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FEATURED PRODUCTS & CAPABILITIES

AIRBORN WORLDWIDE

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MicroQUAD

MicroSI

RC

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HD4™

microQUAD™

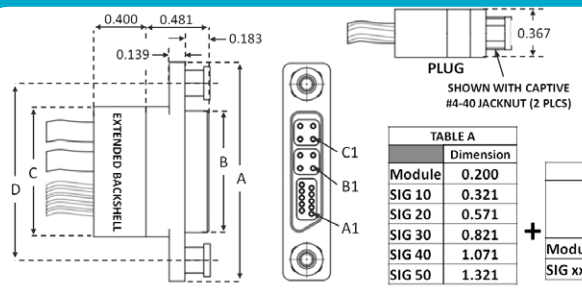
AirBorn introduces a Micro-D, multi-gigabit, high-speed connector designed to meet the performance requirements of MIL-DTL-83513, where applicable. This rugged connector system is designed to handle LVDS serial bus signals like Ethernet, serial rapid IO, etc. This versatile product has a range from one to ten high-speed modules and up to fifty signal contacts making it ideal for most high-reliability applications.

microQUAD™

MMHS – Cable I/O (Male)

MMHS cable connectors are used in cable applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

DIMENSIONS



DIMENSIONS	
A	Body Length (see calculation below)
B	"A" minus 0.744
C	"A" minus 0.560
D	"A" minus 0.320

TABLE A

	Dimension
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

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

+ 0.896

Sample Part Number Format: MMHS-02L4-11D-018-5000

MMHS – □ □ – □ □ □ □ – □ – □ □

SERIES
Cable I/O (Male)

HIGH-SPEED MODULES
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)

BODY STYLE
1 – Plug

WIRE TYPE & GAUGE, QUADRAX
X – See Quadrax Wire Codes on page 13

WIRE TYPE & GAUGE, SIGNALS
0 – No signal contacts
X – See Wire Codes on page 14

WIRE LENGTH
XXX – Wire length in inches (minimum 3")
Example: 018 = 18"

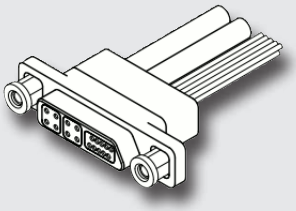
HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

SIGNAL CONTACTS
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

BODY PLATING (LCP INSULATORS)
1 – Electroless nickel-plated aluminum shell
2 – Electroless nickel-plated aluminum shell ☒
3 – Electrodeposited cadmium-plated aluminum shell ☒
5 – Gold-plated aluminum shell
6 – Gold-plated aluminum shell ☒

High-Reliability Contact

MIL-DTL-83513



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NOTES

☒ Option not RoHS-compliant.

* 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 Keying Options" on page 15.

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

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.

PERFORMANCE

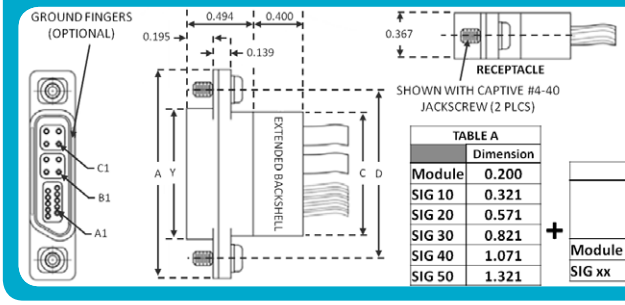
Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 600V, RMS, 60Hz
Insulation Resistance . . . . . 5,000 megohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Engaging Force: . . . . . 6.0 ounces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

microQUAD™

MMHS – Cable I/O (Female)

MMHS cable connectors are used in cable applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

DIMENSIONS



DIMENSIONS	
A	Body Length (see calculation below)
C	"A" minus 0.560
D	"A" minus 0.320
Y	"A" minus 0.624

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

+ 0.896

Sample Part Number Format: MMHS-01R1-410-006-1810

MMHS – ☐ ☐ – ☐ ☐ ☐ ☐ – ☐ – ☐ ☐

SERIES
Cable I/O
(Female)

HIGH-SPEED MODULES
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)

BODY STYLE
2 – Receptacle
4 – Receptacle with ground fingers (preferred)

WIRE TYPE & GAUGE, QUADRAX
X - See Quadrax Wire Codes on page 13

WIRE TYPE & GAUGE, SIGNALS
0 – No signal contacts
X – See Wire Codes on page 14

WIRE LENGTH
XXX – Wire length in inches (minimum 3")
Example: 018 = 18"

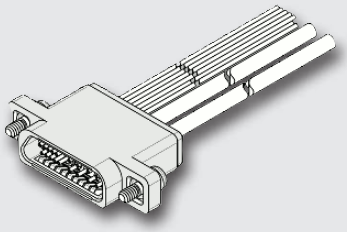
HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

SIGNAL CONTACTS
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

BODY PLATING (LCP INSULATORS)
1 – Electroless nickel-plated aluminum shell
2 – Electroless nickel-plated aluminum shell ☒
3 – Electrodeposited cadmium-plated aluminum shell ☒
5 – Gold-plated aluminum shell
6 – Gold-plated aluminum shell ☒

High-Reliability Contact

MIL-DTL-83513



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

NOTES

1. All high-speed receptacles have fluoropolymer interfacial seals.

☒ Option not RoHS-compliant.

* 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 Keying Options" on page 15.

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

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microQUAD™

MJHS – Jumper Cable

MJHS rugged metal cable assemblies are used in jumper applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

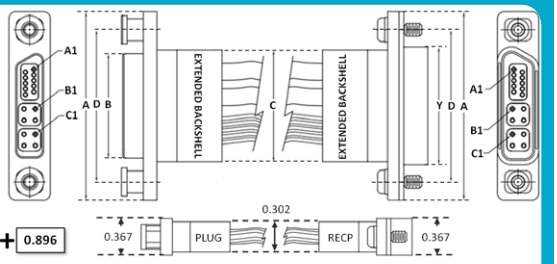
DIMENSIONS

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

DIMENSIONS	
A	Body Length (see calculation below)
B	"A" minus 0.744
C	"A" minus 0.560
D	"A" minus 0.320
Y	"A" minus 0.624

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

+ 0.896



SHOWN WITH CAPTIVE #4-40 JACKNUT/SCREW (2 PCS EA)

Sample Part Number Format: MJHS-04R1-33D-022-5N41

MJHS – □ □ – □ □ □ – □ – □ – □

SERIES
Jumper Cable

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
1 – Male-to-Male
2 – Male-to-Female
3 – Male-to-Female, ground fingers
4 – Female-to-Female
5 – Female-to-Female (both with ground fingers)

WIRE TYPE & GAUGE, QUADRAX
X – See Quadrax Wire Codes on page 13

WIRE TYPE & GAUGE, SIGNALS
0 – No signal contacts
X - See Wire Codes on page 14

WIRE LENGTH
XXX – Wire length in inches (minimum 3")
Example: 018 = 18"

BODY PLATING (LCP INSULATORS)
1 – Electroless nickel-plated aluminum shell
2 – Electroless nickel-plated aluminum shell ☒
3 – Electrodeposited cadmium-plated aluminum shell ☒
5 – Gold-plated aluminum shell
6 – Gold-plated aluminum shell ☒

HARDWARE
000 – No hardware
610 – Fixed jacknuts, captivated** (both)
810 – Turning jackscrews, captivated** (both)
860 – Fixed jacknuts, captivated (female) & turning jackscrews (male)
870 – Fixed jacknuts, captivated (male) & turning jackscrews (female)
NXX – Keying jacknuts (both)***
JXX – Keying jackscrews (both)***
AXX – Keying jacknuts (female) & keying jackscrews (male)***
BXX – Keying jacknuts (male) & keying jackscrews (female)***

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

NOTES

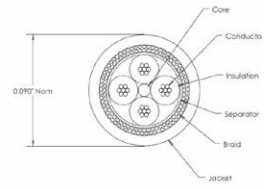
1. All high-speed receptacles have fluoropolymer interfacial seals.

☒ Option not RoHS-compliant.

* 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 Keying Options" on page 15.



SIGNAL INTEGRITY PERFORMANCE

1	1 Meter Long	1.0 GHz @ -2 dB
2	2 Meters Long	1.0 GHz @ -4 dB
3	3 Meters Long	1.0 GHz @ -6 dB

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.

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

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microQUAD™

MKHS – Right Angle Surface Board-Mount (Male)

MKHS are rugged metal connectors used in applications where a right angle orientation and a surface board-mount termination style are desired.

