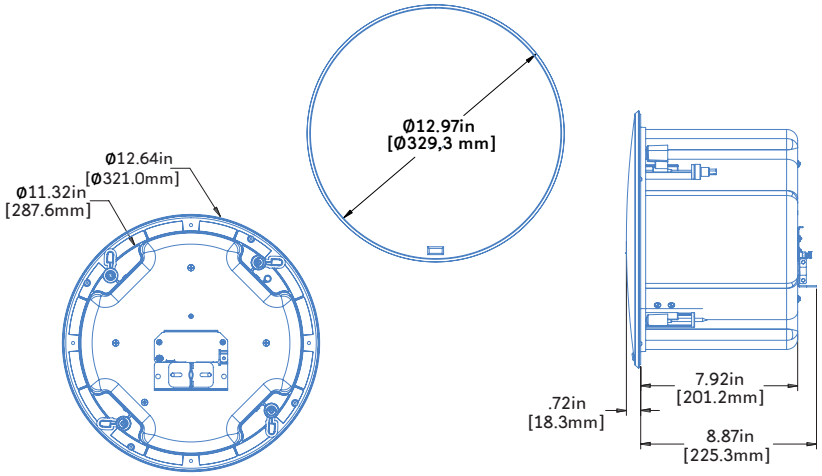
Ashby-8C Ceiling Loudspeaker



Outside Dimensions	12.64 in (321,0 mm) diameter 8.87 in (225.3 mm) depth: front of ceiling surface to built-in safety attachment ring
Cutout Diameter Range	11.42 – 11.83 in (290.0 – 300.4 mm)
Weight	13.8 lb (6.26 kg)
Enclosure	Zinc-plated steel-back can and UL 94V-0 rated baffle
Grille	Perforated steel 12.97 in (329.2 mm) in diameter
Mounting Options	C-Ring with bridge kit, new construction bracket, and pendant mount

The Ashby-8C self-powered, ceiling-mounted loudspeaker provides wide coverage and low distortion, even at high sound levels, for applications that require accurate music reproduction and intelligible voice. The Ashby- 8C is ideal for applications that require a deeper low-end and higher SPL. It offers sonic performance beyond other in-ceiling loudspeakers of comparable size.

The Ashby-8C is engineered to the same award-winning standards as all Meyer Sound IntelligentDC loudspeakers. With on-board amplification with sophisticated signal processing, the Ashby-8C exhibits the flat frequency and phase response for which Meyer Sound loudspeakers are known.

The Ashby drivers are designed and manufactured at the Meyer Sound factory in Berkeley, California. The 0.75-in metal-dome tweeter is concentrically mounted over an 8-in cone driver in an innovative configuration that maximizes the surface of the wave guide.

With an incredibly smooth, consistent 100° coverage, fewer loudspeakers can cover a larger area, reducing system cost while maintaining the highest sound quality.

The Ashby-8C requires an external MPS-488HP IntelligentDC power supply. The 19-in (1 RU) unit distributes DC power and balanced audio to Ashby loudspeakers or other Meyer Sound IntelligentDC loudspeakers. Composite multi-conductor cables (e.g., Belden® 1502) can deliver both DC power and balanced audio from a single Phoenix™ 5-pin male connector.

The MPS-488HP can power up to 16 Ashby-8C loudspeakers (2 per channel) and can connect to Meyer Sound's RMS remote monitoring system. Using IntelligentDC to supply power from an external source has several advantages:

- Eliminates the need to use conduit (Class 2 wiring).
- Allows longer, lighter-gauge cable runs.
- Preserves the advantages of self-powered systems with even more flexible installation options.

Housed in an integrated metal back-can to meet commercial fire codes, the Ashby-8C can be flush-mounted in ceilings using a low-profile grille that blends discretely into any décor. The following Meyer Sound accessories are designed specifically to install Ashby loudspeakers into a variety of ceiling environments:

- **C-Ring with Bridge Kit**: Used for suspended ceilings, the C-ring better distributes the clamping force of the four mounting clamps, while the bridges help support and distribute the weight of the loudspeaker.
- **New Construction Bracket**: This bracket can be fastened to the ceiling and acts as a template for ceiling cutout, ensuring a neat installation.
- **Ashby Pendant**: Allows Ashby loudspeakers to hang from ceilings where a flush-mount is not practical. These elegant pendant enclosures utilize a minimalistic design typically used in pendant lighting to blend discreetly into the environment.

Features & Benefits

- Self-powered
- Easy to install
- Extremely wide and consistent coverage
- Ultra low distortion
- Exceptional SPL-to-size ratio
- Beautiful low frequency response and reproduction of speech and music
- Supports long cable runs with light-gauge cablesOne MPS-488HP can power up to 16 Ashby-8Cs

Applications

- Distributed systems for music and paging that demand high-quality audio and vocal intelligibility
- Constellation acoustic systems

SPECIFICATIONS

ACOUSTICAL

Operating Frequency Range[1]	60 Hz – 18 kHz
Frequency Response[2]	67 Hz – 16 kHz ±4 dB
Phase Response	190 Hz – 16 kHz ± 45˚
Linear Peak SPL[3]	106.5 dB, Pink noise 109.5 dB, B-noise 114.0 dB, M-noise

COVERAGE

Coverage	100˚ conical

TRANSDUCERS

Low Frequency	One 8-in cone driver
High Frequency	One 0.75-in dome tweeter mounted concentrically in wave guide in front of 8-in driver

CONNECTOR PANEL

Audio/Power Connector	Two 5-pin female Phoenix (one input and a hard-wired loop output)
Pinout	Two pins for 48 DC power, three pins for balanced audio
Power Wiring	Pin 1: DC Power (–) Pin 2: DC Power (+)
Audio Wiring	Pin 3: Audio shield, chassis/earth Pin 4: Signal (–) Pin 5: Signal (+)
LED	Displays loudspeaker status

INPUT

Type	Differential, electronically balanced
Impedance	10 kΩ Balanced (AC Impedance)
Nominal Input Sensitivity	–2.5 dBV (0.25 V rms, 1.00 V peak) continuous average is typically the onset of limiting for noise and music Where pink noise has 12dB Peak to RMS ratio
Audio Input Source	Audio source must be capable of producing +16 dBV (6.3 V rms, 9.0 V peak) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker with a sine wave.

