DL4

DuraPlex™ Lavalier Microphones

The Shure DuraPlex Lavalier online user guide. Includes how to wear, clip options, specifications, wiring and termination
Version: 1.2 (2023-C)

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DL4
DuraPlex™ Lavalier Microphones

General Description

The Shure DuraPlex DL4 is a professional MEMS condenser lavalier microphone that is ideal for both speech and performance applications in challenging environments. The IP57 rated omnidirectional lavalier is dust resistant and waterproof, manufactured for use in applications that require extended durability, uncompromised sound quality, and reliability. The subminiature design and various mounting options provide discrete placement in applications for film, television, education, and corporate events. Each microphone is supplied with a storage pouch, single tie clip, sticky vocal presence frequency response cap, snap fit windscreen, foam windscreen, and TA4F threaded adapter.

Features

- IP57 Certified dust resistant and waterproof/sweatproof headset
- 5mm omnidirectional subminiature design for discrete placement and improved gain before feedback
- 1.6mm PLEX Cable technology, paintable cable, and no memory effect
- Professional sound quality for speech and performance applications
- High RF immunity, compatible with digital wireless systems without RF interference
- Attachable Presence Cap included for tailored frequency response in speech applications
- Included furnished accessories for storage, mounting options, and wind protection
- TA4F and LEMO terminations for variable wireless system connectivity
- Included sticky mount (adhesive patch sold separately) for application requiring placement underneath clothing
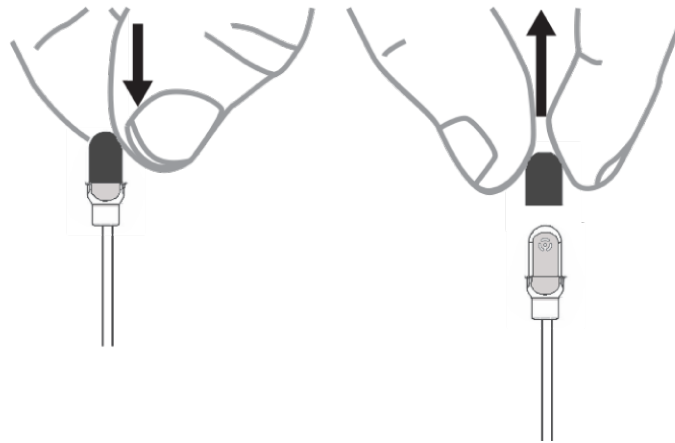- Available in Black, Tan, Cocoa finishes

Care and Maintenance

The DuraPlex omnidirectional microphone has been IP57 dust-protected, waterproof rated by extensive internal tests, so you can clean it using distilled water and a mild detergent when necessary.
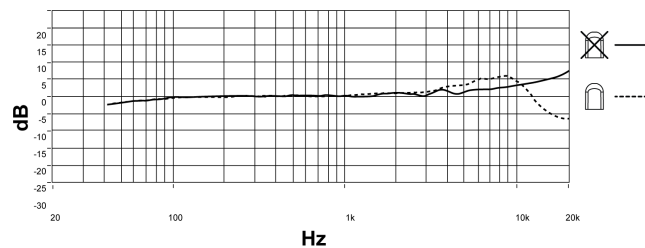
DuraPlex Accessories
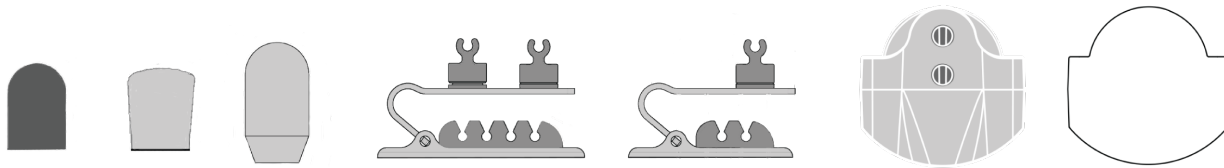
Presence Cap

