IC6CLASS-54

CEILING LOUDSPEAKERS

EN54-24 In-ceiling /In-wall High-end Loudspeaker



USER MANUAL

INDEX

1. IMPORTANT REMARK 3
2. IMPORTANT SAFETY INSTRUCTIONS 3
3. IMPORTANT NOTE 5
4. INTRODUCTION 5
5. MAIN CHARACTERISTICS: 5
6. LOCATION, ASSEMBLY AND CONNECTIONS 6
7. PAINT 7
8. TECHNICAL CHARACTERISTICS 8

Coverage angles *9*

Frequency response and impedance vs. frequency *9*

Coverage diagrams *11*

Mounting diagram *13*

1. IMPORTANT REMARK



WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING (If applicable): The terminals marked with symbol of "  " may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

WARNING: An apparatus with Class I construction shall be connected to a mains socket-outlet with a protective earthing connection.

2. IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the apparatus during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Disconnecting from mains: Switching off the POWER switch all the functions and light indicators of the amplifier will be stopped, but fully disconnecting the device from mains is done unplugging the power cord from the mains input socket. For this reason, it always shall remain readily operable.
15. Equipment is connected to a socket-outlet with earthing connection by means of a power cord.
16. The marking information is located at the bottom of apparatus.
17. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.

NOTE: *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.*



WARNING: This product must not be discarded, under any circumstance, as unsorted urban waste. Take to the nearest electrical and electronic waste treatment centre.

NEEC AUDIO BARCELONA, S.L. accepts no liability for any damage that may be caused to people, animal or objects due to failure to comply with the warnings above.

3. IMPORTANT NOTE

Thank you for choosing our Ecler **EN54-24 In-ceiling /In-wall High-end Loudspeaker IC6CLASS-54**!

It is **VERY IMPORTANT** to carefully read this manual and to fully understand its contents before any connection in order to maximize your use and get the best performance from this equipment.

To ensure optimal operation of this device, we strongly recommend that its maintenance be carried out by our authorised Technical Services.

All ECLER products are covered by warranty, please refer to www.ecler.com or the warranty card included with this product for the period of validity and conditions.

4. INTRODUCTION

ECLER IC6CLASS-54 is a low and high impedance 2-way loudspeaker which features a design in accordance with EN54-24 standard (Fire detection and fire alarm systems, Voice alarms - Loudspeakers), including a back can, ceramic connection terminals, thermal fuse and Internal FR wiring. It integrates a very careful and efficient selection of components (6" woofer + 1" tweeter), together with a mechanical design that provide a high-quality audio ("Hi-Fidelity" profile sound) and a very fast installation process, just using a basic set of tools.

5. MAIN CHARACTERISTICS:

- EN54-24 certified
- 2-ways in-ceiling/in-wall loudspeaker
- High impedance built-in transformer, allowing for 70V / 100V line applications (5 different power tappings available)
- Low/high impedance power selection accessible from the front panel, once the loudspeaker is already installed in the ceiling
- 6" Kevlar® woofer
- 1" Silk dome (ACCW) tweeter
- Aluminium front grill
- Back can included
- Ceramic connection terminals
- Thermal fuse
- Internal fireproof wiring
- Available in white (RAL9003) finish
- Fast installation procedure using a basic set of tools

6. LOCATION, ASSEMBLY AND CONNECTIONS

For proper product installation, circular holes have to be made in selected places and the appropriate wiring has to be prepared for each unit.

Here are the steps to follow for proper installation:

1. Make the mounting hole in the drop ceiling, after marking its outline with the supplied cutting template
2. Remove the connection box using a slight pressure on the back can of the speaker.
3. Pierce the rubber grommet of the connection box, passing the end of the speaker connection cable through.
4. Strip the two wires of the speaker cable end and connect them to a screw terminal inside the connection box, respecting the polarity between the speaker (IN + and -), the other speakers of the system and the amplifier feeding them.

