

## F-2352C

### PANEL CONE SPEAKER



The F-2352C ceiling and wall-mounted speaker covers an extremely wide area and can be used for 25, 70 and 100 V line applications. Well-balanced sound can be heard uniformly at any location.

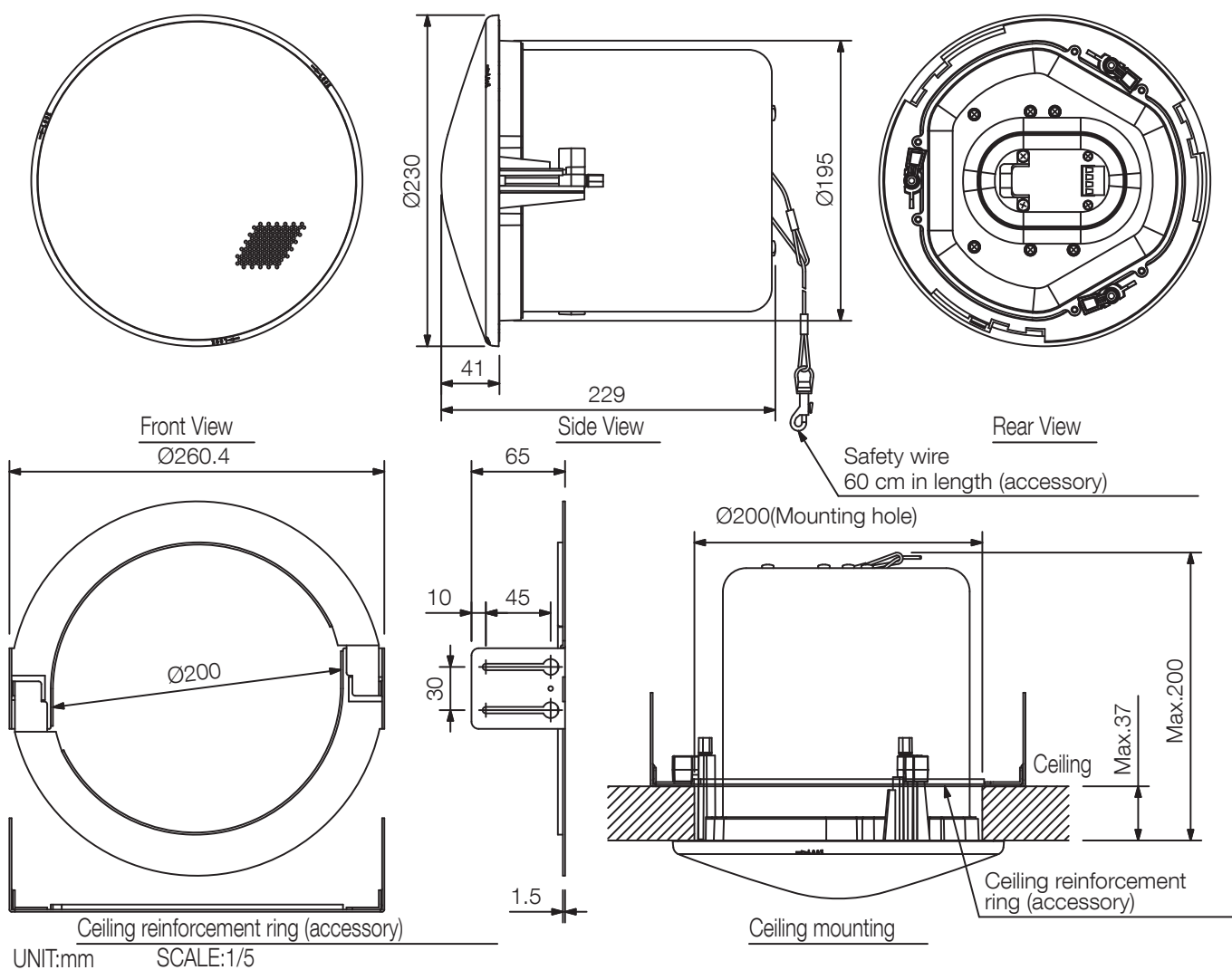
### Key features

- Ported bass-reflex design
- Co-axial: 5" cone driver and dome tweeter
- Special diffuser provides wide off-axis high frequency response
- Metal back-can and safety cable
- Removable terminal block with loop-through terminations
- Overload protection circuitry
- For medium ceiling height (2 to 4 m)

