

# 100 V Ceiling Speakers according to EN 54-24

## EDL-224ABC

Order No. 16.0100



**PA A/B ceiling speaker**, with EN 54-24 certification. For systems with A/B speaker distribution according to EN 60849. Thus, ideally suited for smaller PA applications due to the cost-effective reduction of the ceiling cutouts required.

- 100 V line technique
- 2 separate speaker systems
- Full range speaker with a very high efficiency and high maximum volume level
- Metal housing
- Fire protection cover
- Quick mounting facility
- 3 power taps via push terminals

EN 54-24 EN 60849



## EDL-250C/WS

Order No. 16.0110



**PA ceiling speaker**, with EN 54-24 certification.

- 100 V line technique
- Full range speaker with a very high efficiency and high maximum volume level
- Metal housing
- Fire protection cover
- Quick mounting facility
- 3 power taps via push terminals

EN 54-24 EN 60849



## EDL-165C/WS

Order No. 16.0090



**PA ceiling speaker**, with EN 54-24 certification.

- 100 V line technique
- Full range speaker with a high efficiency
- Metal housing
- Fire protection cover
- Quick mounting facility
- 3 power taps via push terminals

EN 54-24 EN 60849



Model	EDL-224ABC	EDL-250C/WS	EDL-165C/WS
Frequency range	75-20,000 Hz	70-19,000 Hz	80-19,000 Hz
Power capability, 100 V	2 x 6/2 x 3/2 x 1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
SPL (1 W/m)	92 dB	98 dB	93 dB
Max. rated SPL	100 dB	106 dB	101 dB
Type of speaker	2 x 100	200	130
Mounting cutout	ø 230 mm	ø 230 mm	ø 150 mm
Mounting depth	110 mm	110 mm	90 mm
Admiss. ambient temp.	-10 °C to +55 °C	-10 °C to +55 °C	-10 °C to +55 °C
Dimensions	ø 252 mm x 115 mm	ø 252 mm x 110 mm	ø 170 mm x 95 mm
Weight	1.7 kg	1.5 kg	1 kg

## 100 V Ceiling Speakers according to EN 54-24

### EDL-35ABC/WS

Order No. 16.2970



**PA A/B ceiling speaker**, with EN 54-24 certification.

- Flush-mount speaker, 100 V line technique
- For evacuation systems with A/B speaker distribution according to EN 60849 and DIN VDE 0833-4
- 2 separate full range speakers, each with its own transformer
- Fire protection cover
- Robust metal housing and metal grille
- Service-friendly spring mechanism
- 3 power taps via ceramic connection terminal with thermal fuse
- Suitable for a ceiling thickness from 10 to 20 mm due to adjustable clamping device



EN 54-24 EN 60849

### EDL-36C/WS

Order No. 16.2980



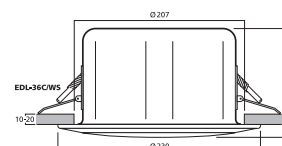
**PA ceiling speaker**, with EN 54-24 certification.

- Flush-mount speaker, 100 V line technique
- For evacuation systems according to EN 60849 and DIN VDE 0833-4
- 16 cm full range speaker
- Fire protection cover
- Robust metal housing and metal grille
- Service-friendly spring mechanism
- 3 power taps via ceramic connection terminal with thermal fuse
- Suitable for a ceiling thickness from 10 to 20 mm due to adjustable clamping device



EN 54-24 EN 60849

Model	EDL-35ABC/WS	EDL-36C/WS
Frequency range	130-20,000 Hz	170-20,000 Hz
Power capability, 100 V	2 x 6/2 x 3/2 x 1.5 W <sub>RMS</sub>	10/5/2.5 W <sub>RMS</sub>
SPL (1 W/m)	88 dB	93 dB
Max. rated SPL	95 dB	100 dB
Type of speaker	2 x oval, 60x110 mm	160
Mounting cutout	ø 220 mm	ø 207 mm
Mounting depth	130 mm	120 mm
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	245 mm x 130 mm	230 mm x 130 mm
Weight	2.25 kg	1.78 kg



### EDL-606EN

Order No. 16.3160



### EDL-612EN

Order No. 16.3170



### EDL-620EN

Order No. 16.3180



**PA ceiling speakers**, with EN 54-24 certification.

- 100 V line technique with 3 power taps
- Full range speaker with optimised voice reproduction
- Plastic cover with low mounting depth
- For a ceiling thickness from 5 to 22 mm
- Quick installation
- Robust metal basket and protective grille



Model	EDL-606EN	EDL-612EN	EDL-620EN
Frequency range	120-15,000 Hz	120-15,000 Hz	120-15,000 Hz
Power capability, 100 V	6/3/1.5 W <sub>RMS</sub>	12/6/3 W <sub>RMS</sub>	20/10/5 W <sub>RMS</sub>
SPL (1 W/m)	93 dB	93 dB	93 dB
Max. rated SPL	101 dB	103 dB	105 dB
Type of speaker	180	180	180
Mounting cutout	ø 180 mm	ø 180 mm	ø 180 mm
Mounting depth	60 mm	60 mm	60 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C
Dimensions	ø 200 mm x 70 mm	ø 200 mm x 70 mm	ø 200 mm x 70 mm
Weight	800 g	980 g	1.1 kg

## 100 V Wall Speakers according to EN 54-24

### ESP-62/WS

Order No. 16.3030



**PA wall speaker**, with EN 54-24 certification.

- 100 V line technique via audio transformer with 3 power taps
- Full range speaker with an excellent sound quality and a clear voice reproduction
- Plastic cabinet of a special design (open rear panel) with protective metal grille
- Due to balanced design, horizontal and vertical mounting possible
- Supplied with mounting screws and screw head covers



EN 54-24 EN 60849

### ESP-50AB/WS

Order No. 16.0120



**PA A/B wall speaker**, with EN 54-24 certification for evacuation systems with A/B speaker distribution according to EN 60849 and DIN VDE 0833-4.

- 100 V line technique
- 2 separate full range speakers (10 cm), each with its own transformer 6/3/1.5 W
- Connection via 2 spring-loaded terminals inside the cabinet
- Wooden cabinet with protective metal grille
- Easy wall mounting via supplied metal bracket and mounting accessories



EN 54-24 EN 60849

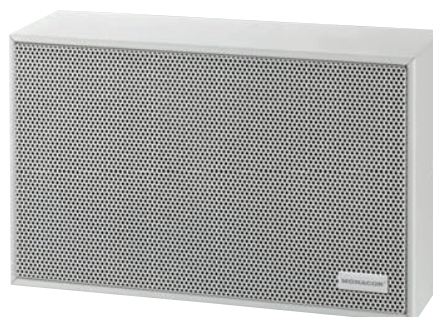
### ESP-50EN/WS

Order No. 16.0260



**PA wall speaker**, with EN 54-24 certification.

- 100 V line technique
- Full range speaker (13 cm)
- Suitable for voice and music transmissions
- Connection via spring-loaded terminal inside the cabinet
- Wooden cabinet with protective metal grille
- Easy wall mounting via supplied mounting bracket and mounting accessories



EN 54-24 EN 60849

Model	ESP-62/WS	ESP-50AB/WS	ESP-50EN/WS
Frequency range	100-19,000Hz	120-20,000 Hz	100-19,000 Hz
Power capability, 100 V	6/3/1.5W <sub>RMS</sub>	2 x 6/2 x 3/2 x 1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
SPL (1 W/m)	93dB	92 dB	93 dB
Max. rated SPL	101dB	99 dB	100 dB
Type of speaker	130	2 x 100	130
Admiss. ambient temp.	-10 °C to +55 °C	-10 °C to +55 °C	-10 °C to +55 °C
Dimensions	240x330x85mm	265x165x90 mm	265x165x90 mm
Weight	1.6kg	2.1 kg	1.8 kg

## 100 V Speakers according to EN 54-24

### ESP-35AB/WS

Order No. 16.2910



**PA A/B wall and ceiling speaker, with EN 54-24 certification.**

- Surface-mount version, 100 V line technique
- For evacuation systems with A/B speaker distribution according to EN 60849 and DIN VDE 0833-4
- 2 separate full range speakers, each with its own transformer
- Robust metal housing and metal grille
- Service-friendly due to spring mechanism
- 3 power taps via ceramic connection terminal with thermal fuse
- Mounting with metal bracket and subsequent spring suspension of the speaker unit



EN 54-24 EN 60849

Model	ESP-35AB/WS
Frequency range	180-20,000 Hz
Power capability, 100 V	2 x 6/2 x 3/2 x 1.5 W <sub>RMS</sub>
SPL (1 W/m)	88 dB
Max. rated SPL	95 dB
Type of speaker	2 x oval, 60x110 mm
Mounting cutout	-
Mounting depth	-
Admiss. ambient temp.	0-40 °C
Dimensions	ø 280 mm x 87 mm
Weight	1.55 kg

### IT-32EN

Order No. 16.0020



### IT-15EN

Order No. 16.0230



**Weatherproof horn speakers, with EN 54-24 certification.**

- 100 V line technique
- IP66 tested
- Light grey ABS housing (self-extinguishing, corresponds to the standard UL 94V-0)
- Cable inlet via high-strength cable gland
- Suitable for general indoor and outdoor applications
- Integrated high-pass filter for optimising the sound and stability
- Supplied with mounting bracket



EN 54-24 UL 94V-0

Model	IT-32EN	IT-15EN
Power rating	30/15/7.5 W <sub>RMS</sub>	15/7.5/3.75 W <sub>RMS</sub>
Frequency range	350-10,000 Hz	350-10,000 Hz
SPL (1W/1m)	110 dB	110 dB
Radiation angle (hor./vert.)	110°/55°	110°/55°
Admiss. ambient temp.	-25 °C to +70 °C	-25 °C to +70 °C
Dimensions	180x120x230 mm	180x120x230 mm
Weight	2.2 kg	2.2 kg
Special feature	IP66, self-extinguishing ABS	IP66, self-extinguishing ABS



