



# Installation Manual (preliminary)

## RL 180 NT EVAC 2-Way Directional Speaker

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### 1. Safety Precautions

- Before starting to install the RL 180 NT EVAC loudspeaker please read these instructions carefully.
- Keep this instructions for future reference
- The RL 180 NT EVAC speakers are intended to be used in voice alarm systems with a 100 V line speaker distribution.
- Installation work should only be done by a certified installer.
- Only use accessories and mounting accessories specified by the manufacturer.



This symbol indicates a possible presence of uninsulated dangerous voltages that may constitute a risk of electric shock.



This symbol indicates the presence of important safety instructions in this manual.

<b>EN 54-24</b>	Certified to the European Standard EN 54-24: 2008 Loudspeaker for voice alarm systems
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#### Manufacturer

LB Lautsprecher und Beschallungstechnik GmbH · Steinerstr. 15 k · 81369 München · Tel. +49 89 1893 109-0 Fax -29 · [www.lb-lautsprecher.de](http://www.lb-lautsprecher.de) · [info@lb-lautsprecher.de](mailto:info@lb-lautsprecher.de)

## 2. General Description

The RL 180 NT EVAC is a 2-way cylinder speaker with a cardioid dispersion pattern and high efficiency for use in voice alarm systems. The speakers may be suspended from the ceiling or mounted on wall/ceiling with the WH 180 bracket (to be ordered separately). Due to its broad forward dispersion angle and highly reduced backward radiation it is well suited for even coverage of a listening area with sufficient intelligibility even in reverberant rooms. The RL 180 NT EVAC is certified according to the European standard EN 54-24: 2008.

## 3. Power Setting and Wiring

The RL 180 NT EVAC comprises a 4-pole plug to select the speaker power. Use COM and one of the 3 taps to connect the speaker to the speaker line.

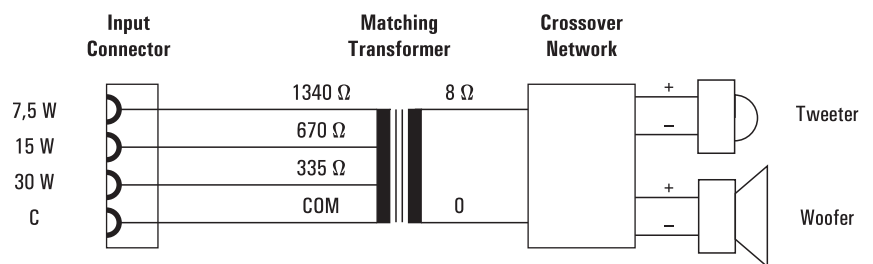


Turn the amplifier down before wiring to avoid electric shock.

Connector on the Rear (without back cover)



COM 30 W 15 W 7.5 W



RL 180 NT EVAC Wiring Diagram

## 4. Box Content

- Speaker
- M8 eye bolt, lock washer and nut
- Installation manual



## 5. Optional Accessories

For on wall and on ceiling mounting with adjustable speaker direction the WH 180 Mount is available.



WH 180 Bracket with safety rope

## Manufacturer

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## 6. Installation

### 6.1 RL 180 NT-EVAC suspended from the ceiling with a steel rope

The procedure to install the speakers suspended from the ceiling goes as follows:

1. Create the main suspension point and a second point for the safety rope
2. Prepare the 2 steel ropes and the speaker cable with appropriate length
3. Remove the back cover from the speaker and fix the eye bolt to it using the lock washer and nut. Seal the joint with thread-locking fluid water-tight.
4. Pass the cable through the gland and connect the speaker feed to the 4-pole plug. Use C (COM) and one of the 3 different taps (7,5, 15 or 30 watts).  
Then tighten the cable gland leaving enough free cable to connect the plug to the speaker terminal and fix the back cover to the speaker again.