DIMENSIONS

DIMENSIONS	
A	Body Length (see calculation below)
B	"A" minus 0.744
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.096

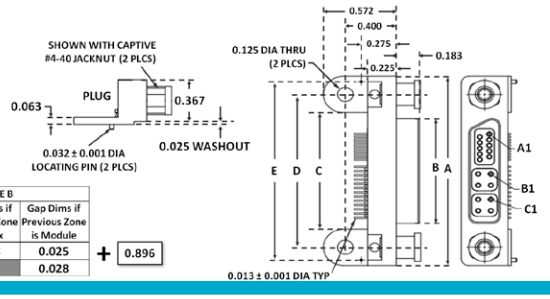


TABLE A	
	Dimension
Module	0.200
SIG 10	0.321
SIG 20	0.571
SIG 30	0.821
SIG 40	1.071
SIG 50	1.321

+

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

+ 0.896

Sample Part Number Format: MKHS-06L3-100-175-3J45

MKHS – □ □ – □ – □ – □ – □

SERIES
Right Angle Surface Mount (Male)

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
100 – Plug

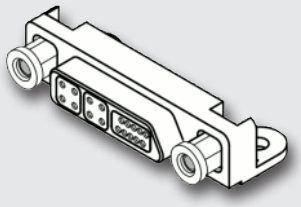
CONTACT TERMINATION
17 – Pin, horizontal surface-mount (SMT)

TERMINATION PLATING
5 – 50 µ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 µ" Gold contact, SAC305-plated termination

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact
MIL-DTL-83513



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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

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.

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

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MKHS – Right Angle Surface Board-Mount (Female)

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DIMENSIONS

DIMENSIONS	
A	Body Length (see calculation below)
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.096
Y	"A" minus 0.624

TABLE A

	Dimension
Module	0.200
SIG 10	0.321
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SIG 40	1.071
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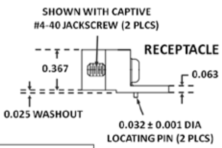
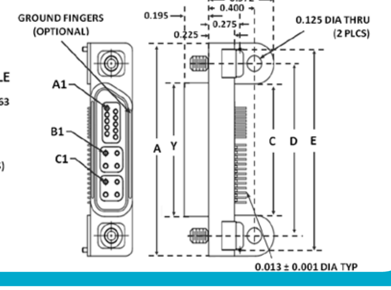
TABLE B

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

+ 0.896





Sample Part Number Format: MKHS-04R1-400-275-2620

MKHS - ☐ ☐ - ☐ - ☐ ☐ - ☐ ☐

SERIES
Right Angle Surface Mount (Female)

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
200 – Female
400 – Female with ground fingers (preferred)

CONTACT TERMINATION
27 – Socket, horizontal surface-mount (SMT)

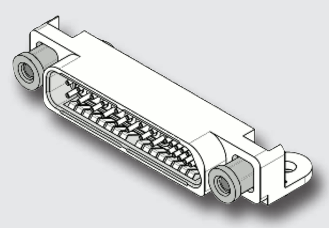
TERMINATION PLATING
5 – 50 µ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 µ" Gold contact, SAC305-plated termination

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513



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

NOTES

1. All high-speed receptacles have fluoropolymer interfacial seals.

☒ Option not RoHS-compliant.

* 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 Keying Options on page 15.

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

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

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

DIMENSIONS

DIMENSIONS	
A	Body Length (w/o feet) for V-SMT Turning Hardware (see calculation below)
B	"A" minus 0.744
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.570

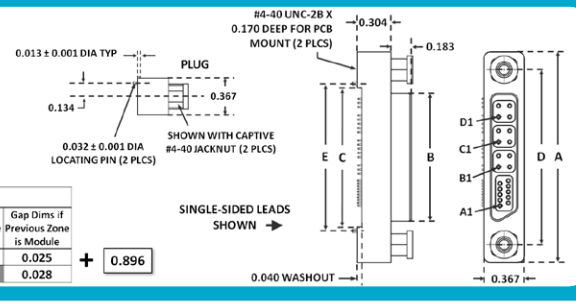


TABLE A	
Module	0.200
SIG 10	0.321
SIG 20	0.571
SIG 30	0.821
SIG 40	1.071
SIG 50	1.321

+

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

+ 0.896

Sample Part Number Format: MLHS-04L2-100-A77-3N35

MLHS - □ □ - □ - □ □ - □ □ - □

SERIES
Vertical Surface Mount (Male)

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
100 – Plug

CONTACT TERMINATION
37 – Pin: vertical SMT, staggered leads
57 – Pin: vertical SMT, staggered leads; Signals: high-speed, single-sided leads
77 – Pin: vertical SMT, single-sided leads; Signals: high-speed, staggered leads
A7 – Pin: vertical SMT, single-sided leads

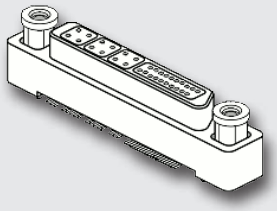
TERMINATION PLATING
5 – 50 µ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 µ" Gold contact, SAC305-plated termination

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
NXX – Keying jacknuts***

High-Reliability Contact

MIL-DTL-83513



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NOTES

☒ Option not RoHS-compliant.

* 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 Keying Options on page 15.

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

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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

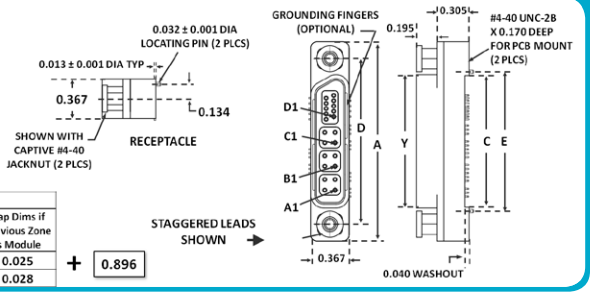
DIMENSIONS	
A	Body Length (see calculation below)
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.570
Y	"A" minus 0.624

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

+ 0.896



Sample Part Number Format: MLHS-03R2-400-B77-3620

MLHS – □□ – □ – □ – □ – □ – □

SERIES
Vertical Surface-Mount (Female)

HIGH-SPEED MODULES
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)

BODY STYLE
200 – Female
400 – Female with ground fingers (preferred)

TERMINATION PLATING
5 – 50 µ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 µ" Gold contact, SAC305-plated termination

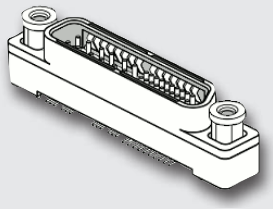
HARDWARE
000 – No hardware
620 – Two fixed jacknuts, captivated**
NXX – Keying jacknuts***

CONTACT TERMINATION
47 – Socket: vertical SMT, staggered leads
67 – Socket: vertical SMT, staggered leads; Signals: high-speed, single-sided leads
87 – Socket: vertical SMT, single-sided leads; Signals: high-speed, staggered leads
B7 – Socket: vertical SMT, single-sided leads

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

SIGNAL CONTACTS
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

High-Reliability Contact
MIL-DTL-83513



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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 Keying Options on page 15.

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

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MLHS – Vertical Surface Board-Mount w/Turning Hardware (Male)

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 turning hardware.

DIMENSIONS

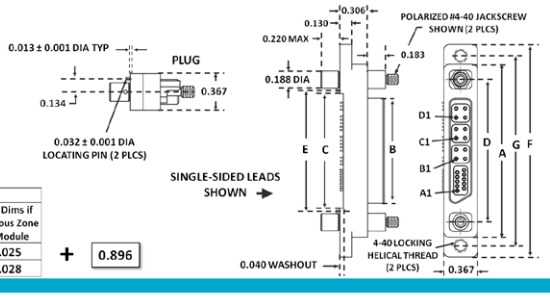
DIMENSIONS	
A	Body Length (w/o feet) for V-SMT Turning Hardware (see calculation below)
B	"A" minus 0.744
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.570
F	"A" PLUS 0.430
G	"F" minus 0.250

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

+ 0.896



Sample Part Number Format: MLHS-05R2-300-775-2810

MLHS - [ ][ ] - [ ] - [ ][ ][ ] - [ ][ ]

SERIES
Vertical Surface-Mount (Male)

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
300 – Plug

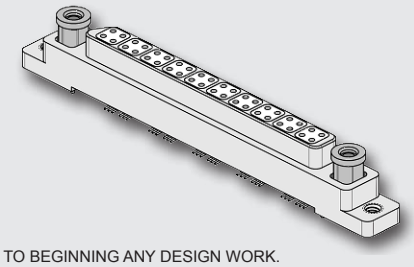
CONTACT TERMINATION
37 – Pin: vertical SMT, staggered leads
57 – Pin: vertical SMT, staggered leads; Signals: high-speed, single-sided leads
77 – Pin: vertical SMT, single-sided leads; Signals: high-speed, staggered leads
A7 – Pin: vertical SMT, single-sided leads

TERMINATION PLATING
5 – 50 µ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 µ" Gold contact, SAC305-plated termination

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

HARDWARE
000 – No hardware
810 – Two Turning jackscrews, captivated**
JXX – Keying jack-screws***

High-Reliability Contact
MIL-DTL-83513



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NOTES

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* 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 Keying Options on page 15.