   Note: *there are two grommets and two connectors inside the connection box, connected in parallel to link another speaker if necessary.*

5. Reinsert the connection box into the back can of the speaker.
6. Insert the speaker's frame into the hole, taking care that the 3 revolving fasteners remain in the retracted position
7. Tighten each of the 3 screws accessible from the front of the unit. The revolving fasteners rotate and at the end of the tightening, the frame is fixed at its final position

8. Using a flat screwdriver, set one of the following taps with the power selector on the front of the speaker:

Tap #1	12Ω - 30W	
	Connection to a 70V line	**Connection to a 100V line**
Tap #2	1,5 W	3 W
Tap #3	3,7 W	7,5 W
Tap #4	7,5 W	15 W
Tap #5	10 W	20 W
Tap #6	15 W	30 W

9. Test the operation by powering up the sound system.
10. Finally, install the grill on the speaker frame and turn it slightly so that the revolving fasteners of the frame and the grille are fitted together. During assembly, hold the grate by the edges (not the perforated, centre part) to avoid damaging it. The installation must guarantee compliance with section 5.18 (IP21C) of the EN54 standard: 24.

NOTE: impedance and power values indicated are exposed according the EN54 standard. However, IC6CLASS-54 can be considered as a 16 Ω and 75WRMS loudspeaker in use when connected to low impedance lines.

7. PAINT

IC6CLASS-54 is ready to be painted and thus can match any cosmetic criteria of the environment in which it is installed.

Once the installation is complete, the front grill is the only visible part of the unit, simply paint it to get the desired result. Paint it carefully, avoiding excess paint from clogging the small holes in its central area.

8. TECHNICAL CHARACTERISTICS

NOTE: specifications indicated below are exposed according the EN54 standard. However, IC6CLASS-54 can be considered as a 16 Ω and 75WRMS loudspeaker in use when connected to low impedance lines.

IC6CLASS-54

System	
Effective frequency range	75 Hz-20 kHz
Coverage angle	70°x80° (HxV)
Power handling	30 W RMS / 120 W Peak
Sensitivity	84 dB (1W/1m)
Maximum SPL	99 dB
Power options	100V: 30W / 20W / 15W / 7,5W / 3W / 12 Ω
	70V: 15W / 10W / 7,5W / 3,7W / 1,5W / 12 Ω
Recommended amplifier power	60 W RMS
Transducers	
Ways	2
Low frequency driver	6.5" Kevlar woofer
High frequency driver	1" Silk dome (ACCW) tweeter
Nominal impedance	12Ω
Physical	
Connection type	Ceramic terminals
Power type selector	Built-in transformer
Installation options	In-ceiling, in-wall
Certifications	EN54-24
Grille material	Aluminium
External diameter	270 mm / 10.63"
Internal diameter	224,5 mm / 8.84"
Recommended cut out diameter	227 mm / 8.93”
Required depth	175 mm / 6.89”
Finished color	White (RAL 9003)
Ceiling thickness	No limit min
	40mm / 1.57" max
Included accessories	Back can included
Weight	3.1 kg / 6.83 lb