Frequency Response

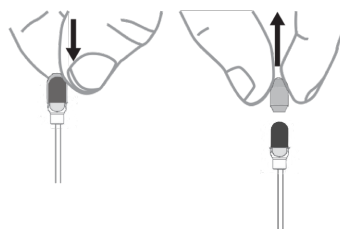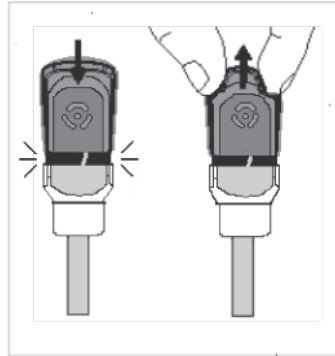## Attaching the Windscreen

There are two windscreens for use with the DuraPlex microphone:

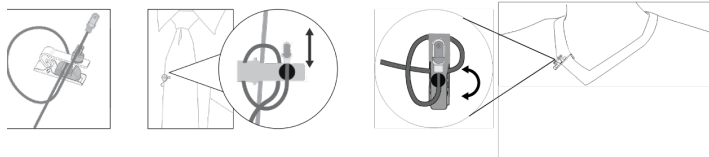1. A slide-fit windscreen for use with the presence cap

2. A snap-fit windscreen for use without the presence cap

   Note: *Do not use the snap-fit windscreen with the presence cap--the presence cap can become caught inside the snap-fit windscreen.*

Tie Clip

Dual Tie Clip

Sticky Mount
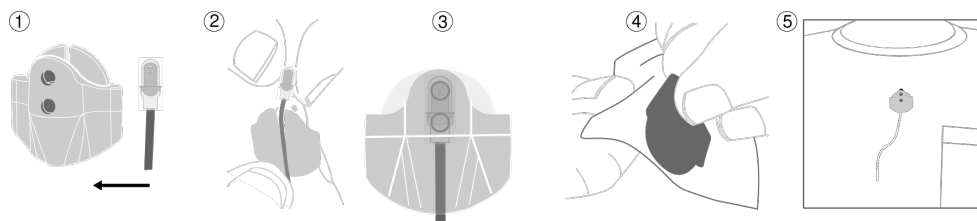
Lavalier Distance

15-25 cm
(6-10 in.)
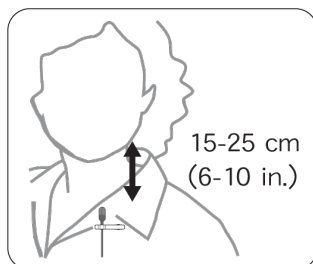
Threaded Mount Instructions
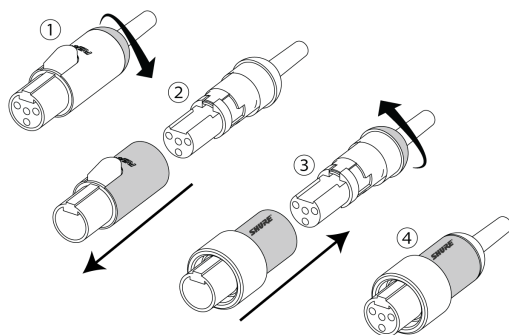
Accessories

Furnished Accessories

Furnished Accessories	DL4 Black	DL4 Tan	DL4 Cocoa	DL4 White
Single Tie Clip	RPMDL4STC/B (1)	RPMDL4STC/T (1)	RPMDL4STC/C (1)	RPMDL4STC/W (1)
Presence Cap	RPMDL4FC/B (1)	RPMDL4FC/T (1)	RPMDL4FC/C (1)	RPMDL4FC/W (1)
Snap-Fit Windscreen	RPMDL4SFWS/B (1)	RPMDL4SFWS/T (1)	RPMDL4SFWS/C (1)	RPMDL4SFWS/W (1)
Foam Windscreen	RPMDL4WS/B (1)	RPMDL4WS/T (1)	RPMDL4WS/C (1)	RPMDL4WS/W (1)
Sticky Mount	RPMDL4SM (1)	RPMDL4SM (1)	RPMDL4SM (1)	RPMDL4SM (1)
Case	RPMDL4CASE	RPMDL4CASE	RPMDL4CASE	RPMDL4CASE
Threaded TA4F Adapter	WA445	WA445	WA445	WA445

Accessories are available in Black (/B), Tan (/T), Cocoa (/C), and White (/W) color varieties. Please consult your Shure representative for available options.