# 100 V A/B Speakers

## EDL-35AB/WS

Order No. 16.2900

100V

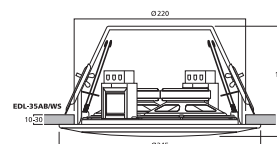
### PA A/B ceiling speaker

- Flush-mount version for systems with A/B speaker distribution according to EN 60849
- Mounting with metal bracket and subsequent spring suspension of the speaker unit
- 2 separate full range speakers, each with its own transformer
- Robust metal housing and metal grille
- Service-friendly due to spring mechanism
- 3 power taps via ceramic connection terminal with thermal fuse
- Suitable for a ceiling thickness from 10 to 30 mm due to adjustable clamping device



EN 60849

Model	EDL-35AB/WS
Frequency range	140-20,000 Hz
Power capability, 100 V	2 x 6/2 x 3/2 x 1.5 W <sub>RMS</sub>
SPL (1 W/m)	88 dB
Max. rated SPL	95 dB
Type of speaker	2 x oval, 60x110 mm
Mounting cutout	ø 220 mm
Mounting depth	120 mm
Admiss. ambient temp.	0-40 °C
Dimensions	245 mm x 125 mm
Weight	1.45 kg



## ESP-78AB/WS

Order No. 16.2760

100V

## ESP-76AB/WS

Order No. 16.2750

100V

**PA A/B wall speakers**, for systems with A/B speaker distribution according to EN 60849.

- 100 V line technique
- ESP-78AB/WS: 2 separate oval coaxial speakers (10x15 cm), each with its own transformer 20/10/5 W
- ESP-76AB/WS: 2 separate oval full range speakers (10x15 cm), each with its own transformer 10/6/4 W
- Connection via 2 spring-loaded terminals inside the cabinet
- Wooden cabinet with protective metal grille
- Easy wall mounting via supporting plate



EN 60849

Model	ESP-78AB/WS	ESP-76AB/WS
Frequency range	120-20,000 Hz	120-12,000 Hz
Power capability, 100 V	20/10/5 W <sub>RMS</sub>	10/6/4 W <sub>RMS</sub>
Power capability, 8 Ω	-	-
Type of speaker	100/150	100/150
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	300x200x90 mm	300x200x90 mm
Weight	3.6 kg	2.8 kg

## 100 V Ceiling Speakers



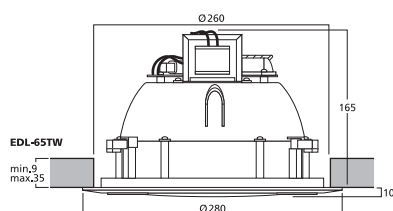
### EDL-65TW

Order No. 16.2220



#### Movable PA ceiling speaker

- 100 V line technique
- High power rating with 30 W max.
- High-quality 2-way coaxial speaker system with 2-way crossover network
- Dome tweeter
- The complete speaker part can be moved, ideal acoustic arrangements for rooms
- Plastic housing of superior design with metal grille
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- For a ceiling thickness from 9 to 35 mm



UL 94V-0

Model	EDL-65TW
Frequency range	50-20,000 Hz
Power capability, 100 V	30/15/7.5 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	180
Mounting cutout	ø 260 mm x 165 mm
Mounting depth	165 mm
Admiss. ambient temp.	0-40 °C
Dimensions	ø 280 mm x 175 mm
Weight	2.4 kg

# 100 V Ceiling Speakers

## EDL-38TW

Order No. 16.2080

## EDL-36TW

Order No. 16.2070

100V

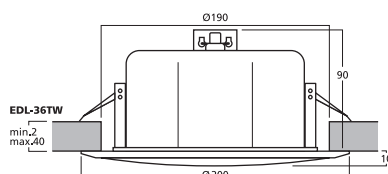
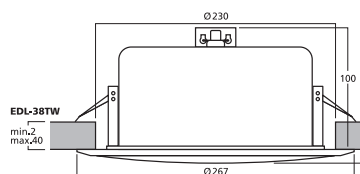
100V

**PA ceiling speakers**, for a high safety level in case of a fire.

- 100 V line technique
- Additional integrated tweeter
- Fire protection cover
- Metal housing with fitted ceramic terminal
- Thermal fuse 1 A/150 °C for disconnecting a faulty speaker in case of a short circuit (fire), so that the function of one speaker line is maintained
- 3-step power selector switch
- Earth connection
- Glass fibre insulated supply line with high-strength cable gland
- Quick-mounting facility
- For a ceiling thickness from 2 to 40 mm



### Tweeter Fire protection cover



## EDL-35

Order No. 16.2060

## EDL-33

Order No. 16.2050

100V

100V

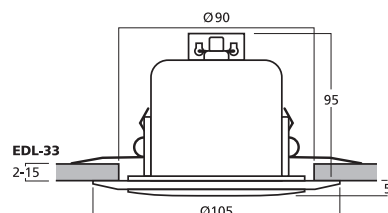
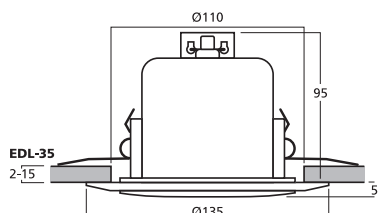
**PA ceiling speakers**, for a high safety level in case of a fire.

- 100 V line technique
- Fire protection cover
- Metal housing with fitted ceramic terminal
- Thermal fuse 1A/150 °C for disconnecting a faulty speaker in case of a short circuit (fire), so that the function of one speaker line is maintained
- 3-step power selector switch
- Earth connection
- Glass fibre insulated supply line with high-strength cable gland
- Quick-mounting facility
- For a ceiling thickness from 2 to 15 mm

necting a faulty speaker in case of a short circuit (fire), so that the function of one speaker line is maintained



### Fire protection cover



Model	EDL-38TW	EDL-36TW	EDL-35	EDL-33
Frequency range	140-20,000 Hz	150-20,000 Hz	50-18,000 Hz	100-15,000 Hz
Power capability, 100 V	10/5/2.5 W <sub>RMS</sub>	10/5/2.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-	-	-	-
Type of speaker	200	165	100	75
Mounting cutout	ø 230 mm x 120 mm	ø 190 mm x 110 mm	ø 110 mm x 110 mm	ø 90 mm x 110 mm
Mounting depth	100 mm	90 mm	95 mm	95 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	ø 267 mm x 115 mm	ø 200 mm x 100 mm	ø 135 mm x 100 mm	ø 105 mm x 100 mm
Weight	1.8 kg	1.5 kg	760 g	650 g

## 100 V Ceiling Speakers

SPEAKERS

### EDL-11TW

Order No. 16.1210

### EDL-11TW/SI

Order No. 16.2740

### EDL-11TW/SW

Order No. 16.2410

100V

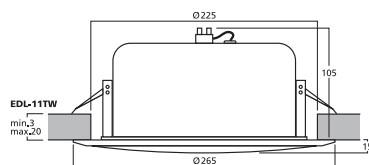
100V

100V

#### PA ceiling speakers

- 100 V line technique
- White, silver or black metal housing
- Including fire protection cover for a high safety level
- Additional integrated tweeter
- Quick mounting facility
- For a ceiling thickness from 3 to 20 mm

► Tweeter Fire protection cover



The corresponding radiation angles can be found on our website [www.monacor.com](http://www.monacor.com)



Model	EDL-11TW	EDL-11TW/SI	EDL-11TW/SW
Frequency range	60-20,000 Hz	60-20,000 Hz	60-20,000 Hz
Power capability, 100 V	10/5/2.5 W <sub>RMS</sub>	10/5/2.5 W <sub>RMS</sub>	10/5/2.5 W <sub>RMS</sub>
Power capability, 8 Ω	-	-	-
Type of speaker	200	200	200
Mounting cutout	Ø 225 mm x 110 mm	Ø 225 mm x 110 mm	Ø 225 mm x 110 mm
Mounting depth	105 mm	105 mm	105 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C
Dimensions	Ø 264 mm x 120 mm	Ø 264 mm x 120 mm	Ø 264 mm x 120 mm
Weight	1.6 kg	1.6 kg	1.6 kg



## 100 V Ceiling Speakers

### EDL-158

Order No. 16.2930

### EDL-156

Order No. 16.1910

### EDL-155

Order No. 16.2920

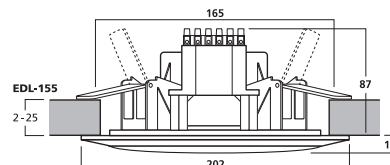
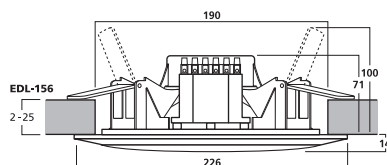
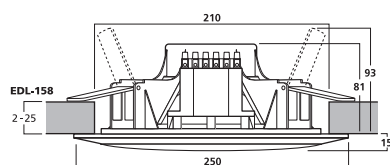


**Weatherproof PA ceiling speakers**, heat-resistant up to 100 °C. For applications in saunas and swimming pool areas.

- 100 V line technique
- 2-way system with dome tweeter
- Excellent sound
- White plastic housing
- Weatherproof speaker cone
- Tested according to ASTM B117 (400 h salt spray test)
- For a ceiling thickness from 2 to 25 mm



