



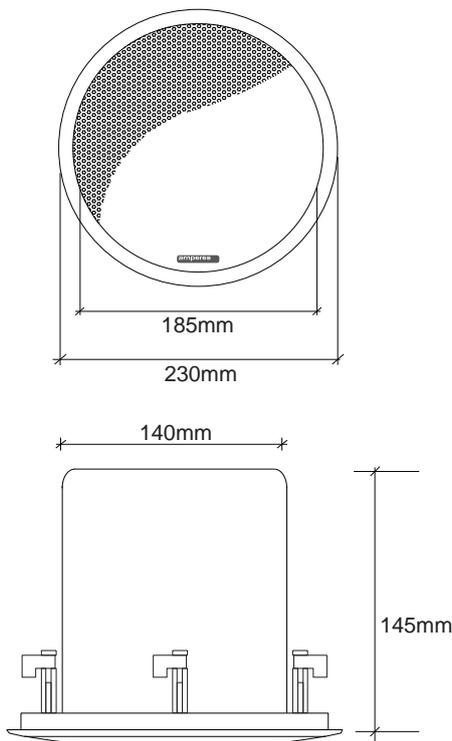
**Introduction**

CS630 is another premium full range ceiling speaker with metal back enclosure, suitable for requirement of quality sound reproduction with adjustable power taps. With its controlled dispersion angle, it is suitable for installation at high ceiling areas.

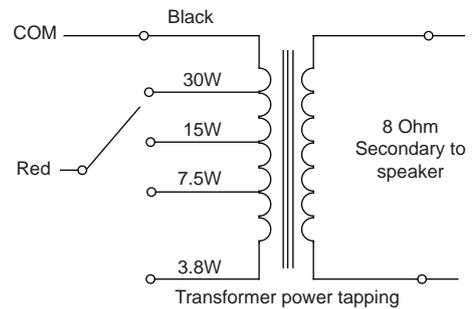
It is suitable for speech and background music playback in areas, such as:

- Hotel corridors / lobbies
- Offices
- Shopping centres for general paging and pipe in music
- Public areas

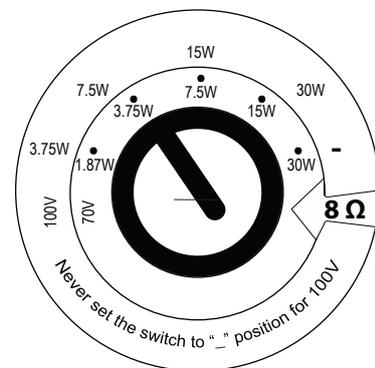
**Speaker Dimension**



**Circuit Diagram**



**Rotary Power Switch**



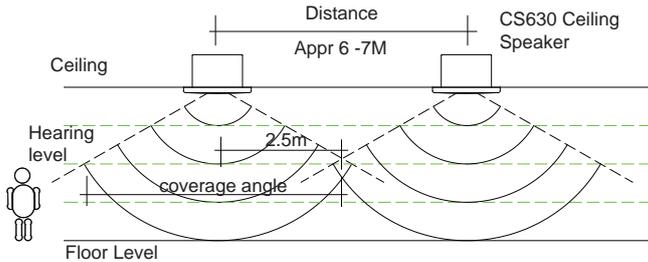
**Design Assistance**

To obtain a reasonably good sound or speech intelligibility, several environmental factors had to be taken into consideration such as :

- Environmental noise level or background noise
- Ceiling height
- Area's acoustic factor ( eg. reverberation time )
- Coverage area

In order to hear properly, the sound source from speaker shall be minimum 6 dB above the background noise.

If the background noise is around 70 dB, the person shall be listening to the speaker sound at approximately 76 dB, at around 1.5 to 2m above floor level.



If the power input to CS630 is 15W, the SPL ( 1KHz ) at 2m from speaker shall be approximately 95.8 dB. With music source, the average SPL shall be 3 dB below ; thereby the hearing shall be around 92 dB, which is rather comfortable level in a shopping mall.

From this, the coverage area can be estimated ; ie. approximately 7m diameter or 38 sq m. Further to this, the distance of speaker can be ascertained by dividing the area of the mall to the area of coverage by each speaker.

