



LISTED
UL-1480,
UL-2043

Product Description

The Tannoy CMS 601 is a full bandwidth; high power and high sensitivity ceiling monitor system. The design comprises a 165mm (6.50") transducer mounted in a vented, injection moulded, paintable front baffle manufactured from UV/weather resistant UL94V-0 ABS material.

The point source configuration of the Tannoy ICT™ driver's mid-bass and tweeter sections ensures 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 discrete designs. The ICT (Inductive Coupling Technology) drive unit also addresses the two most common component failures experienced in background music and sound reinforcement systems, the tweeter and the crossover reliability. The use of a wireless electromagnetic tweeter means that no crossover is required in the design; this therefore ensures that an ICT™ unit is exceptionally reliable and therefore ideal for applications where constant heavy usage is the norm. This aluminium high frequency dome has a deep drawn skirt that sits on the inside of the low frequency voice coil in the same magnetic gap. The skirt is like a single shorted turn that is induced with high frequency information generated by the low frequency voice coil, which is fed a full bandwidth signal. The mineral loaded polypropylene cone material and nitrile rubber surround further enhance durability and long-term reliability.

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

The CMS 601BM is equipped with a low insertion loss 60W line transformer 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 601PI is supplied without a transformer. The 60W 4 Ohm line transformer is available as an optional accessory pack (7600 1663) for easy connection to the control switch circuit if the product is to be used without a back can.

The recommended option for optimum performance and compliance with safety ratings is to use the CMS 601PI 4 Ohm Back Can (8001 4520) in which the transformer is pre-fitted. Two CMS 601 model versions and a separate back can are available to satisfy the vast majority of installation application requirements:

CMS 601BM (Blind Mount) - supplied with an integral back can.
CMS 601PI (Pre-Install) - supplied without a back can.
CMS 601PI 4 Ohm Back Can (Pre-wire back can) - use with the CMS 601PI.

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.

Features

- 165mm (6.50") ICT™ transducer for greater durability and longevity
- High power & high sensitivity with extended frequency response
- 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 discrete designs
- UV/weather resistant UL94V-0 ABS front baffle
- Blind Mount & Pre Install options
- No crossover required
- Easily accessible tapping switch on front baffle.
- Low insertion loss 60W line transformer
- Packaged with tile rails and C-ring for quick & easy installation and simple stocking logistics
- Five year warranty

Applications

- Multi-zone foreground music & paging systems
- Boardrooms and 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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CMS 601

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TECHNICAL SPECIFICATIONS

System	CMS 601		
Frequency Response (-3dB) ⁽¹⁾ BM Back can	78Hz - 22kHz		
Frequency Range (-10dB) ⁽¹⁾ BM Back can	51Hz - 24kHz		
Frequency Range (-10dB) ⁽¹⁾ PI Back can	46Hz - 24kHz		
System Sensitivity (1W @1m) ⁽²⁾	91dB (1W = 2.45V for 6 Ohms)		
Nominal Coverage Angle	90 degrees conical		
Coverage Angle (1kHz to 6kHz)	92 degrees conical		
Directivity Factor (Q)	7.1 averaged 1kHz to 6kHz		
Directivity Index (DI)	7.9 averaged 1kHz to 6kHz		
Rated Maximum SPL ⁽²⁾			
Average	108dB		
Peak	112dB		
Power Handling			
Average	60W		
Programme	120W		
Peak	240W		
Recommended Amplifier Power	120W @ 6 Ohms		
Nominal Impedance	6 Ohms		
Transformer Taps (via front rotary switch) 70V	60W / 30W / 15W / 7.5W / OFF & Low Impedance operation		
100V	60W / 30W / 15W / 7.5W / OFF & Low Impedance operation		
Distortion			
10% Full Power	2nd Harmonic	3rd Harmonic	
250Hz	1%	0.14%	
1kHz	1.4%	0.45%	
10kHz	1%	0.1%	
1% Full Power	2nd Harmonic	3rd Harmonic	
250Hz	0.32%	0.14%	
1kHz	0.45%	0.22%	
10kHz	0.32%	0.1%	
Crossover	7kHz inductively coupled		

(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 NWAALabs, 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.

