

Microflex Microphones

There's never been a more flexible choice



Work a room in more ways than ever with Shure Microflex microphones. Combining sleek, low profile aesthetics and a complete selection of microphones and mounting options, the Microflex line offers the highest standard of quality and efficiency for installed audio applications.

## Microflex Gooseneck Microphones

- 12 cm (5"), 25 cm (10"), 30 cm (12"), and 45 cm (18") models fit a wide variety of applications from the podium to the conference table
- Interchangeable condenser cartridges with superior audio quality

# Microflex Boundary Microphones

- Multi-element, low-profile, or wireless microphone styles available
- Extremely versatile range of placement options for easy configuration and installation

# Microflex Overhead Microphones

- Compact and adjustable 10 cm (4") gooseneck
- Interchangeable condenser cartridges for accurate sound reproduction in any setting

# Microflex Lavalier Microphones

- Exceptionally low handling noise
- Use in wired or wireless applications

#### **APPLICATIONS**

Conference Rooms

**Seminars** 

**Houses of Worship** 

Theaters

Lecterns

### PRODUCT HIGHLIGHTS

Wide selection for customized installations

Wired or wireless models available

Superior audio quality

CommShield<sup>™</sup>
Technology for improved RF resistance

Sleek, low-profile designs



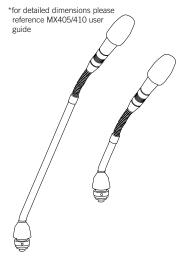
# MX405 and MX410 Miniature Gooseneck Microphones

#### **Overview**

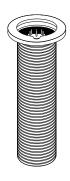
Flexible in more ways than one, Microflex Miniature Gooseneck Microphones deliver unsurpassed style and performance for conference rooms and similar applications. Offering desktop or mounted bases, wired or wireless options, and even interchangeable cartridges, it's easy to get the perfect fit for your application. Fully compatible with SLX® Wireless Systems, including the SLX4L wireless receiver with logic signal output for applications requiring logic functionality.

# Specifications (subject to change)

Туре	Condenser (electret bias)	
Frequency Response	50 – 17,000 Hz	
Polar Pattern	MX405/C, MX410/C: Cardioid MX405/S, MX410/S: Supercardioid	
Output Impedance	EIA rated at 150 $\Omega$ (170 $\Omega$ actual)	
Output Configuration	Active balanced	
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL)	Cardioid: -35 dBV/Pa (18 mV) Supercardioid: -34 dBV/Pa (21 mV)	
<b>Maximum SPL</b> (1 kHz at 1% THD, 1 kΩ load)	Cardioid: 121 dB Supercardioid: 120 dB	
Equivalent Output Noise (A-weighted)	Cardioid: 28 dB SPL Supercardioid: 27 dB SPL	
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Supercardioid: 67 dB	
Dynamic Range (1 kΩ load at 1 kHz)	93 dB	
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum	
Preamplifier Output Clipping Level (1% THD)	-8 dBV (0.4 V)	
Polarity	3-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector.  5-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 4 relative to pin 2 of output XLR connector.	
Weight	MX405: 54 g (0.119 lbs) MX410: 68 g (0.150 lbs) MX400DP: 516 g (1.138 lbs) MX400SMP (w/ Kit): 125 g (0.275 lbs)	
Logic Connections	LED IN: Active low ( $\leq$ 1.0 V), TTL compatible. Absolute maximum voltage: -0.7 V to 50 V. LOGIC OUT: Active low ( $\leq$ 1.0 V), sinks up to 20 mA, TTL compatible. Absolute maximum voltage: -0.7 V to 50 V (up to 50 V through 3 k $\Omega$ ).	
Mute Switch Attenuation	-50 dB minimum	
Cable	MX400DP: 6 m (20 ft) attached cable with shielded audio pair terminated at a 3-pin male XLR and three unterminated conductors for logic control	
Environmental Conditions	Operating temperature: $-18-57$ °C (0 $-135$ °F) Storage temperature: $-29-74$ °C ( $-20-165$ °F) Relative humidity: $0-95\%$	
Power Requirements	48 – 52 Vdc phantom, 8.0 mA	

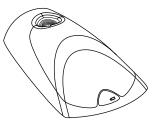


MX410 and MX405 Miniature goosenecks



#### MX400SMP

Surface mount preamp
Diam. x H: 32 mm (1 1/4") x 86,6 mm (3 13/32")



#### MX400DP

Wired desktop base (also available as MX890 wireless desktop base)

#### **Available Models**

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, S = Supercardioid, N = No Cartridge

MX405/C, MX405/S	127 mm (5 inch) gooseneck, bi-color status indicator, includes surface mount preamp	
MX405R/N	127 mm (5 inch) gooseneck, light ring, includes surface mount preamp	
MX410/C, MX410/S	254 mm (10 inch) gooseneck, bi-color status indicator, includes surface mount preamp	
MX410R/N	254 mm (10 inch) gooseneck, light ring, includes surface mount preamp	
MX405LP/C, MX405LP/S	127 mm (5 inch) gooseneck, bi-color status indicator, less preamp	
MX405RLP/N	127 mm (5 inch) gooseneck, light ring, less preamp	
MX410LP/C, MX410LP/S	254 mm (10 inch) gooseneck, cardioid, bi-color status indicator, less preamp	
MX410RLP/N	254 mm (10 inch) gooseneck, light ring, less preamp	



# **MX405** and **MX410** Miniature Gooseneck Microphones

# **Optional Accessories and Replacement Parts**

MX400SMP	Surface mount preamp	R185B	Black cardioid cartridge for all Microflex models	A412MWS	Metal locking windscreen
MX400DP	Wired desktop base. Includes 6.1 m (10 ft.) attached cable	R184B	Black supercardioid cartridge for all Microflex models	95A2487	Tapered windscreen
MX890	Wireless desktop base, compat-	R183B	Black Omnidirectional cartridge for		