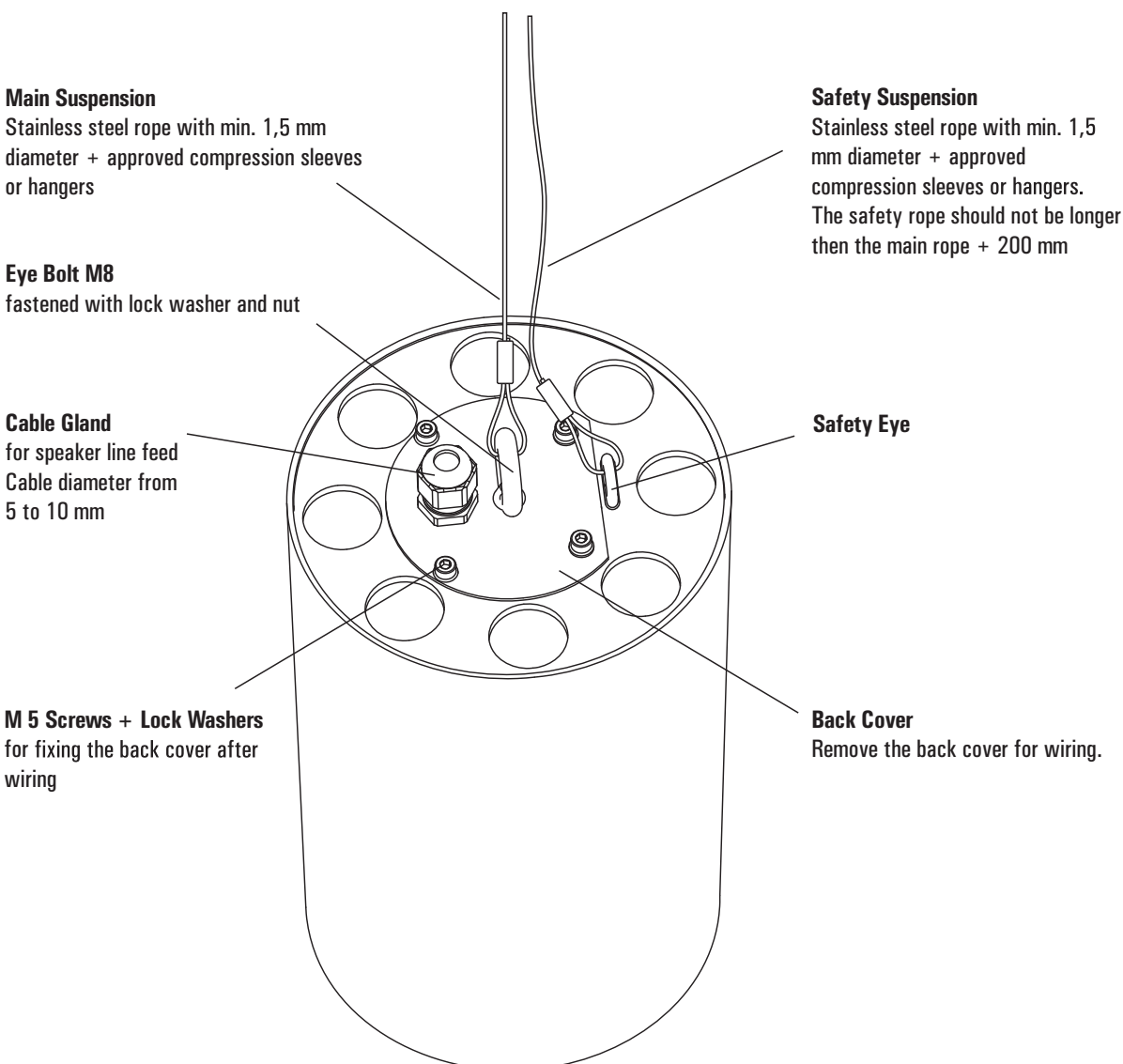


- Turn the amplifier down before wiring to avoid electric shock.
- Make sure all screws of the back cover are firmly fastened and the gland fits tightly around the cable jacket. A leaky gland affects the enclosure protection.



- Seal the eye bolt joint with thread-locking fluid water-tight.