Optional Accessories

Sticky Mount Adhesives (15 Pieces)	RPM40TS
Sticky Mount Adhesives (50 Pieces)	RPM40TS/50
TA4F/TQG XLR Preamplifier	RPM400TQG
Lemo XLR Preamplifier	RPM400LEMO
Black Dual Tie Clip, qty.1	RPMDL4DTC/B
White Dual Tie Clip, qty.1	RPMDL4DTC/W
Tan Dual Tie Clip, qty.1	RPMDL4DTC/T
Cocoa Dual Tie Clip, qty.1	RPMDL4DTC/C
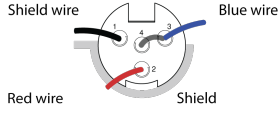
Replacement Parts

RPMDL4WS/B	FOAM WINDSCREEN, BLACK, QTY. 5
RPMDL4WS/C	FOAM WINDSCREEN, COCOA, QTY. 5
RPMDL4WS/T	FOAM WINDSCREEN, TAN, QTY. 5
RPMDL4WS/W	FOAM WINDSCREEN, WHITE, QTY. 5
RPMDL4SFWS/B	DL4/DH5 SNAP FIT WINDCREEN, BLACK, QTY 3
RPMDL4SFWS/C	DL4/DH5 SNAP FIT WINDCREEN, COCOA, QTY 3
RPMDL4SFWS/T	DL4/DH5 SNAP FIT WINDCREEN, TAN, QTY 3
RPMDL4SFWS/W	DL4/DH5 SNAP FIT WINDCREEN, WHITE, QTY 3
RPMDL4STC/B	SINGLE TIE CLIP, BLACK, QTY. 3
RPMDL4STC/C	SINGLE TIE CLIP, COCOA, QTY. 3

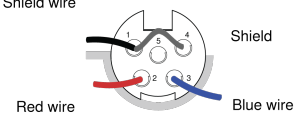|	
RPMDL4STC/T	SINGLE TIE CLIP, TAN, QTY. 3
RPMDL4STC/W	SINGLE TIE CLIP, WHITE, QTY. 3
RPMDL4DTC/B	DUAL TIE CLIP, BLACK, QTY. 3
RPMDL4DTC/C	DUAL TIE CLIP, COCOA, QTY. 3
RPMDL4DTC/T	DUAL TIE CLIP, TAN, QTY. 3
RPMDL4DTC/W	DUAL TIE CLIP, WHITE, QTY. 3
RPMDL4FC/B	DL4/DH5 FREQ CAP, BLACK, QTY. 5
RPMDL4FC/C	DL4/DH5 FREQ CAP, COCOA, QTY. 5
RPMDL4FC/T	DL4/DH5 FREQ CAP, TAN, QTY. 5
RPMDL4FC/W	DL4/DH5 FREQ CAP, WHITE, QTY. 5
RPMDL4SM	DL4 STICKY MOUNT, QTY. 3
RPMDL4CASE	DL4 POUCH, LAVALIER

Wiring and Termination

Typical Wiring Table

Series	Cable Construction	Electrical Design	Polarity	Replacement Connector	For Use With	Wiring	Line Art (From Solder Side)
DL4-LEMO	1.6mm cable with single conductor and shield	3 wire with additional bias on pin 3	Positive with respect to ground	WA416	Shure Lemo Bodypacks (AD1/ADX1-Lemo, Shure UR1M-Lemo, ULXD1-Lemo)	Red wire: Bias(2) Blue wire: Audio(3) Shield: Ground(1)	
DL4-MTQG	1.6mm cable with 2 conductors, 2 shield wires and shield	3-Wire	Positive with respect to ground	WA430	All Shure TA4F Bodypacks	Red wire: Bias(2) Blue wire: Audio(3) Shield wire: Ground(1) Shield: Ground (Shell)	

Note: The conductors have a black, protective coating that you must remove with isopropyl alcohol to see their actual color.