#### **Furnished Accessories**

Models with included Preamp		All Models	All Models		
MX400SMP	Surface mount preamp	RK513WS	Snap-fit foam windscreen (4 pcs.)		
65A405	Rubber isolation rings				
65A2190	Wing nut				
95A2529	5-pin XLR-F				
65A2166	Сар				

## **Architectural Specifications**

MX405/C – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX405/S – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with supercardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX405R/N – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with no included cartridge, black finish, and logic controlled, upper red light ring status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410/C – The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410/S – The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with supercardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mWPa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410R/N – The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, black finish, and logic controlled, upper red light ring status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX405LP/C – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be compatible with the MX400SMP or MX890. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

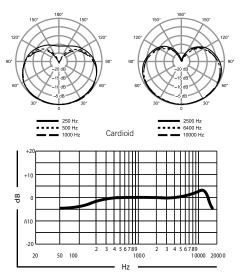
MX405LP/S – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with supercardioid polar pattern, black finish, and logic controlled bi-colorstatus indicator. The microphone shall be compatible with the MX400SMP, MX400DP or MX890. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

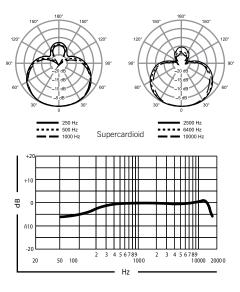
MX405RLP/N – The microphone shall be an electret condenser 127 mm gooseneck microphone (5") with no included cartridge, black finish, and logic controlled, upper red light ring status indicator. The microphone shall be compatible with the MX400SMP, MX400DP or MX890. The microphone shall be resistant to RF interference from portable mobile and handheld devices.

MX410LP/C – The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be compatible with the MX400SMP or MX890. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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# **MX412 and MX418 Standard Gooseneck Microphones**

#### **Overview**

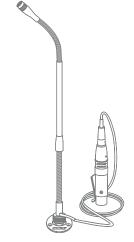
Microflex Standard Gooseneck Microphones provide the added length and flexibility needed for speakers in environments like lecterns, pulpits, and courtrooms. Available in four models with a variety of lenghts and mounting styles to choose from, Microflex Gooseneck microphones feature high sensitivity and balanced, transformerless output for maximum resistance to electromagnetic hum and RF interference, even over long cable runs.

# Specifications (subject to change)

Type Condenser (electret bias)			
Frequency Response	50 – 17,000 Hz		
Polar Pattern	MX412/C, MX418/C: Cardioid MX412/S, MX418/S: Supercardioid Omnidirectional cartridge available separately		
Output Impedance	EIA rated at 150 $\Omega$ (170 $\Omega$ actual)		
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL)	Cardioid: -35 dBV/Pa (17.8 mV) Supercardioid: -33.5 dBV/Pa (21.1 mV) Omnidirectional: -27.5 (42.2 mV)		
<b>Maximum SPL</b> (1 kHz at 1% THD, 1 kΩ load)	Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB		
<b>Equivalent Output Noise</b> (A-weighted)	Cardioid: 28 dB SPL Supercardioid: 26.5 dB SPL Omnidirectional: 20.5 dB SPL		
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB		
<b>Dynamic Range</b> (1 kΩ load at 1 kHz)	96.2 dB 100 dB at 0 gain (internal modification)		
Common Mode Rejection	45 dB minimum (10 Hz – 100 kHz)		
Preamplifier Output Clipping Level (1% THD)	-6 dBV (0.5 V)		
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector.		
Mute Switch Attenuation	-50 dB minimum		
Cable	MX412D and MX418D: The 3 m (10 ft.) attached custom cable contains a shielded audio pair and three unshielded conductors for logic control. Overall diameter = 4 mm (0.165 inch)		
Environmental Conditions	Operating temperature range: -18° $-$ 57° C (0° $-$ 135° F) Relative humidity: 0 $-$ 95%		
Power Requirements	11 – 52 Vdc phantom, 8.0 mA		



MX418 Gooseneck with attached preamp and shockmount



Gooseneck with in-line preamp and side exit cable

### **Available Models**

MX412/C, MX412/S, MX412/N	$305\;\mathrm{mm}\;(12\;\mathrm{inch})$ gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windsreen
MX418/C, MX418/S, MX418/N	$457\;\mathrm{mm}$ (18 inch) gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windsreen
MX412S/C, MX412S/S, MX412S/N	$305\;\mathrm{mm}$ (12 inch) gooseneck, attached XLR preamp, Shock Mount, flange mount, snap-fit foam wndscreen, mute switch, LED Indicator
MX418S/C, MX418S/S, MX418S/N	457 mm (18 inch) gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windscreen, mute switch, LED indicator
MX412SE/C, MX412SE/S, MX412SE/N	305 mm (12 inch) gooseneck, in-line preamp, shock mount, flange mount, 3 m side-exit (or bottom-exit) cable, snap-fit foam windscreen
MX418SE/C, MX418SE/S, MX418SE/N	457 mm (18 inch) gooseneck, in-line preamp, shock mount, flange mount, 3 m side-exit (or bottom-exit) cable, snap-fit foam windscreen
MX412D/C, MX412D/S, MX412D/N	305 mm (12 inch) gooseneck, desktop base with 3 m cable, logic functions, programmable switch and LED indicator, snap-fit foam windscreen
MX418D/C, MX418D/S, MX418D/N	457 mm (18 inch) gooseneck, desktop base with 3 m cable, logic functions, programmable switch and LED indicator, snap-fit foam windscreen