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

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

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DIMENSIONS

DIMENSIONS	
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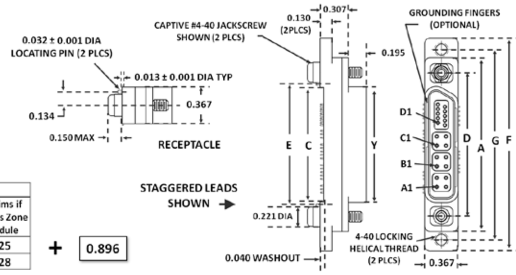
C	"A" minus 0.640
D	"A" minus 0.320
E	"A" minus 0.570
F	"A" PLUS 0.430
G	"F" minus 0.250
Y	"A" minus 0.624

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

+ 0.896



Sample Part Number Format: MLHS-03L3-800-477-2J21

MLHS - □ □ - □ - □ □ - □ □

SERIES
Vertical Surface-Mount (Female)

HIGH-SPEED MODULES
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)

SIGNAL CONTACTS
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

BODY STYLE
600 – Female with mounting ears
800 – Female with ground fingers & mounting ears (preferred)

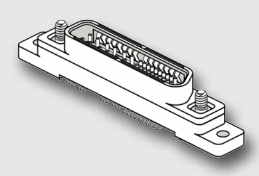
CONTACT TERMINATION
47 – Socket: vertical SMT, staggered leads
67 – Socket: vertical SMT, staggered leads; Signals: high-speed, single-sided leads
87 – Socket: vertical SMT, single-sided leads; Signals: high-speed, staggered leads
B7 – Socket: vertical SMT, single-sided leads

TERMINATION PLATING
5 – 50 μ" Gold contact, Sn/Pb alloy termination ☒
7 – 50 μ" Gold contact, SAC305-plated termination

BODY PLATING (LCP INSULATORS)
2 – Electroless nickel-plated aluminum shell
3 – Electrodeposited cadmium-plated aluminum shell ☒
6 – Gold-plated aluminum shell

HARDWARE
000 – No hardware
810 – Two Turning jackscrews, captivated**
JXX – Keying jack-screws***

High-Reliability Contact
MIL-DTL-83513



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NOTES

☒ Option not RoHS-compliant.

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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

WIRE CODES — microQUAD

QUADRAX CABLE CONSTRUCTION

Conductors:	Silver-plated copper alloy
Insulation:	FEP
Cable:	Planetary twist with filler in core
Binder:	PTFE tape
Inner Shield:	Aluminized mylar facing out
Outer Shield:	Braided silver-plated copper (95% min. coverage)
Marker Tape:	Polyimide tape
Jacket:	Translucent FEP
Differential Pairs:	Pair 1 - blue (position M1), orange (position M3) Pair 2 - green (position M2), red (position M4)
Temperature:	-55°C to +125°C
Differential Impedance:	100 Ω ±10 Ω; 110 Ω ±6 Ω
Delay Skew within Pair:	4.0 ps/ft max.

QUADRAX WIRE CODES

1	100 Ω 24 AWG
2	100 Ω 26 AWG
3	100 Ω 28 AWG
4	100 Ω 30 AWG
5	110 Ω 24 AWG
6	110 Ω 26 AWG
7	110 Ω 28 AWG
8	110 Ω 30 AWG

NOTES

1. Additional high-speed cable types are available as standard options (i.e., drain wire, TwinAx, shielded pairs, shielded pair quad, twisted pair quad, etc.). Contact AirBorn for construction specifications of alternate cable.
2. Additional wire types are available as standard options (i.e., twisted pair, shielded, braid, etc.).

WIRE CODES

microQUAD

SIGNAL WIRE CODES

A	SAE AS22759/11-24	Ten repeating colors per M83513
B	SAE AS22759/11-24	Non-repeating colors per MIL-STD-681
C	SAE AS22759/11-24	White
D	SAE AS22759/11-26	Ten repeating colors per M83513
E	SAE AS22759/11-26	Non-repeating colors per MIL-STD-681
F	SAE AS22759/11-26	White
G	SAE AS22759/11-28	Ten repeating colors per M83513
H	SAE AS22759/11-28	White
J	SAE AS22759/33-24*☒	Ten repeating colors per M83513
K	SAE AS22759/33-24*☒	White
L	SAE AS22759/33-26*☒	Ten repeating colors per M83513
M	SAE AS22759/33-26*☒	White
N	SAE AS22759/33-28*☒	Ten repeating colors per M83513
P	SAE AS22759/33-28*☒	White
Q	SAE AS22759/33-30*☒	Ten repeating colors per M83513
R	SAE AS2275933-30*☒	White
S	NEMA HP3-EXBEB	24 AWG non-repeating colors per MIL-STD-681
T	NEMA HP3-EXBEB	24 AWG white
U	NEMA HP3-EXBDB	26 AWG non-repeating colors per MIL-STD-681
V	NEMA HP3-EXBDB	26 AWG white
W	NEMA HP3-EXBCB	28 AWG non-repeating colors per MIL-STD-681
X	NEMA HP3-EXBCB	28 AWG white
Y	NEMA HP3-EXBBB	30 AWG non-repeating colors per M83513
Z	NEMA HP3-EXBBB	30 AWG white

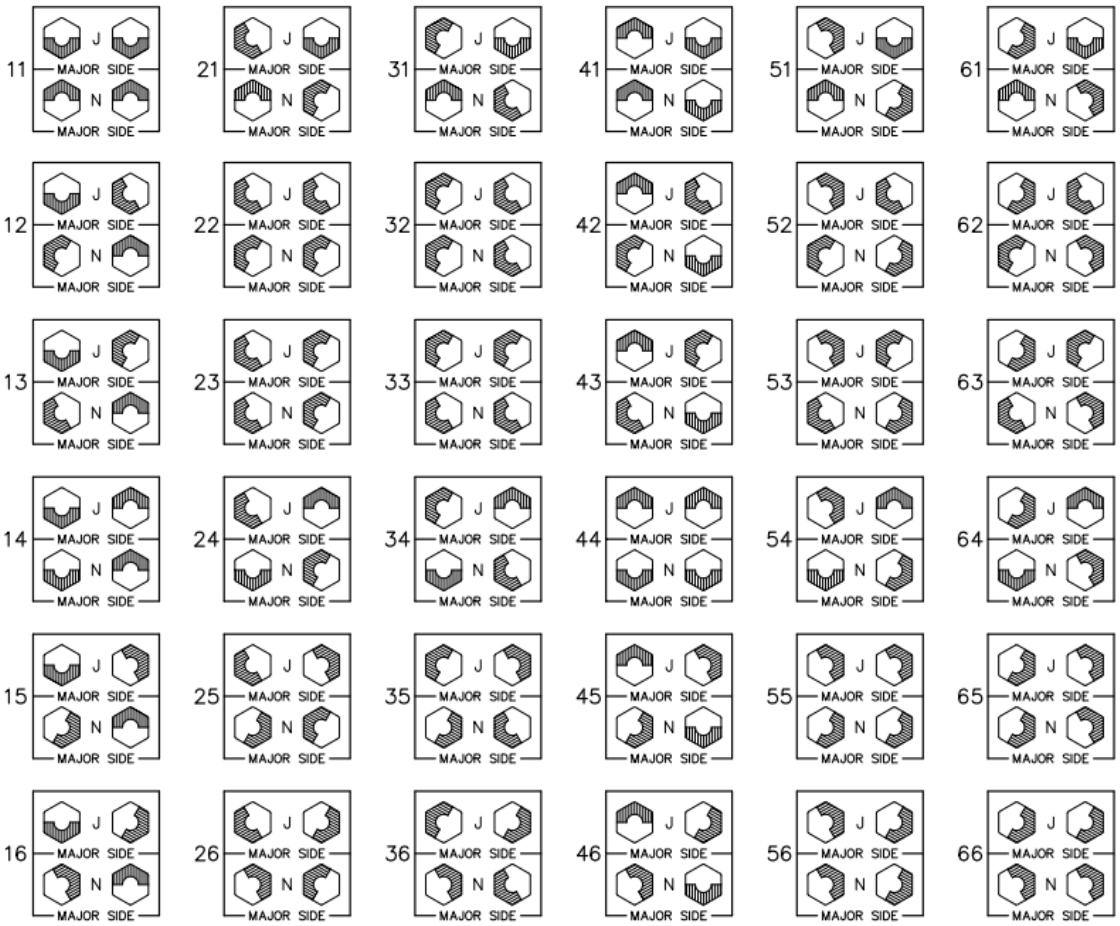
NOTES

* Corrosion has been experienced on connectors that are pre-wired with M22759/33 and stored in sealed environments. Exercise caution in packaging and storing when using this wire.

