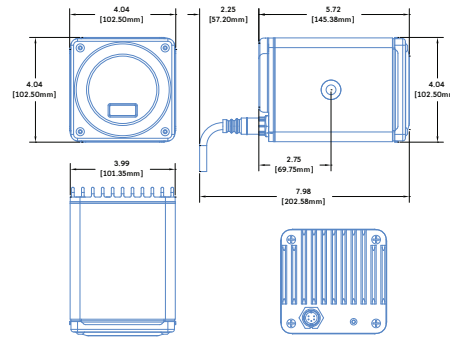




MM-4XP : Miniature Loudspeaker



- Dimensions** 4.04" w x 4.04" h x 5.72" (7.98" with connector) d (102.50 mm x 105.50 mm x 145.38/202.58 mm)
- Weight** 4.2 lbs (1.91 kg)
- Enclosure** Extruded aluminum
- Finish** White or black anodized; custom colors available
- Protective Grille** Perforated steel
- Mounting** Two 3/8"-16 side inserts; optional U-bracket available

The MM-4XP miniature loudspeaker is a self-powered loudspeaker designed for high-quality distributed systems. Housed in a compact aluminum enclosure, the MM-4XP is especially suitable for installations involving space limitations and visibility concerns, such as fill and spot coverage, and hidden locations like chancel steps in houses of worship. Its flexible and easy-to-configure mounting options, as well as its ability to effortlessly reproduce both speech and music, make it an excellent choice for fixed applications, theatrical presentations (stage lip frontfill), and small portable systems for corporate AV solutions.

The MM-4XP meets the same exceptional performance standards established by its predecessor, the MM-4, and adds the advantages of self-powered systems, with onboard amplification and signal processing. The MM-4XP's proprietary 4-inch cone transducer, manufactured at Meyer Sound's Berkeley factory, delivers an impressive maximum peak SPL of 113 dB, and has a wide operating frequency range of 120 Hz to 18 kHz with very low distortion. The MM-4XP exhibits the same high intelligibility and flat frequency and phase responses for which Meyer Sound loudspeakers are known. Peak and rms limiters regulate loudspeaker

temperatures and excursion, ensuring that the MM-4XP performs exceedingly well even when driven into overload.

The MM-4XP's amplifier and signal-processing circuits are designed to store DC power and tolerate voltage drops, thereby accommodating light-gauge cables and long cable runs. The MM-4XP receives balanced audio and DC power from a SwitchCraft® EN3™ 5-pin male connector on its rear panel. The sealed EN3 connector provides protection against harsh environmental conditions when the MM-4XP is installed outdoors.

The MPS power supplies are the required method of powering MM-4XP loudspeaker systems. Designed for powering a single loudspeaker, the compact MPS-481 includes a 10-foot cable that receives balanced audio from its XLR female input connector and routes the audio, along with 48 V of DC power from the power supply to a SwitchCraft EN3 5-pin female connector that attaches to the MM-4XP input connector.

The MPS-488 power supply is ideal for larger installations with multiple loudspeakers. The MPS-488 receives eight channels of balanced audio from its XLR female inputs and routes the audio, along with 48 V of DC power, to its

eight channel outputs. The MPS-488 channel outputs are equipped with either Phoenix 5-pin male connectors or EN3 5-pin female connectors.

Both MPS power supplies can deliver DC power to the MM-4XP loudspeakers at cable lengths of up to 300 feet with just 1 dB of loss in peak SPL using 18 AWG wire. The use of composite multiconductor cables (such as Belden® 1502) allows a single cable to carry both audio and DC power to the MM-4XP. Longer cable lengths are possible for moderate applications that don't drive the loudspeakers to maximum output, or for installations with heavier wire gauges. Powering the MM-4XP from a unipolar external power source reduces induced noise significantly and eliminates the need for wiring conduits. For information and specifications for the MPS power supplies, refer to their respective datasheets.

The MM-4XP's extruded aluminum enclosure acts as a heat sink to dissipate heat from the driver's voice coil. The enclosure is available in standard white or black anodized finishes with a perforated steel grille. It can also be custom painted to match specific color schemes. The optional MUB-MM4XP U-bracket is available for mounting the loudspeaker on walls and ceilings at adjustable angles.