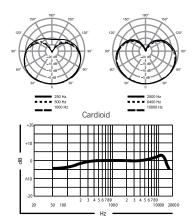
# **MX412 and MX418 Standard Gooseneck Microphones**

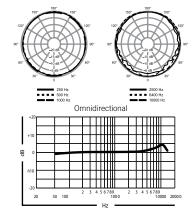
# **Furnished Accessories**

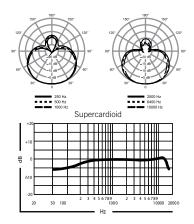
MX412, MX418, MX412S, MX418S Models		MX412SE, N	MX412SE, MX418SE Models		MX412D, MX418D Models	
65B8264	Flange	A12C	Flange and nut	RK412WS	Snap-fit foam windscreen (1 furnished, 4 in replacement pack)	
65B8265	Retainer	80A476	Clamp			
80A439	Isolation ring	A400SM	Shock mount	_		
RK412WS	Snap-fit foam windscreen (1 furnished, 4 in replacement pack)	RK412WS	Snap-fit foam windscreen (1 furnished, 4 in replacement pack)	_		
A400SM	Shock mount	31B1762A	Shock mount adapter	_		
80A67	Hex wrench #4			_		

# **Optional Accessories and Replacement Parts**

A99WS	Foam ball windscreen	R183B	Black omnidirectional cartridge for all Microflex models	A412MWS	Metal locking windscreen
RK100PK	Replacement in-line preamplifier (SE models)	R184B	Black supercardioid cartridge for all Microflex models	A412B	Desktop base
C130	Custom logic cable (specify length)	R185B	Black cardioid cartridge for all Microflex models	A57F	Stand adapter







# **MX412 and MX418 Standard Gooseneck Microphones**

### **Architectural Specifications**

MX412/C – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with cardioid polar pattern, interchangeable cartridges integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall be 17.8 mV/Pa. The microphone shall be 17.8 mV/Pa.

MX412/S – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with supercardioid polar pattern, integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX412/N – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX418/C – The microphone shall be an electret condenser 457 mm gooseneck microphone (18") with cardioid polar pattern, integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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MX412S/C – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with cardioid polar pattern, integrated XLR preamp, black finish, mute switch, and LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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MX412SE/C – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with cardioid polar pattern, black finish, and 3 m (10") side-exit (or bottom-exit) cable that terminates to a 4-pin miniature (TA4F) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX412SE/S – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with supercardioid polar pattern, black finish, and 3 m (10") side-exit (or bottom-exit) cable that terminates to a 4-pin miniature (TA4F) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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MX418SE/C – The microphone shall be an electret condenser 457 mm gooseneck microphone (18") with cardioid polar pattern, black finish, and 10" (3m) side-exit (or bottom-exit)) cable that terminates to a 4-pin miniature (TA4F) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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MX412D/C – The microphone shall be an electret condenser 305 mm gooseneck microphone (12") with cardioid polar pattern and black finish. The microphone shall be mounted on a desktop base with a logic controlled programmable switch and LED indicator. The microphone shall include an attached 3 m (10") cable. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern

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# **MX396 Multi-Element Boundary Microphones**

#### **Overview**

Microflex Multi-Element Boundary Microphones deliver a unique and versatile tool for conference room installations. Clean and simple in appearance, Multi-Element Boundary mics come in two or three element configurations, combining the coverage of multiple microphones into one small, compact package.

### Specifications (subject to change)

Туре	Condenser (electret bias)	
Frequency Response 50 – 17,000 Hz		
Output Impedance         EIA rated at $150 \Omega (170 \Omega \text{ actual})$		
Output Configuration	Active balanced	
Sensitivity (at 1 kHz, open circuit voltage; 1 Pa = 94 dB SPL)	-35 dBV/Pa (18 mV)	
Maximum SPL (1 kHz at 1% THD, 1 kΩ load)	122 dB	
Equivalent Output Noise (A-weighted)	28 dB SPL	
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	66 dB	
<b>Dynamic Range</b> (1 kΩ load at 1 kHz)	94 dB	
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum	
Preamplifier Output Clipping Level (1% THD)	-6 dBV (0.5 V)	
Weight	Net: 587 g (1.29 lb) Packaged: 816 g (2.02 lbs)	
Logic Connections	LED IN: Active low ( $\leq$ 1.0 V), sinks up to 20 mA, TTL compatible. Absolute maximum voltage: -0.7 V to 50 V (up to 50 V through 3 k $\Omega$ ). LOGIC OUT: Active low ( $\leq$ 1.0V), sinks up to 20 mA, TTL compatible. Absolute maximum voltage: -0.7 V to 50 V (up to 50 V through 3 k $\Omega$ ).	
Mute Switch Attenuation	-50 dB minimum	
Cable	6 m (20 ft.) attached unterminated cable with three shielded audio pairs and three shielded conductors for logic control.	
Environmental Conditions	Operating temperature: -18 $-$ 57 °C (0 $-$ 135 °F) Storage temperature: -29 $-$ 74 °C (-20 $-$ 165 °F) Relative humidity: 0 $-$ 95%	
Power Requirements	MX396/C-DUAL: 48 – 52 Vdc phantom, 10.0 mA MX396/C-TRI: 48 – 52 Vdc phantom, 12.0 mA	

#### **Available Models**

MX396/C-DUAL	Dual-Element 0-180 degrees, back or bottom exit cable, mute output, LED input
MX396/C-TRI	Tri-Element 90-0-90 mic, adjustable to 120-120-120 degrees, back or bottom exit cable, mute output, LED input