☒ Option is not RoHS-compliant

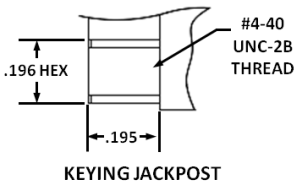
HARDWARE KEYING OPTIONS

microQUAD

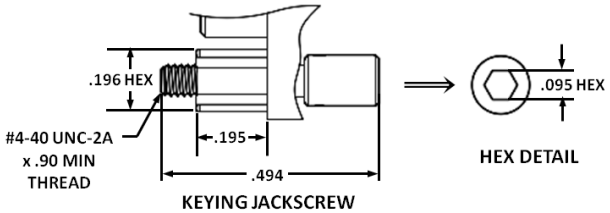


Select the appropriate two-digit number above and include as the last two digits of the hardware code in the part number. (Keying is factory-installed and non-removable.)

Example: MMHS-03L2-12D-197-2J11
MKHS-03R2-200-275-2N11

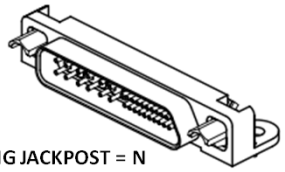


KEYING JACKPOST

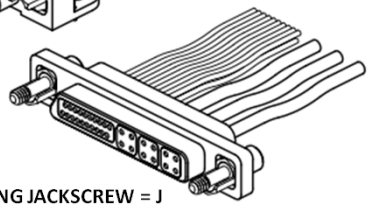


KEYING JACKSCREW

HEX DETAIL



KEYING JACKPOST = N

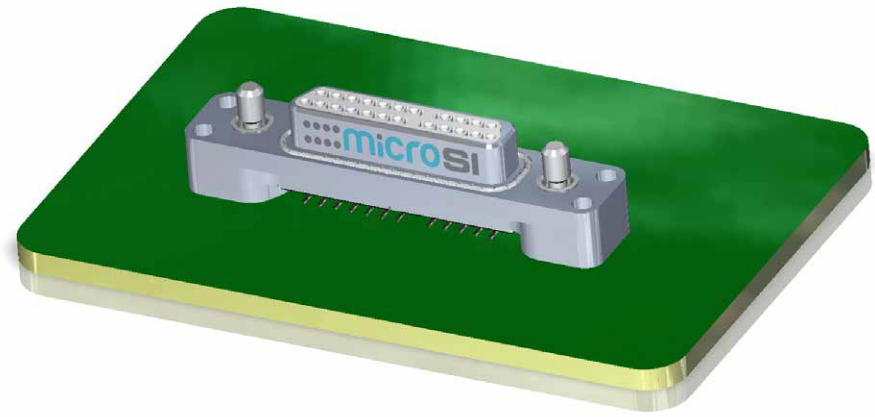


KEYING JACKSCREW = J

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

microSI™

The AirBorn microSI product line is designed to meet requirements for high-speed/signal integrity applications while still delivering the reliability customers have come to expect from AirBorn. MicroSI delivers flexibility by design, offering vertical board-mount, right angle board-mount, and cable I/O configurations supporting 1X, 4X, and 8X 100 Ω and 85 Ω differential serial buses. Its balanced design limits skew within pairs. The MIL-DTL-83513 (Micro-D) qualified contact system and metal shells ensure ruggedness and durability.

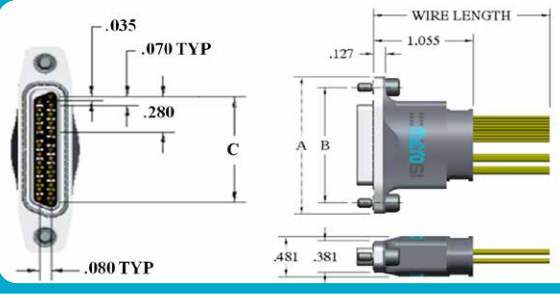


microsi™

MMSI – Cable I/O (Male)

MMSI cable connectors are used in cable applications where signal integrity is desired. The connector interface controls the polarization of the twinax contact style. Comes with a variety of wiring and hardware options. All cable connectors are available in custom lengths.

GENERAL DIMENSIONS



SIZE	A	B	C
1X	1.636	1.377	0.840
4X	2.266	2.007	1.470
8X	3.106	2.847	2.310

Sample Part Number Format: MMSI-01L-14B0-006-2810

MMSI - [ ] - [ ] [ ] [ ] - [ ] - [ ] [ ]

SERIES
Cable I/O (Male)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
11 – Male, Twinax 100Ω 24 AWG
14 – Male, Twinax 100Ω 30 AWG

SIDEBAND WIRES (color code per MIL-STD-681)
A – 22759/11-24
B – 22759/11-26
C – 22759/11-28
D – 22759/33-24 ☒
E – 22759/33-26 ☒
F – 22759/33-28 ☒
G – 22759/33-30 ☒
H – NEMA HP3-EXBEB 24 AWG
J – NEMA HP3-EXBDB 26 AWG
K – NEMA HP3-EXBCB 28 AWG
L – NEMA HP3-EXBBB 30 AWG

OVERALL**
0 – None
1 – Silver-plated braid
2 – Tin-plated braid
3 – Silver-plated braid, Halar® sleeving
4 – Tin-plated braid, Halar® sleeving
5 – Halar® sleeving (no braid)

WIRE LENGTH[1]
Inches, 3 digits
Ex. 018 = 18 inches

BODY PLATING, INTERNAL SOLDER
1 – Electroless nickel, SAC305
2 – Electroless nickel, Sn/Pb ☒
5 – Gold, SAC305
6 – Gold, Sn/Pb ☒

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews; captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513

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

NOTES

1. Overall braid and/or Halar® will be 1.0 ± 0.5 inches shorter than specified wire length. Minimum length without overall braid or Halar® is 3 inches. If overall braid or Halar® is specified the minimum length is 6 inches.

☒ Option not RoHS-compliant

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable.

**** Refer to "Keying Hardware Options" on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

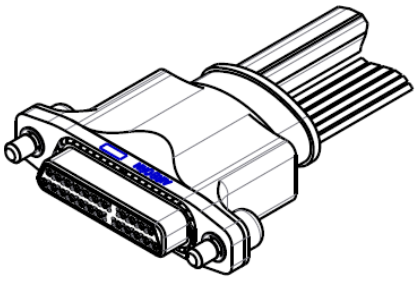
NOTE: AirBorn can manufacture special configurations to your exact specifications.

PERFORMANCE

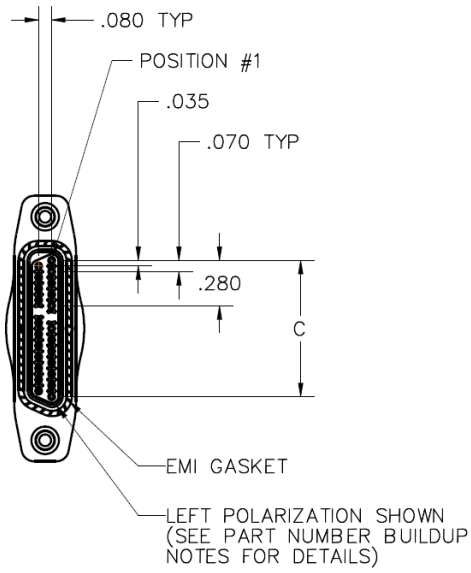
Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, RMS, 60Hz
Insulation Resistance . . . . . 5,000 megohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Engaging Force: . . . . . 6.0 ounces maximum/contact
Contact Separating Force: . . . . . 0.5 ounces minimum/contact
Mating and Unmating Force: . . . . . 10 ounces maximum/contact

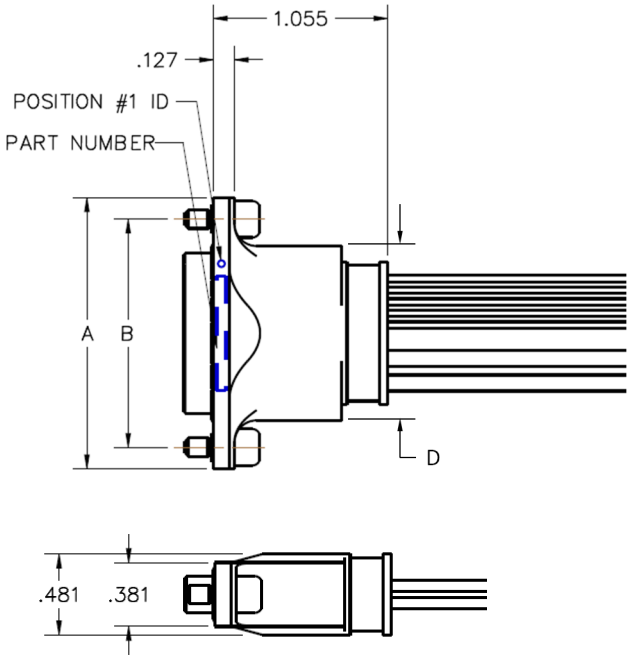
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

