



# microQUAD

## MLHS – Vertical Surface Board-Mount w/Fixed Hardware (Female)

MLHS are rugged metal connectors used in applications where a vertical orientation and a surface board-mount termination style are desired. These connectors have captivated fixed hardware.

### DIMENSIONS

DIMENSIONS	
A	Body Length (see calculation below)
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.570
Y	"A" minus 0.624

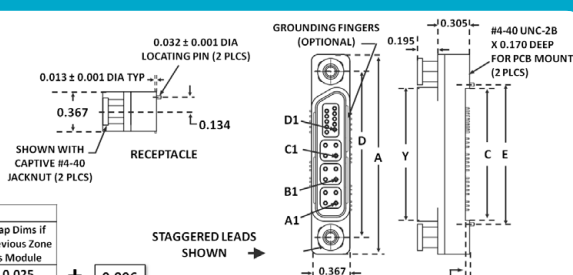
TABLE A	
Module	0.200
SIG 10	0.321
SIG 20	0.571
SIG 30	0.821
SIG 40	1.071
SIG 50	1.321

TABLE B		
Module	Gap Dims if Previous Zone is SIGxx	Gap Dims if Previous Zone is Module
SIG xx	0.028	0.025


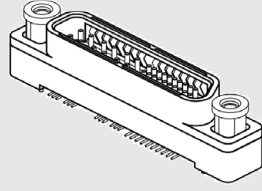
  

0.013 ± 0.001 DIA TYP  
0.032 ± 0.001 DIA LOCATING PIN (2 PLCS)  
0.367  
0.134  
RECEPTACLE  
SHOWN WITH CAPTIVE #4-40 JACKNUT (2 PLCS)  
STAGGERED LEADS SHOWN →  
0.040 WASHOUT



## ORDER FORM

Sample Part Number Format: **MLHS-XXXX-XXX-XXX-XXXX**

ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>MLHS</b>						
<b>SERIES</b> Vertical Surface-Mount (Female)	<b>HIGH-SPEED MODULES</b> 01 – 1 Module 02 – 2 Modules 03 – 3 Modules 04 – 4 Modules 05 – 5 Modules (max. sig. 40) 06 – 6 Modules (max. sig. 30) 07 – 7 Modules (max. sig. 20) 08 – 8 Modules (max. sig. 10) 09 – 9 Modules (max. sig. 10) 0A – 10 Modules (no signals)	<b>BODY STYLE</b> 200 – Female 400 – Female with Ground Fingers (preferred)	<b>CONTACT TERMINATION</b> 47 – Socket, Vertical SMT, Staggered Leads – All 67 – Socket, Vertical SMT, Staggered Leads – High-Speed, Single-Sided Leads – Signals 87 – Socket, Vertical SMT, Single-Sided Leads – High-Speed, Staggered Leads, Signals B7 – Socket, Vertical SMT, Single-Sided Leads – All	<b>TERMINATION PLATING</b> 5 – 50 µ" Gold Contact, Sn/Pb Alloy Termination <input checked="" type="checkbox"/> 7 – 50 µ" Gold Contact, SAC305-Plated Termination	<b>BODY PLATING (LCP INSULATORS)</b> 2 – Electroless Nickel-Plated Aluminum Shell 3 – Electrodeposited Cadmium-Plated Aluminum Shell <input checked="" type="checkbox"/> 6 – Gold-Plated Aluminum Shell	<b>HARDWARE</b> 000 – No Hardware 620 – Two Fixed Jacknuts Captivated** NXX – Keying Jacknuts***
<b>High-Reliability Contact</b> ML-DTL-83513 	<b>SIGNAL CONTACTS</b> L0 – Left Side Key – No Signal Contacts L1 – Left Side Key – 10 Signal Contacts L2 – Left Side Key – 20 Signal Contacts L3 – Left Side Key – 30 Signal Contacts L4 – Left Side Key – 40 Signal Contacts L5 – Left Side Key – 50 Signal Contacts R0 – Right Side Key – No Signal Contacts R1 – Right Side Key – 10 Signal Contacts R2 – Right Side Key – 20 Signal Contacts R3 – Right Side Key – 30 Signal Contacts R4 – Right Side Key – 40 Signal Contacts R5 – Right Side Key – 50 Signal Contacts					

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

## NOTES

- Option not RoHS compliant.
- 1. All high-speed receptacles have fluoropolymer interfacial seals.
- \* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
- \*\* Captivated hardware is factory-installed and non-removable.
- \*\*\* Refer to "Hardware Polarization" catalog page for keying options.

## MATERIALS and FINISHES

Socket Contact: ..... Brass  
Pin Contacts: ..... BeCu alloy strip  
Contact Finish: ..... Gold plate, 50 µ" minimum  
Shells: ..... Aluminum alloy 6061-T6  
Shell Finishes: ..... Electroless nickel, electrodeposited cadmium, or Gold-plated  
Molded Insulators: ..... Glass-filled liquid crystal polymer (LCP)  
Embedment: ..... Frey Eng. Co. compound CF3003-80 & L-II-49  
Hardware: ..... Corrosion-resistant steel  
Interfacial Seal Gaskets: ..... Fluorosilicone  
EMI Gaskets: ..... Corrosion-resistant steel

NOTE: AirBorn can manufacture special configurations to your exact specifications.

## SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 70 ps (20-80%)	100 ohm +/- 10
2	Diff. Insertion Loss	4.0 GHz @ -3 dB
3	Diff. Return Loss	1.8 GHz @ -20 dB
4	Intra-Pair	15 ps

## PERFORMANCE

Contact Rating: ..... 3 amperes maximum  
Operating Temperature: ..... -55° C to 125° C  
Maximum Working Voltage: ..... 600V, RMS, 60Hz  
Insulation Resistance: ..... 5,000 megohms minimum @ 500 VDC  
Durability: ..... 500 connector mating cycles  
Contact Engaging Force: ..... 6.0 ounces maximum/contact  
Contact Separating Force: ..... 0.5 ounces minimum/contact  
Mating and Unmating Force: ..... 10 ounces maximum/contact