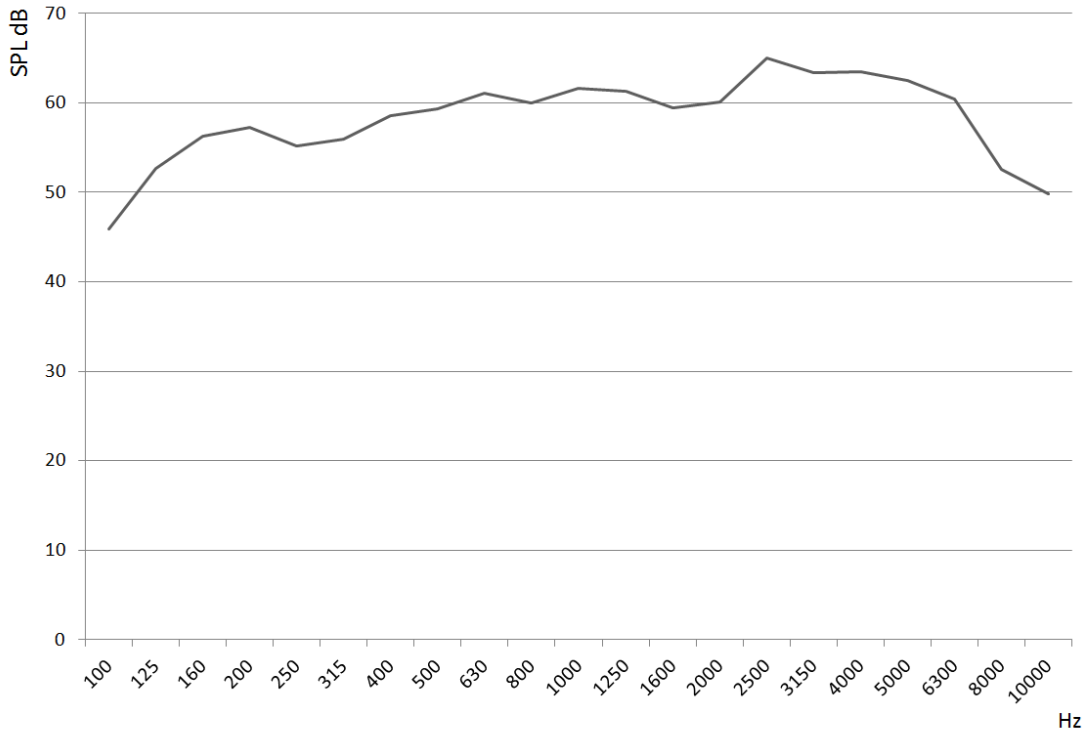
Coverage angles

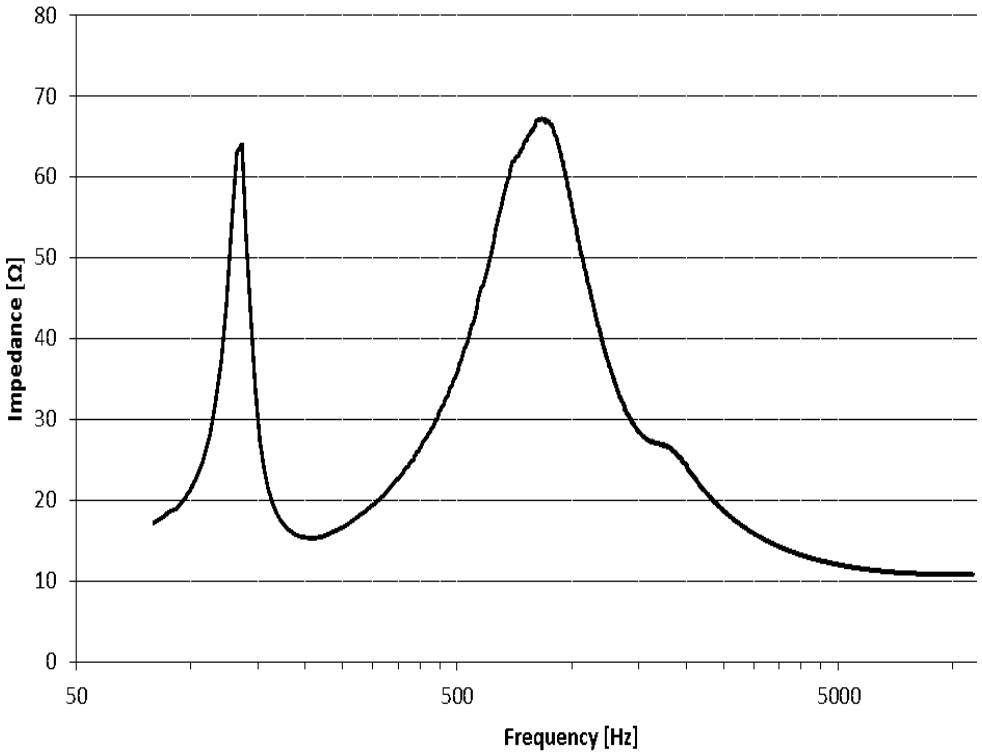
Max. angle that shows less than 6dB loss from maximum radiation direction:

Freq (Hz)	Up	Down
500	80º	80º
1000	80º	80º
2000	80º	80º
4000	40º	50º

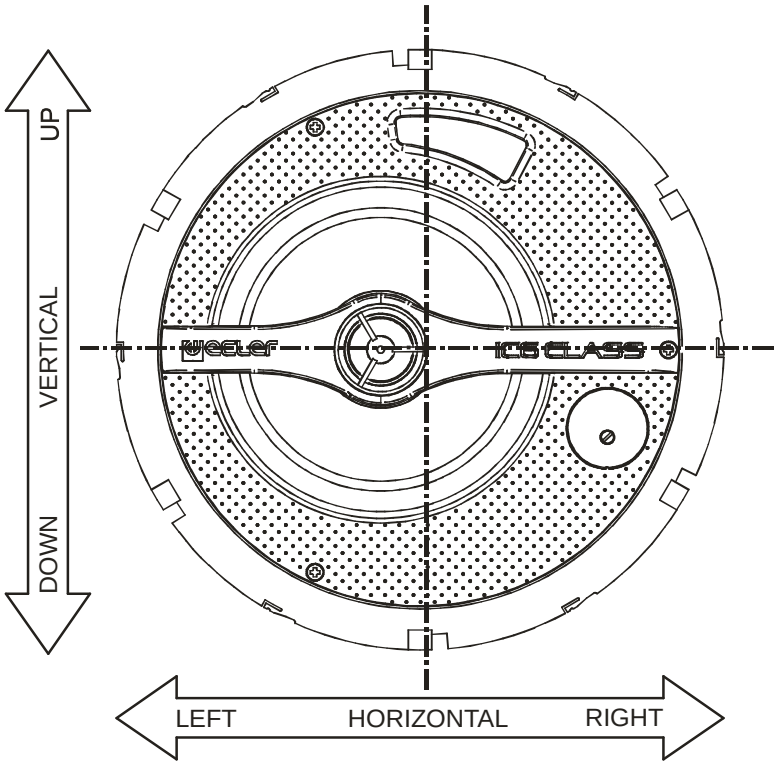
Freq (Hz)	Left	Right
500	80º	80º
1000	70º	70º
2000	70º	70º
4000	60º	60º

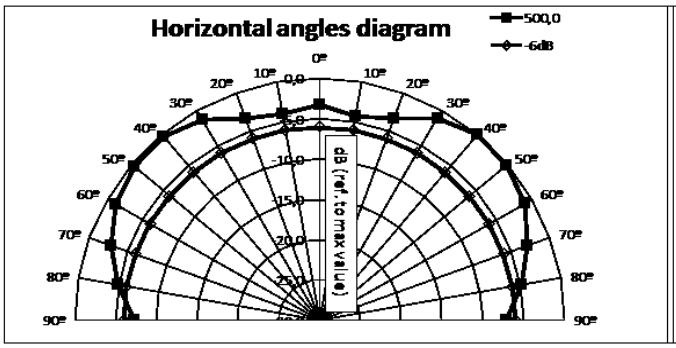
Frequency response and impedance vs. frequency

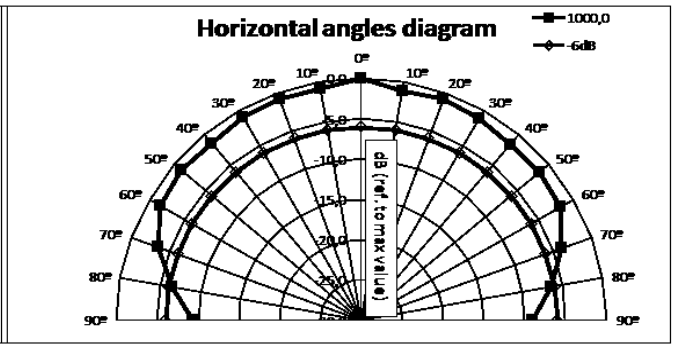


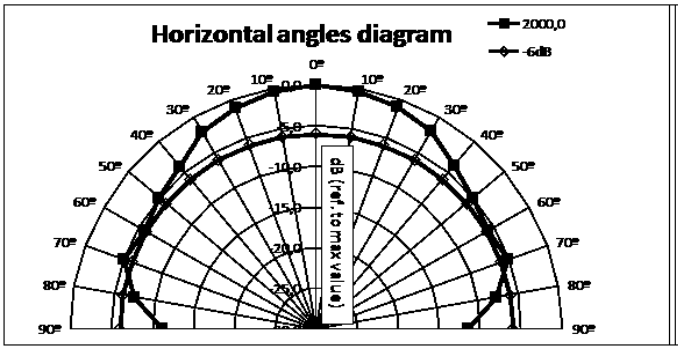

80
70
60
50
40
30
20
10
0
Impedance [Ω]
50
500
5000
Frequency [Hz]