MMSI DIMENSIONS (PLUG)



ISOMETRIC VIEW
MMSI–01L–14B0–006–2810
FOR REFERENCE ONLY

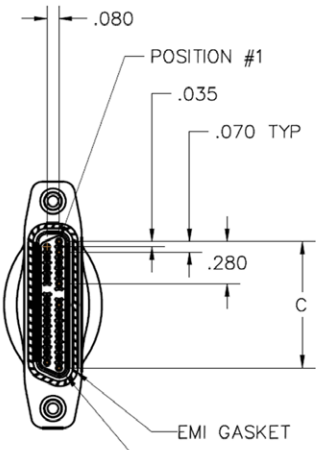




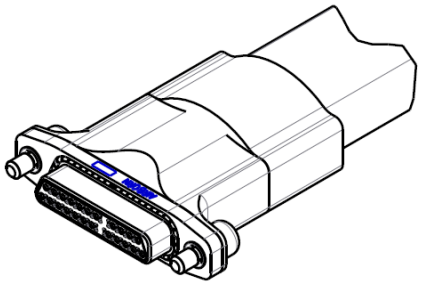
SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

1. See next page for cable with braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

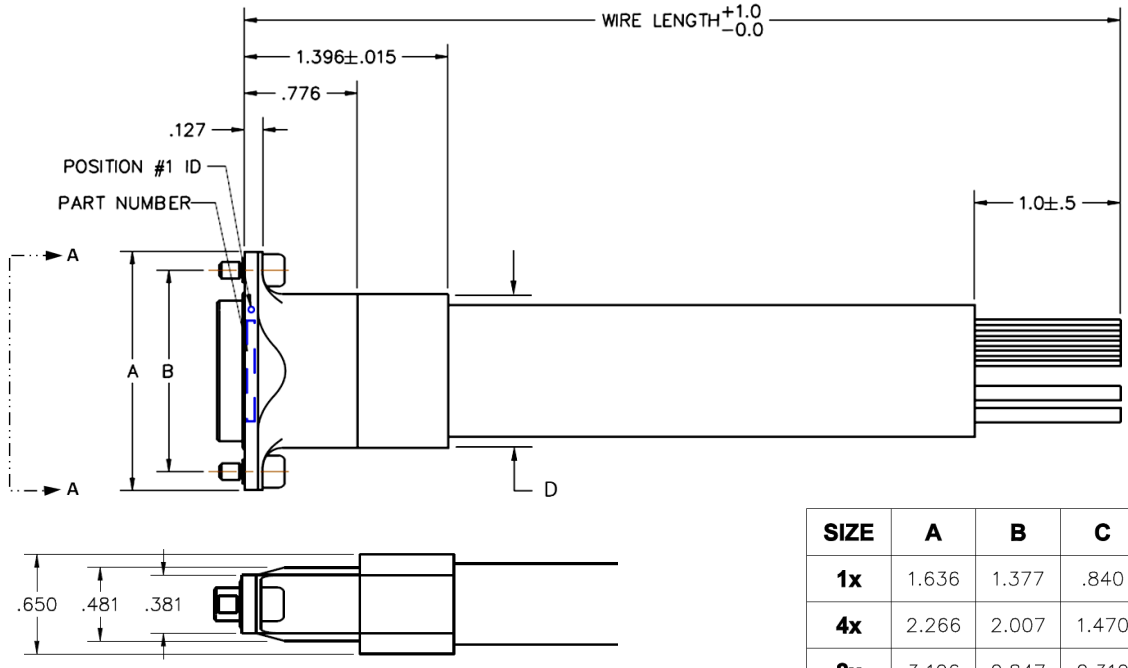
MMSI DIMENSIONS with HALAR® SLEEVE (PLUG)



A-A



ISOMETRIC VIEW OF PLUG END
MMSI-01L-14B3-006-2810
FOR REFERENCE ONLY



SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

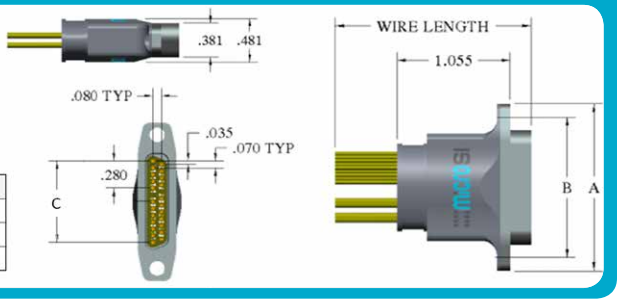
1. See previous page for cable without braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

microSI™

MMSI – Cable I/O (Female)

MMSI cable connectors are used in cable applications where signal integrity is desired. The connector interface controls the polarization of the twinax contact style. Comes with a variety of wiring and hardware options. All cable connectors are available in custom lengths.

GENERAL DIMENSIONS



SIZE	A	B	C
1X	1.636	1.377	0.840
4X	2.266	2.007	1.470
8X	3.106	2.847	2.310

Sample Part Number Format: MMSI-01L-24B0-006-2810

MMSI - [ ] - [ ] [ ] [ ] - [ ] - [ ] [ ]

SERIES
Cable I/O
(Female)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
21 – Female, Twinax
100Ω 24 AWG
24 – Female, Twinax
100Ω 30 AWG

SIDEBAND WIRES
(color code per MIL-STD-681)
A – 22759/11-24
B – 22759/11-26
C – 22759/11-28
D – 22759/33-24 ☒
E – 22759/33-26 ☒
F – 22759/33-28 ☒
G – 22759/33-30 ☒
H – NEMA HP3-EXBEB 24 AWG
J – NEMA HP3-EXBDB 26 AWG
K – NEMA HP3-EXBCB 28 AWG
L – NEMA HP3-EXBBB 30 AWG

OVERALL**
0 – None
1 – Silver-plated braid
2 – Tin-plated braid
3 – Silver-plated braid, Halar® sleeving
4 – Tin-plated braid, Halar® sleeving
5 – Halar® sleeving (no braid)

WIRE LENGTH[1]
Inches, 3 digits
Ex. 018 = 18 inches

BODY PLATING, INTERNAL SOLDER
1 – Electroless nickel, SAC305
2 – Electroless nickel, Sn/Pb ☒
5 – Gold, SAC305
6 – Gold, Sn/Pb ☒

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews; captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513

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

NOTES

1. Overall braid and/or Halar® will be 1.0 ± 0.5 inches shorter than specified wire length. Minimum length without overall braid or Halar® is 3 inches. If overall braid or Halar® is specified the minimum length is 6 inches.
2. All microSI females have fluorosilicone interfacial seals installed.

☒ Option not RoHS-compliant

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable.

**** Refer to “Keying Hardware Options” on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

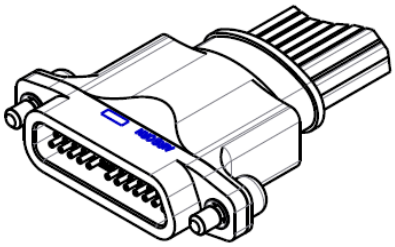
NOTE: AirBorn can manufacture special configurations to your exact specifications.

PERFORMANCE

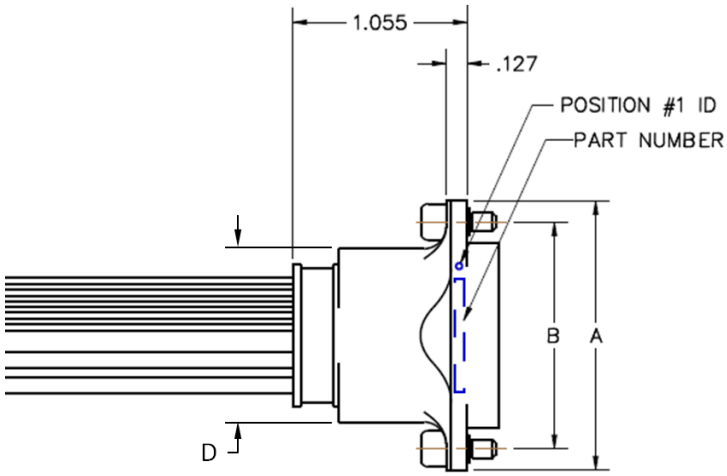
Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, RMS, 60Hz
Insulation Resistance . . . . . 5,000 megohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Engaging Force: . . . . . 6.0 ounces maximum/contact
Contact Separating Force: . . . . . 0.5 ounces minimum/contact
Mating and Unmating Force: . . . . . 10 ounces maximum/contact