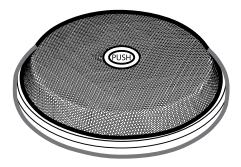
### **Furnished Accessories and Replacement Parts**

65A2190	Fastening wingnut	R185B	Cardioid replacement cartridge (x 1)
31A2165	Fastening tube	65A405	Rubber isolation rings

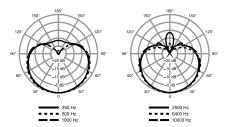
# **Architectural Specifications**

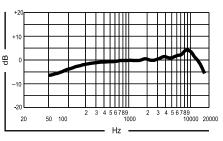
MX396/C-Dual – The microphone shall be a surface mounted, black electret condenser microphone with two cardioid polar pattern elements, each with individual channel output. The microphone shall include a logic enabled, bi-color status indicator and programmable mute switch. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity of each individual element, 18 mV/Pa.

MX396/C-Tri – The microphone shall be a surface mounted, black electret condenser microphone with three cardioid polar pattern elements, each with individual channel output. The microphone shall include a logic enabled, bi-color status indicator and programmable mute switch. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity of each individual element, 18 mV/Pa.



**MX396** Multi-Element boundary microphone Diam. x H: 110 mm (45/16") x 24 mm (15/16")





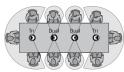
Cross-Table Coverage (Dual) End-Of-Table Coverage (Tri) Center-Of-Table Coverage (Tri)







Example of Boardroom Table Mic Placement Coverage





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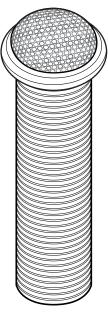
# **MX395 Low Profile Boundary Microphones**

#### **Overview**

The Microflex Low Profile Boundary Microphone is an ideal table microphone when minimal presence is of high priority. Perfect for meeting rooms, these microphones deliver exceptional sound pickup while barely being noticed. Choose from a selection of colors and pickup patterns for customized table and ceiling installations.

# Specifications (subject to change)

Туре	Condenser (electret bias)
Frequency Response	50 – 17,000 Hz
Polar Pattern	MX395/O: Omnidirectional MX395/C: Cardioid MX395/BI: Bidirectional
Output Impedance	EIA rated at 150 $\Omega$ (170 $\Omega$ actual)
Output Configuration	Active balanced
Sensitivity (at 1 kHz , open circuit voltage; 1 Pascal = 94 dB SPL)	Cardioid: -35 dBV/Pa (18 mV) Omnidirectional: -28 dBV/Pa (42 mV) Bidirectional: -37 dBV/Pa (14 mV)
Maximum SPL (1 kHz at 1% THD, 1 kΩ load)	Cardioid: 121 dB Omnidirectional: 114 dB Bidirectional: 123 dB
Equivalent Output Noise (A-weighted)	Cardioid: 28 dB SPL Omnidirectional: 21 dB SPL Bidirectional: 29 dB
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Omnidirectional: 73 dB Bidirectional: 65 dB
<b>Dynamic Range</b> (1 kΩ load at 1 kHz)	Cardioid: 93 dB Omnidirectional: 93 dB Bidirectional: 94 dB
Common Mode Rejection	45 dB minimum (10 Hz to 100 kHz)
Preamplifier Output Clipping Level (1% THD)	-8 dBV (0.4 V)
Polarity	3-pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector.  5-pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 4 relative to pin 2 of output XLR connector.
Weight	Net: 136 g (0.30 lb); Packaged: 374 g (0.825 lbs)
Logic Connections	LED IN: Active low (≤ 1.0 V), TTL compatible. Absolute maximum voltage: -0.7 V to 50 V.
Environmental Conditions	Operating temperature: $-18 - 57$ °C (0 $- 135$ °F) Storage temperature: $-29 - 74$ °C ( $-20 - 165$ °F) Relative humidity: 0 $- 95\%$
Power Requirements	MX395: 11 – 52 Vdc phantom, 2.0 mA MX395-LED: 48 – 52 Vdc phantom, 8.0 mA



MX395 Low Profile Boundary Mic Diam. x H: 32 mm (1 1/4") x 110 mm (4")

### **Available Models**

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, O = Omnidirectional, BI = Bidirectional

MX395B/C, MX395B/BI, MX395B/O	Black, 3-pin XLR	
MX395AL/C, MX395AL/BI, MX395AL/O	Aluminum, 3-pin XLR	
MX395W/O	White, 3-pin XLR	
MX395B/C-LED, MX395B/BI-LED, MX395B/O-LED	Black, 5-pin XLR, LED, bi-color status indicator	



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# **MX395 Low Profile Boundary Microphones**

#### **Furnished Accessories**

65A405	Rubber isolation rings	
95A1118 (LED Models only) 5-pin XLR-female connector		
<b>65A2190</b> Wing nut		

# **Architectural Specifications**

MX395AL/C – The microphone shall be a surface mounted, aluminum finish, electret condenser microphone with low-cut switch and cardioid polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1  $^{\rm M}$ ) and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mV/Pa.

MX395B/C – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and cardioid polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1 ¼") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mV/Pa.

MX395B/C-LED – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and cardioid polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1 ¼") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mV/Pa.

MX395AL/O – The microphone shall be a surface mounted, aluminum finish, electret condenser microphone with low-cut switch and omnidirectional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1 ¼") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17kHz and the sensitivity 42 mV/Pa.

MX395B/O – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and omnidirectional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1 ¼") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17kHz and the sensitivity 42 mV/Pa.