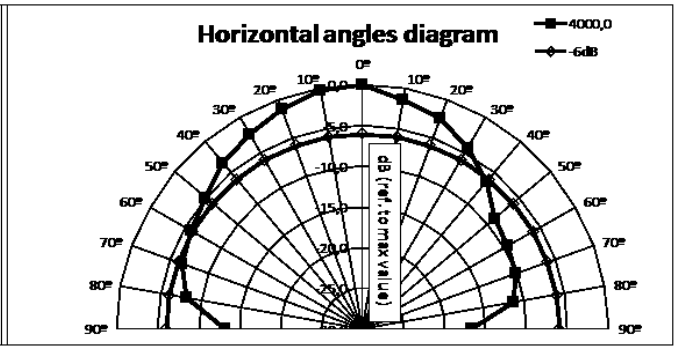
Coverage diagrams

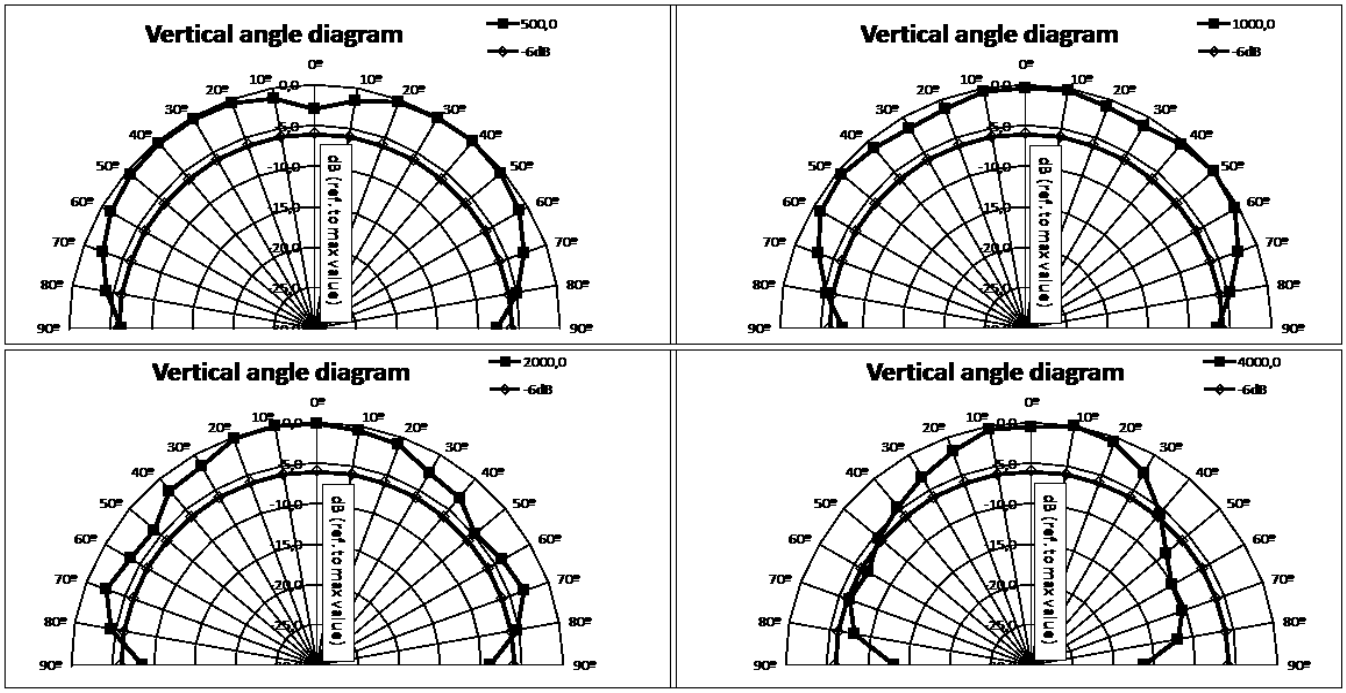




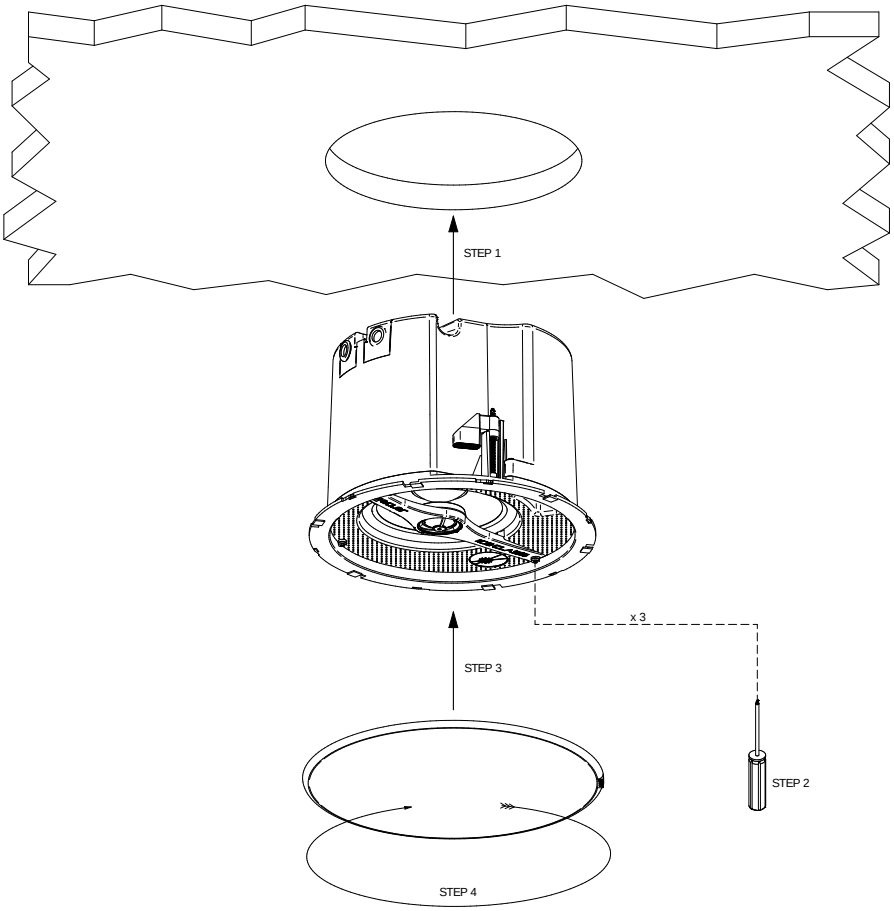


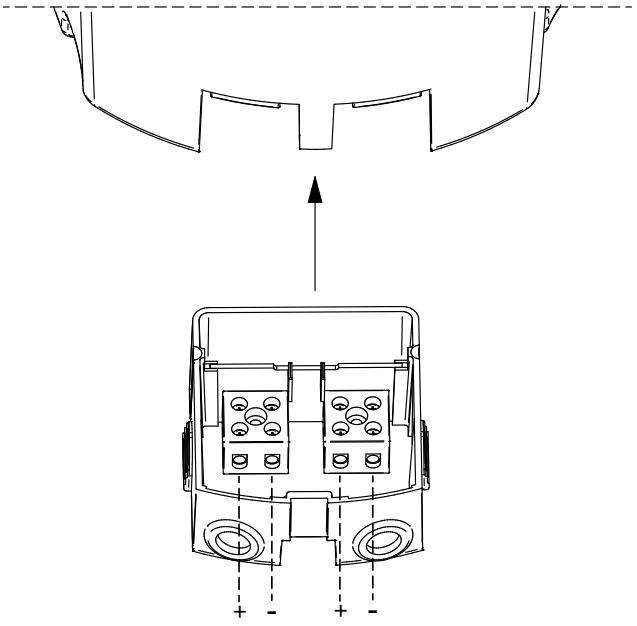





Vertical angle diagram
500,0
-6dB
1000,0
2000,0
4000,0
dB (ref. to max value)

Mounting diagram





All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical queries contact your supplier, distributor or complete the contact form on our website, in Support / Technical requests.

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