Transducers	
Low Frequency	1 x 165mm (6.50") mineral loaded polypropylene ICT™
High Frequency	1 x ICT™ aluminium dome
Physical	
Enclosure	Zinc plated steel
Back can	Reflex loaded UL 94V-0 rated ABS
Baffle	Steel, with weather resistant coating
Grille	
Safety Features	Safety ring located at rear of enclosure for load bearing safety bond
Clamping Design	Security toggle clamp
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	UL-1480, UL-2043, CE
BM Hole Cutout Diameter	253mm (9.96")
PI Hole Cutout Diameter	253mm (9.96")
Dimensions	
Bezel diameter	280mm (11.02")
Front of ceiling to rear of back can (BM)	258mm (10.16")
Front of ceiling to top of safety loop (BM)	275.5mm (10.84")
Front of ceiling surface to rear of speaker unit (PI)	95.50mm (3.76")
Front of accessory back can bezel to top of safety loop (PI)	168.50mm (6.60")
Net Weight (ea)	
CMS 601BM	6.50kg (14.33lbs)
CMS 601PI	4.00kg (8.82lbs)
CMS 601PI back can	3.685kg (8.06lbs)
Included Accessories	C Ring, tile bridge, paint mask, cutout template, grille
Optional Accessories	Plaster (Mud) Ring

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
8001 4500	CMS 601BM	White / paintable	2
8001 4510	CMS 601PI	White / paintable	2
8001 4181	CMS 601 Plaster (Mud) Ring	Zinc plated steel	10
8001 4520	CMS 601PI 4 Ohm back can	Zinc plated steel	1
7600 1663	CMS 601 60W transformer kit 4 Ohm	N/A	1

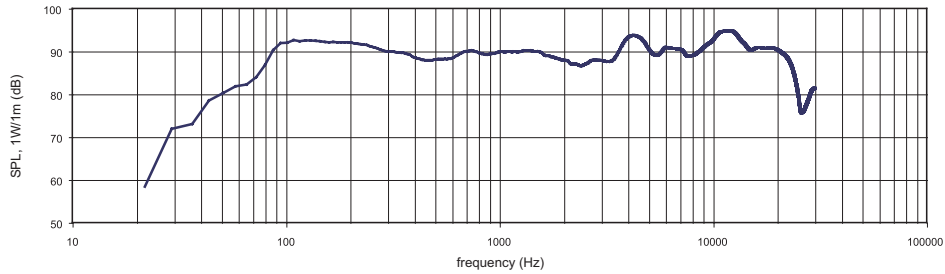
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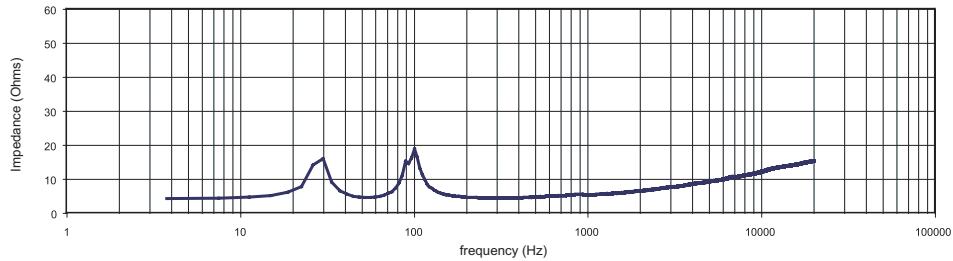
PERFORMANCE MEASUREMENTS

