



CMS 801DC

TANNOY®



Product Description

The Tannoy CMS 801DC is a full bandwidth; high power and high sensitivity ceiling monitor system. The 200mm (8.00") Tannoy Dual Concentric™ is a point source drive unit design comprising a multi fibre paper pulp mid bass cone and a 25mm (1.00") ferrofluid cooled, titanium dome HF unit with neodymium magnet system. The driver and passive frequency dividing network are mounted in a vented, injection moulded, paintable front baffle manufactured from UV/weather resistant UL94V-0 ABS material.

The mid-bass and tweeter sections of the Tannoy Dual Concentric™ constant directivity driver are coincidentally aligned to a true point source; ensuring a wide and controlled dispersion for optimum coverage; this while avoiding the massive loss of energy, in the vertical plane at the crossover frequency, inherent in two-way discreet designs. This high power and high sensitivity design, with extended frequency response and very low distortion, is equipped with dynamic high frequency protection.

This compact unit is specifically designed for applications requiring the combination of premium sonic quality for music and speech reinforcement and exceptional reliability and intelligibility.

Two CMS 801DC model versions and a separate back can are available to satisfy the vast majority of installation application requirements:

- CMS 801DC BM (Blind Mount) - supplied with an integral back can.**
- CMS 801DC PI (Pre-Install) - supplied without a back can.**
- CMS 801PI Back Can (Pre-wire back can) - use with the CMS 801DC PI.**

The CMS 801DC BM model is equipped with a low insertion loss 60W line transformer mounted within the back can. This is easily configurable to the following settings via front baffle mounted rotary tapping switch:

- 70V systems: 60W / 30W / 15W / 7.5W / OFF & low Impedance operation**
- 100V systems: 60W / 30W / 15W / OFF & low Impedance operation**

The CMS 801DC PI is supplied without a transformer. If the product is to be used without a back can a 60W line transformer (7600 1658) is available as an optional accessory for easy connection to the baffle mounted control switch circuit. Installing the transformer in this manner (flying) requires installation in accordance with local building regulations.

NOTE: For optimum performance and full compliance with safety ratings Tannoy recommends using the CMS 801PI back can (8001 4570) accessory option in which the transformer is pre-fitted.

The zinc plated steel back cans have an integrated, recessed termination box. The removable locking connector has screw terminals for secure wire termination and "loop through" facility. Strain relief is provided by a clamping mechanism for use with plenum rated cable or conduit.

Spring loaded self-aligning clamps make for quick and easy installation, while all models are also supplied with two tile support rails and one C-ring included in the package.

A plaster (mud) ring is available as an optional accessory.

Features

- 200mm (8.00") point source Dual Concentric™ driver
- High power & high sensitivity with extended frequency response and very low distortion
- Wide, controlled constant directivity dispersion for optimum coverage.
- Does not suffer from massive loss of energy in the vertical plane at crossover caused by two way discreet designs
- UV/weather resistant UL94V-0 ABS front baffle
- Blind Mount & Pre Install options
- Dynamic high frequency protection
- Easily accessible tapping switch on front baffle.
- Low insertion loss 60W line transformer
- Ferrofluid cooled neodymium HF
- Packaged with tile rails and C-ring for quick & easy installation and simple stocking logistics

Applications

- Multi-zone foreground music & paging systems
- Boardrooms & offices
- Business music systems
- Airports, convention centres, hotels
- Reception and waiting rooms
- Houses of worship
- Retail outlets and shopping malls
- Lounges and bars
- Cruise ships
- Courtrooms

