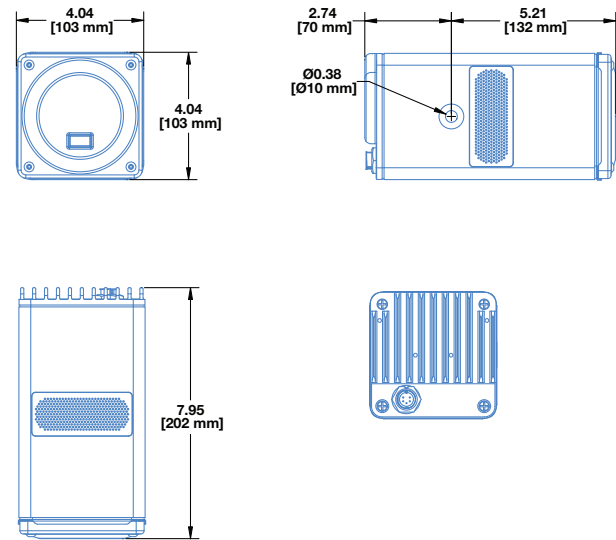


MM-4XPD Directional Miniature Self-Powered Loudspeaker



The MM-4XPD directional miniature self-powered loudspeaker with IntelligentDC technology was specifically designed for high-quality distributed systems in reverberant spaces. The directional polar pattern of the MM-4XPD, especially at low frequencies, significantly reduces room excitation and increases intelligibility. Its flexible and easy-to-configure mounting options, as well as its ability to effortlessly reproduce both speech and music, make the MM-4XPD an excellent choice for large distributed systems, theatrical presentations, museums, and small portable systems for corporate audio-visual, where intelligibility is critical.

The MM-4XPD meets the same exceptional performance standards as the MM-4XP with the added advantage of a hypercardioid coverage pattern. Patent-pending technology yields a high degree of attenuation between the front and rear of the loudspeaker, achieving a directional polar response using passive acoustical techniques. Even at low frequencies, the breakthrough technology yields 10 dB of attenuation at the rear of the loudspeaker while retaining directional dispersion at high frequencies.

The MM-4XPD employs a single-driver design, avoiding the complexity and cost incurred by directional techniques implemented with two drivers that would require additional amplification and signal processing. Housed in a compact aluminum enclosure, the single 4-inch cone transducer, designed and manufactured at Meyer Sound's Berkeley, California factory, delivers an impressive linear peak SPL of 111.5 dB with crest factor >16.5 dB³, and a wide operating frequency range of 120 Hz to 18 kHz with very low distortion. The MM-4XPD exhibits the same high intelligibility and flat frequency and phase responses for which Meyer Sound loudspeakers are known. Peak and rms limiters regulate loudspeaker temperature and excursion.

The MM-4XPD receives power and balanced audio from a SwitchCraft® EN3 5-pin male input connector on its rear panel. The MM-4XPD's amplifier and signal-processing circuits were designed to store DC power and tolerate voltage drops, thereby

accommodating light-gauge cables and long cable runs.

MM-4XPD loudspeakers require a Meyer Sound external power supply. The MPS-488HP IntelligentDC power supply is ideal for larger installations with multiple loudspeakers; the single-space rack-mount unit distributes DC power and balanced audio to up to eight MM-4XP loudspeakers or other compatible Meyer Sound low-voltage loudspeakers. Another option is the 1RU, 1/2 width rack-mount MPS-482HP IntelligentDC power supply that offers two channels of audio and DC power.

Meyer Sound's RMS™ remote monitoring system, which provides comprehensive monitoring of system parameters from a Mac® or Windows®-based computer, is available as an option for the MPS-488HP.