1m on-axis frequency response



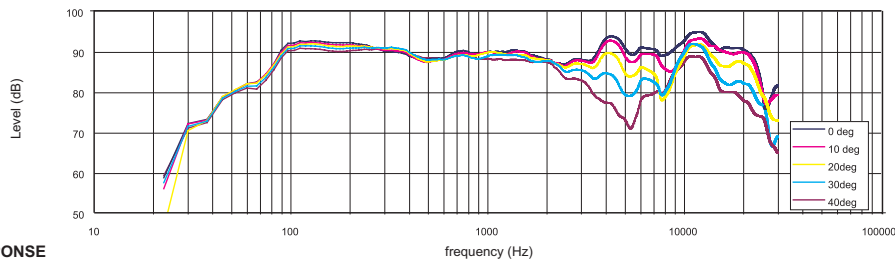
ANECHOIC
FREQUENCY
RESPONSE

Impedance vs frequency



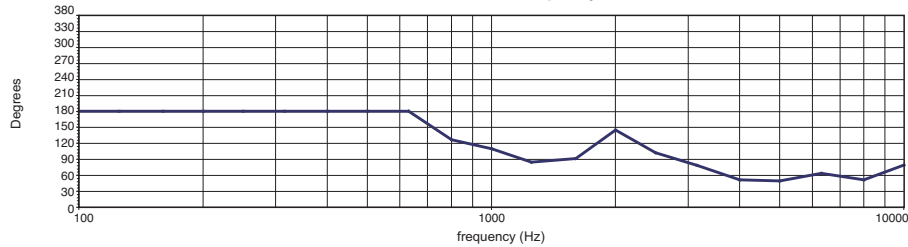
IMPEDANCE

Horizontal off-axis response



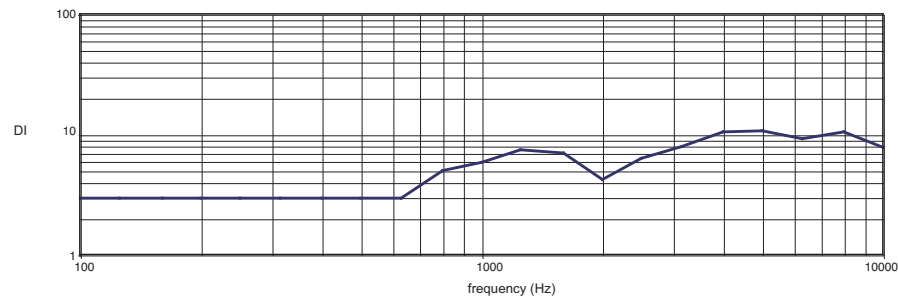
OFF AXIS RESPONSE

Beamwidth vs Frequency



BEAMWIDTH

Directivity Index (DI)



