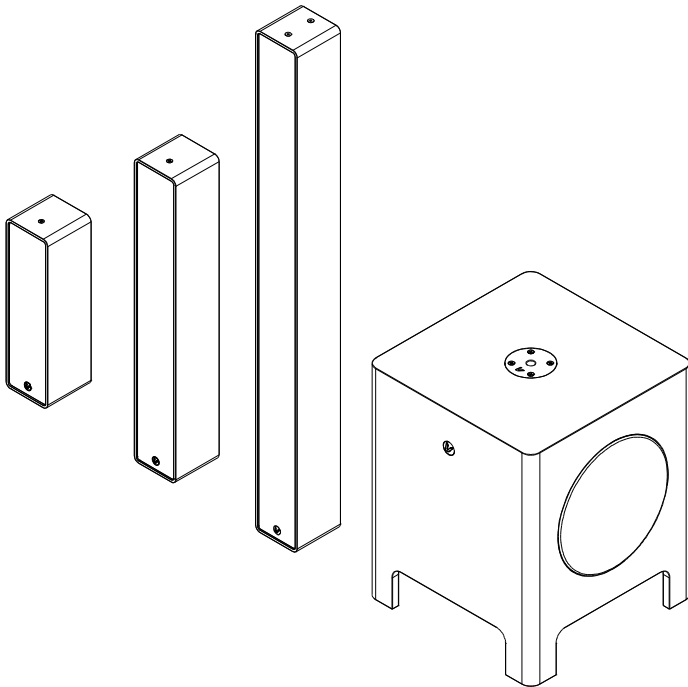




## AMBIENCE SERIES



**COL4.3/COL4.3B**  
**COL8.3/COL8.3B**  
**COL16.3/COL16.3B**  
**SUB210S/SUB210SB**

**User's Manual**

The AMBIENCE loudspeakers series feature a unique design with a high quality finishing and a superior sound performance.

AMBIENCE is the ideal series to provide an exquisite and powerful sound to a wide range of movable and fixed installation applications such as on fashion shops or retail stores, luxurious KTVs, high-end bars and clubs, auditoriums, theaters or even home cinemas.

The AMBIENCE series includes three loudspeaker models, the COL4.3/COL4.3B, COL8.3/COL8.3B and COL16.3/COL16.3B columns and the SUB210S/SUB210SB subwoofer. ( B means black loudspeaker )

The COL4.3, COL8.3 and 16.3 columns are composed of four, eight and sixteen 3" full range neodymium drivers respectively. One of the major benefits of the COL speakers is the narrow vertical angle of its sound beam. This feature is very helpful to reduce undesired ceiling reflections and have a better distribution of the sound pressure. Additionally, the vertical aperture angle of its sound beam can be adjusted to precisely focus it on the audience. The COL speakers provide a crystal clear and free of distortion mid and high frequencies particularly appropriate for vocals sound reproduction.

The SUB210S is composed of two 10" drivers and comes in a small cabinet form factor. It features asymmetrical position of the drivers and reflex ports placed on the bottom side of the cabinet. This innovative design cancels any cabinet vibration and distortion, translating to an exceptionally clean, deep, natural and punchy bass.

All AMBIENCE loudspeaker cabinets are made of 18mm MDF to improve its sound performance by making its structure very rigid

## 2.1. COL4.3/COL4.3B

### Acoustics

Power: 120W AES, 240W Program, 480W Peak  
Impedance: 8Ω  
Sensitivity: 101dB 1W/1m half space  
Max. SPL @1m: 122dB Continuous, 125dB Program, 128dB Peak  
Frequency response: 170Hz-13.5kHz (-6dB)  
Horizontal directivity: 120° ±30° 800Hz-5kHz, 60° ±10° 6kHz-16kHz  
Vertical directivity: 20° ±5° 2.5kHz-8kHz, 40° ±25° 1kHz-13.5kHz

