AMINA

DATASHEET Revision 1.3

ALF50SM

100W RMS, HIGH PERFORMANCE
DISCREET PLASTER-IN SUBWOOFER

SMALL SPACE, BIG BASS

The ALF50SM hidden subwoofer is the perfect fusion of compact design, easy installation, and powerful low-frequency performance. Designed specifically for cavity wall and ceiling installations, it ports sound into the room through a discreet, letterbox-style slot, ensuring deep, impactful bass without intruding on the room's visual aesthetic. Its surface-mounted design allows it to replace a section of plasterboard, fixing directly into studs or joists for a straightforward, efficient installation process. The ALF50SM features a tapered front flange that creates a seamless transition with the surrounding surface, allowing it to blend into the existing décor once plastered over. Despite its small size, the subwoofer delivers a full-bodied audio experience, making it ideal for applications where space is limited but performance cannot be compromised. With its minimal footprint and impressive acoustics, the ALF50SM ensures superior sound while remaining largely hidden from view.

A LEGACY OF INNOVATION

For over two decades, Amina has been at the forefront of hidden audio technology, consistently pushing the boundaries of sound innovation. The ALF50SM continues this proud tradition with subwoofers that provide exceptional audio performance and seamless integration. Like all Amina products, it reflects our commitment to delivering high-quality, invisible audio solutions that enhance the listening experience without compromising on aesthetics.

WHERE THIS TECHNOLOGY SHINES

The ALF50SM excels in discreet audio installations where space is at a premium, and performance cannot be compromised. Its compact size and surface-mounted design make it perfect for environments where traditional subwoofers are impractical, such as small residential spaces, boutique retail locations, or even heritage properties where minimal disruption to the décor is essential.

OUR SOUND, YOUR FINISH

Transform your space with immersive sound, without compromising on aesthetics. Amina's range of discreet subwoofers provide a large sonic footprint without impacting floorspace, and port in to the room via a narrow slot that can be disguised in baseboards or behind furniture. Once blended in, the surface of the subwoofer and surrounding surface can be decorated with any material providing the port slot is not obstructed.

FEATURES AT-A-GLANCE

100W RMS/200W PEAK

Providing a maximum sound pressure of 106dBSPL from 100W at four ohms

DEEP EXTENSION

Providing bass that can be felt as well as heard for fuller, more immersive performance

SONIC ARTICULATION

Fast and defined response providing tight, controlled bass, enhancing depth and clarity

INSTALL FLEXIBILITY

Fixes to studs or joists on 400mm centres, fits in a standard 4" stud wall, replacing a section of drywall

ALF50SM SPECIFICATION

HALF SPACE, QUASI-ANECHOIC, 2.83V @ 1M, NO FILTERS

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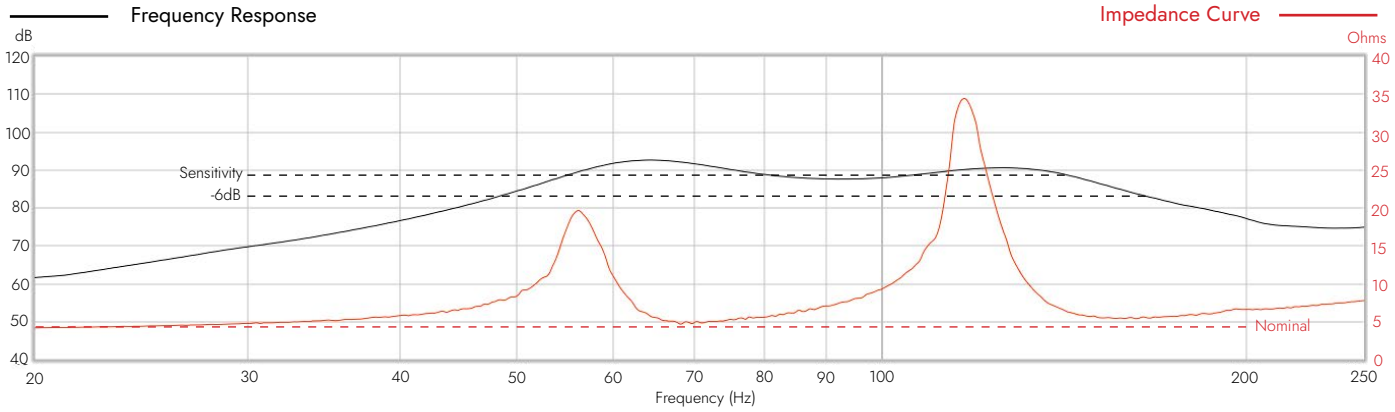
NOMINAL IMPEDANCE	4 Ohms
SENSITIVITY	89dB
RATED MAXIMUM SPL @ 1M	106dB SPL
FREQUENCY RESPONSE (-6dB)	48Hz - 165Hz
NOMINAL COVERAGE PATTERN	Omnidirectional
POWER HANDLING (RMS/PEAK)	100W/200W
RECOMMENDED HIGH PASS FILTER	30Hz (48dB per Oct.)
RECOMMENDED CROSSOVER	80-165Hz