### Heat



Model	EDL-158	EDL-156	EDL-155
Frequency range	50-16,000 Hz	60-20,000 Hz	70-18,000 Hz
Power capability, 100 V	15/10/5/2.5/1.25 W <sub>RMS</sub>	15/10/5/2.5/1.25 W <sub>RMS</sub>	15/10/5/2.5/1.25 W <sub>RMS</sub>
SPL (1 W/m)	89 dB	88 dB	87 dB
Max. rated SPL	101 dB	100 dB	99 dB
Type of speaker	200	180	130
Mounting cutout	ø 210 mm	ø 190 mm	ø 165 mm
Mounting depth	85 mm	75 mm	95 mm
Admiss. ambient temp.	-20 °C to +100 °C	-20 °C to +100 °C	-20 °C to +100 °C
Dimensions	ø 250 mm x 96 mm	ø 226 mm x 100 mm	ø 202 mm x 100 mm
Weight	1.14 kg	1.1 kg	1.05 kg

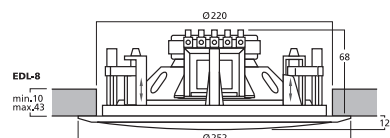
### EDL-8

Order No. 16.1070



#### PA ceiling speaker

- 100 V line technique
- 20 cm (8") full range speaker
- Plastic housing with protective metal grille
- For a ceiling thickness from 10 to 43 mm



Model	EDL-8
Frequency range	60-14,000 Hz
Power capability, 100 V	10/6/4/2 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	200
Mounting cutout	ø 220 mm
Mounting depth	68 mm
Admiss. ambient temp.	0-40 °C
Dimensions	ø 252 mm x 80 mm
Weight	1 kg



# 100 V Ceiling Speakers

SPEAKERS

## EDL-28

Order No. 16.1460

## EDL-26

Order No. 16.1450

## EDL-25

Order No. 16.1440

## EDL-24

Order No. 16.1430

100V

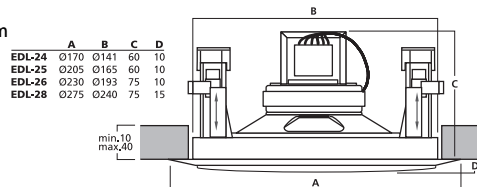
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100V

100V

### PA ceiling speakers

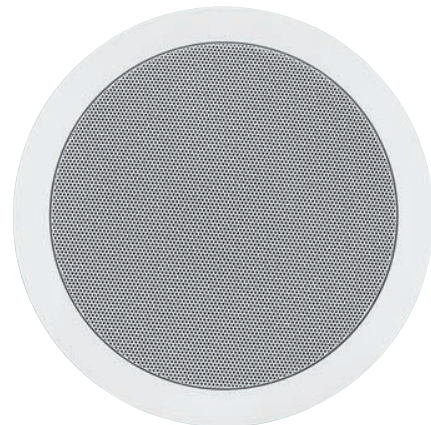
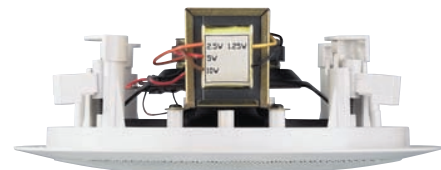
- 100 V line technique via audio transformer with power taps
- Full range speaker with dual cone
- Plastic housing with protective metal grille
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- For a ceiling thickness from 10 to 40 mm



UL 94V-0



The corresponding radiation angles can be found on our website [www.monacor.com](http://www.monacor.com)



Model	EDL-28	EDL-26	EDL-25	EDL-24
Frequency range	60-14,000 Hz	80-14,000 Hz	100-14,000 Hz	100-14,000 Hz
Power capability, 100 V	10/5/2.5/1.25 W <sub>RMS</sub>	10/5/2.5/1.25 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-	-	-	-
SPL (1 W/m)	91 dB	86 dB	87 dB	87 dB
Max. rated SPL	100 dB	95 dB	94 dB	94 dB
Type of speaker	200	165	130	100
Mounting cutout	ø 240 mm	ø 200 mm	ø 165 mm	ø 142 mm
Mounting depth	75 mm	75 mm	60 mm	60 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	ø 275 mm x 90 mm	ø 230 mm x 85 mm	ø 205 mm x 70 mm	ø 170 mm x 70 mm
Weight	1.2 kg	910 g	830 g	750 g

# 100 V Ceiling Speakers

## EDL-10TW

Order No. 16.1200

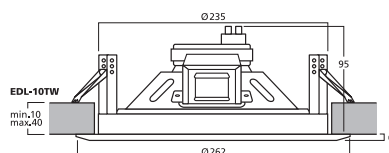
100V

**PA ceiling speaker**, with additional integrated tweeter.

- 100 V line technique
- Metal housing
- Quick mounting facility
- For a ceiling thickness from 10 to 40 mm

Tweeter

Model	EDL-10TW
Frequency range	50-20,000 Hz
Power capability, 100 V	10/6/4/2 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	200
Mounting cutout	ø 235 mm
Mounting depth	95 mm
Admiss. ambient temp.	0-40 °C
Dimensions	ø 262 mm x 101 mm
Weight	1.5 kg



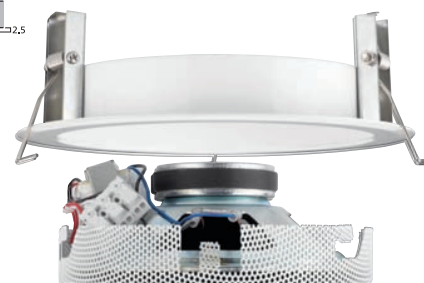
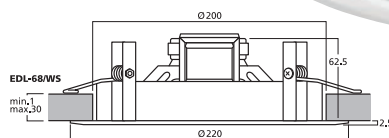
## EDL-68/WS

Order No. 16.2340

100V

**PA ceiling speaker**, with special 2-step mounting.

- 100 V line technique
- Snap-in mounting
- For a ceiling thickness from 1 to 30 mm
- 2-way coaxial speaker
- Wide frequency range
- Robust metal version (basket and protective grille)
- Speaker additionally secured by a safety rope



Model	EDL-68/WS
Frequency range	100-19,000 Hz
Power capability, 100 V	6/3 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	165
Mounting cutout	ø 200 mm
Mounting depth	65 mm
Admiss. ambient temp.	0-40 °C
Dimensions	ø 220 mm x 65 mm
Weight	1.275 kg

For mounting this PA ceiling speaker, the mounting frame is attached to the ceiling cutout at first via the snap-in system. Then, the speaker is inserted into the frame with a bayonet-type locking. A safety rope provides additional safety.

## 100 V Ceiling Speakers

### EDL-620

Order No. 16.2590

100V

### EDL-612

Order No. 16.1810

100V

### EDL-606

Order No. 16.1800

100V

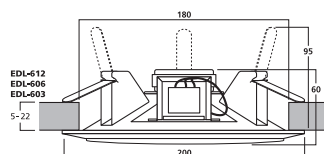
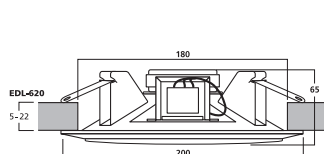
### EDL-603

Order No. 16.3110

100V

#### PA ceiling speakers

- 100 V line technique via audio transformer with power taps
- For a ceiling thickness from 5 to 22 mm
- Full range speaker, type 180
- A more powerful reproduction of the range of fundamental notes
- Robust metal version (basket and protective grille)



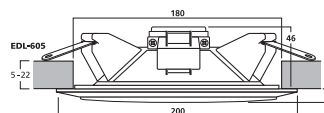
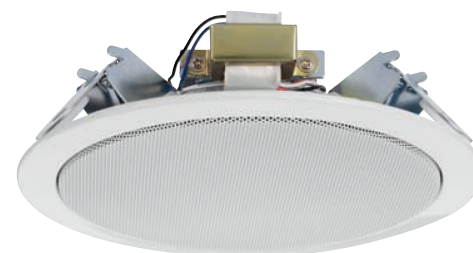
### EDL-605

Order No. 16.2560

100V

#### PA ceiling speaker

- 100 V line technique via audio transformer with power taps
- For a ceiling thickness from 5 to 22 mm
- Full range speaker, type 130, in a basket for 180 mm cutouts
- Improved omnidirectional radiation of the upper vocal range
- Robust metal version (basket and protective grille)



Model	EDL-620	EDL-612	EDL-606	EDL-603	EDL-605
Frequency range	100-20,000 Hz	100-20,000 Hz	100-20,000 Hz	100-20,000 Hz	110-15,000 Hz
Power capability, 100 V	20/10/5 W <sub>RMS</sub>	12/6/3 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>	3/1.5/1/0.75 W <sub>RMS</sub>	6/3 W <sub>RMS</sub>
Type of speaker	180	180	180	180	130
Mounting cutout	ø 180 mm	ø 180 mm	ø 180 mm	ø 180 mm	ø 180 mm
Mounting depth	65 mm	60 mm	60 mm	60 mm	46 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	ø 200 mm x 65 mm	ø 200 mm x 60 mm	ø 200 mm x 60 mm	ø 200 mm x 60 mm	ø 200 mm x 54 mm
Weight	900 g	750 g	700 g	700 g	704 g



# 100 V Ceiling Speakers

## EDL-206

Order No. 16.1650

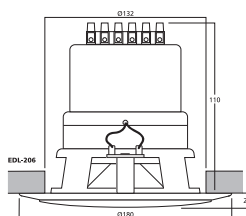
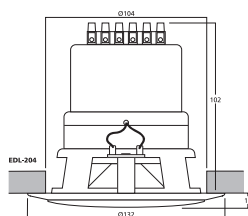
## EDL-204

Order No. 16.1630



### Weatherproof flush-mount PA speakers

- 100 V line technique
- Full range speaker with dual cone, perfect sound characteristics
- Splashproof due to white one-piece plastic design, high-quality polypropylene cone with rubber surround
- For indoor and outdoor applications
- Supplied with stainless steel mounting screws



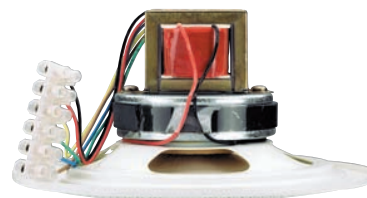
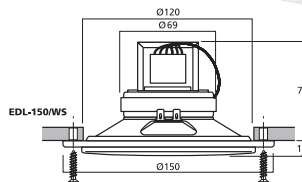
## EDL-150/WS