### Speaker components

4 x 3" Full Range European Neodymium driver

### Connectors

1x Euroblock (Phoenix connector) 42A rated with locking screws

### Cabinet

CNC made 12mm MDF, smooth non glossy white painting

### Mounting

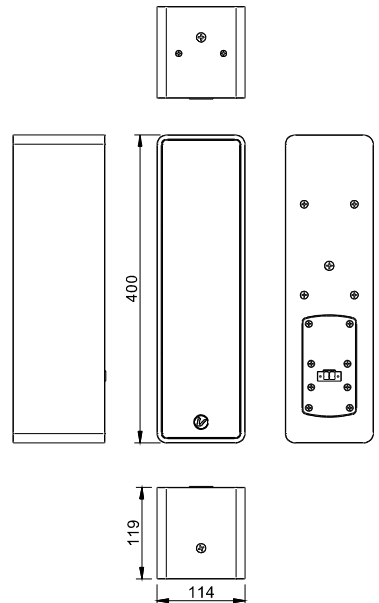
Flying: • 2 M6 insertion points on top and rear for eye bolts  
Wall: • 4 M5 insertion points on rear face for swivel-tilting wall/pole bracket  
2 M6 insertion points on top and bottom for "U" bracket  
Pole: • 2 M4 insertion points on bottom face for pole adaptor

### Size/Package Size:

W400xH119xD114/W500xH170xD175

### Net Weight/Gross Weight

3kg/3.8kg



## 2.2. COL8.3/COL8.3B

### Acoustics

Power: 240W AES, 480W Program, 960W Peak  
Impedance: 4Ω  
Sensitivity: 103dB 1W/1m half space  
Max. SPL @1m: 127dB Continuous, 130dB Program, 133dB Peak  
Frequency response: 10° setting: 180Hz-16kHz (-6dB)  
20° setting: 180Hz-13kHz (-6dB)  
Horizontal directivity: 120° ±30° 800Hz-5kHz, 50° ±15° 6kHz-16kHz  
Vertical directivity: 10° setting: 10° ±5° 2kHz-16kHz  
20° setting: 20° ±5° 1.3kHz-16kHz



### Speaker components

8 x 3" Full Range European Neodymium driver

### Connectors

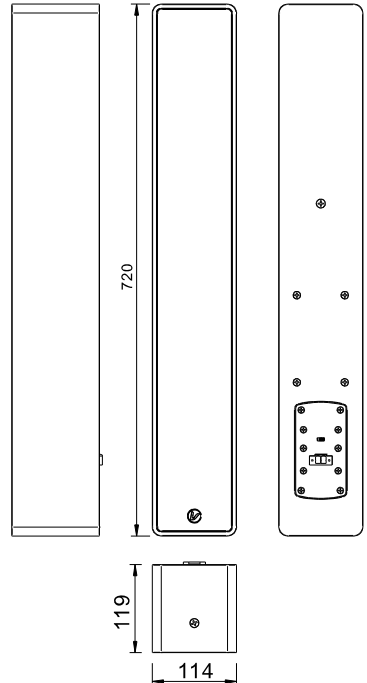
1x Euroblock (Phoenix connector) 42A rated with locking screws

### Cabinet

CNC made 12mm MDF, smooth non glossy white painting

### Mounting

Flying: •2 M6 insertion points on top and rear for eye bolts  
Wall: •4 M5 insertion points on rear face for swivel-tilting wall/pole bracket  
2 M6 insertion points on top and bottom for "U" bracket  
Pole: •2 M4 insertion points on bottom face for pole adaptor



### Size/Package Size:

W720xH119xD114/W810xH170xD175

### 2.3. COL16.3/COL16.3B

#### Acoustics

Power: 480W AES, 960W Program, 1920W Peak  
Impedance: 4Ω  
Sensitivity: 104dB 1W/1m half space  
Max. SPL @1m: 131dB Continuous, 134dB Program, 137dB Peak  
Frequency response: 15° setting: 180Hz-13kHz (-6dB)  
30° setting: 180Hz-14kHz (-6dB)  
Horizontal directivity: 120° ±30° 800Hz-5kHz, 50° ±15° 6kHz-16kHz  
Vertical directivity: 15° setting: 15° -0+10° 600Hz-9kHz  
30° setting: 30° ±5° 400Hz-14kHz

#### Speaker components

16 x 3" Full Range European Neodymium driver



#### Connectors

1x Euroblock (Phoenix connector) 42A rated with locking screws.