DRIVERS	1x 8" Woofer
DIAPHRAGM DESIGN	Point Source
ENCLOSURE MATERIAL	Baltic Birch Ply
ELECTRICAL CONNECTION	Push Button Spring Terminals
PRODUCT DIMENSIONS	653mm X 409mm X 99mm (25 $^{11}/_{16}$" x 16 $^{1}/_{8}$" x 3 $^{7}/_{8}$")
PRODUCT WEIGHT	9.0kg (19lb 14oz)
MANUFACTURER WARRANTY	3 Years
MOUNTING HARDWARE	All Fixings Included

PERFORMANCE FACTS

HALF SPACE, QUASI-ANECHOIC, 2.83V @ 1M, $^{1}/_{6}$ OCT. SMOOTHING, NO FILTERS



DSP OPTIMISATION

FILTER	FREQUENCY	GAIN	Q / SLOPE
HPF	30Hz		BW48dB/Oct.
LPF	< 165Hz		
PEAK	TBC	TBC	TBC
PEAK	TBC	TBC	TBC

The filters shown in the adjacent table are the initial recommended acoustic filters for the ALF50SM. This represents an EQ starting point for all applications. Further equalisation must be primarily subtractive, and significant boosts in low frequency should be avoided.

ARCHITECTURAL SPECIFICATION

The subwoofer shall be designed to be installed within walls or ceilings. The unit shall be edge-filled and blended into the surrounding surface using plaster, creating a fully concealed, seamless finish other than a discrete, slot-shaped port.