Order No. 16.1220



### PA ceiling speaker

- 100 V line technique via audio transformer with 5 power taps
- Full range speaker with dual cone
- Metal housing with white, fixed protective metal grille



Model	EDL-206	EDL-204	EDL-150/WS
Frequency range	85-18,000 Hz	100-18,000 Hz	100-12,000 Hz
Power capability, 100 V	20/15/10/5/2.5 W <sub>RMS</sub>	20/15/10/5/2.5 W <sub>RMS</sub>	10/5/2.5/1.25/0.625 W <sub>RMS</sub>
Type of speaker	180	100	130
Mounting cutout	ø 132 mm	ø 104 mm	ø 120 mm
Mounting depth	110 mm	102 mm	75 mm
Admiss. ambient temp.	-10 °C to +40 °C	-10 °C to +40 °C	-20 °C to +55 °C
Dimensions	ø 180 mm x 130 mm	ø 132 mm x 118 mm	ø 150 mm x 75 mm
Weight	900 g	820 g	730 g

## 100 V Ceiling Speakers

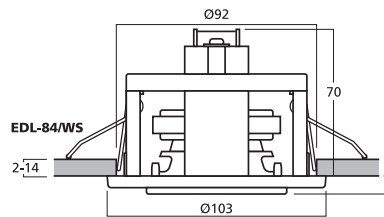
### EDL-84/WS

Order No. 16.2350

100V

#### PA ceiling speaker

- 100 V line technique
- White cover
- Similar design to standard flush-mounted halogen lights
- Suitable for speech and background music
- Quick mounting facility
- Plastic housing with protective metal grille
- Plastic material of ABS, not self-extinguishing like EDL-82/WS
- For a ceiling thickness from 2 to 14 mm



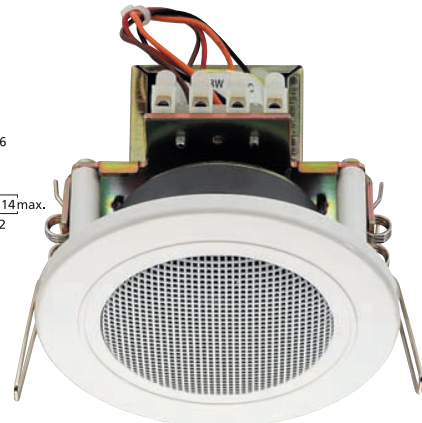
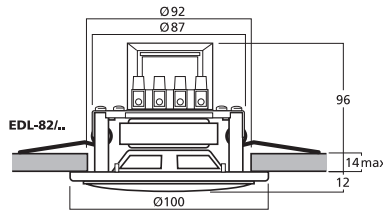
### EDL-82/WS

Order No. 16.1490

100V

#### PA ceiling speaker

- 100 V line technique
- White cover
- Similar design to standard flush-mounted halogen lights
- Suitable for speech and background music, very consistent frequency response
- Quick mounting facility
- Plastic housing with protective metal grille
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- For a ceiling thickness from 2 to 14 mm



UL 94V-0

Model	EDL-84/WS	EDL-82/WS
Frequency range	200-19,000 Hz	200-20,000 Hz
Power capability, 100 V	6/3 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-	-
SPL (1 W/m)	86 dB	86 dB
Max. rated SPL	94 dB	94 dB
Mounting cutout	ø 92 mm	ø 92 mm
Mounting depth	80 mm	96 mm
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	ø 103 mm	ø 100 mm
Weight	420 g	635 g

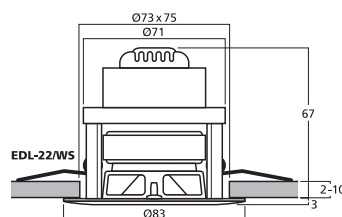
### EDL-22/WS

Order No. 16.2770

100V

PA ceiling speaker, small and compact design, with a very wide bandwidth reproduction.

- 100 V line technique
- Quick-mounting facility
- White plastic housing
- For a ceiling thickness from 2 to 10 mm



Model	EDL-22/WS
Frequency range	130-20,000 Hz
Power capability, 100 V	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	50
Mounting cutout	ø 73 mm x 75 mm
Mounting depth	67 mm
Admiss. ambient temp.	0-40 °C
Dimensions	ø 83 mm x 70 mm
Weight	320 g

## Hi-fi Ceiling Speakers

### ESP-32/WS

Order No. 16.1680

### ESP-22/WS

Order No. 16.1670

### ESP-17/WS

Order No. 16.1660

### ESP-15/WS

Order No. 16.1550

100V

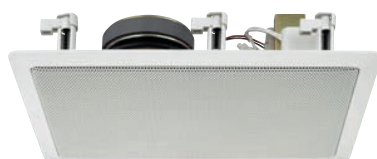
100V

100V

100V

#### PA hi-fi wall and ceiling speakers

- 100 V line technique, 2-way version with dome tweeter (movable with ESP-17/WS, ESP-22/WS and ESP-32/WS)
- Plastic housing with protective metal grille
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- Excellent sound characteristics
- For a wall thickness/ceiling thickness from 8 to 35 mm



The corresponding radiation angles can be found on our website [www.monacor.com](http://www.monacor.com)

UL 94V-0 Tweeter

Model	ESP-32/WS	ESP-22/WS	ESP-17/WS	ESP-15/WS
Frequency range	40-20,000 Hz	50-20,000 Hz	55-20,000 Hz	60-20,000 Hz
Power capability, 100 V	30/15/7.5/4/2 W <sub>RMS</sub>	20/15/10/5/2.5 W <sub>RMS</sub>	15/7.5/4/2/1 W <sub>RMS</sub>	15/7.5/4/2/1 W <sub>RMS</sub>
Power capability, 8 Ω	-	-	-	-
Type of speaker	200	165	130	100
Mounting cutout	330x225 mm	275x190 mm	270x185 mm	115x190 mm
Mounting depth	90 mm	90 mm	80 mm	61 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	358x256x100 mm	306x220x100 mm	300x214x90 mm	146x220x70 mm
Weight	3.1 kg	2.6 kg	1.9 kg	1.3 kg

### SPE-32/WS

Order No. 10.5630

### SPE-22/WS

Order No. 10.5620

### SPE-17/WS

Order No. 10.5610

### SPE-15/WS

Order No. 10.5600

8Ω

8Ω

8Ω

8Ω

#### Hi-fi wall and ceiling speakers, 8 Ω

- 2-way version with dome tweeter (movable with SPE-17/WS, SPE-22/WS and SPE-32/WS)
- Plastic housing with protective metal grille
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- Excellent sound characteristics
- For a wall thickness/ceiling thickness from 8 to 35 mm



UL 94V-0 Tweeter

Model	SPE-32/WS	SPE-22/WS	SPE-17/WS	SPE-15/WS
Frequency range	40-20,000 Hz	50-20,000 Hz	55-20,000 Hz	60-20,000 Hz
Resonant frequency (fs)	37 Hz	51 Hz	59 Hz	90 Hz
Power capability, 8 Ω	100 W <sub>MAX</sub> , 50 W <sub>RMS</sub>	80 W <sub>MAX</sub> , 40 W <sub>RMS</sub>	60 W <sub>MAX</sub> , 30 W <sub>RMS</sub>	50 W <sub>MAX</sub> , 25 W <sub>RMS</sub>
SPL (1 W/m)	89 dB	88 dB	87 dB	87 dB
Max. rated SPL	106 dB	104 dB	103 dB	102 dB
Type of speaker	200	165	130	100
Mounting cutout	330x225 mm	275x190 mm	270x185 mm	115x190 mm
Mounting depth	87 mm	77 mm	65 mm	61 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	358x256x97 mm	306x220x87 mm	300x214x75 mm	146x220x70 mm
Weight	2.2 kg	2 kg	1.4 kg	0.83 kg

## KNOW-HOW: Arrangement of Ceiling Speakers

### Arrangement of Ceiling Speakers

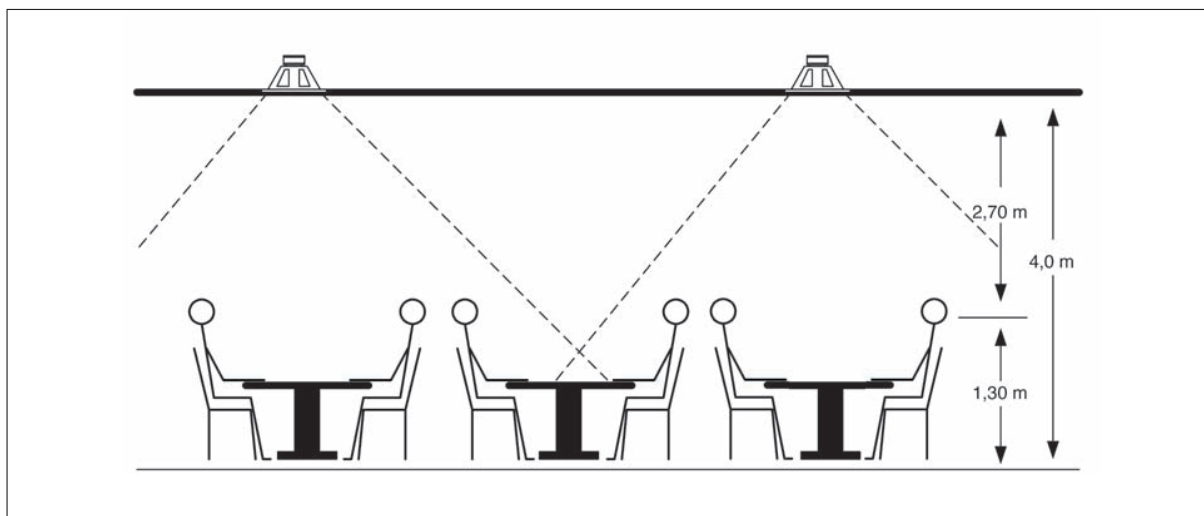
When installing speakers into a ceiling, the question frequently arises where to place the speakers and at what distance. "Where" can easily be answered: wherever people are present.