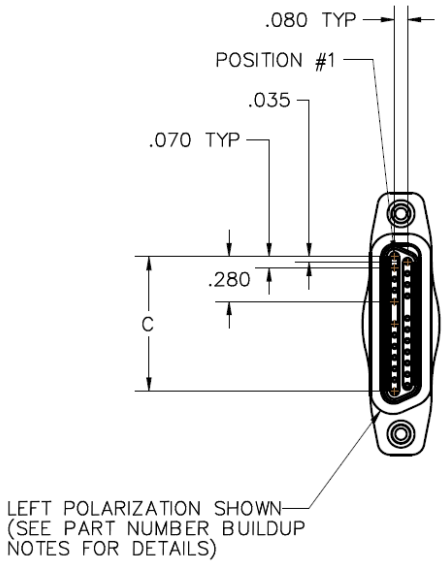
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

MMSI DIMENSIONS (RECEPTACLE)



ISOMETRIC VIEW
MMSI-01L-24B0-006-2810
FOR REFERENCE ONLY

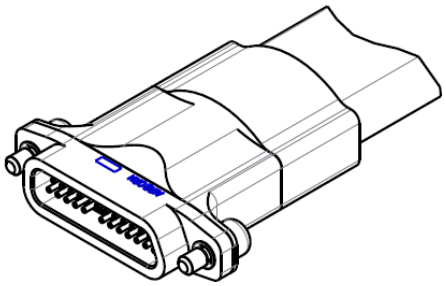




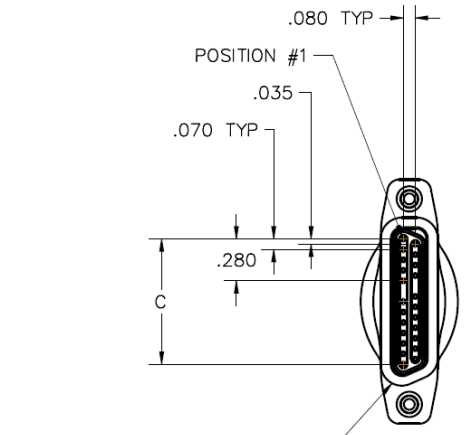
SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

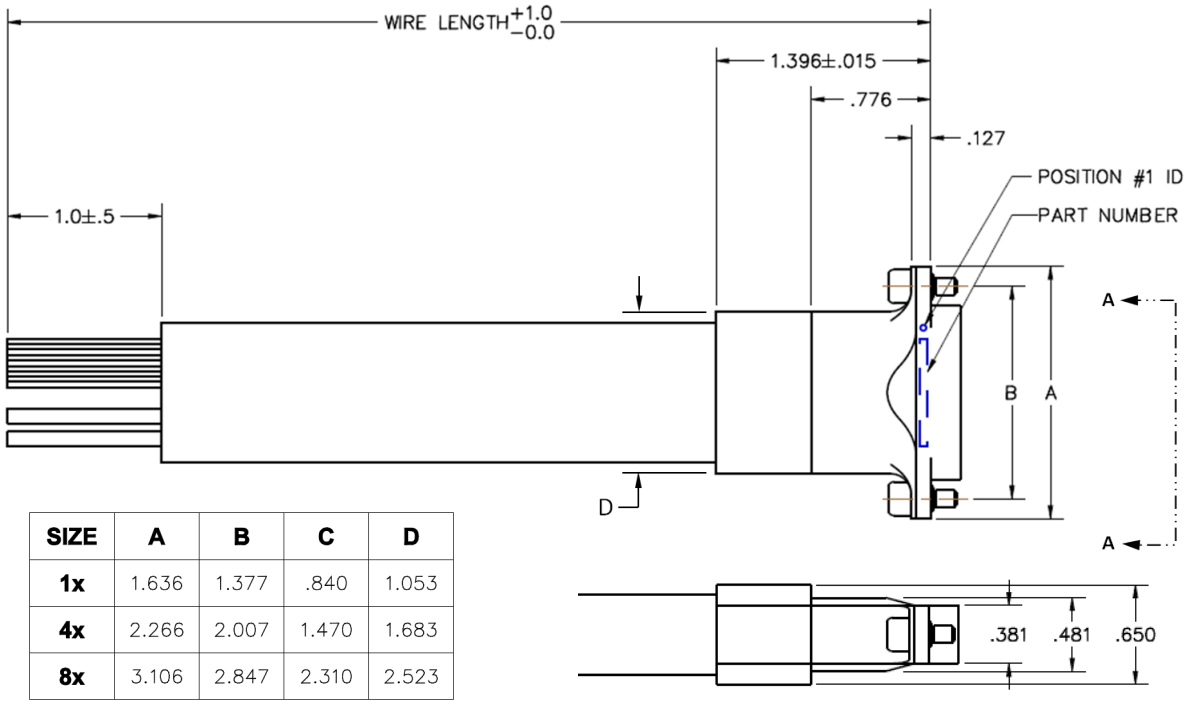
1. See next page for cable with braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

MMSI DIMENSIONS with HALAR® SLEEVE (RECEPTACLE)



ISOMETRIC VIEW OF RCPT END
MMSI-01L-24B3-006-2810
FOR REFERENCE ONLY





SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

1. See previous page for cable without braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

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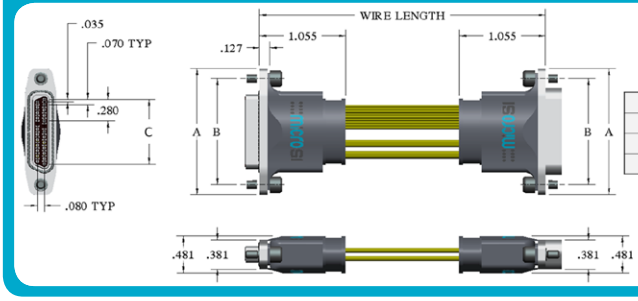
CONTACT CUSTOMER SERVICE
CALL 512-863-5585
x6464

microSI™

MJSI – Cable Assembly

MJSI cable assemblies are used in jumper applications where signal integrity is desired. They have a wide range of styles, wiring options, and hardware options. All cable assemblies are available in custom lengths.

GENERAL DIMENSIONS



SIZE	A	B	C
1X	1.636	1.377	0.840
4X	2.266	2.007	1.470
8X	3.106	2.847	2.310

Sample Part Number Format: MJSI-01L-24B0-018-2810

MJSI - [ ] - [ ][ ][ ] - [ ] - [ ] [ ]

SERIES
Cable Assembly
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
11 – Male-to-Male, Twinax 100Ω 24 AWG
14 – Male-to-Male, Twinax 100Ω 30 AWG
21 – Male-to-Female, Twinax 100Ω 24 AWG
24 – Male-to-Female, Twinax 100Ω 30 AWG
31 – Female-to-Female, Twinax 100Ω 24 AWG
34 – Female-to-Female 100Ω 30 AWG

SIDEBAND WIRES (color code per MIL-STD-681)
A – 22759/11-24
B – 22759/11-26
C – 22759/11-28
D – 22759/33-24 ☒
E – 22759/33-26 ☒
F – 22759/33-28 ☒
G – 22759/33-30 ☒
H – NEMA HP3-EXBEB 24 AWG
J – NEMA HP3-EXBDB 26 AWG
K – NEMA HP3-EXBCB 28 AWG
L – NEMA HP3-EXBBB 30 AWG

OVERALL****
0 – None
1 – Silver-plated braid
2 – Tin-plated braid
3 – Silver-plated braid, Halar® sleeving
4 – Tin-plated braid, Halar® sleeving
5 – Halar® sleeving (no braid)

WIRE LENGTH[1]
Inches, 3 digits
Ex. 018 = 18 inches

BODY PLATING, INTERNAL SOLDER
1 – Electroless nickel, SAC305
2 – Electroless nickel, Sn/Pb ☒
5 – Gold, SAC305
6 – Gold, Sn/Pb ☒

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews, captivated**
860 – Fixed jacknut & turning jackscrews, captivated**
870 – Fixed jacknut on male & turning jackscrews, captivated** on female (styles 21 & 24, only)
NXX – Keying jacknuts***
JXX – Keying jackscrews***
AXX – Keying jacknuts & keying jackscrews*** (for styles 21 & 24, jacknuts on female)
BXX – Keying jacknuts on male & keying jack-screws on female*** (styles 21 & 24, only)

High-Reliability Contact
MIL-DTL-83513

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

NOTES

1. All microSI females have fluorosilicone interfacial seals installed.
2. Overall braid and/or Halar® will be 1.0 ± 0.5 inches shorter than specified wire length. Minimum length without overall braid or Halar® is 3 inches. If overall braid or Halar® is specified the minimum length is 6 inches.
3. Hardware is the same for both connectors unless otherwise noted.