**Technical Specifications**

**Speaker**

Power rating	30W 100V line
Diameter	6.5" ( 165 mm )
Cone type	Co-axial
Impedance	8 Ohm
Freq response ( -5dB )	75 - 18 KHz
SPL @ 1W / m ( +/-3dB ) ; 1 KHz	90 dB
Dispersion angle	120° (@1kHz ± 6dB)

**Matching Transformer**

Tapping ( 100V line input )	3.8 / 7.5 / 15 / 30W
Primary impedance	2.6K / 1.33K / 667 / 333 Ohm
Secondary impedance	8 Ohm

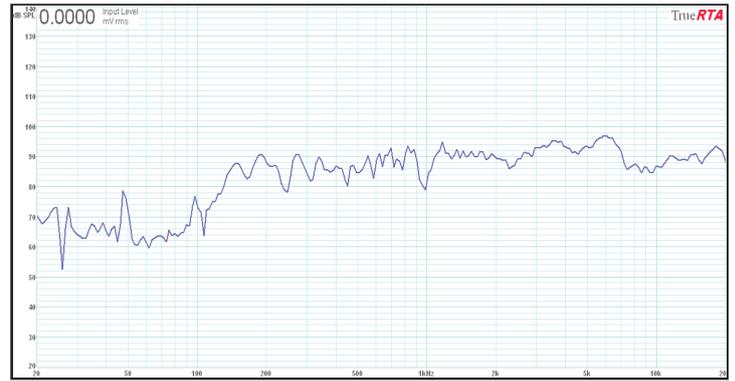
**Physical Dimensions**

Grille / enclosure	Aluminium / Metal enclosure
Cutting hole dimension ( mm )	185 mm
Overall size (mm)	230 dia x 145 h
Weight	2.15 kg
Colour	White

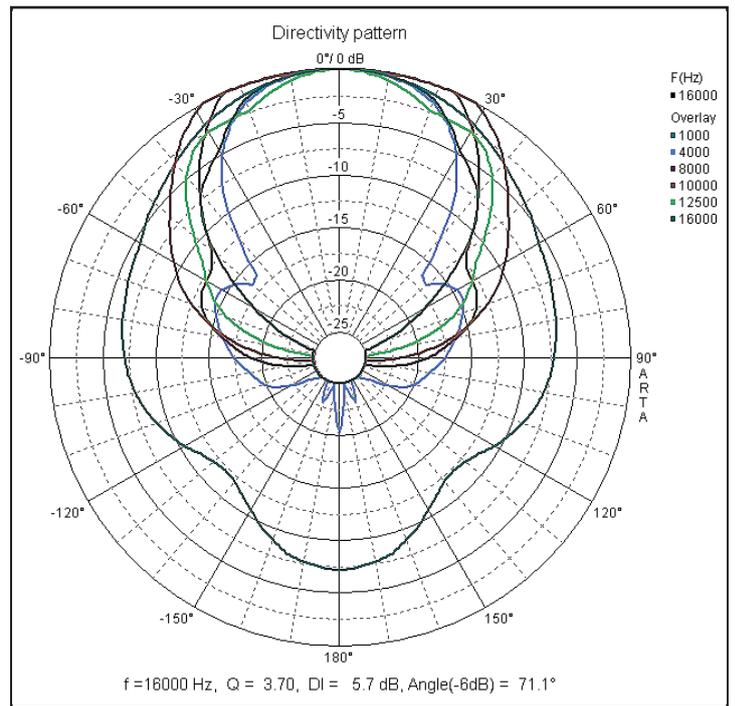
**Packing Information**

Carton box dimensions ( mm )	570 (L) x 560 (W) x 430 (D)
Weight	23.30 kg
Packing quantity	8 uts

**Frequency Response Chart**



**Polar Chart**



**SPL - Distance Chart**

TAP	1M	2M	3M	4M	5M
1W	90	84	80.5	78	76
3.8W	95.8	89.8	86.3	83.8	81.8
7.5W	98.8	92.8	89.3	86.8	84.8
15W	101.8	95.8	92.3	89.8	87.8

The above chart shows the co-relation of SPL and distance from speaker based on the characteristics of CS630, at 1 kHz.

Different frequencies may have different dB values at hearing point.