The answer regarding the distance is not as easy. The shorter the distance of the speakers, the lower the individual power can be selected, which will result in a more uniform sound distribution.

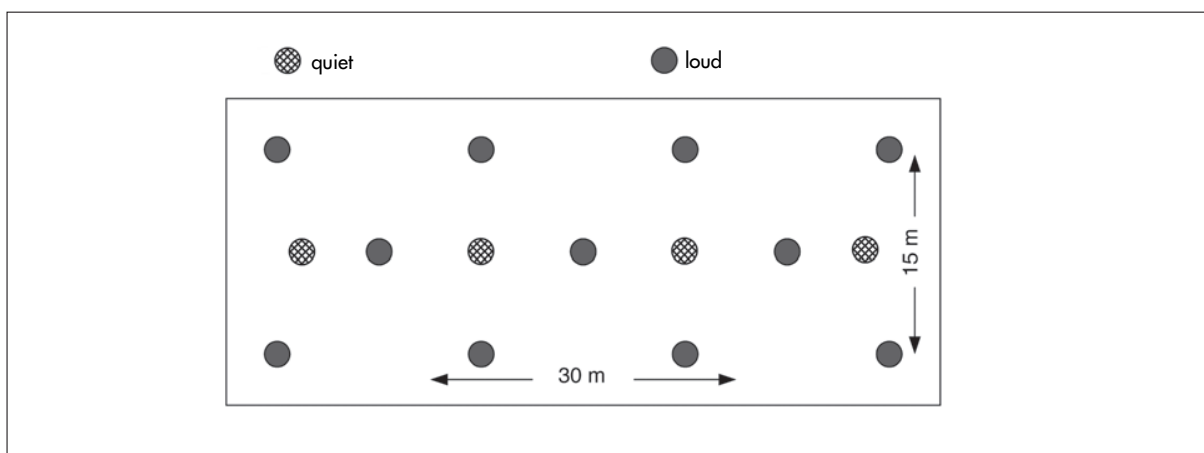
Supposed that the persons are sitting down, an average height of the ears of approx. 1.3 m will be obtained. The basic distance can be determined with the following general rule.

Speaker distance =  $2 \times (H - 1.3 \text{ m})$   $H$  = ceiling height

With a ceiling height of 4 m, we get a distance of  $2 \times (4 \text{ m} - 1.3 \text{ m}) = 5.4 \text{ m}$



The actual distance depends on the basic volume in the room. In a quiet environment a distance which is by 50 % larger can be selected, that is approx. 8 m.



Example of a speaker arrangement for a quiet and a loud environment.



## KNOW-HOW: Example of Application

### High-Quality PA Application on Sports Fields

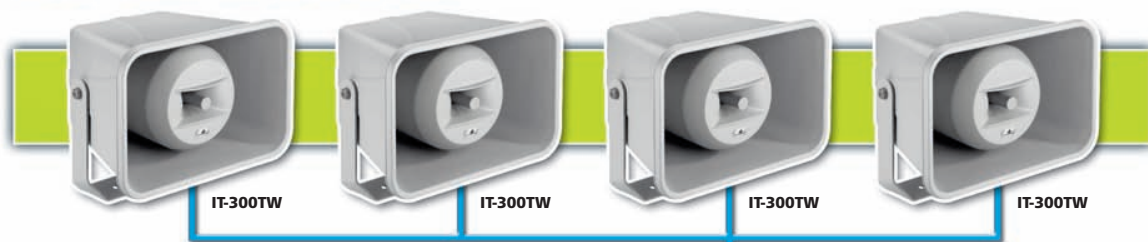
Even nowadays, PA applications on sports fields can be a real challenge.

Large distances have to be covered, but the transmission of voice and music must be possible, too. In addition, another requirement is that the speakers have to be rigidly mounted to poles or buildings in such a way that optimum weather protection is guaranteed. Most of the times, one requirement remains unconsidered. Although the classic horn speakers allow for outdoor installation, the sound quality is often only suitable for voice transmissions.

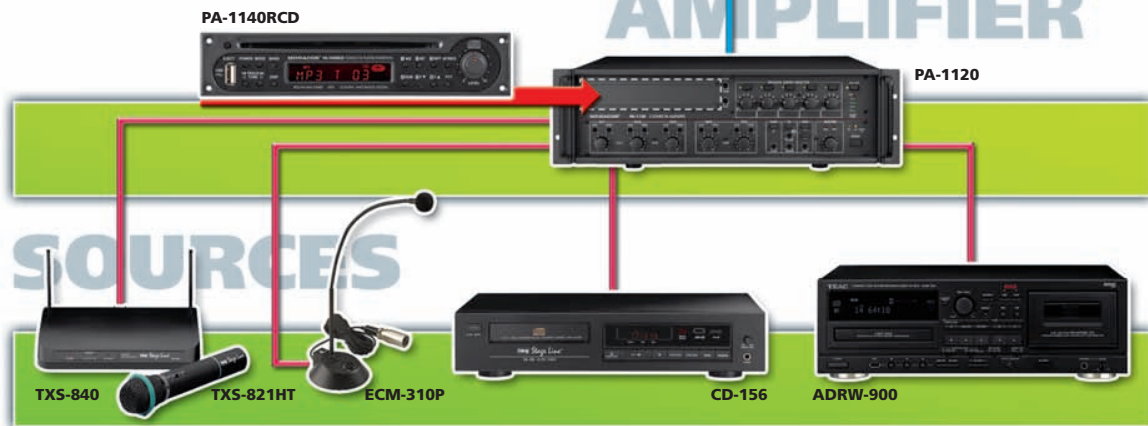
The application of new speaker systems will change that.

The horn speaker **IT-300TW** does no longer feature a basic horn speaker system. This speaker consists of a 16 cm bass speaker and a built-in horn tweeter. Thus, a clearly better sound quality is achieved. Therefore, this speaker is also called a music horn. The quality of the speaker will also improve voice transmission, because a more powerful sound allows for a better audibility.

## SPEAKERS



## AMPLIFIER



## Low-impedance Ceiling Speakers

### SPE-284/WS

Order No. 10.5520

### SPE-264/WS

Order No. 10.4900

### SPE-254/WS

Order No. 10.5510

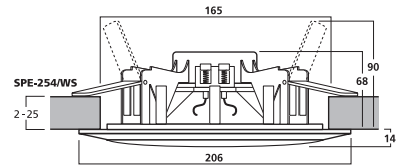
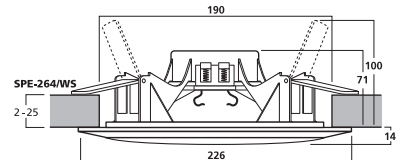
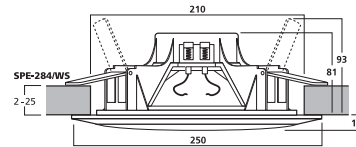


**Weatherproof pair of PA ceiling speakers, heat-resistant up to 100 °C.**

For applications in saunas and swimming pool areas.

- 2-way system with dome tweeter
- Excellent sound
- White plastic housing
- Weatherproof speaker cone
- Tested according to ASTM B117 (400 h salt spray test)
- For a ceiling thickness from 2 to 25 mm
- Spring-loaded speaker terminals

**Tweeter Heat**



Model	SPE-284/WS	SPE-264/WS	SPE-254/WS
Frequency range	45-20,000 Hz	60-20,000 Hz	65-20,000 Hz
Power capability, 4 Ω	100 W <sub>MAX</sub> , 50 W <sub>RMS</sub>	90 W <sub>MAX</sub> , 45 W <sub>RMS</sub>	80 W <sub>MAX</sub> , 40 W <sub>RMS</sub>
SPL (1 W/m)	89 dB	88 dB	87 dB
Max. rated SPL	104 dB	103 dB	102 dB
Type of speaker	200	165	130
Mounting cutout	ø 210 mm	ø 190 mm	ø 165 mm
Mounting depth	85 mm	71 mm	68 mm
Admiss. ambient temp.	-20 °C to +100 °C	-20 °C to +100 °C	-20 °C to +100 °C
Dimensions	ø 250 mm x 96 mm	ø 226 mm x 100 mm	ø 206 mm x 82 mm
Weight	0.95 kg	0.9 kg	0.86 kg

### SPE-110P/SW

Order No. 16.2530

### SPE-110P/WS

Order No. 16.2540

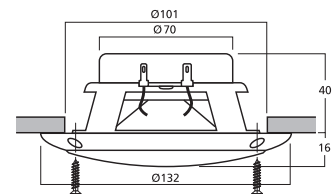


**Weatherproof flush-mount speakers, 30 W<sub>MAX</sub>, 4 Ω, heat-resistant up to 120 °C.**

For saunas and swimming pool areas, as well as other areas where a reliable operation at high temperatures must be ensured.