5. Fix the main suspension rope to the speaker eye bolt and the ceiling anchor with approved compression sleeves or hangers.
6. Fix the safety rope to the safety eye of the speaker and the ceiling anchor with approved compression sleeves or hangers.  
The safety rope should be a little longer than the main rope to avoid a tilt of the speaker, but not more than the main rope + 200 mm
7. both ropes + cable may be bundled with a textile hose



#### Manufacturer

## 6. Installation

### 6.2 RL 180 NT-EVAC suspended from the ceiling with a threaded rod

The procedure to install the speakers suspended from the ceiling with a threaded rod goes as follows:

1. Create the main suspension point and a second point for the safety
2. Prepare rod, safety rope and speaker cable with appropriate length
3. Remove the back cover from the speaker and fix the M8 threaded rod to it using lock washers and nuts. Use thread-locking fluid to seal the joint water-tight.
4. Pass the cable through the gland and connect the speaker feed to the 4-pole plug. Use C (COM) and one of the 3 different taps (7,5, 15 or 30 watts).  
Then tighten the cable gland leaving enough free cable to connect the plug to the speaker terminal and fix the back cover to the speaker.



- Turn the amplifier down before wiring to avoid electric shock.
- Make sure the screws of the back cover are firmly fastened and the gland fits tightly around the cable jacket.  
A leaky gland affects the enclosure protection.



- Use thread-locking fluid to seal the rod joint water-tight.

5. Fix the threaded rod to the ceiling point using lock washers and nuts
6. Fix the safety rope to the safety eye of the speaker and the ceiling anchor with approved compression sleeves or hangers.  
The safety rope should not be tensioned to avoid a tilt of the speaker, but it should not be longer than the main suspension + 200 mm
7. Rod, rope and cable may be bundled with a textile hose

#### Main Suspension

Threaded rod M8, fastened with lock washers and nuts. Seal the inlet with thread-locking fluid water-tight

#### Safety Suspension

Stainless steel rope with min. 1,5 mm diameter + approved compression sleeves or hangers.  
The safety rope should not be longer than the main suspension + 200 mm

#### Cable Gland

for speaker line feed.  
Cable diameter from 5 to 10 mm

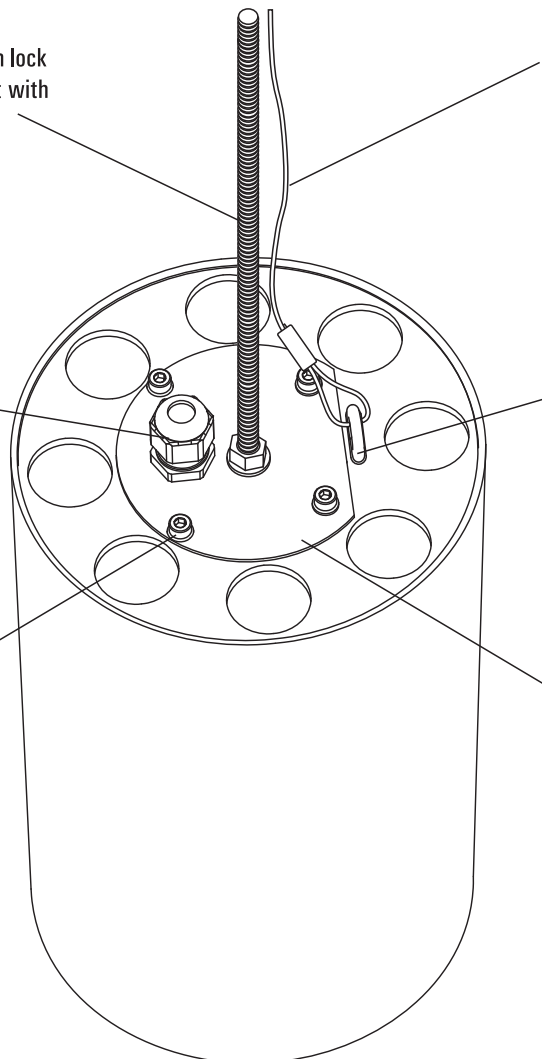
#### Safety Eye

#### M 5 screws + Lock Washers

for fixing the back cover after wiring

#### Back Cover

Remove the back cover for wiring.