☒ Option not RoHS-compliant

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable.

**** Refer to “Keying Hardware Options” on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or Gold
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

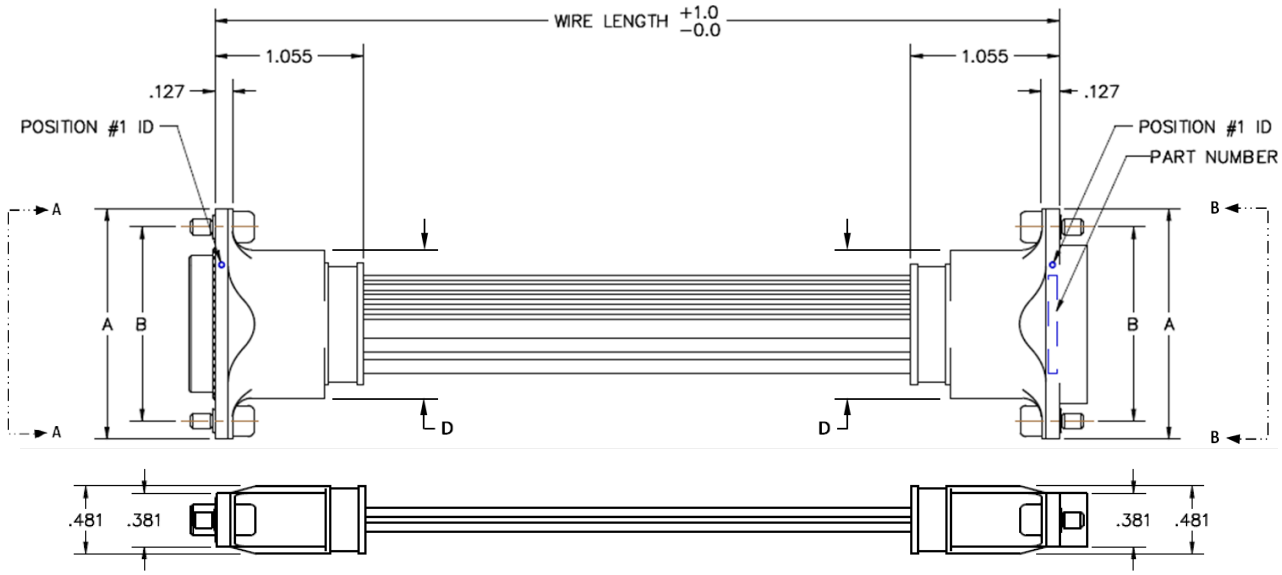
NOTE: AirBorn can manufacture special configurations to your exact specifications.

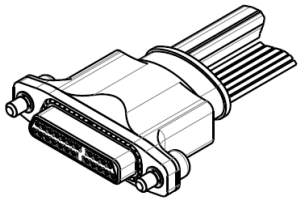
PERFORMANCE

Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, 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

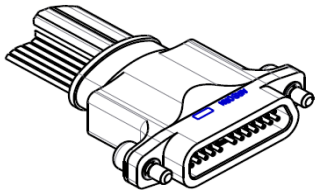
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

MJSI DIMENSIONS

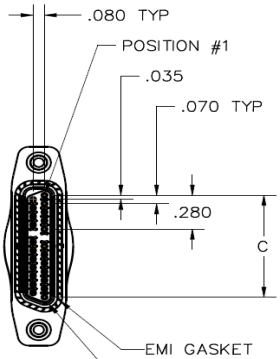




ISOMETRIC VIEW OF PLUG END
MJSI-01L-24B0-006-2810
FOR REFERENCE ONLY

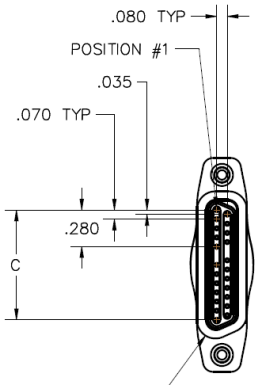


ISOMETRIC VIEW OF RCPT END
MJSI-01L-24B0-006-2810
FOR REFERENCE ONLY



A-A

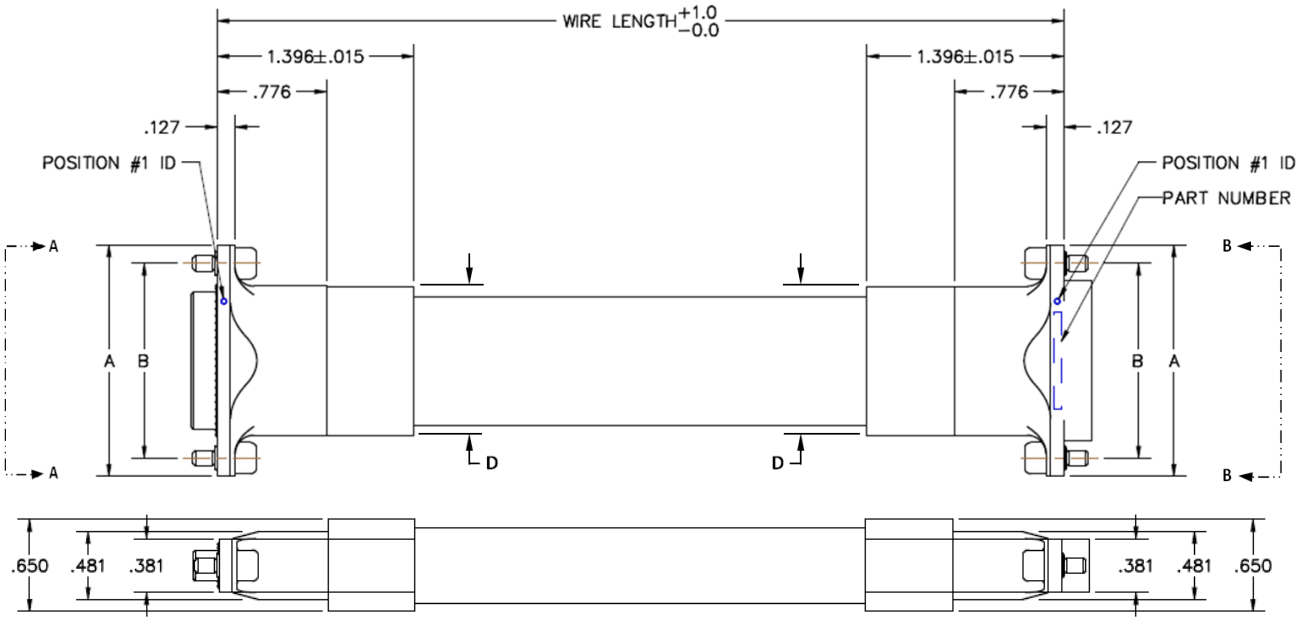
SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

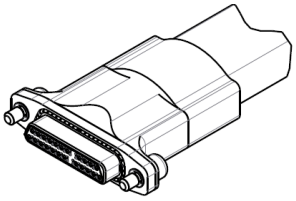


B-B

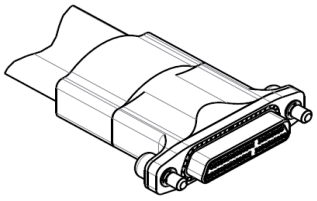
1. See next page for cable with braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

MJSI DIMENSIONS with HALAR® SLEEVE

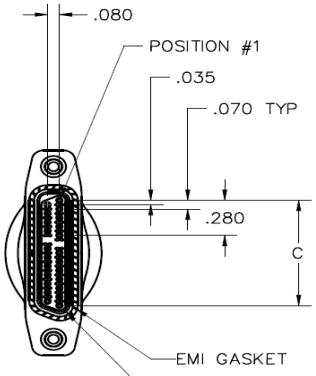




ISOMETRIC VIEW OF PLUG END
MJSI-01L-24B3-006-2810
FOR REFERENCE ONLY

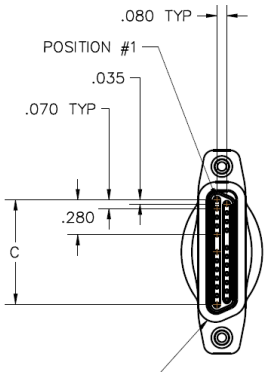


ISOMETRIC VIEW OF RCPT END
MJSI-01L-24B3-006-2810
FOR REFERENCE ONLY



A-A

SIZE	A	B	C	D
1x	1.636	1.377	.840	1.053
4x	2.266	2.007	1.470	1.683
8x	3.106	2.847	2.310	2.523