DIRECTIVITY
INDEX

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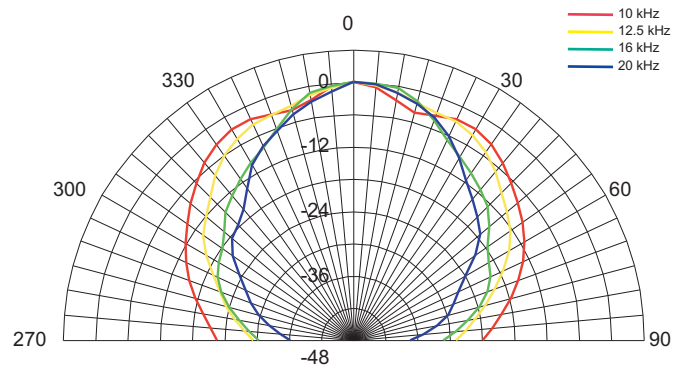
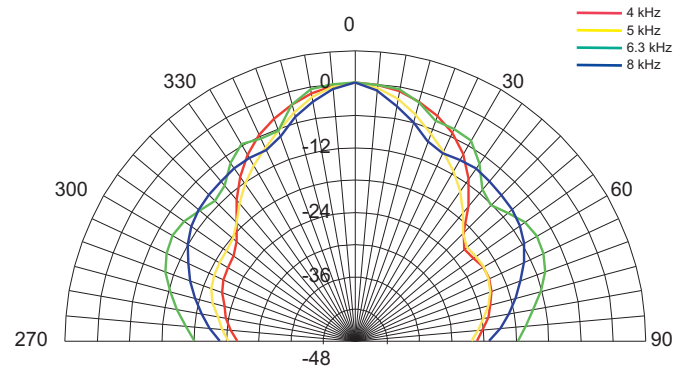
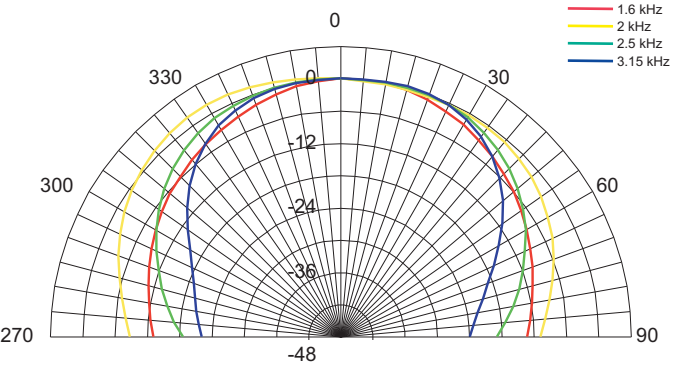
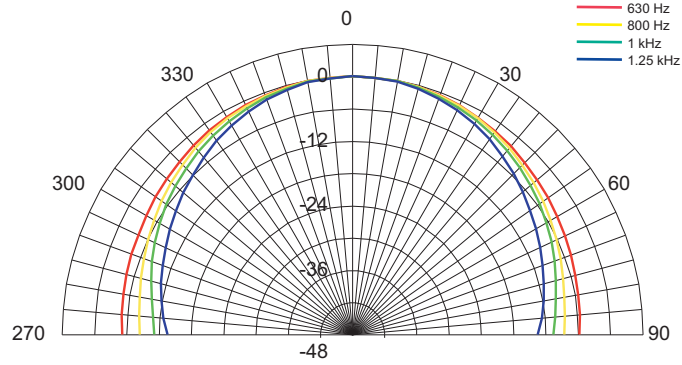
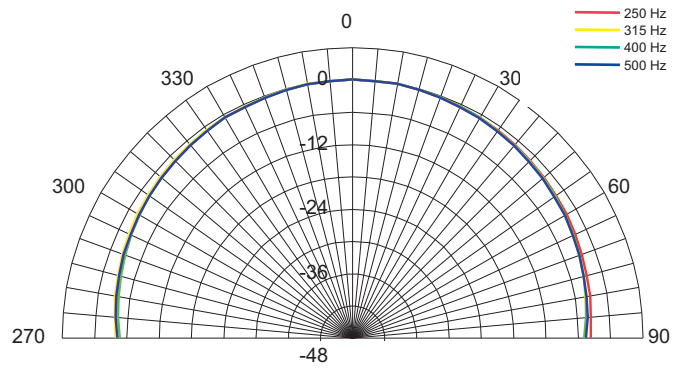
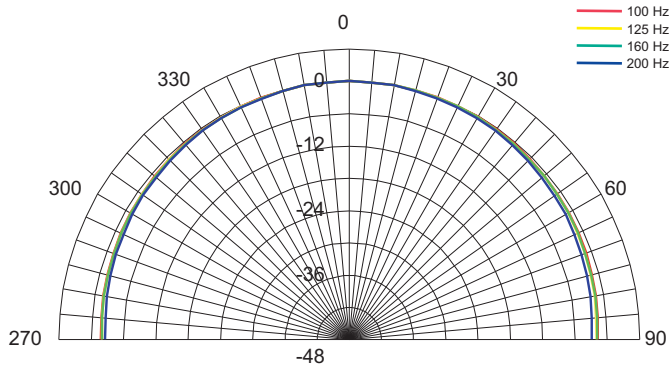
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PERFORMANCE MEASUREMENTS POLAR PLOTS (1/3 OCTAVE)