TA5F Wiring for Lectrosonics Bodypacks (Servo Biased Wiring)

Series	Cable Construction	Electrical Design	Polarity	Replacement Connector	For Use With	Wiring	Line Art (From Solder Side)
DL4-MTQG	1.6mm cable with 2 conductors, 2 shield wires and shield	3-Wire (Source Follower)	Positive with respect to ground	WA435	Lectrosonics TA5F bodypacks	Red wire: Bias(2) Blue wire: Audio(3) Shield wire: Ground(1) Shield: Ground(Shell) Jumper between 1 and 4	

Series	Cable Construction	Electrical Design	Polarity	Replacement Connector	For Use With	Wiring	Line Art (From Solder Side)
DL4-LEMO	1.6mm cable with 2 conductors, 2 shield wires and shield	3-Wire (Source Follower)	Positive with respect to ground	WA435	Lectrosonics TA5F body-packs	Red wire: Bias(2) Blue wire: Audio(3) Shield wire: Ground(1) Shield: Ground(Shell) Jumper between 1 and 4	

Note: The conductors have a black, protective coating that you must remove with isopropyl alcohol to see their actual color.

LEMO Wiring for Q5X Bodypacks

Requires Q5X Inline Interface Board

Wiring Diagram

Series	Cable Construction	Electrical Design	Polarity	Replacement Connector	For Use With	Wiring	Line Art (from Solder Side)
DL4-LEMO1	1.6 mm cable with 2 conductors, 2 shield wires, and shield	2-Wire (Common Source)	Positive with respect to ground	FFS. 01.250.DLAE24	Q5X PlayerMic Q5X PlayerMicS Q5X Incognito Q5X CoachMic Q5X RefMic Q5X BeltMic	Red wire: Audio/ Bias(1) Shield wire: Ground (Shell)	
DL4-LEMO6	1.6 mm cable with 2 conductors, 2 shield wires, and shield	2-Wire (Common Source)	Positive with respect to ground	FVG. 03.306.CLAC27Z	Q5X AquaMic Q5X AquaMicL	Red wire: Audio/ Bias (1) Shield wire: Ground (2)	

MTQG Connector Assembly

Exploded View
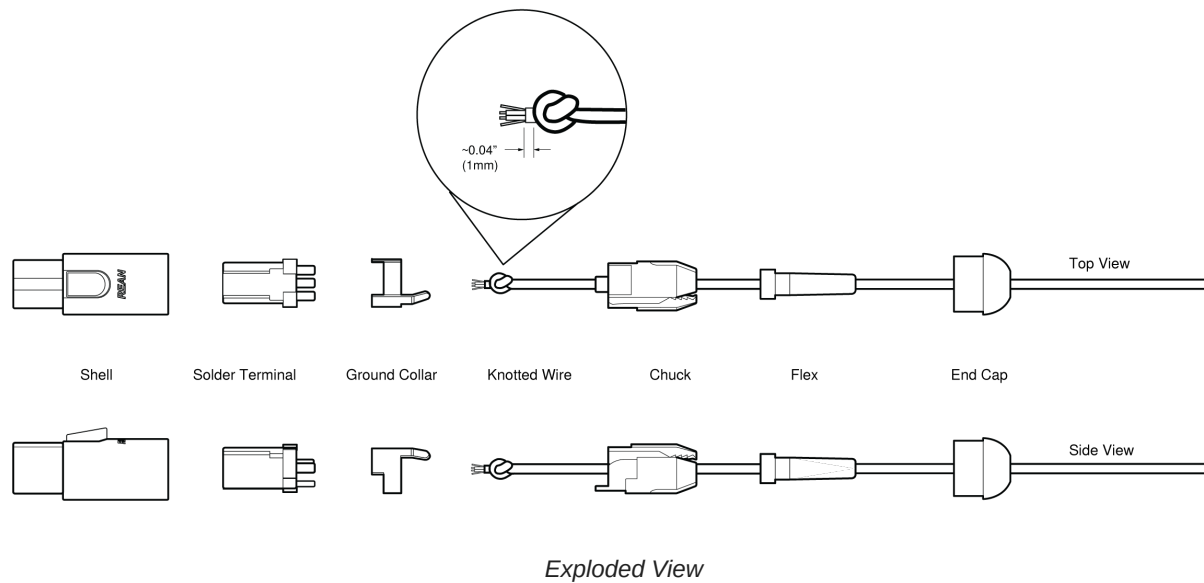
Note: Make sure to solder the shield to ground collar.