AMPLIFIER

Type	High efficiency Class D
Output Power[4]	220 W (440 W peak)
Cooling	Natural convection through the metal enclosure

DC POWER

48V DC	Powered from Meyer Sound MPS-488HP Power Supply Approved for Class 2 Wiring used in conjunction with MPS-488HP
Safety Agency Rated Operating Range[5]	48 V DC
Current Draw	
Idle Current	0.16 A rms
Maximum Long-Term Continuous Current (>3 sec)	0.78 A rms
Maximum Instantaneous Peak Current	3.10 A peak
Meyer Sound Power Supply Required	For information and specifications on the Meyer Sound MPS-488HP IntelligentDC external power supply, refer to its datasheet.

COMPLIANCE

Safety Agency certification:	Standard for audio, video and similar electronic apparatus: UL 60065, CSA C22.2 NO. 60065-03 (AMD 2),IEC 60065,IEC 62368-1 Fire Rated to UL Standard 2043, Product and Accessories Installed in Air-Handling Spaces
EMC Certification:	CE and FCC Part 15 Emission Class B emission limits applied.

MAXIMUM CABLE LENGTHS[6]

Number of Speakers	Maximum Cable Length (feet) – imperial				Maximum Cable Length (meters) – metric			
	12 AWG	14 AWG	16 AWG	18 AWG	2.5 mm²	1.5 mm²	1.0 mm²	0.75 mm²
1	1200	750	475	300	320	175	90	55
2*	600	375	237	150	160	87	45	27

** this applies to one 8C and one 5C looped*

NOTES

1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Half-space loading, measured with 1/3-octave frequency resolution at 4 m.*
3. *Measured at 4 m and referred to 1 m.*

   Pink noise is an unfiltered, full range test signal with an average-to-peak ratio of 12.5 dB.

   B-noise is a Meyer Sound test signal used to ensure measurements reflect system behavior when reproducing the most common input spectrum, and verify there is still headroom over pink noise.

   M-noise is a full-range signal developed by Meyer Sound to better measure the loudspeaker's performance with music. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth peak-to-average ratio of 18 dB.
4. *Amplifier wattage rating is based on the maximum unclipped burst sine wave rms voltage the amplifier will produce for at least 0.5 s into the nominal load impedance: 30 V rms (42 V peak).*
5. *Tolerates voltage drops up to 30% due to long cable runs. Normal operating conditions with recommended cable gauge, length, and number of loudspeakers assures peak SPL to remain within 2 dB of max SPL specification.*
6. *Some high frequency loss can occur from long analog audio cables. For lengths greater than 500 ft (150 m), Meyer Sound recommends using low capacitance shielded audio cable or AES Digital audio cable. Discuss expected high frequency loss with the cable manufacturer to determine acceptability.*

3K59 OR 3JKB
COMMERCIAL
AUDIO SYSTEM

Ashby-8C
04.260.004.01A

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ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be self-powered and include one 8-in (203.2 mm) diameter coaxial transducer and one 0.75-in (20 mm) dome tweeter mounted concentrically in wave guide in front of the 8-in driver.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range, 60 Hz – 18 kHz; phase response, 190 Hz – 16 kHz ±45˚ and a conical coverage of 100 degrees. The loudspeaker shall be capable of maximum linear peak SPL of 114 dB peak at 1 m measured using M-noise, a full-range signal developed by Meyer Sound to better model the loudspeaker's performance with music.

The loudspeaker shall be equipped with two Phoenix 5-pin male connectors (pins 1, 2 for 48 V DC power, pins 3, 4, 5 for balanced audio). One shall be the input, the second connector shall be hard wired for looping.

The audio input shall be electronically balanced with a 10 kohm impedance and shall accept a nominal –2.5 dBV (0.25 V rms, 1 V peak) signal.

The loudspeaker shall incorporate a highly efficient Class-D power amplifier with a total output power of 220 W (440 W peak).

Power requirements for the loudspeaker shall be a Meyer Sound MPS-488HP power supply, capable of delivering 48 V DC. Current draw for the loudspeaker shall be 0.16 A in idle state and its maximum long-term continuous current draw shall be 0.78 A with a duration of less than 3 s.

The loudspeaker shall tolerate voltage drops up to 30% caused by long cable runs when connected to one channel of the required power supply. Maximum cable run for a single unit is 300 ft with 18 AWG (90 m with 1.0 mm²) and the maximum cable run for two looped units is 150 ft with 18 AWG (45 m with 1.0 mm²).

Loudspeaker components shall be housed in a zinc-plated steel enclosure which shall also include a UL94V-0 rated baffle. The enclosure shall incorporate also 4 mounting clamps for flush-mount installations in ceilings and walls with a minimum depth of 8.87 in (225.3 mm). Grille shall be made of perforated steel and its diameter shall be 12.97 in (329.3 mm).

Dimensions shall be 12.64 in (321 mm) in diameter and 8.87 in (225.3 mm) in depth (front of ceiling surface to built-in safety attachment ring). Cutout diameter range shall be 11.32 – 11.75 in (287.6 – 298.4 mm). Weight shall be 13.8 lb (6.26 kg).

The loudspeaker shall be the Meyer Sound Ashby-8C.