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TECHNICAL SPECIFICATIONS

System	CMS 801DC	
Frequency Response (-3dB) ⁽¹⁾ BM Back can	47Hz - 30kHz	
Frequency Range (-10dB) ⁽¹⁾ BM Back can	40Hz - 35kHz	
Frequency Range (-10dB) ⁽¹⁾ PI Back can	41Hz - 35kHz	
System Sensitivity (1W @1m) ⁽²⁾	92dB (1W = 2.83V for 8 Ohms)	
Nominal Coverage Angle	90 degrees conical	
Coverage Angle (1kHz to 6kHz)	100 degrees conical	
Directivity Factor (Q)	5.5 averaged 1kHz to 6kHz	
Directivity Index (DI)	7.2 averaged 1kHz to 6kHz	
Rated Maximum SPL ⁽²⁾		
Average	112dB	
Peak	118dB	
Average with THP60	110	
Power Handling ⁽³⁾		
Average	90W	
Programme	180W	
Peak	360W	
Recommended Amplifier Power	180W @ 8 Ohms	
Nominal Impedance	8 Ohms	
Transformer Taps (via front rotary switch)		
70V	60W / 30W / 15W / 7.5W / OFF & low impedance operation	
100V	60W / 30W / 15W / OFF & low impedance operation	
Distortion		
10% Full Power	2nd Harmonic	3rd Harmonic
250Hz	0.65%	0.39%
1kHz	1.36%	0.29%
10kHz	1%	0.03%
1% Full Power	2nd Harmonic	3rd Harmonic
250Hz	0.20%	0.43%
1kHz	0.49%	0.28%
10kHz	0.42%	0.03%
Crossover	2kHz - 2nd order LF, 2nd order HF (with dynamic HF protection)	

(1) Average over stated bandwidth. Measured at 1 metre on axis.
(2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber
(3) Long term power handling capacity as defined in EIA - 426B test

A full range of measurements, performance data, CLF and Ease™ Data can be downloaded from www.tannoy.com

Full independent verification of published specifications carried out by NWAAM Labs, California can also be obtained from the downloads section of www.tannoy.com

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods will always equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
8001 4550	CMS 801DC BM	White / paintable	2
8001 4560	CMS 801DC PI	White / paintable	2
8001 4650	CMS 601 Plaster (Mud) Ring	Zinc plated steel	10
8001 4570	CMS 801PI 8 Ohm back can	Zinc plated steel	1
7600 1658	CMS 801DC 60W transformer kit 8 Ohm	N/A	10

Transducers

Low Frequency 1 x 200mm (8.00") Dual Concentric™ constant directivity point source driver with multi fibre paper pulp cone

High Frequency 1 x 25mm (1.00") titanium dome with neodymium magnet system

Physical

Enclosure
Back can Zinc plated steel
Baffle Reflex loaded UL 94V-0 rated ABS
Grille Steel, with weather resistant coating

Safety Features Safety ring located at rear of enclosure for load bearing safety bond

Clamping Design
Min / Max Clamping Range 0.0mm (0.0") / 20.0mm (0.79")
Recommended Clamp Torque 1.5Nm

Back Can Options
Blind Mount (BM) Complete with fixed back can
Pre Install (PI) Separate back can for pre installation

Cable Entry Options Cable clamp and squeeze connector for conduit up to 22mm

Conduit Knockouts 3 Sets of horizontal positions
19 / 22 / 28mm (0.75" / 0.87" / 1.10")

Connectors Removable locking connector with screw terminals with "loop through" facility

Safety Agency Ratings (pending) UL-1480, UL-2043, CE

BM Hole Cutout Diameter 295mm (11.61")

PI Hole Cutout Diameter 295mm (11.61")

Dimensions
Bezel diameter 325mm (12.80")

Front of ceiling to rear of back can (BM) 310.50mm (12.22")

Front of ceiling to top of safety loop (BM) 327.80mm (12.90")

Front of ceiling surface to rear of speaker unit (PI) 118.70mm (4.67")

Front of accessory back can bezel to top of safety loop (PI) 168.50mm (6.63")

Net Weight (ea)
CMS 801DC BM 6.5kg (14.33lbs)
CMS 801DC PI 2.5kg (5.51lbs)
CMS 801 Plaster (Mud) Ring 0.3685kg (0.81lbs)
CMS 801PI 8 Ohm back can 4kg (8.81lbs)
CMS 801DC 60W transformer kit 8 ohm 1.095kg (2.41lbs)