- Black (SW) or white (WS) plastic housing
- Plastic material of ABS and self-extinguishing according to UL 94V-0
- Weatherproof speaker cone
- Tested according to ASTM B117 (400 h salt spray test)

**UL 94V-0 Heat**



Model	SPE-110P/SW	SPE-110P/WS
Frequency range	180-18,000 Hz	180-18,000 Hz
Resonant frequency (fs)	250 Hz	250 Hz
Power capability, 4 Ω	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>
SPL (1 W/m)	86 dB	86 dB
Type of speaker	130	130
Mounting cutout	ø 101 mm	ø 101 mm
Mounting depth	40 mm	40 mm
Admiss. ambient temp.	-20 °C to +120 °C	-20 °C to +120 °C
Dimensions	ø 132 mm	ø 132 mm
Weight	285 g	285 g

## Low-impedance Ceiling Speakers

### SPE-26/WS

Order No. 16.2830

### SPE-25/WS

Order No. 16.2820

### SPE-24/WS

Order No. 16.2810

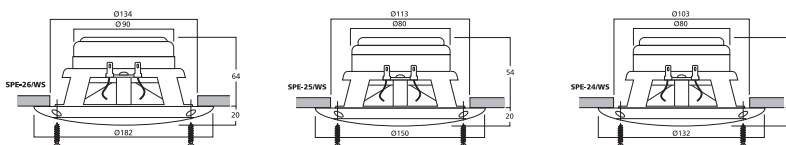


#### Weatherproof pairs of flush-mount

**PA speakers, 40 W<sub>MAX</sub>**, with UV-stabilised plastic housing.

For general use in car hi-fi or PA applications, on a terrace or a boat, in swimming pool areas.

- 2-way coaxial system
- White plastic housing
- Weatherproof polypropylene speaker cone
- Tested according to ASTM B117 (400 h salt spray test)
- Low stray magnetic field
- Supplied with stainless mounting accessories and connection cable



#### Tweeter

Model	SPE-26/WS	SPE-25/WS	SPE-24/WS
Frequency range	60-20,000 Hz	70-20,000 Hz	80-20,000 Hz
Power capability, 4 Ω	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>
SPL (1 W/m)	89 dB	88 dB	87 dB
Max. rated SPL	-	-	-
Type of speaker	165	130	100
Mounting cutout	ø 134 mm	ø 113 mm	ø 103 mm
Mounting depth	65 mm	60 mm	60 mm
Admiss. ambient temp.	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C
Dimensions	ø 182 mm x 84 mm	ø 150 mm x 75 mm	ø 132 mm x 70 mm
Weight	686 g	555 g	546 g

### SPE-16F/WS

Order No. 16.2850

### SPE-15F/WS

Order No. 16.2840

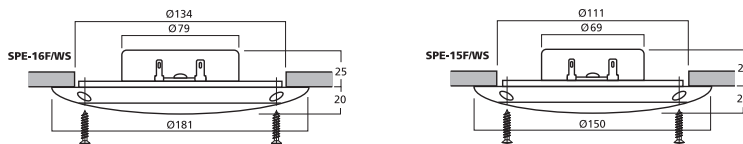


#### Weatherproof pairs of flush-mount

**PA speakers, 30 W<sub>MAX</sub>**, with UV-stabilised plastic housing, slimline design.

For general use in car hi-fi or PA applications, on a terrace or a boat, in swimming pool areas.

- White plastic housing for mounting positions of low mounting depth
- Weatherproof polypropylene speaker cone
- Tested according to ASTM B117 (400 h salt spray test)
- Low stray magnetic field
- Supplied with stainless mounting accessories and connection cable



Model	SPE-16F/WS	SPE-15F/WS
Frequency range	70-15,000 Hz	80-16,000 Hz
Power capability, 4 Ω	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>
SPL (1 W/m)	87 dB	86 dB
Max. rated SPL	-	-
Type of speaker	165	130
Mounting cutout	ø 134 mm	ø 111 mm
Mounting depth	25 mm	25 mm
Admiss. ambient temp.	-20 °C to +50 °C	-20 °C to +50 °C
Dimensions	ø 181 mm x 45 mm	ø 150 mm x 45 mm
Weight	315 g	270 g

## Low-impedance Ceiling Speakers



CRB-...65/WS  
SPE-...65/WS

CRB-...30/WS  
SPE-...30/WS

### CRB-265/WS

Order No. 13.0930

### CRB-230/WS

Order No. 13.0920



Pair of flush-mount speakers, coaxial system, 4 Ω, tweeter with ferrofluid.

- Humidity-proof
- White one-piece plastic design and plastic cone
- Versatile use for car hi-fi, PA, terrace, boat

### CRB-165/WS

Order No. 13.0910

### CRB-130/WS

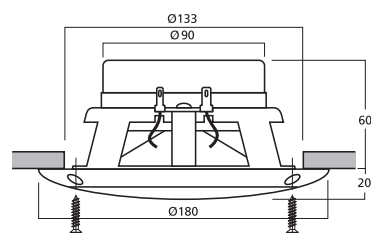
Order No. 13.0900



Pair of flush-mount speakers, with dual cone, 4 Ω.

- Humidity-proof
- White one-piece plastic design and plastic cone
- Versatile use for car hi-fi, PA, terrace, boat

Model	CRB-265/WS	CRB-230/WS	CRB-165/WS	CRB-130/WS
Impedance	4 Ω	4 Ω	4 Ω	4 Ω
Frequency range	80-20,000 Hz	100-20,000 Hz	80-10,000 Hz	80-10,000 Hz
Music power	60 W	50 W	50 W	40 W
Power rating	30 W	25 W	25 W	20 W
Type of speaker	165	130	165	130
Mounting cutout	ø 133 mm	ø 110 mm	ø 135 mm	ø 110 mm
Mounting depth	60 mm	50 mm	60 mm	50 mm
Magnet	ø 80 mm	ø 70 mm	ø 80 mm	ø 70 mm
Magnet weight	230 g	150 g	230 g	150 g
Dimensions	ø 180 mm	ø 150 mm	ø 180 mm	ø 150 mm
Weight	0.8 kg	0.5 kg	0.8 kg	0.5 kg



CRB-...65/WS  
SPE-...65/WS

### SPE-265/WS

Order No. 10.2690

### SPE-230/WS

Order No. 10.2700



Pair of flush-mount speakers, coaxial system, 8 Ω, tweeter with ferrofluid.

- Humidity-proof
- One-piece plastic design and plastic cone
- Versatile use for car hi-fi, PA, terrace, boat

### SPE-165/WS

Order No. 10.2670

### SPE-130/WS

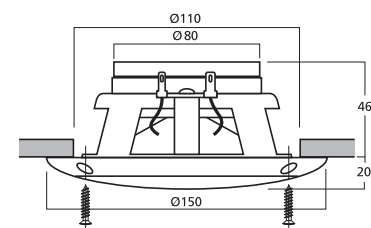
Order No. 10.2680



Pair of flush-mount speakers, with dual cone, 8 Ω.

- Humidity-proof
- One-piece plastic design and plastic cone
- Versatile use for car hi-fi, PA, terrace, boat

Model	SPE-265/WS	SPE-230/WS	SPE-165/WS	SPE-130/WS
Frequency range	80-20,000Hz	100-20,000Hz	80-10,000Hz	80-10,000Hz
Power capability, 8 Ω	60W <sub>MAX</sub> , 30W <sub>RMS</sub>	50W <sub>MAX</sub> , 25W <sub>RMS</sub>	50W <sub>MAX</sub> , 25W <sub>RMS</sub>	40W <sub>MAX</sub> , 20W <sub>RMS</sub>
SPL (1 W/m)	87dB	85dB	87dB	85dB
Type of speaker	165	130	165	130
Mounting cutout	ø 133mm	ø 110mm	ø 133mm	ø 110mm
Mounting depth	60mm	50mm	60mm	50mm
Admiss. ambient temp.	-	0-40 °C	0-40 °C	
Dimensions	ø 180mm	ø 150mm	ø 180mm x 80mm	ø 150mm x 66mm
Weight	0.8kg	0.5kg	800g	500g



CRB-...30/WS  
SPE-...30/WS



## Low-impedance Ceiling Speakers

### SPE-150/WS

Order No. 10.1620



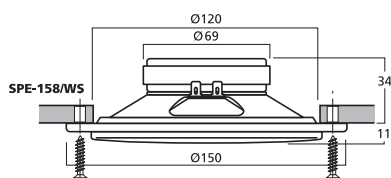
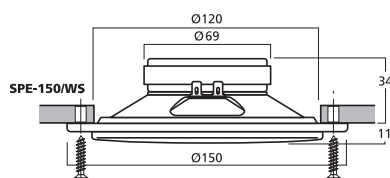
### SPE-158/WS

Order No. 10.3150



**Flush-mount full range speakers, 30 W<sub>MAX</sub>**

- Dual cone
- Slimline design with fixed metal grille
- Suitable for mounting into ceilings, walls and car doors



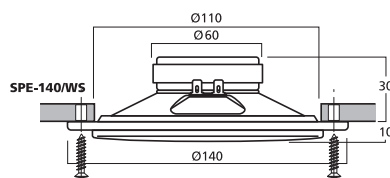
### SPE-140/WS

Order No. 10.4470



**Flush-mount speaker, 20 W<sub>MAX</sub>**

- Dual cone for a full range reproduction
- Slimline design
- Fixed metal grille
- Suitable for indoor announcements and background music



Model	SPE-150/WS	SPE-158/WS	SPE-140/WS
Frequency range	100-12,000 Hz	100-12,000 Hz	120-12,000 Hz
Power capability, 8 Ω	-	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>	-
Power capability, 4 Ω	30 W <sub>MAX</sub> , 15 W <sub>RMS</sub>	-	20 W <sub>MAX</sub> , 10 W <sub>RMS</sub>
SPL (1 W/m)	89 dB	88 dB	87 dB
Type of speaker	130	130	130
Mounting cutout	ø 120 mm	ø 120 mm	ø 110 mm
Mounting depth	34 mm	34 mm	30 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C
Dimensions	ø 153 mm x 45 mm	ø 153 mm x 45 mm	ø 140 mm x 40 mm
Weight	500 g	500 g	300 g

