm, a nominal sound pressure sensitivity of 50 mV/Pa (nominal sound pressure sensitivity level of-26 dB, reference value of 1 V), and a tip capacitance of approximately 15 pF.
I)indicator	128 × 128-pixel liquid crystal display (LCD), 3.0 inches, resolution 0.1 dB, data refresh rate 1 second. It features warning indicators such as overload, below limit, and low battery voltage.
j) Measurement at 1 kHz frequency Range	30dB(A)~130dB(A); 40dB(C)~130dB(C); 45dB(Z)~130dB(Z) Note: 1-The measurement range for other frequencies shall be the sum of the upper and lower limits of the instruments measurement range and th e frequency-weighted nominal values specified in the national standard GB/T 3785.1-2010provided that the upper limit shall not exceed the meas urement range of 1 kHz.Both the upper and lower limits shall not be lower than the lower limit of the 1 kHz measurement range. 2-The measurement range can be provided by the user according to the needs of other non-nominal measurementrange.)
k) octave	1) 1/1 octave: 16 Hz, 31 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, and 16 kHz; 2) 1/3 octave: 16 Hz, 20 Hz, 25 Hz, 31 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 Hz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz, and 20 kHz.
L) memory	1) 16GB of memory. 2) Calibration records are automatically stored in the instrument's memory; 3) The measurement data is automatically stored in the instrument's memory. 4) Select USB in Settings to use it as a USB drive.

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m) source	1) It is powered by 5 AA batteries. 2) When the battery voltage is too low, the battery symbol on the display will turn blank and start to flash. 3) It can be connected to a USB port (5.0V) for external power. 4) When operating in 24-hour measurement mode, it is recommended to use a power bank. Note: Explosion-proof products must use LR6 alkaline batteries only.
n) power bank	For extended or 24-hour measurements, a power bank is recommended with a 10000mAh battery providing over 36 hours of operation
o)Autocalibrationrange	±4.5dB(referencesensitivity:50mV/Pa).
p) Calibrationcheckfre-quency	1kHz.
q)Theeffectofwindproof cover	The deviation must not exceed 0.5 dB with in the critical frequency range
r)referencedirection	Frontalincidence(0°incidence).
s) referencesoundpress-urelevel	94dB,withareferencesoundpressureof20μPa.
t) preheating time	60s.
u) intrinsic noise level	1) Under reference environmental conditions, the self-generated noise level does not exceed 25 dB (A-weighted) and 35 dB (C-weighted). 2) The expected value of the self-generated noise level of the sound level meter is not greater than the above value when the electrical input of the sound level meter is short-circuited by a 15 pF capacitor.
V) temperature affect	The difference between the sound level at any temperature and the sound level at the reference temperature is not more than ±0.7 dB for Class 1 sound level meter and ± 1.0 dB for Class 2 sound level meter in the working temperature range of 0℃ to 40℃.
w) humidity effect	When the relative humidity changes from 25% to 90%,the difference between the indicated sound level and the reference sound level at the corresponding relative humidity should not exceed ±0.7dB for Class1 sound level meters and ±1.0dB for Class 2 sound level meters..
x) temperatureandhumidity limits	Temperature:-20℃ and+60℃;Relativehumidity:95%.
y) Adjustment data of sound pressure response and free field response	The equivalent free field response can be obtained by adjusting the datain Table1 based on the acoustic pressure response generated by the acoustic calibrator or the simulated acoustic pressure response produced by the electrostatic exciter.
z)Test the impedance of the microphone replacement (fortesting)	15 pF in series with 10Ω.
Aa)The maximum sound pressure level that can be applied to the microphone	146dB。
Bb)Th maximu peak-to-peak voltage that can be applied to the electrical inputterminal	15V。
Cc) output port	Type-C is used for printing or data communication.
Dd) analog output	1) The output jack is a 3.5 mm dual-channel headphone jack. 2) DC output: The output voltage is approximately 15 mV/dB, with a range of 450 mV to 1950 mV. 3) AC output: The output is linearly related to the measured signal, and the root mean square value of the maximum AC output voltage does not exceed 2V.
Ee) outline dimension	270mm×90mm×32mm.
Ff) weight	Approximately 360g (excluding the battery).

Standard layout	Main engine
	Hurricane globe
	Portable suitcase (B04)
	Operating instruction
	Measuring microphone
Optional attachments	Tripod
	External power adapter
	Electrical signal adapter
	Class 1 sound level calibrator/Class 2 sound level calibrator
	Extension cable
	Printer
	Output plug
	Bluetooth
	Powerbank
	USB Online Line + Software