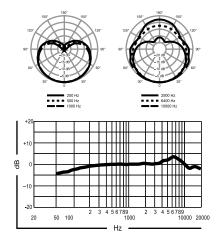
MX395B/O-LED – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and omnidirectional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm ( $1 \frac{1}{4}$ ") and 24 mm ( $5 \frac{1}{8}$ "). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 42 mV/Pa.

MX395W/O – The microphone shall be a surface mounted, white, electret condenser microphone with low-cut switch and omnidirectional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1  $^{1}$ 4") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17kHz and the sensitivity 42 mV/Pa.

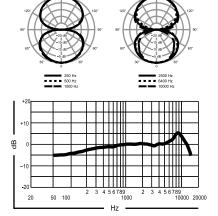
MX395AL/BI – The microphone shall be a surface mounted, aluminum finish, electret condenser microphone with low-cut switch and bi-directional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1  $\,$ %") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17kHz and the sensitivity 14 mV/Pa.

MX395B/BI – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and bi-directional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm ( $1 \, \text{¼}^{-1}$ ) and 24 mm ( $5/8^{\circ}$ ). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity  $14 \, \text{mW/Pa}$ .

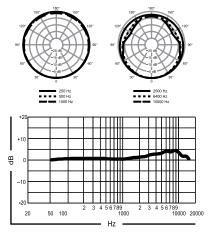
MX395B/BI-LED – The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and bi-directional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm (1 %") and 24 mm (5/8"). The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 14 mV/Pa.



Cardioid



Bidirectional



Omnidirectional



# MX690 Wireless Boundary and MX890 Wireless Desktop Base

#### **Overview**

The Microflex Wireless Boundary Microphone as well as the Wireless Desktop Base offer total freedom of placement with no holes to drill or cables to run for installation. They are the perfect solution for conference and meeting spaces where users demand flexibility and high performance. Compatible with Shure SLX® Wireless Systems, including the SLX4L receiver with logic signal output for applications requiring logic functionality.

#### Specifications (subject to change)

MX690 Microphone Specifications			
Туре	Condenser (electret bias)		
Frequency Response	50 – 17,000 Hz		
Polar Pattern	Cardioid		
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL)	-33 dBV/Pa (22 mV)		
Dynamic Range	96 dB (1 kΩ load at 1 kHz)		
Common Mode Rejection	45 dB minimum (10 Hz to 100 kHz)		
Preamplifier Output Clipping Level (1% THD)	-6 dBV (0.5 V)		
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector or tip of 1/4" phone plug (both on SLX4 or SLX4L wireless receiver).		
MX690 and MX890 Transmitter Spec	cifications		
RF Power	10 mW		
Operating Range	30 m (100 ft) Note: Actual range depends on RF signal absorption, reflection, and interference		
Frequency Stability	±10 ppm		
Maximum Frequency Deviation	45 kHz		
Oscillator Type	Phase-locked loop (PLL) controlled synthesizer		
Power Requirements	3 V (2 AA alkaline or rechargeable batteries)		
Battery Life	≥8 hours (alkaline)		
Power Consumption	130 mA, ± 15 mA		
Operating Temperature Range	$-18-57^{\circ}\mathrm{C}$ (0 $-135^{\circ}\mathrm{F}$ ) Note: Battery may limit this range		
Dimensions (H x W x L)	43 mm x 87 mm x 148 mm (1 11/16 x 3 3/8 x 5 13/16 inch)		
Weight	MX690 Net: 318 g (11.2 oz)       MX890 Net: 312 g (11 oz)         Packaged: 516 g (18.2 oz)       Packaged: 530 g (18.7 oz)		



MX690 Wireless boundary microphone, cardioid, mute switch	
MX890 Wireless desktop base for MX405 and MX410 models, mute switch	

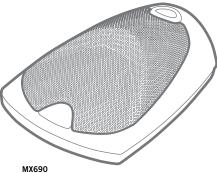
### **Optional Accessories**

SLX4 Wireless diversity receiver SLX4L	Wireless diversity receiver with logic output
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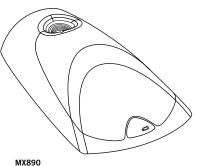
# **Architectural Specifications**

MX690 – The microphone shall be a surface mounted, black condenser microphone with a cardioid polar pattern. The microphone shall include a bi-color LED status indicator and a programmable mute switch. The microphone shall have an integrated wireless transmitter for audio signals with switchable carrier frequencies as well as preprogrammed groups up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity shall be 22 mV/Pa.

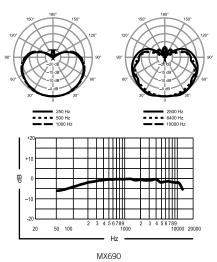
MX890 – The wireless desk stand shall be a transmitter base for audio signals with switchable carrier frequencies as well as preprogrammed groups with up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The wireless desktop base shall be used with the MX405 and MX410 series gooseneck microphones and shall feature a programmable mute switch.



Wireless Boundary Microphone L x W x H: 148 mm x 87 mm x 43 mm (5 13/16" x 3 3/8" x 1 11/16")



Wireless Desktop Base L x W x H: 148 mm x 87 mm x 43 mm (5 3/4" x 3 7/16" x 1 11/16")





# **MX202 Overhead Microphones**

### **Overview**

Easily hung from ceilings, Microflex Overhead Microphones capture sound from speakers, choirs, stages, and more conveniently and unobtrusively from above. Compact and flexible, overhead microphones each feature a 10 cm (4") gooseneck, multiple preamp options for easy installation into ceilings or microphone stands, and versatile condenser cartridges for accurate sound reproduction in any setting.