#### Cabinet

CNC made 12mm MDF, smooth non glossy white painting

#### Mounting

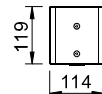
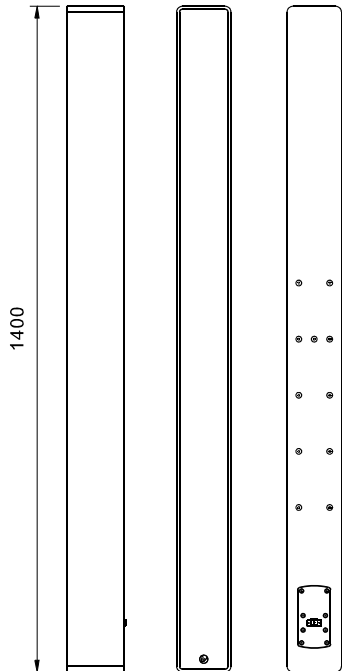
Flying: •2 M6 insertion points on top and rear for eye bolts  
Wall: •10M6 insertion points on rear face for Wall Bracket  
•2 M6 insertion points on top and bottom for "U" bracket (Horizontal application)

#### Size/Package Size:

W1400xH119xD114/W1490xH210xD200

#### Net Weight/Gross Weight

10.4kg/12.2kg



## 2.4. SUB210S/SUB210SB

### Acoustics

Power: 800W AES, 1600W Program, 3200W Peak  
Impedance: 4Ω  
Sensitivity: 96dB 1W/1m half space  
Max. SPL @1m: 125dB Continuous, 128dB Program, 131dB Peak  
Frequency response: 38Hz-500Hz (-6dB)  
Directivity: Omni directional in the usable range

### Speaker components

2 x 10" Subwoofer European Ferrite driver

### Connectors

1x Euroblock (Phoenix connector) 42A rated with locking screws

### Cabinet

CNC made 18mm MDF, smooth non glossy white painting

### Mounting

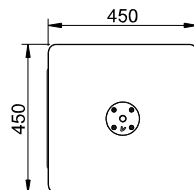
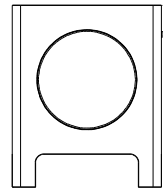
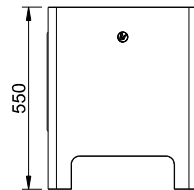
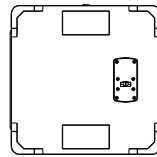
M20 threaded insert on top for pole assembly

### Size/Package Size:

W450xH550xD450/W660xH590xD560mm

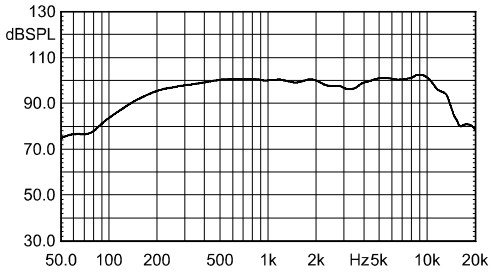
### Net Weight/Gross Weight

36kg/41kg

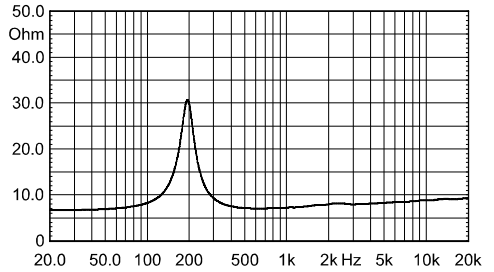


## 2.4. CURVES

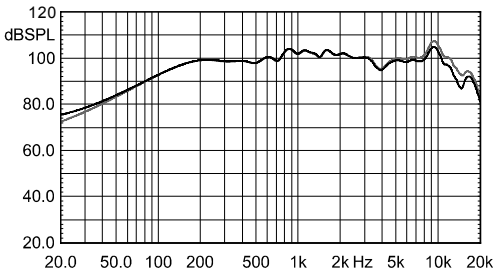
COL4.3 SPL @4m scaled to 1W/1m half space



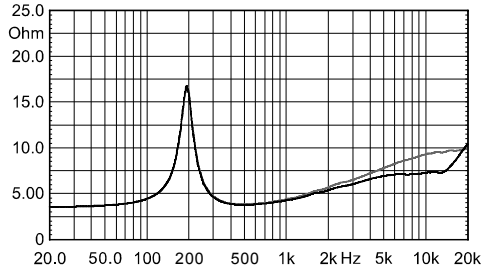
COL4.3 Impedance



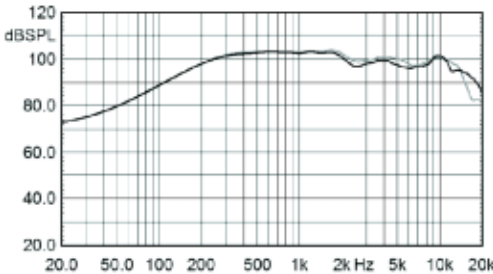
COL8.3 SPL @4m scaled to 1W/1m half space  
Grey: 10° setting, Black: 20° setting