## Low-impedance Ceiling Speakers

### SPE-82/CR

Order No. 16.1520

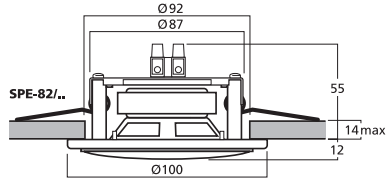
### SPE-82/WS

Order No. 16.1540



**Small flush-mount speakers, 12 W<sub>MAX</sub>, 4 Ω**

- Chrome (CR) or white (WS) covers
- Similar design to standard flush-mounted halogen lights
- Suitable for speech and background music, very consistent frequency response
- Quick mounting facility



The corresponding radiation angles can be found on our website [www.monacor.com](http://www.monacor.com)



Model	SPE-82/CR	SPE-82/WS
Frequency range	f3-20,000 Hz	f3-20,000 Hz
Resonant frequency (fs)	200 Hz	200 Hz
Power capability, 4 Ω	12 W <sub>MAX</sub> , 6 W <sub>RMS</sub>	12 W <sub>MAX</sub> , 6 W <sub>RMS</sub>
SPL (1 W/m)	87 dB	87 dB
Type of speaker	75	75
Mounting cutout	ø 92 mm	ø 92 mm
Mounting depth	57 mm	57 mm
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	ø 100 mm x 67 mm	ø 100 mm x 67 mm
Weight	340 g	340 g

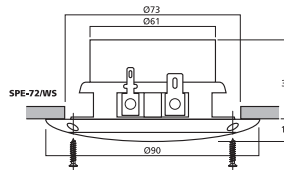
### SPE-72/WS

Order No. 16.2310



**Weatherproof flush-mount full range speaker with dual cone, 40 W<sub>MAX</sub>, 4 Ω**

Weatherproof speaker of compact size and a high power capability with a wide bandwidth and particularly brilliant reproduction due to a twin cone. High-quality white plastic basket with magnetic sleeve in one piece. Polypropylene cone and mica dual cone. Rubber surround, supplied with matching plastic grille (to be glued in). Suitable for PA applications also in a damp environment and outdoors.



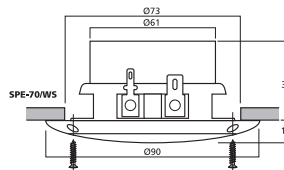
### SPE-70/WS

Order No. 16.2300



**Weatherproof flush-mount full range speaker and bass-midrange speaker, 40 W<sub>MAX</sub>, 8 Ω**

Weatherproof speaker of compact size and high power capability with a wide bandwidth reproduction. High-quality white plastic basket with magnetic sleeve in one piece. Polypropylene cone, rubber surround, supplied with matching plastic grille (to be glued in). Suitable for PA applications also in a damp environment and outdoors, as a bass-midrange speaker also suitable in small hi-fi systems.



Model	SPE-72/WS	SPE-70/WS
Frequency range	100-20,000 Hz	100-20,000 Hz
Resonant frequency (fs)	100 Hz	100 Hz
Power capability, 8 Ω	-	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>
Power capability, 4 Ω	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>	-
SPL (1 W/m)	86 dB	86 dB
Type of speaker	75	75
Mounting cutout	ø 73 mm	ø 73 mm
Mounting depth	37 mm	37 mm
Admiss. ambient temp.	-20 °C to +50 °C	-20 °C to +50 °C
Dimensions	ø 90 mm x 50 mm	ø 90 mm x 50 mm
Weight	230 g	230 g

# 100 V Ceiling Speakers

Special speakers which show completely new ways of invisible PA applications: the super dispersion ceiling speakers effectively utilise an open baffle technology for PA ceiling applications.

## EDL-310L

Order No. 16.2490

100V

### Super dispersion PA ceiling speaker

- 100 V line technique with 3 power taps up to 10 W<sub>RMS</sub>
- High-quality full range speaker (20 cm) with an exceptionally good linearity, extensive bass reproduction and high efficiency
- For all suspended ceilings and for free suspension
- Easiest installation by simply resting the speaker on the ceiling grid or suspending it above the ceiling (to prevent rattling noise with lightweight ceilings)
- A very good sound with excellent stereophony with all suspended ceiling grids
- With most of the more soundproof ceilings, typical treble dampening can be compensated to a large extend by simply readjusting the treble control at the amplifier and background PA applications can be realised without any cutouts or visible speakers
- Dimensions: 300 mm x 300 mm, required clearance above the ceiling when resting the speaker directly on the grid: > 10 cm, when suspending it above the ceiling: > 25 cm
- The sound absorption plate is fitted with 3 foam rubber pads for resting the speaker on the grid and 3 predrilled holes for suspending it



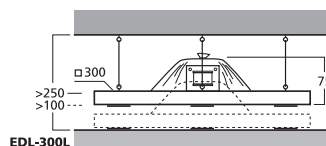
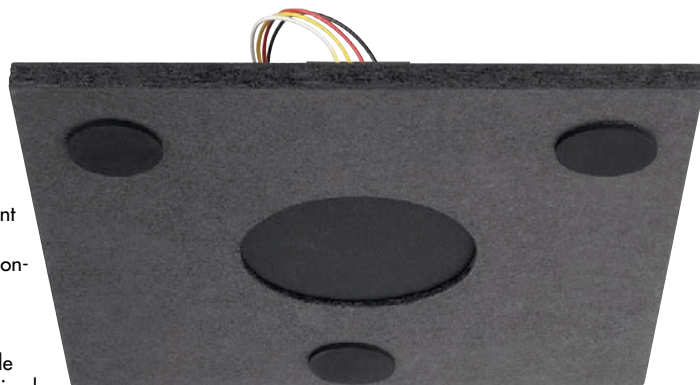
## EDL-300L

Order No. 16.2180

100V

### Super dispersion PA ceiling speaker

- 100 V line technique with 3 power taps
- For all suspended ceilings and for free suspension
- Easiest installation by simply resting the speaker on the ceiling grid or suspending it above the ceiling (to prevent rattling noise with lightweight ceilings)
- High-quality full range speaker (13 cm) with an exceptionally good linearity
- A very good sound with excellent stereophony with all suspended ceiling grids
- With most of the more soundproof ceilings, typical treble dampening can be compensated to a large extend by simply readjusting the treble control at the amplifier and background PA applications can be realised without any cutouts or visible speakers
- Dimensions: 300 mm x 300 mm, required clearance above the ceiling when resting the speaker directly on the grid: > 10 cm, when suspending it above the ceiling: > 25 cm
- The sound absorption plate is fitted with 3 foam rubber pads for resting the speaker on the grid and 3 predrilled holes for suspending it



Model	EDL-310L	EDL-300L
Frequency range	50-18,000 Hz	90-20,000 Hz
Power capability, 100 V	10/5/2.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-	-
Type of speaker	200	130
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	300x300x95 mm	300x300x75 mm
Weight	1.9 kg	1.4 kg

## 100 V Flush-mount Speakers



### ESP-8U

Order No. 16.2170



#### PA wall and ceiling speaker for flush mounting

- 100 V line technique via audio transformer with 3 power taps
- Perfect sound presence for a powerful voice reproduction with a very high audibility
- 20 cm speaker of very high efficiency (99 dB/1 W/1 m)
- Plastic tray for flush mounting in walls or solid ceilings
- Required hole in wall: approx. 242x242x100 mm
- Metal front grille with plastic frame



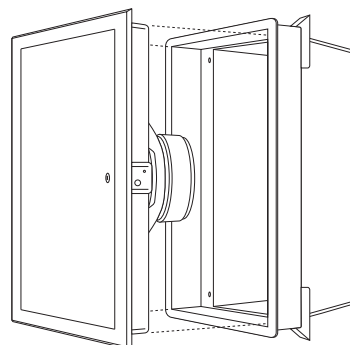
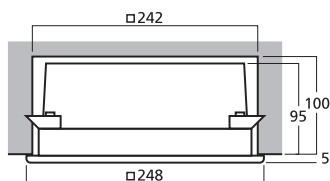
### ESP-5U

Order No. 16.2160



#### PA wall and ceiling speaker for flush mounting

- 100 V line technique via audio transformer with 3 power taps
- Wide bandwidth radiation for a pleasant music reproduction
- 13 cm speaker of high efficiency (94 dB/1 W/1 m)
- Plastic tray for flush mounting in walls or solid ceilings
- Required hole in wall: approx. 242x242x100 mm
- Metal front grille with plastic frame



### SPE-8U

Order No. 10.5640



#### Hi-fi wall and ceiling speaker for flush mounting, 8 Ω

- High-quality 2-way coaxial speaker system with very good sound characteristics
- 20 cm (8") bass speaker with glass fibre cone, 24 mm (1") dome tweeter with titanium cone
- Plastic tray for flush mounting in walls or solid ceilings
- Required hole in wall: approx. 242x242x100 mm
- Metal front grille with plastic frame



Model	ESP-8U	ESP-5U	SPE-8U
Frequency range	200-17,000 Hz	100-19,000 Hz	70-20,000 Hz
Resonant frequency (f <sub>s</sub> )	-	-	60 Hz
Power capability, 100 V	6/3/1.5 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>	-
Power capability, 8 Ω	-	-	60 W <sub>MAX</sub> , 30 W <sub>RMS</sub>
SPL (1 W/m)	-	-	89 dB
Max. rated SPL	-	-	104 dB
Type of speaker	200	130	200
Mounting cutout	-	-	242x242 mm
Mounting depth	-	-	100 mm
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C
Dimensions	248x248x100 mm	248x248x100 mm	248x248x100 mm
Weight	1.7 kg	1.4 kg	1.6 kg



## 100 V Wall Speakers

### ESP-72/WS

Order No. 16.2130

100V

#### PA wall speaker

- 100 V line technique
- 2-way coaxial speaker, providing a high-quality sound
- 5-step rotary switch for 20/10/5/2.5 W<sub>RMS</sub>/off
- Rotary switch can be replaced with a cover plate to avoid accidental changing of the power selection
- Emergency priority relay
- White wooden cabinet with protective metal grille
- Easy wall mounting via supporting plate