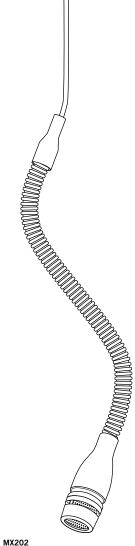
### Specifications (subject to change)

Туре	Condenser (electret bias)	
Frequency Response	50 – 17,000 Hz	
Polar Pattern	MX202/C: Cardioid MX202/O: Omnidirectional MX202/S: Supercardioid	
Output Impedance	150 $\Omega$ rated at EIA (180 $\Omega$ actual)	
Sensitivity (at 1 kHz , open circuit voltage; 1 Pascal = 94 dB SPL)	Cardioid: -35.0 dBV/Pa (17.8 mV) Supercardioid: -33.5 dBV/Pa (21.1 mV) Omnidirectional: -27.5 dBV/Pa (42.2 mV)	
	Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB	
Equivalent Output Noise (A-weighted)	Cardioid: 28.0 dB SPL Supercardioid: 26.5 dB SPL Omnidirectional: 20.5 dB SPL	
Signal to Noise Ratio (referenced at 94 dB SPL)	Cardioid: 66.0 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB	
<b>Dynamic Range</b> (1 kΩ load at 1 kHz)	96.2 dB 100 dB at 0 gain (internal modification)	
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum	
Preamplifier Output Clipping Level (1% THD)	D) -6 dBV (0.5 V)	
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector.	
Power Requirements	11 – 52 Vdc phantom, 2.0 mA	
Environmental Requirements	Operating temperature range: -18° C $-57^\circ$ C (0° F $-$ 135° F) Relative humidity: 0 $-$ 95%	

### **Available Models**

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, S = Supercardioid, N = No Cartridge

	, , , , , , , , , , , , , , , , , , , ,
MX202B/C, MX202B/S, MX202B/N	Black mini-condenser microphone; includes cable, in-line preamplifier, and stand adapter
MX202W/C, MX202W/S, MX202W/N	White mini-condenser microphone; includes cable, in-line preamplifier, and stand adapter
MX202BP/C, MX202BP/S, MX202BP/N	Black mini-condenser microphone; includes cable and plate-mounted preamplifier
MX202WP/C, MX202WP/S, MX202WP/N	White mini-condenser microphone; includes cable and plate-mounted preamplifier



Overhead Microphone Diam.: 11.7 mm (0.46") L: 144.5 mm (5.69")



# **MX202 Overhead Microphones**

#### **Furnished Accessories**

RK183WS (Black)	Black snap-fit foam windscreen	65B1752	Stand adapter
95B2064 (White)	White snap-fit foam windscreen		(MX202B)
RK202PK	Preamplifier kit, plate mounted,	RK100PK/	In-line preamplifier
	White (MX202BP & MX202WP)	RK100PKW	(MX202W & MX202B)
80A476	Clamp (MX202B & MX202WP)	80B489	Hang clip

### **Optional Accessories and Replacement Parts**

A202BB	Desk stand	R183B (Black) R183W (White)	Omnidirectional cartridge for all Microflex models
80A479	Strain relief (MX202BP & MX202WP)	R184B (Black) R184W (White)	Supercardioid cartridge for all Microflex models
A57F	Stativ adapter (MX202B)	R185B (Black) R185W (White)	Cardioid cartridge for all Microflex models

# **Architectural Specifications**

MX202B/C – The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 100 mm (4") gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202B/S – The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 100 mm (4") gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202B/N – The microphone shall be an electret condenser overhead microphone with no included cartridge, 100 mm (4") gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202W/C – The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 100 mm (4") gooseneck, in-line preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202W/S – The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 100 mm ( $4^{\circ}$ ) gooseneck, in-line preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202W/N – The microphone shall be an electret condenser overhead microphone with no included cartridge, 100 mm (4") gooseneck, in-line preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BP/C – The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 100 mm (4") gooseneck, a plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

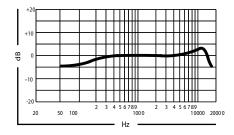
MX202BP/S – The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 100 mm (4") gooseneck, a plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

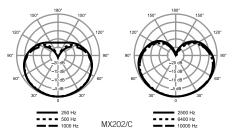
MX202BP/N – The microphone shall be an electret condenser overhead microphone with no included cartridge, 100 mm (4") gooseneck, a plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

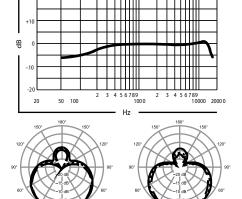
MX202WP/C – The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 100 mm (4") gooseneck, a plate-mounted preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

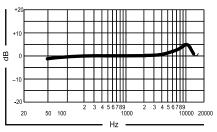
MX202WP/S – The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 100 mm (4") gooseneck, a plate-mounted preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202WP/N – The microphone shall be an electret condenser overhead microphone with no included cartridge, 100 mm (4") gooseneck, a plate-mounted preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

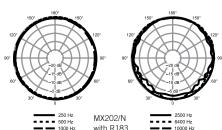








MX202/S





# MX391, MX392, MX393 Boundary Microphones

#### **Overview**

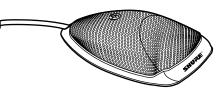
With slim design and superior audio reproduction, Microflex Boundary Microphones are the ideal conference room solution. Equipped with features like programmable, silent membrane switches, interchangeable cartridges, logic inputs and outputs, and LED indicators, Microflex Boundary microphones provide high-quality sound for a wide range of applications.