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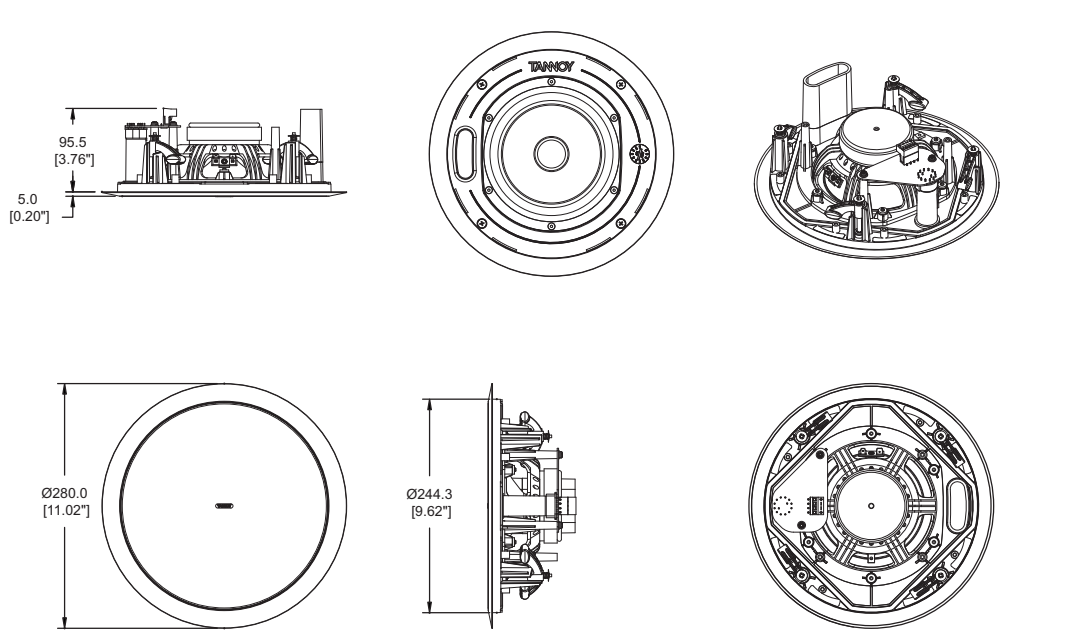
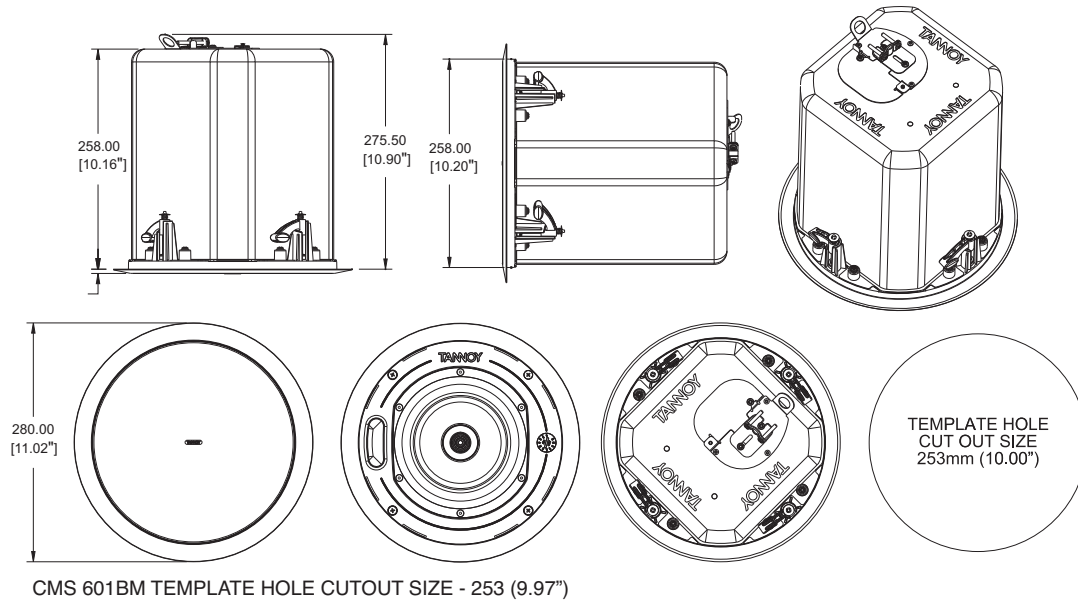
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CMS 601

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DIMENSIONAL SKETCHES



Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
8001 4500	CMS 601BM	White / paintable	2
8001 4510	CMS 601PI	White / paintable	2
8001 4181	CMS 601 Plaster (Mud) Ring	Zinc plated steel	10
8001 4520	CMS 601PI 4 Ohm back can	Zinc plated steel	1
7600 1663	CMS 601 60W transformer kit 4 Ohm	N/A	10