Included Accessories C Ring, tile bridge, paint mask, cutout template, grille

Optional Accessories Plaster (Mud) Ring

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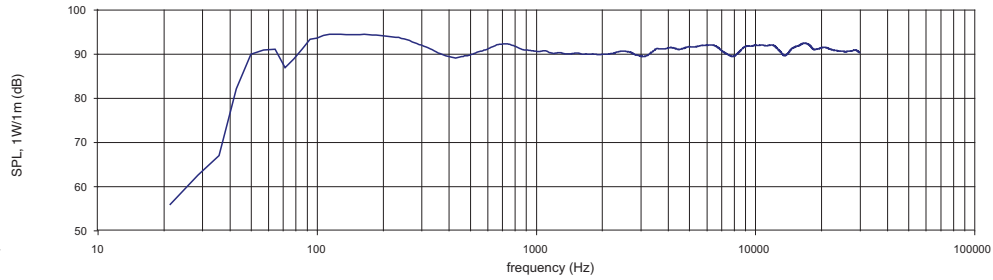
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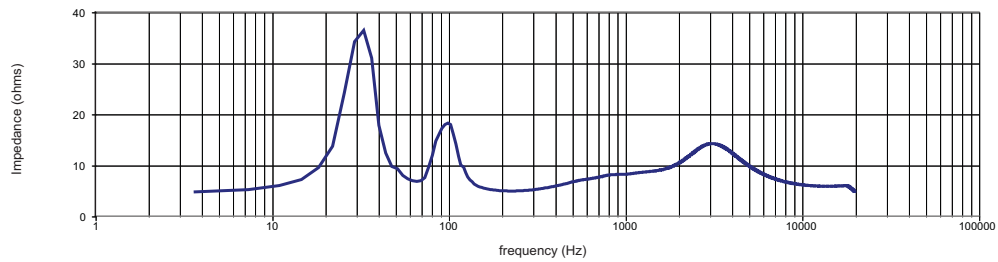
PERFORMANCE MEASUREMENTS