#### Manufacturer

## 6. Installation

### 6.3 RL 180 NT-EVAC with WH 180 Mount on wall or on ceiling

The procedure to install the speakers with WH 180 mounts goes as follows:

1. Mount the mounting plate on the wall or ceiling with with appropriate dowels and/or screws. Mount the speakers only to a structure that can support the weight of the speaker and mount.
2. Remove the back cover from the speaker and fix the eye bolt to it using the lock washer and nut. Seal the joint with thread-locking fluid water-tight. The eye bolt is not used as a mounting point but to close the rear cover water-tight.
3. Fix the L-bracket to the speaker and the mounting plate with little force so you can adjust the speaker direction using the M10 screws and the toothed lock washers.
4. Take the back cover, pass the cable through the gland with appropriate length and connect the speaker feed to the 4-pole plug. Use C (COM) and one of the 3 different taps (7,5, 15 or 30 watts). Then tighten the cable gland leaving enough free cable to connect the plug to the speaker terminal and fix the back cover to the speaker.



- Turn the amplifier down before wiring to avoid electric shock.
- Make sure the screws of the back cover are firmly fastened and the gland fits tightly around the cable jacket.



- A leaky gland affects the enclosure protection.
- Seal the eye bolt joint with thread-locking fluid water-tight.

5. Adjust the speaker direction und fasten the M 10 screws firmly to secure the speaker position
6. Fix the safety rope to the safety eye of the speaker using the shackle. Make sure the shackle is firmly closed.

#### Mounting the RL 180 NT-EVAC on a ceiling using the WH 180 bracket

##### Safety Rope

**Cable Gland**  
for speaker line feed  
Cable diameter from  
5 to 10 mm

**Shackle and Safety Eye**  
Fix the safety rope to the safety  
eye with the shackle

**M 5 screws + Lock Washers**  
for fixing the back cover after  
wiring

**Back Cover**  
Remove the back cover for wiring.

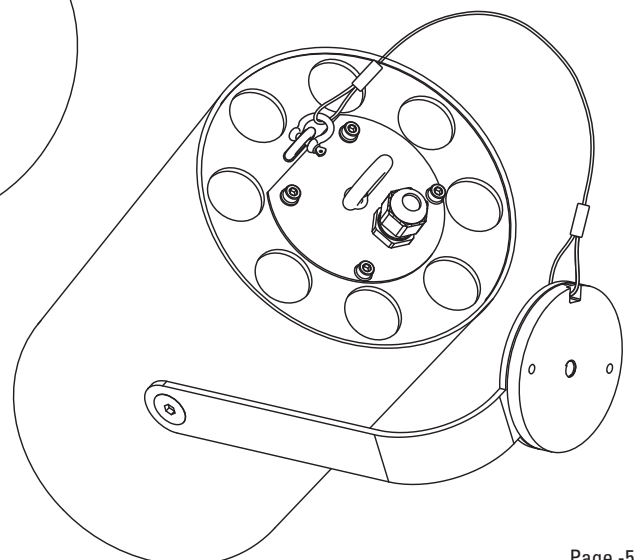
##### Mounting Plate

Mount the plate to the wall or ceiling  
with appropriate dowels

##### L-Bracket

Fix the L-bracket to the mounting  
plate and speaker using the M 10  
screws and the toothed lock washers