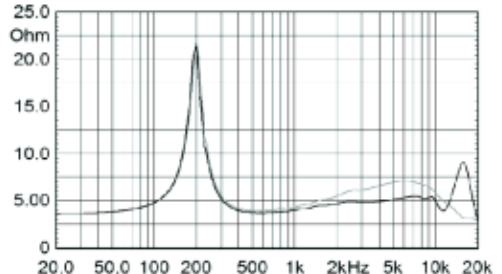
COL8.3 Impedance.  
Grey: 10° setting, Black 20° setting



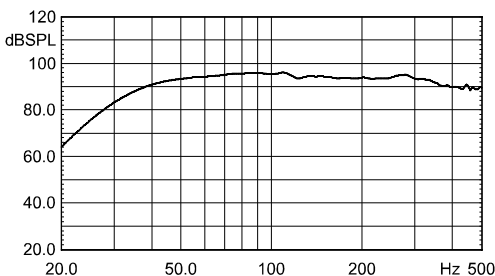
COL16.3 SPL @4m scaled to 1W/1m half space  
Grey: 15° setting, Black: 30° setting



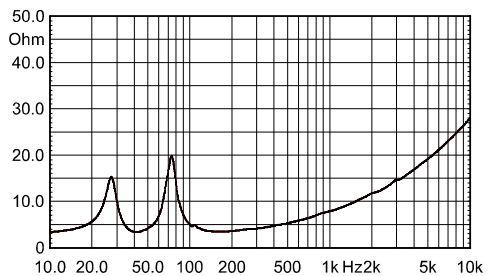
COL16.3 Impedance  
Grey: 15° setting, Black: 30° setting



SUB210S SPL @2m scaled to 1W/1m half space



SUB210S Impedance

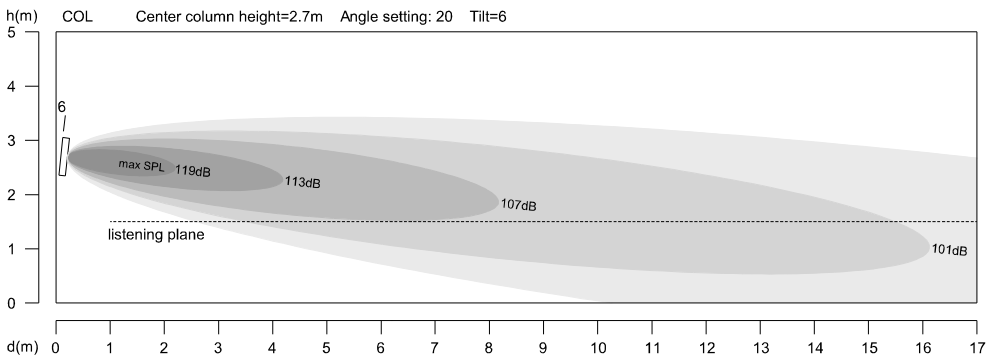
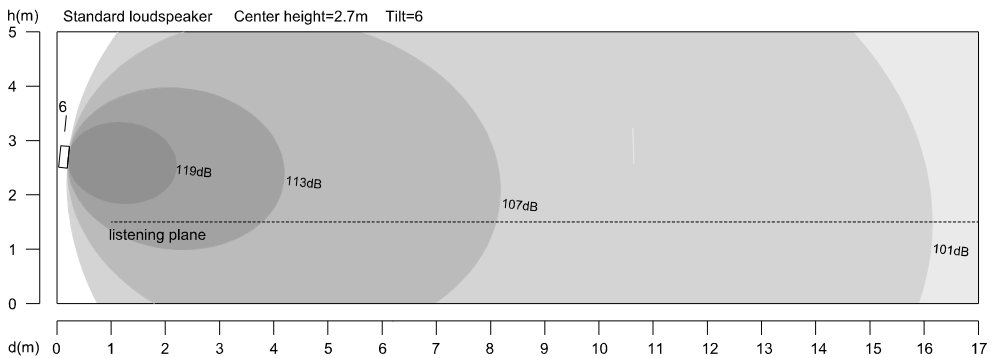


## COL4.3 AND COL8.3 PLACEMENT

The COL speakers can cover a big audience area with small variations in SPL by installing them with the appropriate height and tilt angle.

The example diagrams below compare a COL with a standard point-source speaker in terms of SPL coverage on a certain listening plane. On the 3.5m to 15m distance range the SPL of the COL goes from 107dB to 101dB whereas the SPL of the point-source speaker goes from 113dB to 101dB. This means a variation of only 6dB for the COL but of 12dB for the point-source speaker.