1m on-axis frequency response



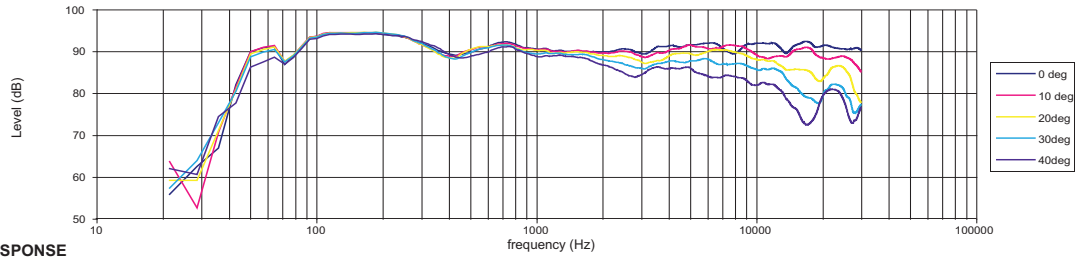
**ANECHOIC
FREQUENCY
RESPONSE**

Impedance vs frequency



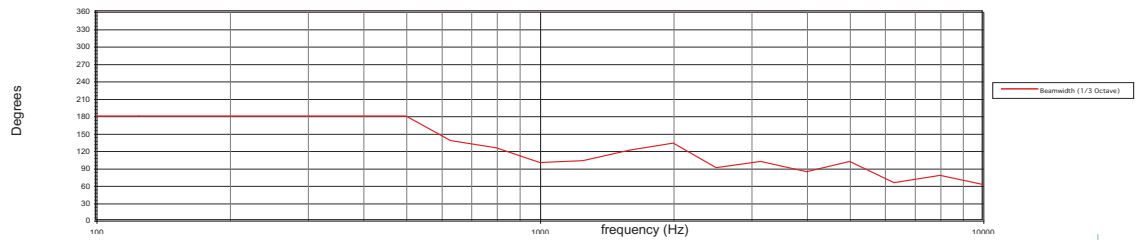
IMPEDANCE

Horizontal off-axis response



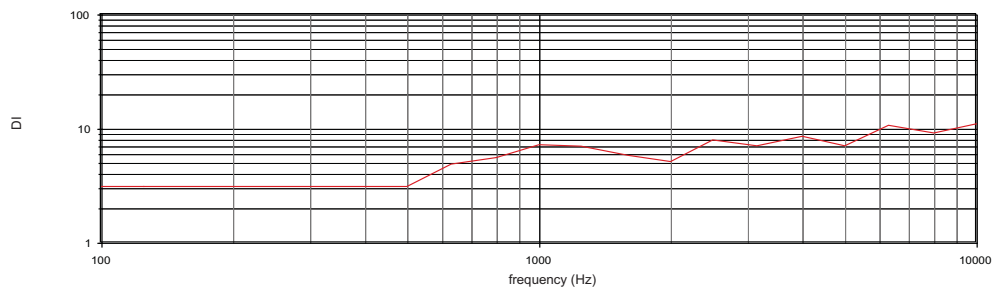
OFF AXIS RESPONSE

Beamwidth vs Frequency



BEAMWIDTH

DI vs Frequency



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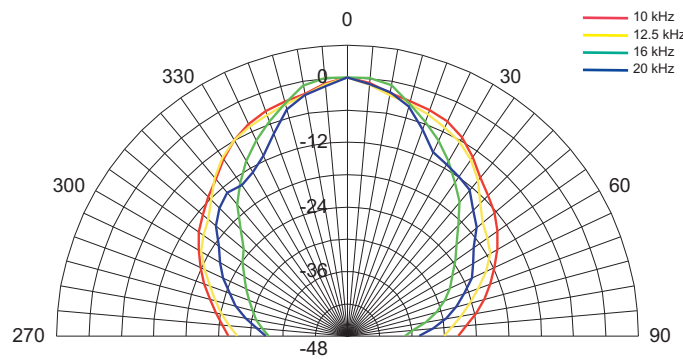
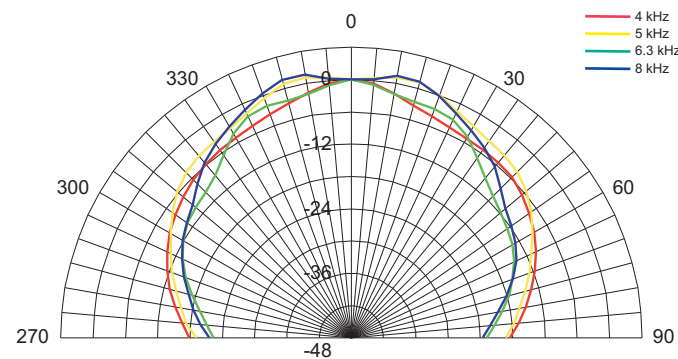
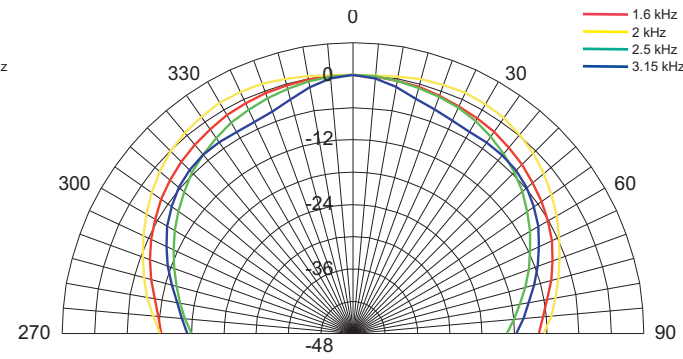
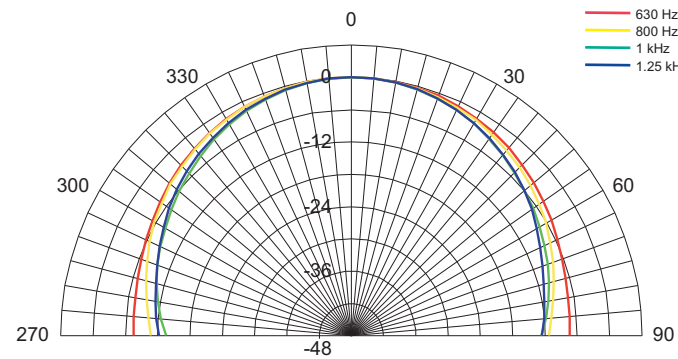
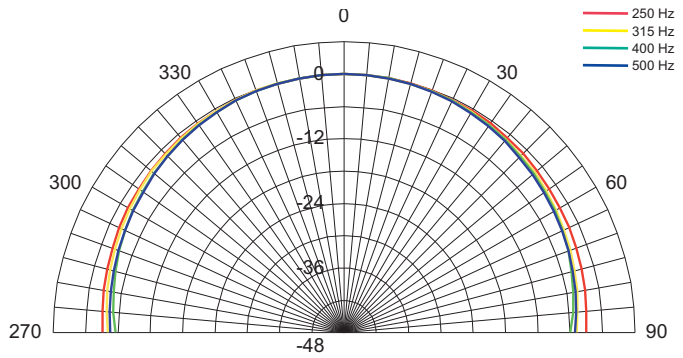
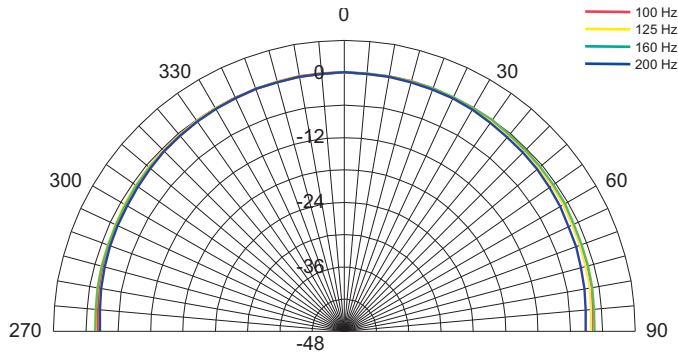
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PERFORMANCE MEASUREMENTS POLAR PLOTS (1/3 OCTAVE)