## Specifications

|                      |  |
|----------------------|--|
| Enclosure            | Bass reflex type   |
| Rated Input          | 30 W (High Impedance)  |
| Power Handling       | Continuous pink noise: 60 W (8 $\Omega$ )<br>Continuous program: 120 W (8 $\Omega$ )   |
| Impedance            | 100 V line: 330 $\Omega$ (30 W), 1 k $\Omega$ (10 W), 3.3 k $\Omega$ (3 W), 10 k $\Omega$ (1 W)<br>70 V line: 170 $\Omega$ (30 W), 330 $\Omega$ (15 W), 1 k $\Omega$ (5 W), 3.3 k $\Omega$ (1.5 W), 10 k $\Omega$ (0.5 W)<br>25 V line: 170 $\Omega$ (3.7 W), 330 $\Omega$ (1.9 W), 1 k $\Omega$ (0.6 W), 3.3 k $\Omega$ (0.2 W), 10 k $\Omega$ (0.06 W)<br>8 $\Omega$ |
| Sensitivity          | 90 dB (1 W, 1 m)   |
| Frequency Response   | 70 Hz - 20 kHz (-10 dB), 50 Hz - 20 kHz (-20 dB)<br>at installation in 1/2 free sound field<br>(Measured by installing the unit in the center of a ceiling.)   |
| Speaker Component    | High frequency: Balanced dome-type, Low frequency: 12 cm cone-type   |
| Mounting Hole        | Ø200 mm (Maximum ceiling thickness: 37 mm)   |
| Input Terminal       | Removable locking connector with screw-down terminals<br>(2 input terminals and 2 bridge terminals)  |
| Cable Requirements   | Solid copper wire: Ø0.5 - Ø1.6 mm (equivalent to AWG No. 24 - 14)<br>Stranded copper wire: 0.2 - 2.5 mm <sup>2</sup> (equivalent to AWG No. 24 - 14)   |
| Finish               | Enclosure: Steel plate, plating<br>Baffle: Fire-resistant ABS resin (resin material grade: UL-94 V-0), black<br>Rim: Fire-resistant ABS resin (resin material grade: UL-94 V-0), white, paint<br>Punched net: Steel plate, white, paint  |
| Dimensions           | Ø230 x 229 (D) mm  |
| Weight               | 3.7 kg (including mounting accessories)  |
| Included Accessories | Panel .....1, Ceiling reinforcement ring .....1, Safety wire .....1, Paper pattern ...1  |
| Optional Accessories | Anchor hanging bracket: HY-AH1, Back can: HY-BC1, Tile bar bridge: HY-TB1, Trim ring: HY-TR1   |

## Dimensions



## A&E specifications

The overhead music/paging speaker shall be a two-way bass-reflex enclosure type suitable for ceiling mounting. The low frequency component shall be a 4.72" (12 cm) cone-type speaker and the high frequency component shall be a 1" (2.5 cm) balanced-dome tweeter. The speaker assembly shall be suitable for use in air handling spaces.

The speaker shall be compatible with low and high impedance speaker systems and include a built-in 25/70.7/100 V matching transformer. The front baffle shall have screwdriver-adjustable tap settings of: 30 W, 15 W, 5 W, 1.5 W, and 0.5 W for 70.7 V operation; 3.7 W, 1.9 W, 0.6 W, 0.2 W, and 0.06 W for 25 V operation; and 30 W, 10 W, 3 W, and 1 W for 100 V operation; plus settings for 16 ohm and direct 8 ohm operation. Built-in overload protection circuitry shall protect the speaker against excessive input power.

The output sound pressure level at a distance of 1 m with 1 W of input power applied shall be 90dB SPL. The rated power handling (Continuous Program) shall be 120 W at 8 ohms, 60 W at 16 ohms, and 30 W when used with a 70.7, or 100 V line system. The speaker shall have a frequency response range from 70 Hz to 20k Hz. Speaker directivity shall be less than  $Q = 8$  for all ISO 1/3-octave bands up to 4k Hz when measured in a half-space anechoic environment using 1/3-octave band-limited pink noise.

The speaker baffle shall be made of fire-resistant ABS resin. The rear enclosure shall be made from a single piece of steel plate. The grille shall be white painted steel plate with fire-resistant ABS resin trim and shall be field re-paintable. Instructions for re-painting the grille shall be included in the speaker package. The speaker shall be equipped with a removable locking connector having two screw-down input terminals and two bridging screw-down pass-through terminals.

The speaker shall be no greater than 9.1" (230 mm) outside diameter shall require a circular cutout no greater than 8"(200 mm), and shall be capable of mounting in surfaces up to 1.46"(37 mm) thick. The rear enclosure shall extend no more than 7.9"(200 mm) above the mounting plane. The speaker shall weigh no more than 8.16 lbs (3.7 kg).

The overhead music/paging speaker shall be TOA model F-2352C.

The tile bridge for drop ceiling installation shall be TOA model HY-TB1.

The trim-ring for covering oversized holes (9" to 11.8") shall be TOA model HY-TR1.

The black painted rear enclosure for exposed ceiling installation shall be TOA model HY-BC1.