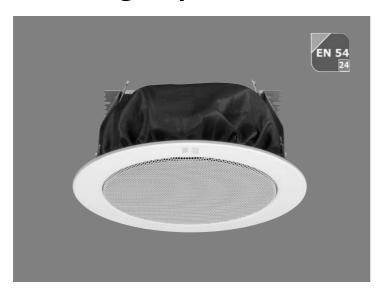
# PC-1869EN Ceiling Speaker 6W EN/ISO



## DESCRIPTION

The PC-1869EN is a new thin-panel speaker design that blends in unobtrusively with an application's architecture and interior décor. This ceiling-mount 12 cm (5") cone-type all-metallic speaker is ideal for BGM and announcement applications. It is also designed for use in a voice alarm system, when the speaker system is integrated with a panel. The PC-1869EN is EN 54-24\* and ISO 7240-24 certified and is therefore authorized for use in conjunction with fire detection systems. Mounting the speaker into the ceiling is quick and easy, thanks to a spring clamp installation method.

A screw connector steatite input terminal allows secure cable connections and bridge wiring. Input impedance can easily be adjusted by changing the tap position of the transformer.

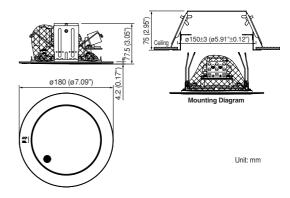
\*EN 54-24: Loudspeaker for voice alarm systems for fire detection and fire alarm systems.

# **FEATURES**

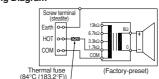
- · Thin panel does not clash with interior design
- · Easy installation with spring clamp
- 12 cm (5") high sound quality cone speaker
- High sensitivity: 94 dB (1 W, 1 m)
- · Steatite screw terminal block and thermal fuse
- Certified to EN 54-24 and ISO 7240-24 (Certificate No.: 0359-CPD-0100)
- Ideally suited for voice alarm system applications

# TOA

# APPEARANCE AND DIMENSIONAL DIAGRAM



### Wiring Diagram



(Note) Use transformer terminals when changing input impedance

# **SPECIFICATIONS**

Rated Noise Power: 6 W (100 V Line), 3 W (70 V Line)

**Rated Impedance:** 100 V line:  $1.7k \Omega$  (6 W),  $3.3k \Omega$  (3 W),  $6.7k \Omega$  (1.5 W),  $1.2k \Omega$  (0.8 W)

6.7k  $\Omega$  (1.5 W), 13k  $\Omega$  (0.8 W) 70 V line: 1.7k  $\Omega$  (3 W), 3.3k  $\Omega$  (1.5 W) 6.7k  $\Omega$  (0.8 W),13k  $\Omega$  (0.4 W)

**Sensitivity:** 94 dB (1 W, 1 m) (500 – 5,000 Hz, pink noise)

90 dB (1 W, 1 m) (100 – 10,000 Hz, pink noise) 78 dB (1 W, 4 m) (100 – 10,000 Hz, pink noise)

 Maximum Sound
 98 dB (6 W, 1 m) (100 – 10,000 Hz, pink noise)

 Pressure Level:
 86 dB (6 W, 4 m) (100 – 10,000 Hz, pink noise)

Frequency Response: 100 – 18,000 Hz

Coverage Angle: Horizontal and Vertical: 165° (500 Hz),

175° (1,000 Hz), 165° (2,000 Hz), 70° (4,000 Hz)

**Environmental Type:** A (indoor applications) **Speaker Component:** 12 cm (5") cone-type

Operating

 $\begin{array}{lll} \hline \textbf{Temperature:} & -10^{\circ} \text{ C to } +50^{\circ} \text{ C } (14^{\circ} \text{ F to } 122^{\circ} \text{ F}) \\ \hline \textbf{Dimensions for} & \text{Mounting hole:} & 150\pm3 \text{ mm } (\emptyset \ 5.91^{\circ}\pm0.12^{\circ}) \\ \hline \textbf{Fixing Hole:} & \text{Ceiling thickness: Max. } 25 \text{ mm } (0.98^{\circ}) \\ \hline \end{array}$ 

Speaker Mounting Method:

Dimensions:

ethod: Spring clamp

Applicable Cable: Conductor: Solid wire or 7-core wire

No bridge connection: 0.8 = 10 mm² (AWG 18 – AWG 7) for solid wire

 $\begin{array}{c} 0.8-8~\text{mm}^2~\text{(AWG~18-AWG~8)}~\text{for~7-core~wire}\\ \text{Bridge connection:}~~0.8-2.5~\text{mm}^2~\text{(AWG~18-AWG~13)}~\text{for~solid~wire}\\ 0.8-1.5~\text{mm}^2~\text{(AWG~18-AWG~15)}~\text{for~7-core~wire} \end{array}$ 

Connection: 0.8 – 1.5 mm² (AWG 18 – AWG 15) for 7-core wire Screw connector (steatite terminal) can be

bridge connection

Finish: Baffle: Steel plate, off-white (RAL 9010 or

equivalent color), paint

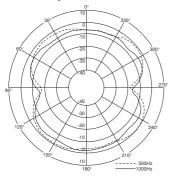
Grille: Surface-treated steel plate net, off-white

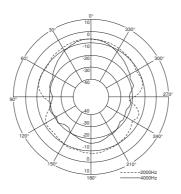
(RAL 9010 or equivalent color), paint ø 180 × 77.5 (D) mm (ø 7.09" × 3.05")

**Weight:** 820 g (1.81 lb)

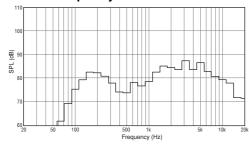
# CHARACTERISTIC DIAGRAMS based on EN 54-24 measurement conditions (Pink noise, 1 W, 4 m)

# **Polar Response**

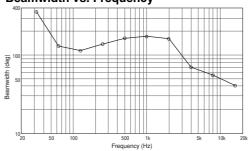




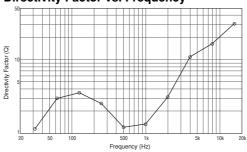
# SPL vs. Frequency



# Beamwidth vs. Frequency



## **Directivity Factor vs. Frequency**



# ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The PC-1869EN is a new thin-panel speaker design that blends in unobtrusively with any application's architecture and interior décor. This ceiling-mount 12 cm (5") cone-type all-metallic speaker is ideal for BGM and announcement applications. It is also designed for use in voice alarm systems. The PC-1869EN is EN 54-24 certified with CPD number 0359-CPD-0100 and ISO 7240-24 certified and is therefore authorized for use in conjunction with fire detection systems. Mounting the speaker into the ceiling is quick and easy, thanks to a spring clamp installation method, Off-white colour (RAL 9010).

Fire-resistant terminal block made of steatite for in- and out-wiring, thermal fuse with a blowing temperature of  $84^{\circ}$  C. Input impedance can easily be adjusted by changing the tap position (6 W, 3 W, 1.5 W, 0.8 W) of the transformer.

The output sound pressure level at a distance of 1m with a 1W input level applied shall be 90 dB SPL. (100 Hz to 10,000 Hz). The speaker shall have a frequency response of 100 - 18,000 Hz. Ingress Protection, IP21C. The unit shall have dimensions of Ø 180  $\times$  80 (D) mm



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