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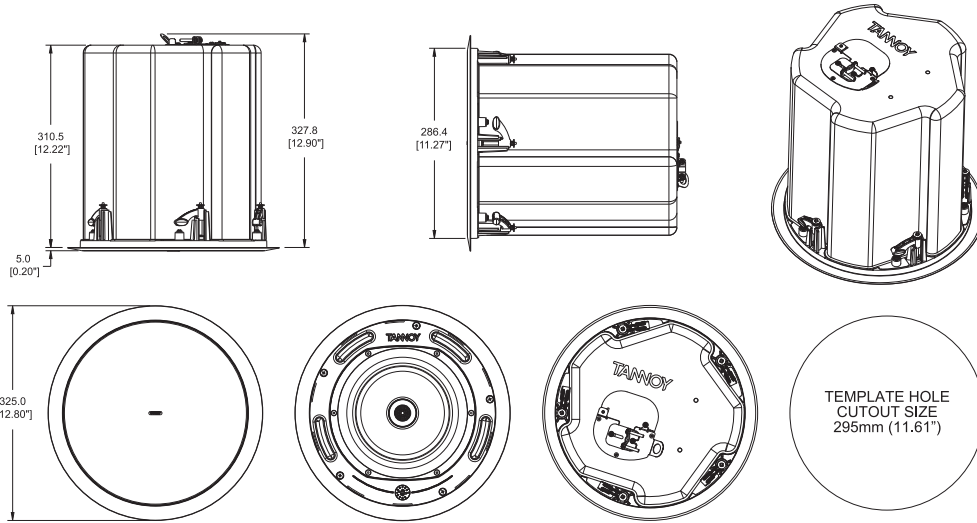
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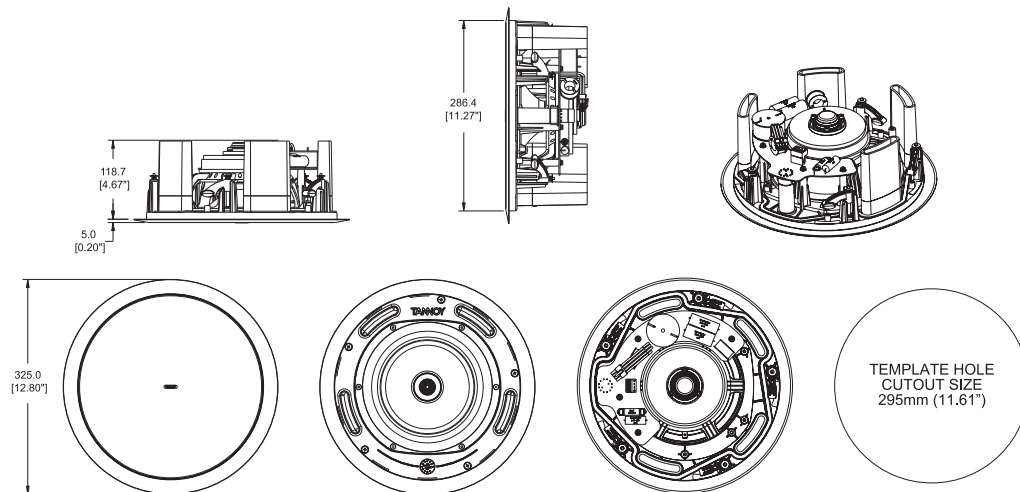
CMS 801DC

