FP122

DATASHEET

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Omni-directional sound source:
BP012 Omni-directional loudspeaker for acoustic measurements
AP602 Amplifier for omni-directional sound source

PRESENTATION

The *FP122* Sound Source has two well defined parts: the Omni-directional Loudspeaker *BP012* and the Amplifier for omni-directional sound source *AP602*.

The *BP012* has12 loudspeakers mounted on a dodecahedral housing. This ensures a complete omni-directional radiation diagram; that is to say, sound is radiated in a spherical distribution (see Fig. 2).

The AP602 comprises in a small size and lightweight White and Pink noise generator , 1/3 octave band Graphics equalizer and a power amplifier.

Also, the AP602 together with the BP012 become the most powerful omni-directional sound source on the present market.

APPLICATIONS

- Measurement of sound insulation in buildings and of building elements ISO 10140-2, ISO 140-4, ISO 16283-1
- Measurement of the reverberation time of rooms ISO 3382-1/-2
- Measurement of sound absorption in a reverberation room ISO 354

MAIN CHARACTERISTICS

- Complete omni-directional radiation diagram (BP012)
- 1/3 octave band graphic equalizer included (AP602)
- Reduced size: 350 x 300 x 150 mm (AP602)
- Lightweight : 4,75 kg (AP602) and 14.5 kg (BP012)
- Bluetooth® wireless technology incorporated
- *MA001* Remote control included
- 123 dB PWL (*AP602* + *BP012*)

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GENERAL DESCRIPTION

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BP012 Omni-directional loudspeaker for acoustic measurements
AP602 Amplifier for omni-directional sound source

GENERAL DESCRIPTION OF EQUIPMENT

The *FP122* (*BP012* + *AP602*) has been designed to take airborne sound insulation, reverberation time and sound absorption measurements in accordance with the standards: ISO 3382, ISO 354, ISO 10140, ISO 16283-1 and ISO 140.

The *BP012* can develop 123 dB of PWL in the third octave bands with centre frequency between 50 and 5,000 Hz. The loudspeaker has been designed to supply the maximum power for over an hour (see Fig.1).

Thanks to its noise generator output and the signal input, the *AP602* allows equalizing and amplifying the signal coming from an external noise generator or inserting additional signal processing equipments in the reproduction chain.

The AP602 has an intermittent operation mode to ease background noise measurements between reception measurements

The *AP602* screen shows all the information necessary to control it: reproduced noise type, internal or external configuration, equalizer on/off, playback status play/stop, numerical and graphical information about the noise volume, graphic equalizer curve, protection equipment status PROT (power and overload protection status) and CLIP (signal clipping).

The *AP602* can be operated directly from the keyboard, through *MA001* remote control (with *AN001* antenna) or by a PC with the included software. This communication with the PC can be done through USB cable or through type1 included Bluetooth® wireless technology, up to 80 meters coverage.

Also the forced ventilation cooling system of the *AP602* is efficient for the background noise measurements.

The characteristics, technical specifications and Accessories may vary without prior notice

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TECHNICAL SPECIFICATIONS

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TECHNICAL SPECIFICATIONS BP012

STANDARDS

ISO 10140-2
ISO 140-4
ISO 16283-1
ISO 3382-1/-2
ISO 354

DIMENSIONS AND WEIGHT

Diameter: 400 mm
Weight: 14.5 kg

IMPEDANCE

Nominal impedance: 6 Ω

CONNECTOR

4 pins speakon© (+1, -1)

POWER

Maximum input power: 600 W rms
Sound Power Level: 123 dB PWL
(pink noise, 1/3 octave bands from 50 to 5000 Hz)
Power distribution by 1/3 octave bands:

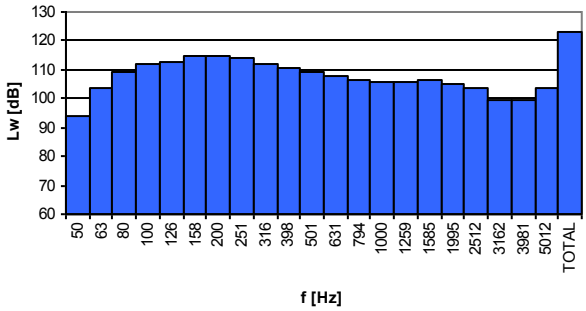
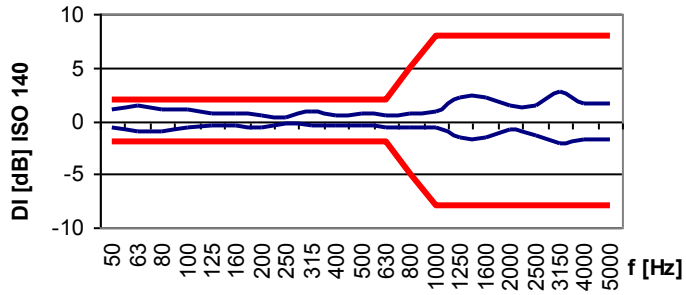
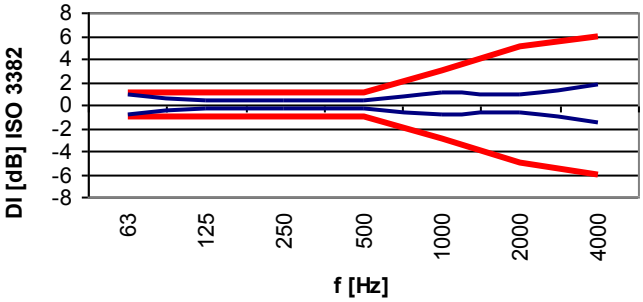


Fig.1 Frequency distribution of the BP012 sound power level

DIRECTIVITY





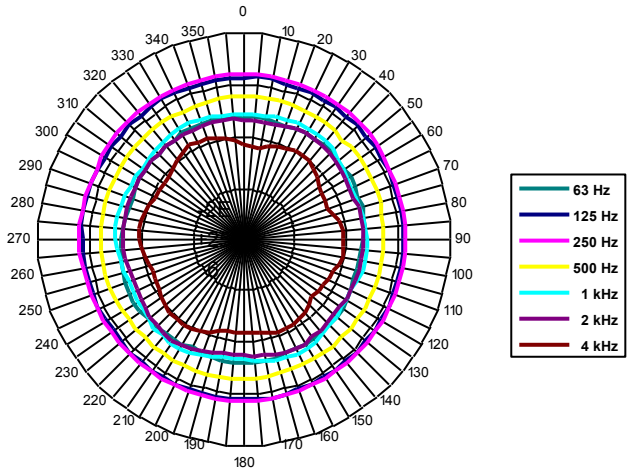


Fig. 2 Directivity diagrams for the octave bands centred in 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz and 4 kHz

Fig. 3 Directivity (D) of BP012 in accordance with standards ISO 140 and ISO 3382

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TECHNICAL SPECIFICATIONS AP602

STANDARDS
ISO 10140-2, ISO 140-4, ISO 16283-1
ISO 3382-1/-2
ISO 354

MAXIMUM OUTPUT POWER
Pink noise filtered between 50 and 5000 Hz 1/3 octave bands — 6 Ω: 580 W

FREQUENCY RESPONSE (± 0,15 dB)
20 – 20000 Hz

TOTAL HARMONIC DISTORTION (THD)
3 dB below the nominal power, 20 Hz – 20 kHz and 8 Ω load — < 0.05 %

SIGNAL TO NOISE RATIO (SNR)
A weighting, 20 Hz – 20 kHz and 8 Ω load — > 119 dB

DAMPING FACTOR
< 1 kHz @ 8 Ω — > 1000

TYPICAL POWER CONSUMPTION
6 A
(580 VA)

MAINS
120/230 ~ VAC
50/60 Hz

SIZE AND WEIGHT
Size: 350 x 300 x 150 mm
Weight: 4750 kg

INPUTS AND OUTPUTS: CONNECTORS
Loudspeaker signal output: 4-pin Speakon© (+1, -1)
Line signal output: XLR male (unbalanced)
pin1 → ground, pin2 → hot, pin3 → free
Line signal input: XLR female (unbalanced)
pin1 → ground, pin2 → hot, pin3 → free
USB Port: Digital Type B complies with USB rev. 2.0
Wireless communication: Bluetooth® class 1
Coverage range: 80 m
MA001 Remote control communication: Radiofrequency
Coverage range (with antenna): 45 m

ACCESSORIES

ACCESORIOS SUMINISTRADOS

CN2US USB Cable for the communications of the *AP602* with a computer.
SF600 Software for the remote control of the *AP602*
MA001 Remote control to control the *AP602*
AN001 Antenna to control the *AP602* through the *MA001*
FL012 Flightcase: Carrying case as a trolley to facilitate the BP012 mobility.
CN012 Loudspeaker cable: 10 m cable with 4 pins speakon connectors (for different configurations please contact us)

OPTIONAL ACCESSORIES

BT002 Bluetooth® wireless technology device for PC
TR014 Tripod with wheelsfor BP012: Can be positioneded at different heights (from 1,0 m to 2,5 m).

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