Assembled View
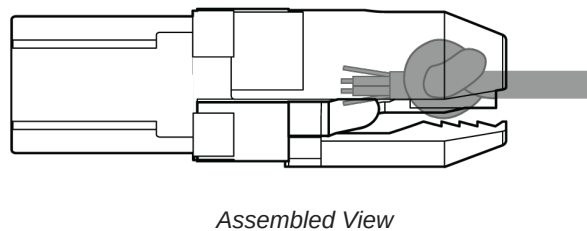
Specifications

Note:

- All specification values are based on using a typical bodypack with 5 V bias input or the RPM400MTQG preamplifier except LEMO1 and LEMO6. When using the RPM400LEMO amplifier, refer to the RPM400LEMO specifications.
- All specifications measured with a 48 Vdc phantom power supply. The microphone operates at lower voltages, but with slightly decreased headroom and sensitivity.

Microphone Capsule
MEMS

Polar Pattern
Omnidirectional

Frequency Response
20 Hz to 20 kHz

Sensitivity

MTQG, LEMO	-42.5 dBV at 1 kHz [1]
LEMO1, LEMO6	-38.5 dBV at 1 kHz [1,4]

Self-Noise, A-Weighted, Equivalent Acoustical

MTQG, LEMO	31 dB SPL-A
LEMO1, LEMO6	33 dB SPL-A

Signal-To-Noise Ratio [2]

MTQG, LEMO	63.0 dB
LEMO1, LEMO6	61.0 dB

Maximum SPL [3]

MTQG, LEMO	132.0 dB SPL,1 kHz at 1% THD, typical
LEMO1, LEMO6	125.0 dB SPL, 1 kHZ at 1% THD, typical

Dynamic Range

MTQG, LEMO	101.0 dB, typical
LEMO1, LEMO6	92 dB, typical

Microphone Current Draw

220 µA, maximum

Bias Voltage
Recommended Operating Voltage

5 V DC, 2.6 V DC minimum [5]

Housing

Molded ABS

Polarity

MTQG	Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1
LEMO	Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1
LEMO1	Positive pressure on diaphragm produces positive voltage on pin 1 with respect to SHIELD
LEMO6	Positive pressure on diaphragm produces positive voltage on pin 1 with respect to pin 2

Cable Diameter

1.6 mm

Cable Length

66 in. (1.67 m)

Net Weight

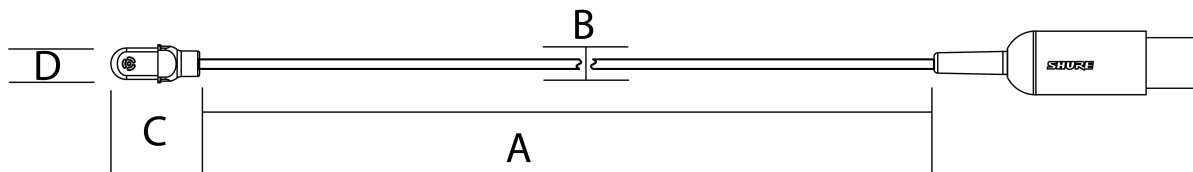|	
DL4	15.0 g (0.53 oz.)
DH5	20.0 g (0.7 oz.)