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DIMENSIONAL SKETCHES



CMS 801DC BM TEMPLATE HOLE CUTOUT SIZE - 295mm (11.61")



CMS 801DC PI TEMPLATE HOLE CUTOUT SIZE - 295mm (11.61")

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
8001 4550	CMS 801DC BM	White / paintable	2
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8001 4650	CMS 601 Plaster (Mud) Ring	Zinc plated steel	10
8001 4570	CMS 801PI 8 Ohm back can	Zinc plated steel	1
7600 1658	CMS 801DC 60W transformer kit 8 Ohm	N/A	10

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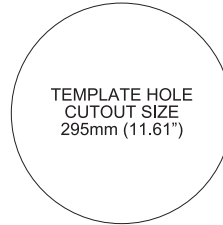
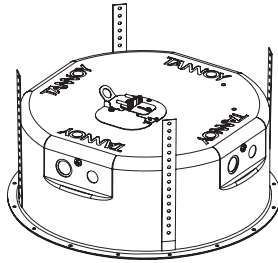
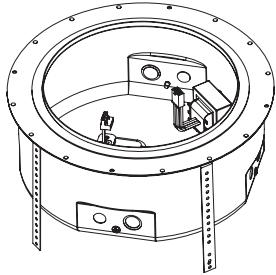
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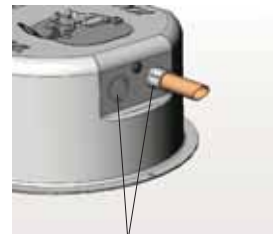
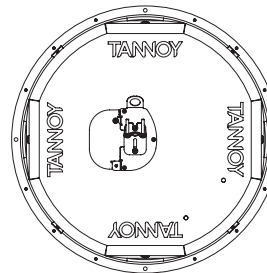
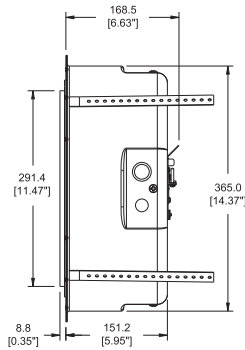
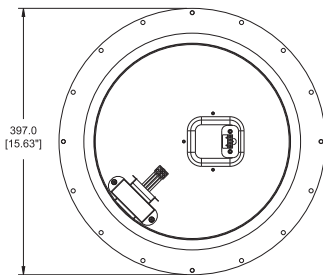
DIMENSIONAL SKETCHES



The PI back can accepts direct connection to installed conduit in two ways using squeeze connectors:



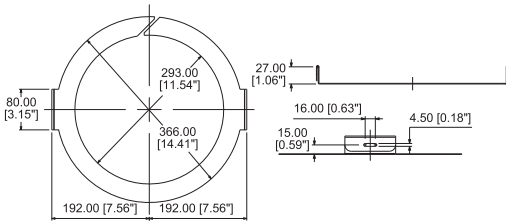
1 22mm (0.87") via the clamp location at the rear after first removing cable clamp