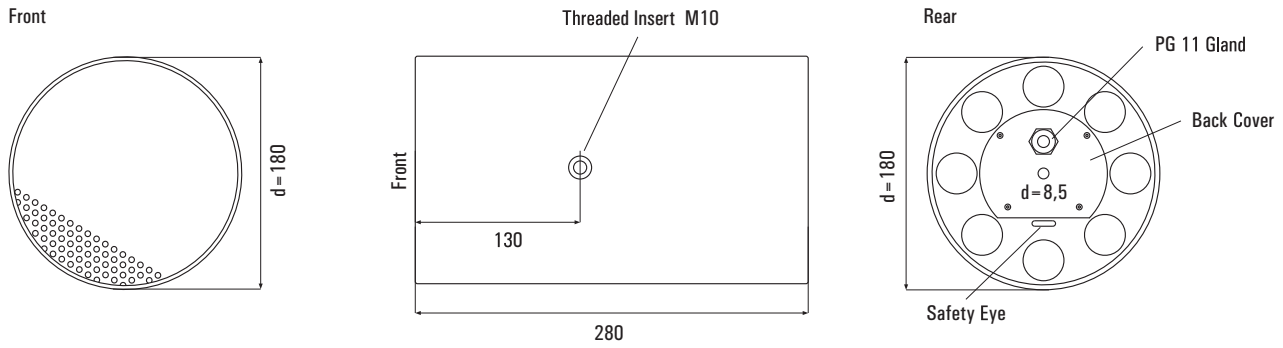
#### RL 180 NT-EVAC with WH 180 Mount on Wall



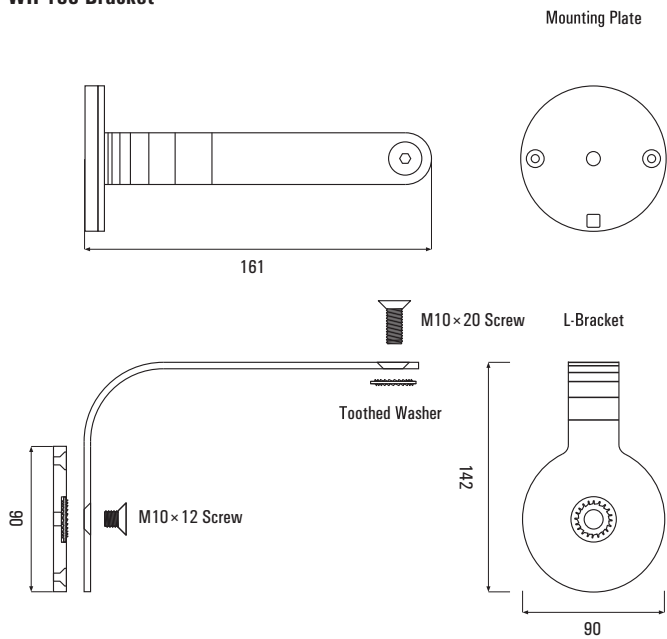
#### Manufacturer

## 7. Drawings

### RL 180 NT EVAC



### WH 180 Bracket



### Manufacturer

## 8. Specifications

Model	RL 180 NT EVAC
Environment Type	Type A
Speaker Components	6,5" Low-Mid driver, 1" dome tweeter with Polar® wave guide
Frequency Range	125 Hz - 20 kHz (-6 dB)
Sensitivity (1 W / 4 m)	78 dB
Maximum SPL (30 W / 4 m)	92 dB
Coverage (vertical and horizontal)	500 Hz: 260° 1 kHz: 130° 2 kHz: 100° 4 kHz: 80° 8 kHz: 110°
Rated Noise Power	30 Wrms (30 W tap)
Rated Noise Voltage	100 Vrms
Rated Impedance	30 W tap: 335 Ω 15 W tap: 670 Ω 7,5 W tap: 1340 Ω
Connector	4-pole Plug, rated cross section 2,5 mm <sup>2</sup>
Cable Gland	Maximum diameter 10 mm
Temperature Range	-10 to 50° C
Dimensions	Diameter 180 mm, Depth 280 mm
Weight	4,3 kg
Enclosure Material	Enclosure: aluminium, powder-coated Front grille: perforated steel mesh, powder-coated
Standard Colors	White or Black
Certificates	CE, EN 54-24: 2008, Loudspeaker for voice alarm systems
Accessories	WH 180 Wall bracket, White or Black (order separately)

### Notes

- The design and specifications are subject to change without notice for improvement.
- The Specifications data was measured according to EN 54-24.
- Reference axis: Axis is on the center of grill surface and perpendicular to the grill surface.

### Manufacturer