► Tweeter

### ESP-70/WS

Order No. 16.2120

100V

#### PA wall speaker

- 100 V line technique
- 5-step rotary switch for 10/6/4/2 W<sub>RMS</sub>/off
- Rotary switch can be replaced with a cover plate to avoid accidental changing of the power selection
- Emergency priority relay
- White wooden cabinet with protective metal grille
- Easy wall mounting via supporting plate



### ESP-40/WS

Order No. 16.1090

100V

### ESP-60/WS

Order No. 16.1110

100V

#### PA wall speakers

- 100 V line technique via audio transformer with 4 power taps
- White wooden cabinet, without rear panel, foam front cover
- Supplied with mounting screws



Model	ESP-72/WS	ESP-70/WS	ESP-40/WS	ESP-60/WS
Frequency range	85-20,000 Hz	95-19,000 Hz	60-8,000 Hz	60-8,000 Hz
Power capability, 100 V	20/10/5/2.5 W <sub>RMS</sub>	10/6/4/2 W <sub>RMS</sub>	6/4/2/1 W <sub>RMS</sub>	6/4/2/1 W <sub>RMS</sub>
Power capability, 8 Ω	-	-	-	-
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dimensions	300x200x90 mm	300x200x90 mm	230x170x80 mm	300x200x90 mm
Weight	2.8 kg	2.3 kg	1.3 kg	1.6 kg

## 100 V Wall Speakers

### ESP-152/WS

Order No. 16.2150



#### PA wall speaker

- 100 V line technique via audio transformer with 3 power taps
- High-quality sound, high volume capability due to 2-way coaxial system
- Plastic cabinet of a special design (open rear panel) with protective metal grille
- Horizontal and vertical mounting possible due to symmetrical shape of cabinet
- Supplied with mounting screws and cover plates for the screws



### ESP-62/WS

Order No. 16.3030



#### PA wall speaker, with EN 54-24 certification.

- 100 V line technique via audio transformer with 3 power taps
- Full range speaker with an excellent sound quality and a clear voice reproduction
- Plastic cabinet of a special design (open rear panel) with protective metal grille
- Horizontal and vertical mounting possible due to symmetrical shape of cabinet
- Supplied with mounting screws and screw head covers



EN 54-24 EN 60849

Model	ESP-152/WS	ESP-62/WS
Frequency range	100-20,000 Hz	100-19,000 Hz
Power capability, 100 V	15/7.5/3.75 W <sub>RMS</sub>	6/3/1.5 W <sub>RMS</sub>
SPL (1 W/m)	91 dB	93 dB
Max. rated SPL	103 dB	101 dB
Type of speaker	130	130
Admiss. ambient temp.	0-40 °C	-10 °C to +55 °C
Dimensions	240x330x85 mm	240x330x85 mm
Weight	2 kg	1.6 kg

## Wall Speakers

### ESP-360/WS

Order No. 16.1900

100V

#### PA wall speaker

- 100 V line technique via audio transformer with 2 power taps
- Full range speaker with dual cone
- White plastic cabinet
- Curved cabinet for a perfect radiation angle



### ESP-130/WS

Order No. 16.1600

100V

#### PA wall speaker

- 100 V line technique via audio transformer with 2.5 W and 5 W power taps
- 2-way system with neodymium bass-midrange speaker and dome tweeter
- White plastic cabinet with protective metal grille
- Slimline design for unobtrusive wall mounting



Model	ESP-360/WS	ESP-130/WS
Frequency range	130-15,000 Hz	80-18,000 Hz
Power capability, 100 V	6/3 W <sub>RMS</sub>	5/2.5 W <sub>RMS</sub>
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	185x255x123 mm	185x275x38 mm
Weight	1.1 kg	1.2 kg

### SMB-130/WS

Order No. 09.0490

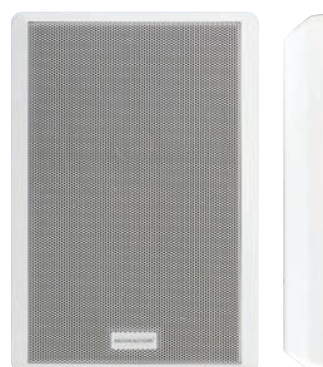
4Ω

40 W<sub>MAX</sub>

PAIR PAIR

#### Pair of slimline speaker systems, 40 W<sub>MAX</sub>, 4 Ω

2-way system with neodymium bass-midrange speaker and dome tweeter. With integrated wall holder. Unobtrusive design with a very pleasant radiation and good level stability. Perfectly suitable for any background PA application, also excellent as rear speakers in surround systems.



Model	SMB-130/WS
Impedance	4 Ω
Frequency range	80-18,000 Hz
Crossover frequency	5,000 Hz
Power rating	40 W <sub>MAX</sub> , 20 W <sub>RMS</sub>
SPL (1 W/1 m)	88 dB
Dimensions	185x275x38 mm
Weight	1 kg

## Wall Speakers

SPEAKERS

### ESP-80/WS

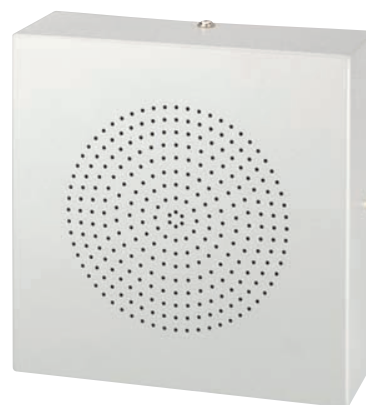
Order No. 16.2380



**PA wall speaker**, vandal-resistant.

- 100 V line technique via audio transformer with 4 power taps
- Full range speaker with a good voice reproduction, suitable for background music
- Very robust 2-piece metal cabinet

Model	ESP-80/WS
Frequency range	250-10,000 Hz
Power capability, 100 V	6/3/1.5/0.75 W <sub>RMS</sub>
Power capability, 8 Ω	-
Admiss. ambient temp.	0-40 °C
Dimensions	170x170x63 mm
Weight	1.3 kg



### ESP-90/WS

Order No. 16.2680



**PA wall speaker**

- 100 V line technique via audio transformer with 3 power taps
- White plastic cabinet (surface-mount version with open rear panel) with protective metal grille
- Supplied with mounting accessories

Model	ESP-90/WS
Frequency range	80-19,000 Hz
Power capability, 100 V	6/3/1.5 W <sub>RMS</sub>
Power capability, 8 Ω	-
Type of speaker	130
Admiss. ambient temp.	0-40 °C
Dimensions	ø 168 mm x 72 mm
Weight	600 g



### SPE-85/WS

Order No. 16.1030



**Surface-mount speaker, 10 W<sub>MAX</sub>**

- Humidity-proof due to water-repellent segments and speaker with plastic cone
- Especially suitable for the reproduction of alarm signals

Model	SPE-85/WS
Frequency range	350-8,000 Hz
Power capability, 8 Ω	10 W <sub>MAX</sub> ; 5 W <sub>RMS</sub>
SPL (1 W/m)	95 dB
Admiss. ambient temp.	0-40 °C
Dimensions	110x110x57 mm
Weight	400 g





## 100 V Ball Speakers

### EDL-420/WS

Order No. 16.1880



### EDL-412/WS

Order No. 16.1860



#### Weatherproof PA ball speakers

- 100 V line technique or 8  $\Omega$  operation
- White ABS cabinet (self-extinguishing, acc. to standard UL 94V-0)
- Supplied with 480 cm connection cable and canopy

UL 94V-0



### EDL-430/WS

Order No. 16.2370



**Top-quality PA ball speaker**, with a perfect omnidirectional sound radiation.

- 100 V line technique
- Speaker configuration of particularly high-quality
- Extensive reflector design
- High-quality sound, also suitable for radiating music
- White ABS cabinet
- 150 cm connection cable with canopy



Model	EDL-420/WS	EDL-412/WS	EDL-430/WS
Frequency range	120-20,000 Hz	160-20,000 Hz	80-15,000 Hz
Power capability, 100 V	20/10/5 W <sub>RMS</sub>	10/5/2.5 W <sub>RMS</sub>	20/10/5 W <sub>RMS</sub>
Power capability, 8 $\Omega$	20 W/8 $\Omega$	10 W/8 $\Omega$	-
SPL (1 W/m)	94 dB	92 dB	92 dB
Admiss. ambient temp.	-10 °C to +40 °C	-10 °C to +40 °C	0-40 °C
Dimensions	ø 265 mm	ø 184 mm	ø 250 mm
Weight	2.2 kg	1.7 kg	2.2 kg

## 100 V Speakers

### EDL-213

Order No. 16.2890



#### Weatherproof PA wall and ceiling projector speaker

- 100 V line technique
- 2 x 13 cm full range speaker with impregnated cone for bidirectional radiation
- Hose-proof due to ABS plastic cabinet with rubber seals and high-strength cable gland
- Robust mounting arm with joint for panning and tilting allows mounting in most varying angles
- 3 power taps

2 x speaker



### EDL-113

Order No. 16.2880



#### Weatherproof PA wall and ceiling projector speaker

- 100 V line technique
- 13 cm full range speaker with impregnated cone
- Directional radiation
- Hose-proof due to ABS plastic cabinet with rubber seals and high-strength cable gland
- Robust mounting arm with joint for panning and tilting allows mounting in most varying angles
- 3 power taps



Model	EDL-213	EDL-113
Frequency range	80-20,000 Hz	80-20,000 Hz
Power capability, 100 V	20/15/10 W <sub>RMS</sub>	15/10/5 W <sub>RMS</sub>
SPL (1 W/m)	90 dB	90 dB
Max. rated SPL	102 dB	100 dB
Type of speaker	2 x 130	130
Mounting cutout	-	-
Mounting depth	-	-
Admiss. ambient temp.	-20 °C to +50 °C	-20 °C to +50 °C
Dimensions	457x200x174 mm	315x200x174 mm
Weight	3.4 kg	2.5 kg