When adjusting the height and tilt angle of the COL speakers to get a high and smooth SPL coverage over a certain area must consider the sound is emitted from the center of the column, not along its front side.



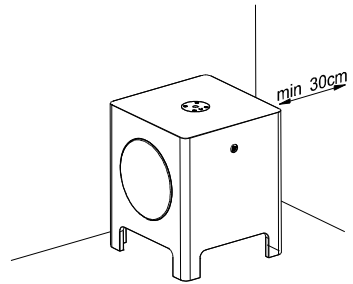
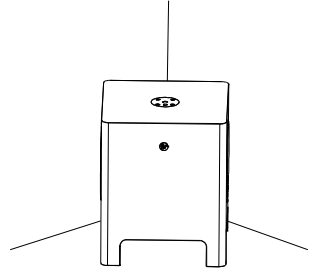


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## SUB210S PLACEMENT

The SUB210S has an innovative design with its drivers symmetrically positioned in opposite sides of the cabinet and the bass reflex ports located at the bottom of the cabinet. Due to this particular design of the SUB210S special requirements must be taken into account when choosing a location for it.

If it's intended to place the SUB210S with any of the sides containing a driver facing a wall, a minimum clearance of 30cm must be allowed from that cabinet side to the wall. It's as well acceptable to place the SUB210S with any of its edges very close to a wall as long as the cabinet side and the wall form a 45 angle. In any case free air circulation must be allowed through the lower openings of the cabinet as the bass reflex ports are located on its bottom surface.




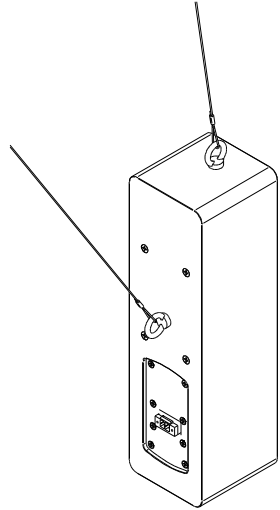
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## 4. INSTALLATION OPTIONS

### 4.1. Suspension Cables

To install the COL speakers with suspension cables, replace the two flat head M6 screws located on the top and back sides of the speaker with M6 eye bolts. Adjust the tilt angle by modifying the suspension cables length. The suspension cables and M6 eye bolts are not supplied.

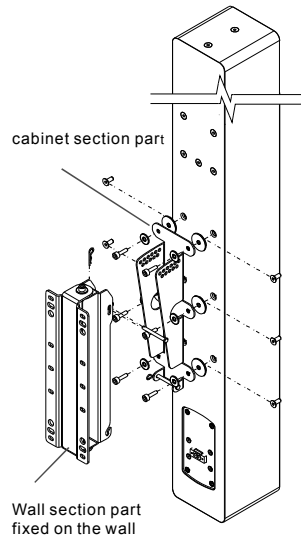
 The maximum allowed length of the eye bolts thread is 20mm for the COL4.3 and 40mm for the COL8.3. Longer screws can damage internal parts of the speaker.



### 4.2. Wall Bracket

The Wall Bracket is available as an optional accessory for the COL speakers and allows for a two axis adjustment of the sound beam direction.

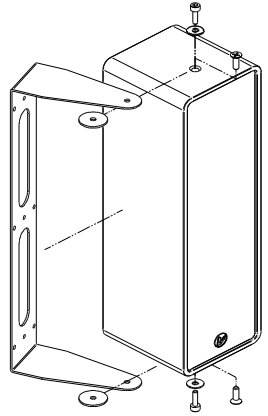
To install the Wall Bracket remove the four flat head screws from the back of the COL speaker and mount on it the cabinet section of the bracket using the screws supplied with it. Attach the wall section of the bracket with the appropriate hardware (not included with the bracket). Mount the cabinet section of the bracket onto its wall section, adjust the swivel angle and lock it with the supplied M6 locking screw and washer. Release the tilt locking pin, adjust the tilt angle and lock it again by inserting the locking pin in the appropriate openings.



### 4.3. Swivel Bracket

The Swivel Bracket is available as an optional accessory for the COL speakers and allows for a single axis (pan) adjustment of the sound beam direction. The Swivel Bracket is optimal for those fixed installations not requiring adjustment of the tilt angle.

To install the Swivel Bracket attach it to the wall with the appropriate hardware (not included with the bracket). Remove the two flat head M6 screws located on top and bottom sides of the column. Mount the column on the bracket, place the supplied rubber discs between column and bracket, and secure it with the supplied screws and washers.