# **Specifications** (subject to change)

Туре	Condenser (electret bias)	
Frequency Response	50 – 17,000 Hz	
Polar Pattern	MX391/C, MX392/C, MX393/C: Cardioid MX391/S, MX392/S, MX393/S: Supercardioid MX391/O, MX392/O, MX393/O: Omnidirectional	
Output Impedance	EIA rated at 150 $\Omega$ (180 $\Omega$ actual)	
Logic Connections (MX392 Only)	LED IN: Active low ( $\leq$ 1.0 V), TTL compatible. Absolute maximum voltage: -0.7 V to 50 V. SWITCH OUT: Active low ( $\leq$ 0.5 V), sinks up to 20 mA, TTL compatible. Absolute maximum voltage: -0.7 V to 50 V (up to 50 V through 3 k $\Omega$ ).	
Environmental Conditions	Operating temperature range: -18° C – 57° C (0° F – 135° F) Relative Humidity: 0 – 95%	
Power Requirements	11 – 52 Vdc phantom, 2.0 mA	
	MX391 MX392/MX393	
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL); All settings -12 dB at 0 gain (internal modification)	Cardioid -29.5 dB (33.5 mV) Supercardioid -28.3 dB (38.5 mV) Omnidirectional -21.8 dB (81.4 mV)	Cardioid: -27.5 dBV/Pa (42.2 mV) Supercardioid: -26.5 dBV/Pa (47.3 mV) Omnidirectional: -22.0 dBV/Pa (79.4 mV
Maximum SPL (1 kHz at 1% THD, 1 kΩ load); All settings +6 dB at 0 gain (internal modification)	Cardioid: 118.8 dB Supercardioid: 117.5 dB Omnidirectional: 110.7 dB	Cardioid: 117.0 dB Supercardioid: 116.0 dB Omnidirectional: 111.5 dB
Equivalent Output Noise (A-weighted)	Cardioid: 22.6 dB SPL Supercardioid: 21.3 dB SPL Omnidirectional: 14.5 dB SPL	Cardioid: 23.0 dB Supercardioid: 22.0 dB Omnidirectional: 17.5 dB
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 71.4 dB Supercardioid: 72.7 dB Omnidirectional: 79.5 dB	Cardioid: 71.0 dB Supercardioid: 72.0 dB Omnidirectional: 76.5 dB
Dynamic Range (1 kΩ load at 1 kHz)	96.2 dB	94.0 dB
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum, 10 Hz to 100 kHz	45 dB minimum, 10 Hz to 100 kHz
Preamplifier Output Clipping Level (1% THD)	-6 dBV (0.5 V) -6 dBV (0.5 V)	
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of the preamplifier XLR output	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector (MX393) or red wire relative to black wire (MX392)



**MX391**Boundary microphone
L x W x H: 79.4 mm x 53 mm x 19 mm
3.13" x 2.08" x 0.75")



**MX392/ MX393**Boundary microphone
L x W x H: 108.3 mm x 76.2 mm x 21.2 mm (4.26" x 3,0" x 0.83")

### **Available Models**

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, O = Omnidirectional, S = Supercardioid

MX391/C, MX391/S, MX391/O	Black surface-mount microphone, attached 3.7 m (12 ft.) cable terminated, 4-pin mini connector, separate preamplifier	
MX391W/C, MX391W/S, MX391W/O	White surface-mount microphone, attached 3.7 m (12 ft.) cable terminated, 4-pin mini connector, separate preamplifier	
MX392/C, MX392/S, MX392/O	Surface-mount microphone, programmable membrane on/off switch, logic input/output terminals, on/off indicator LED, screw terminal connections, attached 3.7 m (12 ft.) unterminated cable	
MX393/C, MX393/S, MX393/O	Surface-mount microphone, programmable membrane on/off switch, on/off indicator LED, miniature three pin connector, and detachable 3.7 m (12 ft.) cable.	



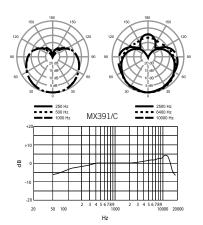
# MX391, MX392, MX393 Boundary Microphones

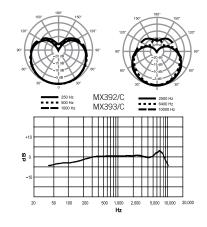
### **Furnished Accessories**

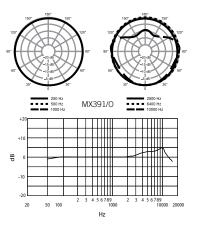
95B2313	Zipper bag	80A541	Switch paint mask (MX392/MX393)
80C514	Paint mask (MX392/MX393)	36A664	Paint plug (MX392/MX393)
RK100PK	In-line preamp (MX391/MX391W)		

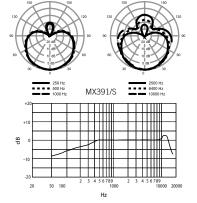
# **Optional Accessories and Replacement Parts**

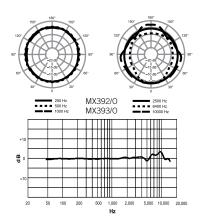
	•		
R183B	Omnidirectional cartridge for all Microflex models	C129	3,7 m (12") cable 3-pin miniature connector (TA3F) to male XLR (MX393)
R184B	Supercardioid cartridge for all Microflex models	C130	Custom-logic cable with threaded adapter
R185B	Cardioid cartridge for all Microflex models	15A525	Custom logic cable (specify length)

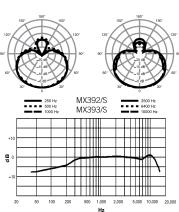












# MX391, MX392, MX393 Boundary Microphones

# **Architectural Specifications**

MX391/C – The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 33.5 mV/Pa.

MX391/S – The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be  $\frac{38}{5}$  m//Pa

MX391/0 – The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 81.4 mV/Pa

MX391W/C – The microphone shall be a surface mounted, white electret condenser microphone with a cardioid polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 33.5 mV/Pa.