[1] 1 Pa=94 dB SPL

[2] S/N ratio is the difference between 94 dB SPL and equivalent SPL of self noise, A-weighted

[3] THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL

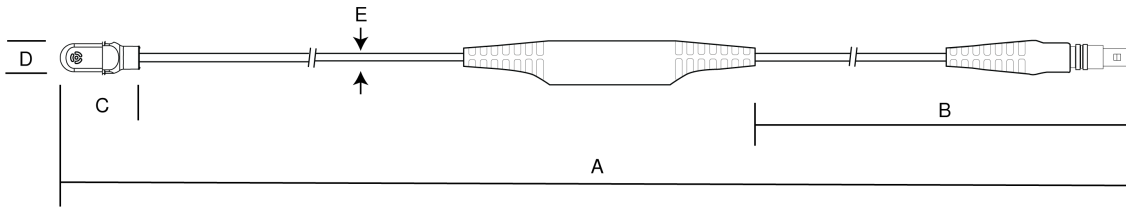[4] Measured using RPM400LEMO, which has 6dB of gain
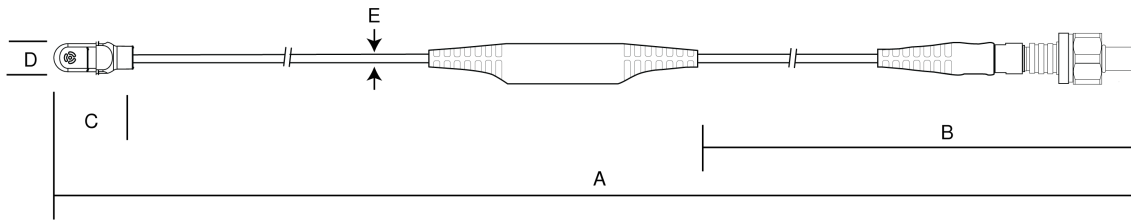
[5] MTQG and LEMO ONLY

Dimensions

|	A Cable Length	B Cable Diameter	C Microphone Length	D Microphone Diameter
DL4	66 in. (1.67M)	1.6MM	14.5MM	5.2MM

DL4-LEMO1

DL4-LEMO6

Warning: Do not remove the Q5X inline interface board.

Dimensions

Series	A Cable Length	B Interface Board Position	C Microphone Length	D Microphone Diameter	E Wire Diameter
DL4-LEMO1,DL4-LEMO6	70 in. (1.78m)	0.3m	14.5 mm	5.2 mm	1.6 mm

Frequency Response
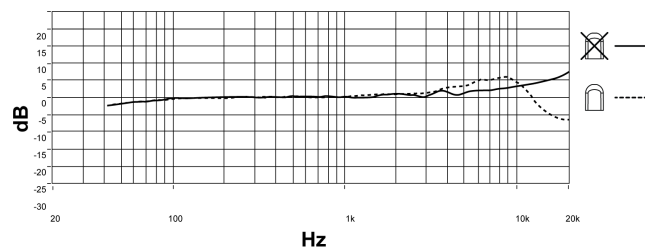
Certifications

Note: Testing is based on the use of supplied and recommended cable types. The use of other than shielded (screened) cable types may degrade EMC performance.

Note: The regulatory model number for this device is DL4B/O.

CE Notice:

Hereby, Shure Incorporated declares that this product with CE Marking has been determined to be in compliance with European Union requirements. The full text of the EU declaration of conformity is available at the following site: https://www.shure.com/en-EU/support/declarations-of-conformity.

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UKCA Notice:

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