Both Meyer Sound power supplies can deliver DC power to MM-4XPD loudspeakers at cable lengths up to 300 feet with just 1 dB of loss in peak SPL when using 18 AWG wire. The use of composite multiconductor cables (such as Belden® 1502 or equivalent) allows a single cable to carry both DC power and audio to the MM-4XPD. Longer cable lengths are possible for moderate applications that do not drive the loudspeakers to maximum output, or for installations with heavier gauge wires. Powering the MM-4XPD from a unipolar external power source reduces induced noise significantly and eliminates the need for conduits. For information about and specifications for the Meyer Sound power supplies, visit www.meyersound.com.

The MM-4XPD's extruded aluminum enclosure acts as a heat sink to dissipate heat from the driver's voice coil. The enclosure is available in a standard black anodized finish with a perforated steel grille. The enclosure can also be custom painted to match specific color schemes. The optional MUB-MM4XPD U-bracket facilitates mounting of the loudspeaker on walls and ceilings at adjustable angles.

FEATURES AND BENEFITS

- Directional hypercardioid pattern provides 10 dB of attenuation between the front and rear of the loudspeaker, even at low frequencies
- Directional pattern reduces room excitation, desirable in highly reverberant spaces
- Extremely compact size fits in small spaces
- Patent-pending, passive, single-driver directional technology minimizes energy consumption, weight, and cabinet volume
- Convenient U-bracket enables quick and easy mounting

APPLICATIONS

- Restaurants, bars, and highly reverberant public spaces
- Large distributed systems
- Trade show presentations

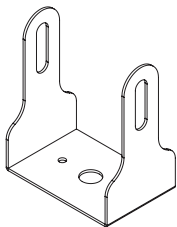
ACCESSORIES AND ASSOCIATED PRODUCTS

MUB-MM4XPD Mounting U-Bracket: Allows the MM-4XPD to be mounted on any flat surface at adjustable angles (includes mounting hardware).

Galileo GALAXY Network Platform: The Galileo GALAXY Network Platform provides state-of-the-art audio control technology for loudspeaker systems with multiple zones. With immaculate sonic performance, it provides a powerful tool set for corrective room equalization and creative fine-tuning for a full range of applications.

MPS-488HP External Power Supply: Rack-mount unit that delivers balanced audio and high-current DC power to up to eight loudspeakers; versions available with either Phoenix or EN3 channel output connectors.

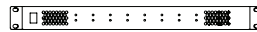
MPS-482HP External Power Supply: 1RU 1/2 width rack unit that delivers balanced audio and high-current DC power to up to two audio channels; optional accessories for rack, wall, ceiling, pole, or truss mounting.



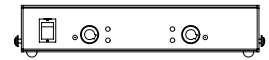
MUB-MM4XPD Mounting U-Bracket



GALAXY Network Platform



MPS-488HP External Power Supply



MPS-482HP External Power Supply

SPECIFICATIONS

ACOUSTICAL ¹	
Operating Frequency Range ²	120 Hz – 18 kHz
Frequency Response ³	135 Hz – 17 kHz ±4 dB
Phase Response	330 Hz – 20 kHz ±45°
Linear Peak SPL ⁴	111.5 dB (M-noise) , 109 dB (Pink noise), 111 dB (B-noise)
COVERAGE	
	Hypercardioid response with <10 dB front-to-back ratio up to 500 Hz 120° (500 Hz – 4 kHz); 80° (4 kHz – 10 kHz ±10°)
TRANSDUCERS	
	One 4-inch cone driver; 4 Ω nominal impedance
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±5 V DC
Connectors	SwitchCraft EN3 5-pin male (two pins for 48 V DC power, three pins for balanced audio)
Input Impedance	10 kΩ electronically balanced
Wiring	Pin 1: DC power (-) Pin 2: DC power (+) Pin 3: Audio shield, chassis/earth Pin 4: Audio (-) Pin 5: Audio (+)
Nominal Input Sensitivity	-2.5 dBV (0.75 V rms) continuous average is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing +16 dBV (6.3 V rms) into 600 Ω to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER	
Type	Class-D
Total Output Power ⁶	440 W peak
THD, IM, TIM	< 0.02%
Cooling	Convection
AC POWER ⁶	
Connector	SwitchCraft EN3 5-pin male (two pins for 48 V DC power, three pins for balanced audio)
Safety Agency Rated Voltage Range ⁷	48 V DC
CURRENT DRAW	
Idle Current	0.16 A rms
Maximum Long-Term Continuous Current (>10 sec)	0.7 A rms
Burst Current (<1 sec)	2.2 A rms
Maximum Instantaneous Peak Current	2.35 A peak
Inrush Current	<7.0 A peak
PHYSICAL	
Dimensions	W: 4.04 in (103 mm) x H: 4.04 in (103 mm) x D: 7.95 in (202 mm) D with connector: 10.20 in (259 mm)
Weight	5.2 lb (2.4 kg)
Enclosure	Extruded aluminum with black anodized finish
Protective Grille	Perforated steel
Mounting	Two 3/8 in-16 side inserts; optional MUB-MM4XPD U-bracket