MX391W/S – The microphone shall be a surface mounted, white electret condenser microphone with a supercardioid polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 38.5 mV/Pa.

MX391W/O – The microphone shall be a surface mounted, white electret condenser microphone with an omnidirectional polar pattern, a 3.7 m (12 ft.) cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 81.4 mW/Pa.

MX392/C – The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 42.2 mV/Pa.

MX392/S – The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 47.3 mV/Pa.

MX392/0 – The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 79.4 mV/Pa.

MX393/C – The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, programmable membrane on/off switch with LED indicator. The microphone shall include a removable  $3.7~\mathrm{m}$  ( $12~\mathrm{ft}$ .) cable, connected to the microphone through a TA3F connector and which terminates to a XLR connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be  $50~\mathrm{Hz}$  to  $17~\mathrm{kHz}$  and the sensitivity shall be  $42.2~\mathrm{mV/Pa}$ .

MX393/S – The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, programmable membrane on/off switch with LED indicator. The microphone shall include a removable 3.7 m (12 ft.) cable, connected to the microphone through a TA3F connector and which terminates to a XLR connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 47.3 mV/Pa.



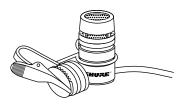
# MX183, MX184, MX185 Lavalier Microphones

#### **Overview**

Attached to a tie or lapel, Microflex Lavalier Microphones offer freedom of movement to any situation involving voice reproduction. As stylish as they are convenient, Lavaliers are available in different directional patterns, come with multiple clip options, and are compatible with all Shure wireless platforms.

### Specifications (subject to change)

Туре	Condenser (electret bias)
Frequency Response	50 – 17,000 Hz
Polar Pattern	MX183: Omnidirectional MX184: Supercardioid MX185: Cardioid
Output Impedance	EIA rated at 150 $\Omega$ (170 $\Omega$ actual)
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL; all settings -12 dB at 0 gain)	MX183: -27.5 dB (42.2 mV) MX184: -33.5 dB (21.1 mV) MX185: -35.4 dB (17.0 mV)
Maximum SPL (1 kHz at 1% THD, 1 kΩ load; all settings +6 dB at 0 gain)	MX183: 116.7 dB MX184: 122.7 dB MX185: 124.2 dB
Equivalent Output Noise (A-weighted)	MX183: 20.5 dB MX184: 26.5 dB MX185: 28.0 dB
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	MX183: 73.5 dB MX184: 67.5 dB MX185: 66.0 dB
<b>Dynamic Range</b> (1 kΩ load at 1 kHz)	96.2 dB 100 dB at 0 gain (internal modification)
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector.
Environmental Conditions	Operating temperature range: -18° – 57° C (0° – 135° F) Storage temperature range: -29° – 74° C (-20° – 165° F)
Power Requirements	11 – 52 Vdc phantom, 2.0 mA
Cable	Shielded 1.2 m (4 ft.) cable terminated with a 4-pin female mini connector (TA4F)



MX183/ MX184/ MX185 Lavalier microphone H x Diam.: 22 mm x 12 mm (0.85" x 0.46")

### **Available Models**

MX183 Omnidirectional, includes belt-clip preamp, rotatable tie clip, dual tie clip, snap-fit win	
MX184	Supercardioid, includes belt-clip preamp, rotatable tie clip, dual tie clip, snap-fit windscreen
MX185	Cardioid, includes belt-clip preamp, rotatable tie clip, dual tie clip, snap-fit windscreen



# MX183, MX184, MX185 Lavalier Microphones

#### **Furnished Accessories**

26A13	Zipper bag	RK183T1	Tie clip
RK261BWS	Foam windscreen	RK183T2	Dual tie clip
RK183WS	Snap-fit windscreen	RK100PK	In-line preamp
80A67	Hex wrench #4		

### **Optional Accessories and Replacement Parts**

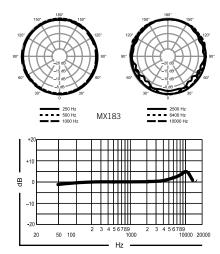
R183B	Omnidirectional cartridge for all Microflex models	R184B	Supercardioid cartridge for all Microflex models	R185B	Cardioid cartridge for all Microflex models
MX1BP	Battery powered preamp	53A2133A	Belt clip for in-line preamp	WA333	4-pin female mini connector (TA4F)
C133	Replacement cable, Microphone to preamp				

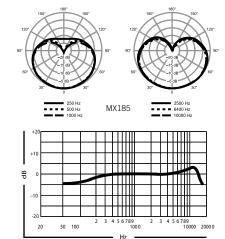
# **Architectural Specifications**

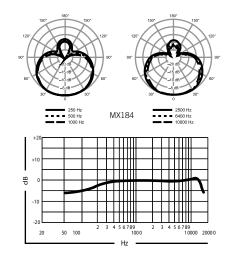
MX183 – The microphone shall be black electret condenser lavalier microphone with an omnidirectional polar pattern, in-line belt-clip preamp, and 1.2 m (4 ft) cable that terminates with a 4-pin miniature (TA4F) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 42.4 mV/Pa.

MX184 – The microphone shall be a black electret condenser lavalier microphone with a supercardioid polar pattern, in-line belt-clip preamp, and 1.2 m (4 ft) cable that terminates with a 4-pin miniature (TA4F) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa.

MX185 – The microphone shall be a black electret condenser lavalier microphone with a cardioid polar pattern, in-line belt-clip preamp, and 1.2 m (4 ft) cable that terminates with a 4-pin miniature (TA4F) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.0 mV/Pa.









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