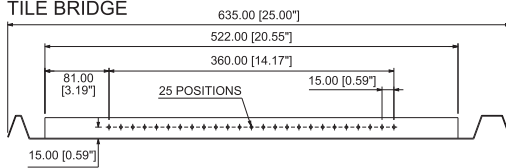
2 Any of the three knock-out points at the side 19mm / 22mm / 28mm (0.75" / 0.87" / 1.10")

CMS 801PI BACK CAN TEMPLATE HOLE CUTOUT SIZE - 295mm (11.61")

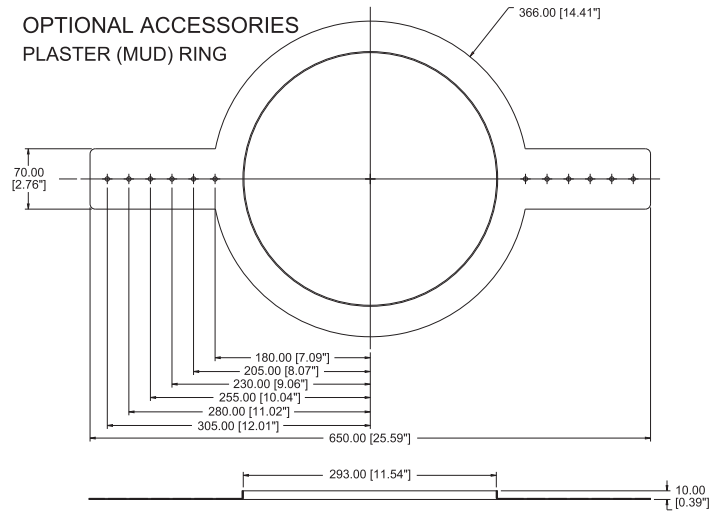
SUPPLIED ACCESSORIES C-RING



TILE BRIDGE



OPTIONAL ACCESSORIES PLASTER (MUD) RING



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Architectural specifications

The Ceiling Monitor System shall consist of a 200mm (8.00") full range, point source, constant directivity Dual Concentric™ transducer and passive frequency dividing network mounted in a vented, injection moulded, paintable front baffle in UL94V-0 ABS material.

The back can in both PI (pre-install) & BM (blind-mount variants) shall be constructed of zinc plated steel. A recessed termination box shall be integrated with the back can, a removable locking connector with screw terminals for secure wire termination with "loop through" facility shall be provided. Strain relief will be provided by a clamping mechanism for use with plenum rated cable or conduit.

For pre-wiring the PI (pre-install) back can is provided with conduit knockouts (19mm/22mm/28mm, 0.75"/0.87"/1.14"). A safety ring is located on the rear of the backcan for a load bearing safety bond.

Performance of the Ceiling Monitor System shall meet or exceed the following criteria: The system shall have a conical coverage pattern of 100 degrees (1kHz to 6kHz). Frequency response measured on axis shall be 40 Hz - 35kHz (-10dB from rated sensitivity, measured in an IEC baffle in an anechoic chamber) with no equalization. Sensitivity shall be 92dB (1W @ 1m). Long term power handling capacity as defined in EIA-426B test shall be 90W, recommended amplifier power 180W. Dynamic high frequency protection is provided for occasional overpowering. The nominal system impedance shall be 8 Ohms (in low impedance setting).

The Ceiling Monitor System shall be equipped with a 60W high performance line transformer for use in 70.7 or 100 Volt distributed audio systems with 60, 30, 15, 7.5* Watt taps available. An easily accessible rotary switch located on the front baffle shall be available for selecting transformer and low impedance settings. A weather resistant perforated steel grille covers the transducer and switch.

Two support rails and one C-Ring shall be included with the ceiling monitor system.

Bezel diameter 325mm (12.80")

BM Front of ceiling to rear of back can 310.50mm (12.22"), Front of ceiling to top of safety loop 327.80mm (12.90")

PI Front of ceiling surface to rear of speaker unit 118.70mm (4.67"), Front of accessory back can bezel to top of safety loop 168.50mm (6.63")

The Ceiling Monitor System shall be the...CMS 801DC.

*70 Volt only