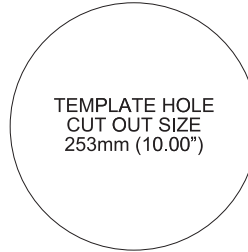
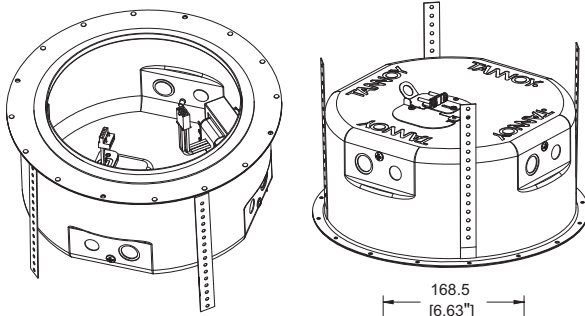
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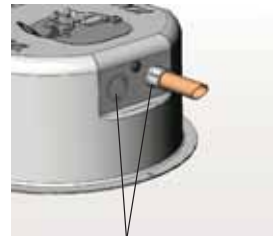
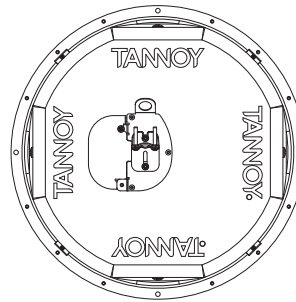
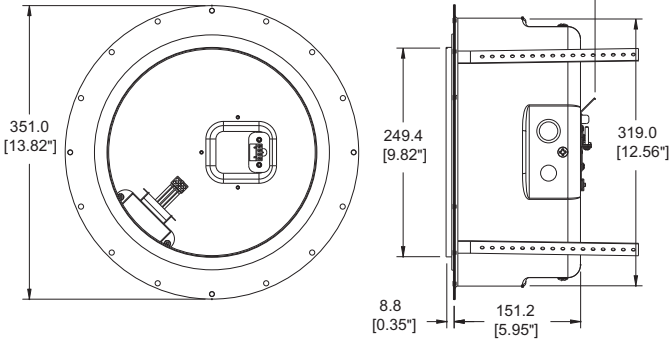
DIMENSIONAL SKETCHES



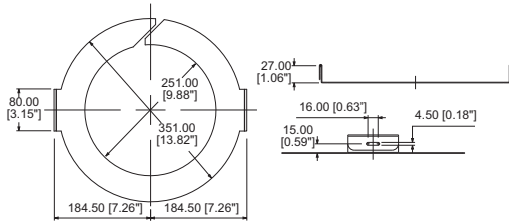
The PI back can accept direct connection to installed conduit in two ways using squeeze connectors:



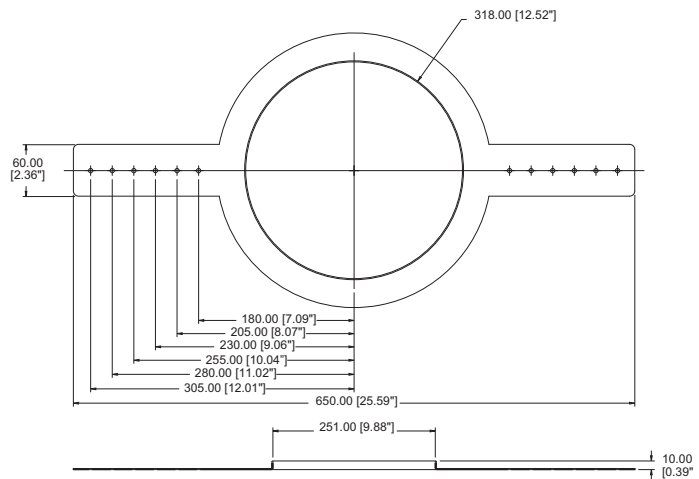
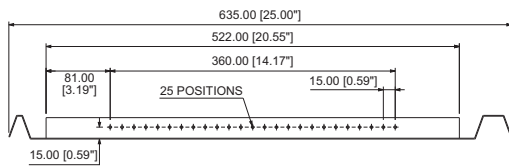
1 22mm (0.87") via the clamp location at the rear after first removing cable clamp



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



TILE BRIDGE



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Architectural specifications

The Ceiling Monitor System shall consist of a 165mm (6.50") full range, point source ICT™ transducer 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 prewiring 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 back can 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 92 degrees (1kHz to 6kHz). Frequency response measured on axis shall be 51Hz - 24kHz (-10dB from rated sensitivity, measured in an IEC baffle in an anechoic chamber) with no equalization. Sensitivity shall be 91dB (1W @ 1m). Long term power handling capacity as defined in EIA-426B test shall be 60W, recommended amplifier power 120W. 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 280mm (11.02")

BM Front of ceiling to rear of back can 258mm (10.16"), Front of ceiling to top of safety loop 275.5mm (10.84")

PI Front of ceiling surface to rear of speaker unit 95.50mm (3.76"), Front of accessory back can bezel to top of safety loop 168.50mm (6.60")

The Ceiling Monitor System shall be the...CMS 601.

*70 Volt only