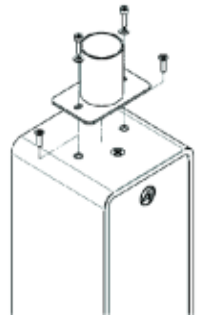


When using the Wall Bracket or the Swivel Bracket is recommended to install a safety cable by attaching it to any available M6 insert point.

### 4.4 Pole Mount

The 35mm Pole Mount is supplied with the COL speakers.

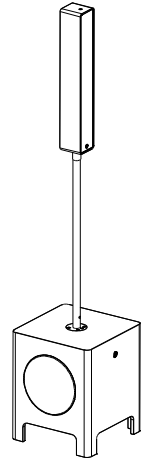
To install the Pole Mount, remove the two flat head M4 screws located at the bottom side of the COL speaker and attach the Pole Mount to the speaker with the supplied screws and washers.



## 4.5 Pole

The 35mm Pole is available as an optional accessory and allows to place the COL speakers over the SUB210S sub-woofer. To install the Pole screw its threaded end into the threaded insert located on the top surface of the SUB210S. We have two kinds of color of the optional pole for chose one is sliver one is black. The COL speakers must be placed on to the Pole by means of the supplied Pole Mount or the optional Wall Bracket .

The following table shows the heights obtained at the COL speaker central point when installed over the SUB210S by means of the Pole .The heights is the most suitable listening position for this series speaker which can let it have good performance in various situation.



	<b>COL4.3</b>	<b>COL8.3</b>	<b>COL16.3</b>
<b>Height</b>	1.66m	1.82m	2.16m



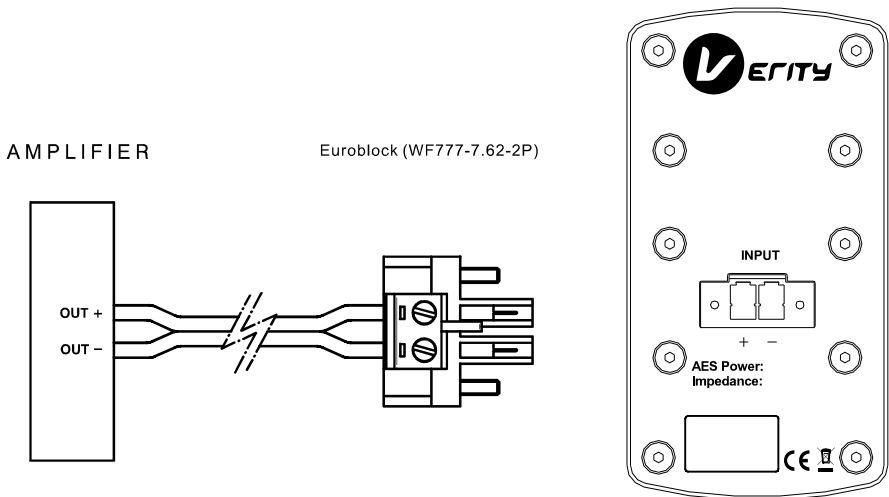
For an optimum sound performance of the COL speakers its cabinet must be completely sealed during operation. Make sure all threaded insert points have a screw into it in order to avoid any air leakage.

## 5. WIRING

The AMBIENCE loudspeakers use a high current Euroblock connector for the signal input.

When wiring an AMBIENCE loudspeaker to a power amplifier use a cable with the appropriate gauge for its length. As a general rule use a 2x2.5mm<sup>2</sup> cable for lengths up to 10m and a 2x4mm<sup>2</sup> cable for longer lengths.

Make sure the positive and negative poles of the power amplifier signal output connector are respectively connected to the positive and negative poles of the AMBIENCE loudspeaker signal input connector.



The signal input connector of the AMBIENCE loudspeakers feature two locking screws to avoid accidentally unplugging it.

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## 6. RECOMMENDED AMPLIFIER POWER

The following table shows the recommended amplifier power for the AMBIENCE loudspeakers.

<b>AMBIENCE loudspeaker</b>	<b>Recommended Power</b>
COL4.3/COL4.3B	250W / 8Ω
COL8.3/COL8.3B	500W / 4Ω
COL16.3/COL16.3B	1000W / 4Ω
SUB210S/SUB210SB	1600W / 4Ω

Verity Audio reserves the right to make any changes to the product specifications without prior notice.  
Final specifications to be found in the user manual.