FEATURES & BENEFITS

- Extremely compact enclosure
- Self-powered
- Wide-range frequency response
- Ultra-low distortion
- Effortlessly reproduces both speech and music
- Exceptional SPL to size ratio
- Supports long cable runs with light-gauge cables

APPLICATIONS

- Fill and spot coverage for systems with space limitations and visibility concerns
- High-quality distributed systems in clubs and restaurants for paging and music
- Small, portable systems for corporate AV
- Sound installations for gallery exhibits and museum displays

MM-4XP SPECIFICATIONS

ACOUSTICAL		Operating Frequency Range¹ Frequency Response² Phase Response Maximum Peak SPL³ Dynamic Range	120 Hz – 18 kHz 135 Hz – 17 kHz ± 4 dB 400 Hz – 20 kHz $\pm 45^\circ$ 113 dB 100 dB
COVERAGE		Horizontal Vertical	80° (3 kHz – 14 kHz $\pm 10^\circ$); 120° (below 2 kHz) 80° (3 kHz – 14 kHz $\pm 10^\circ$); 120° (below 2 kHz)
TRANSDUCER		Type Nominal Impedance Voice Coil Size Power-Handling Capability	One 4" cone driver 4 Ω 0.75" 100 W (AES) ⁴
REAR PANEL		Audio/Power Connector Wiring LED	SwitchCraft EN3 5-pin male (3 pins for balanced audio, 2 pins for DC power) Pin 1: DC power (-) Pin 2: DC power (+) Pin 3: Balanced audio shield, chassis/earth Pin 4: Balanced audio (-) Pin 5: Balanced audio (+) Displays loudspeaker status
AUDIO INPUT		Type Maximum Common Mode Range Input Impedance DC Blocking CMRR RF Filter Nominal Input Sensitivity Input Level	Differential, electronically balanced ± 5 V DC 10 k Ω electronically balanced 4.8 Hz high pass < -60 dB, typically < -72 dB (200 Hz – 3 kHz) Differential mode: 616 kHz Common mode: 616 kHz -2.5 dBV (0.75 V rms, 1.00 V peak) continuous average is typically the onset of limiting for noise and music Audio source must be capable of producing $+16$ dBV (6.3 V rms, 9.0 V peak) into 600 Ω to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER		Type Output Power⁵ THD, IM, TIM Load Capacity Cooling	Class D 220 W (440 W peak) $< .02\%$ 4 Ω Convection
DC POWER		Safety Agency Rated Operating Range⁶ Current Draw: Idle Current Maximum Long-Term Continuous Current (>10 sec) Burst Current (<1 sec) Ultimate Short-Term Peak Current Inrush Current	48 V DC 0.7 A average; 2.2 A peak 0.16 A rms 0.7 A rms 2.2 A rms 2.35 A peak < 7.0 A peak
		MPS Power Supply Required	For information and specifications for the Meyer Sound MPS-481 and MPS-488 power supplies, refer to their respective datasheets.

NOTES:

1. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
2. Free field, measured with 1/3 octave frequency resolution at 4 meters.
3. Measured with music referred to 1 meter.
4. Power handling is measured under AES standards: transducer driven continuously for two hours with band-limited noise signal having a 6 dB peak-average ratio.
5. Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce for at least 0.5 seconds into the nominal load impedance. 30 V rms (42 V peak).
6. Tolerates voltage drops up to 30% due to long cable runs.

Made by Meyer Sound Laboratories
Berkeley, California USA
www.meyersound.com



MM-4XP — 04.163.004.01 A

Copyright © 2008
Meyer Sound Laboratories Inc.
All rights reserved

MEYER SOUND LABORATORIES INC.
2832 San Pablo Avenue
Berkeley, CA 94702

T: +1 510 486.1166
F: +1 510 486.8356

techsupport@meyersound.com
www.meyersound.com

ARCHITECT SPECIFICATIONS

The loudspeaker shall be self-powered and include a single 4-inch (102 mm) diameter cone transducer with a 100 watt (AES), 4-ohm, long-exursion voice coil. The loudspeaker shall incorporate a Class D power amplifier with a burst capability of 220 W total (440 W peak) into a nominal load of 4 ohms. Distortion (THD, IM, TIM) shall not exceed .02%.

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, 400 Hz to 20 kHz $\pm 45^\circ$; maximum peak SPL, 113 dB at 1 meter. Coverage shall be 80° horizontal and 80° vertical at 3 kHz to 14 kHz $\pm 10^\circ$.

The loudspeaker shall be equipped with a single SwitchCraft 5-pin EN3 connector (three pins for balanced audio and two pins for DC power). The audio input shall be electronically balanced with a 10-k Ω impedance and accept a nominal -2.5 dBV (0.75 V rms, 1.00 V peak) input signal. DC blocking and RF filtering shall be provided, and CMRR shall be less than -60 dB and typically less than -72 dB (200 Hz to 3 kHz).

The power requirements for the loudspeaker shall be a Meyer Sound MPS power supply — either the MPS-481 or MPS-488 — capable of delivering 48 V DC. Current draw for the loudspeaker during burst (<1 sec) shall be

2.2 A at 48 V. Current inrush during turn-on shall not exceed 7.0 A at 48 V.

Loudspeaker components shall be housed in a sealed, extruded aluminum enclosure with a white paint or black anodized finish. Custom colors shall also be available. Dimensions shall be 4.02" (102.50 mm) wide by 4.02" (102.50 mm) high by 5.72" (145.38 mm) deep (including the grille). Weight shall be 4.2 lbs (1.91 kg). 3/8"-16 inserts on each side of the enclosure shall accommodate Meyer Sound mounting and rigging options.

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