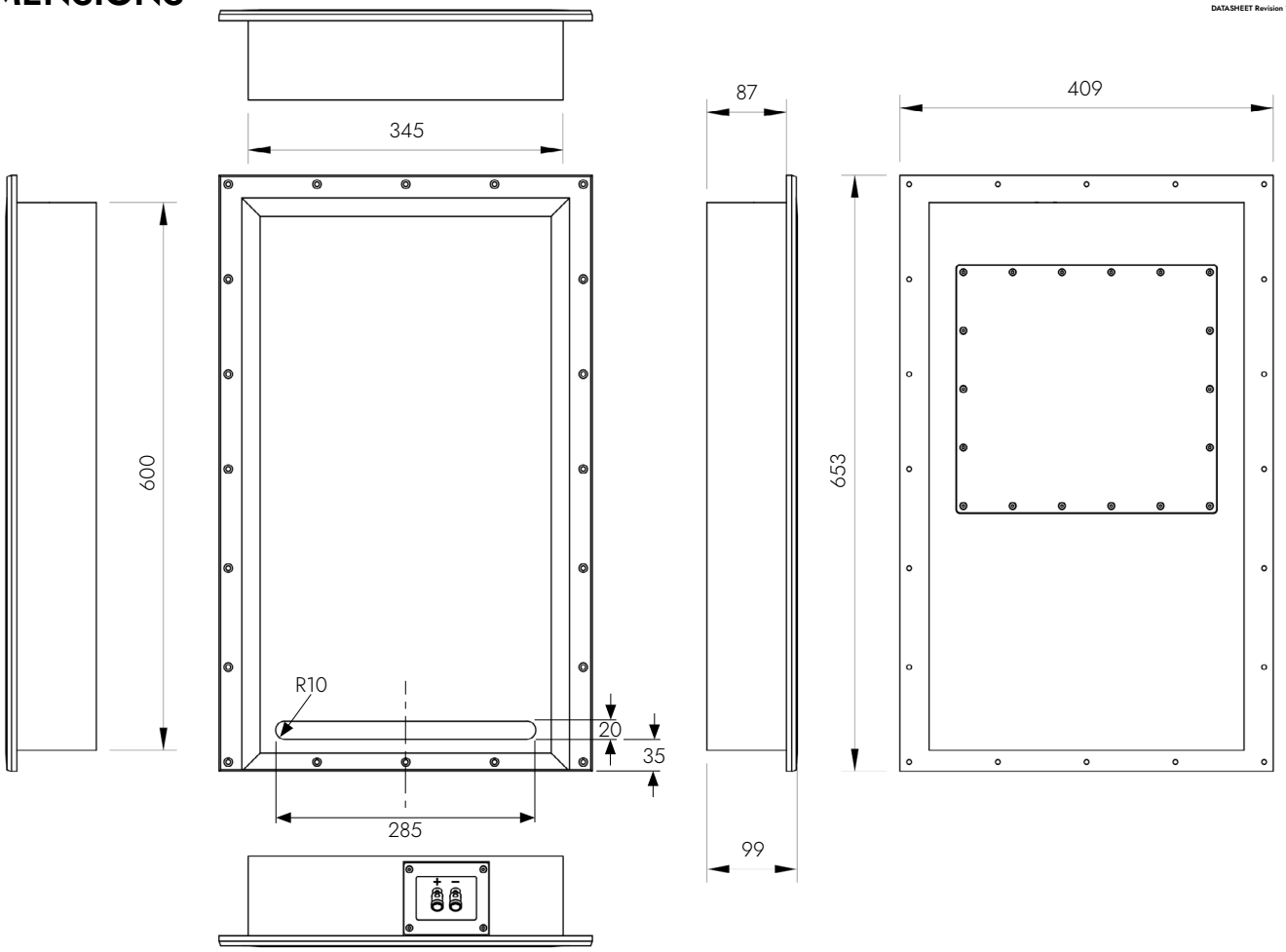
The subwoofer shall feature an 8" diameter driver and shall have a nominal rated impedance of 4 ohms and a frequency response of 48Hz – 165Hz (-6dB). Total power handling shall be 100W RMS. Sensitivity, measured with 2.83 volts input at 1 meter on axis, averaged between 48Hz – 165Hz, shall be 89dB, providing a maximum SPL of 106dB.

The unit shall be equipped with push-button spring terminals for secure and reliable cable connections. External dimensions shall be 653mm x 409mm x 99mm (25 $^{11}/_{16}$" x 16 $^{1}/_{8}$ "x 3 $^{7}/_{8}$"), ensuring compatibility with standard installation spaces within walls or ceilings.

The subwoofer shall be the Amina ALF50SM or an equivalent model, with no other system being acceptable unless the above performance and installation specifications are equalled or exceeded.

Amina Technologies continually engages in research and the development of products. Specifications subject to change without notice. E&OE.

DIMENSIONS



SUBWOOFER PROTECTION

All Amina subwoofers are passive devices requiring external amplification. The amplifier should ideally be equipped with DSP, or alternatively a standalone DSP processor can be used in conjunction with a power amplifier.
The ALF50SM must be effectively protected from being overdriven in application in order to qualify for the manufacturer limited three year warranty: Appropriate voltage limiting and a high-pass filter must be applied using password-protectable DSP.

RoHS Compliant

INSTALLATION SUPPORT

Full and comprehensive installation instructions can be downloaded from the Aminasound.com website, along with a wealth of marketing assets, in-person and online training, animations, CAD file downloads, CPD's and more. Application notes are available covering amplification options, and our support team are on hand to advise around any difficult or unusual install circumstances.

WARRANTY INFORMATION

Amina subwoofers are designed to operate reliably for many years. Correctly installed in accordance with instructions, Amina warranties the loudspeakers against defective materials and workmanship for a period of three years. Full warranty statement available at aminasound.com/warranty.

AMINA
IMMERSIVE INVISIBLE SOUND

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