NOTES

1. Loudspeaker system predictions for coverage and SPL are available in Meyer Sound's MAPP System Design Tool.
2. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
3. Free-field, measured with 1/3 octave frequency resolution at 4 m.
4. **Linear Peak SPL** is measured in free-field at 4 m referred to 1 m. Loudspeaker SPL compression measured with M-noise at the onset of limiting, 2-hour duration, and 50-degree C ambient temperature is < 2 dB.

M-noise is a full bandwidth (10 Hz–22.5 kHz) test signal developed by Meyer Sound to better measure the loudspeaker's music performance. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth Peak to RMS ratio of 18 dB. The presence of a greater-than ($>$) symbol with regard to crest factor indicates it may be higher depending on EQ and boundary loading.

Pinknoise is a full bandwidth test signal with Peak to RMS 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 to verify there is still headroom over pink noise.

5. Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
6. Requires Meyer Sound IntelligentDC Power Supply. For information and specifications, visit www.meyersound.com
7. Tolerates voltage drops up to 30% due to long cable runs.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be self-powered and include a single 4-inch (103 mm) diameter cone transducer with a 4 Ω , long-excursion voice coil. The loudspeaker shall incorporate a class-D power amplifier with a burst capability of 440 W peak into a nominal load of 4 Ω . Distortion (THD, IM, TIM) shall not exceed 0.02 percent.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range, 120 Hz to 18 kHz; phase response, 330 Hz to 20 kHz $\pm 45^\circ$; linear peak SPL shall be 111.5 dB measured with M-noise, free field at 4 m referred to 1 m. Horizontal and vertical coverage shall be hypercardioid with a < 10 dB front-to-back ratio up to 500 Hz, 120° at 500 Hz to 4 kHz, 80° at 4 kHz to 10 kHz $\pm 10^\circ$.

The loudspeaker shall be equipped with a single SwitchCraft EN3 5-pin connector (two pins for DC power, three pins for balanced audio). The audio input shall be electronically balanced with a 10 k Ω impedance and accept a nominal -2.5 dBV (0.75 V rms) input signal.

Power requirements for the loudspeaker shall be an external Meyer Sound IntelligentDC power supply. Current draw for the loudspeaker during burst (< 1 sec) shall be 2.2 A rms at 48 V. Current inrush during turn-on shall not exceed 7.0 A peak at 48 V.

Loudspeaker components shall be housed in a sealed, extruded aluminum enclosure with a black anodized finish. Custom painted colors shall be optionally available. Dimensions with grille frame shall be W: 4.04 in (103 mm) x H: 4.04 in (103 mm) x D: 7.95 in (202 mm) D with connector: 10.20 in (259 mm). Weight shall be 5.2 lb (2.4 kg). 3/8 in-16 inserts on each side of the enclosure shall accommodate Meyer Sound mounting and rigging options.

The loudspeaker shall be the Meyer Sound MM-4XPD.