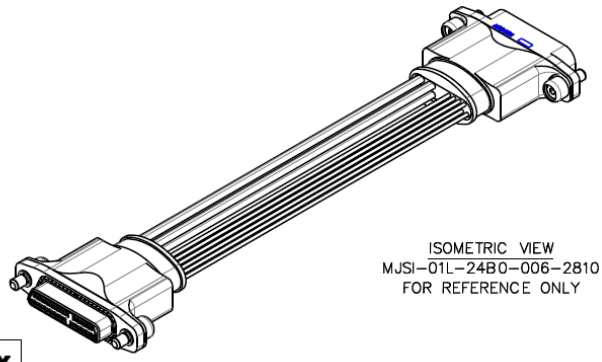


B-B

1. See previous page for cable without braid or Halar®
2. Plug to receptacle jumper shown. See Part Number Buildup for available options.
3. See “Polarized Interface Pinouts” on page 59
4. See “Keying Hardware Options” on page 61

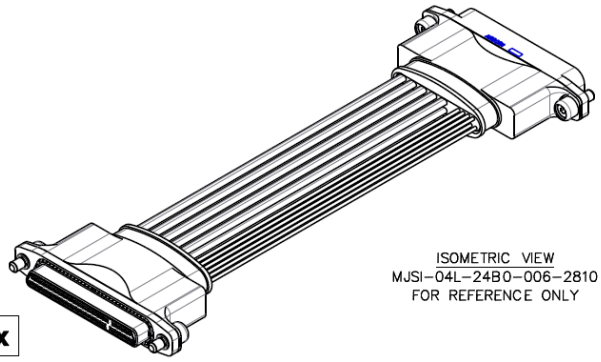
MJSI MATING FACE ORIENTATION

microSI



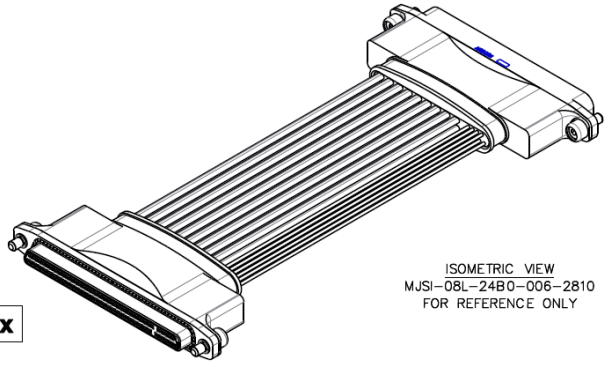
ISOMETRIC VIEW
MJSI-01L-24B0-006-2810
FOR REFERENCE ONLY

1x



ISOMETRIC VIEW
MJSI-04L-24B0-006-2810
FOR REFERENCE ONLY

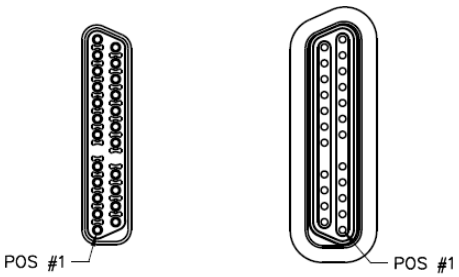
4x



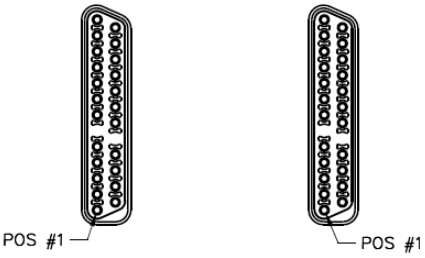
ISOMETRIC VIEW
MJSI-08L-24B0-006-2810
FOR REFERENCE ONLY

8x

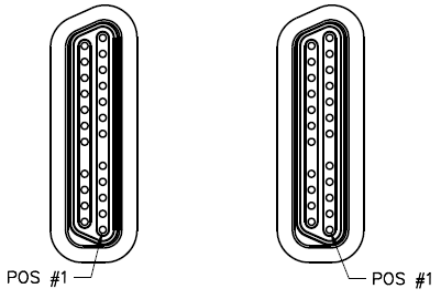
MATING FACE ORIENTATION



PLUG TO RECEPTACLE



PLUG TO PLUG



RECEPTACLE TO RECEPTACLE

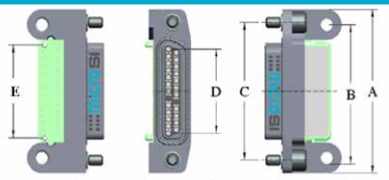
LEFT POLARIZATION SHOWN
(SEE PART NUMBER BUILDUP NOTES FOR DETAILS)

microSI™

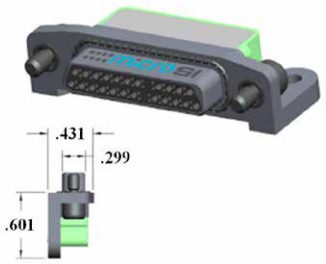
MKSI – Right Angle (Male)

MKSI right angle board surface mount connectors are used in applications where signal integrity is desired. The connector interface controls the polarization of the connector. Comes with a variety of hardware options.

GENERAL DIMENSIONS



SIZE	A	B	C	D	E
1X	1.636	1.330	1.377	0.840	0.930
4X	2.266	1.960	2.007	1.470	1.560
8X	3.106	2.800	2.847	2.310	2.400



Sample Part Number Format: MKSI-01R-1000-175-2810

MKSI – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Right Angle (Male)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
1000 – Male

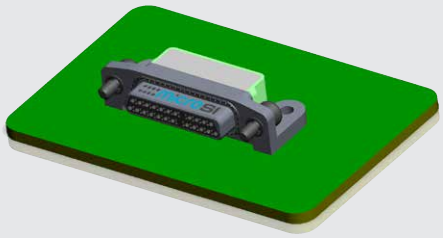
PIN TERMINATION (50 µ" Au Contact)
175 – Sn/Pb alloy ☒
178 – SAC305

BODY PLATING
2 – Electroless nickel
6 – Gold

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513



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

NOTES

☒ Option not RoHS-compliant.

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable. Refer to "Keying Hardware Options" on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

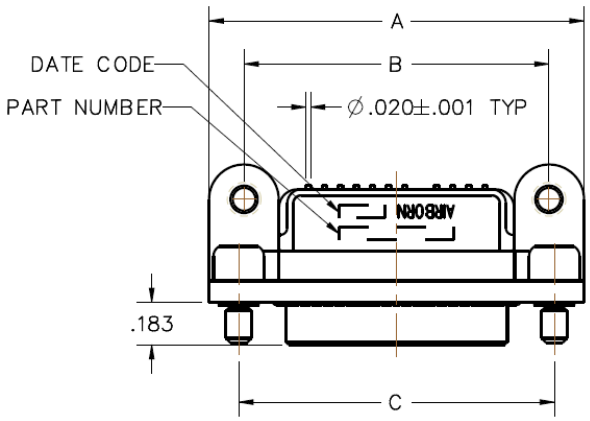
NOTE: AirBorn can manufacture special configurations to your exact specifications.

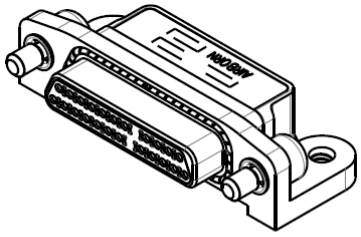
PERFORMANCE

Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, 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

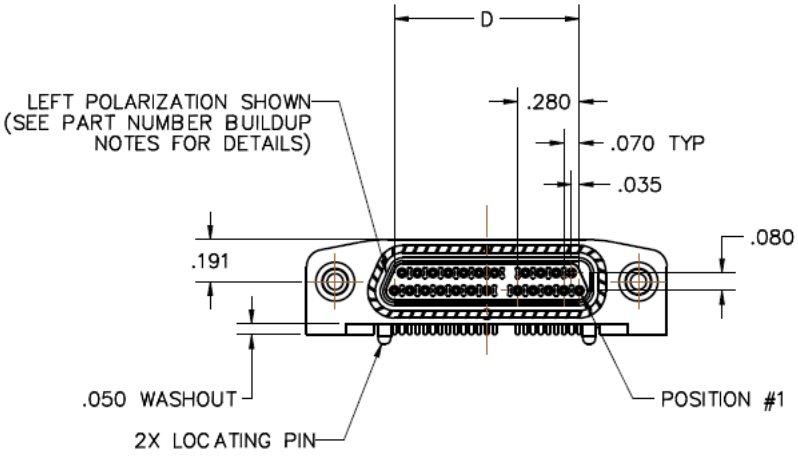
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

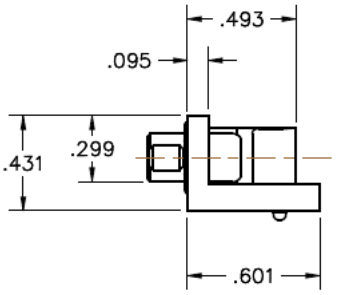
MKSI DIMENSIONS (PLUG)

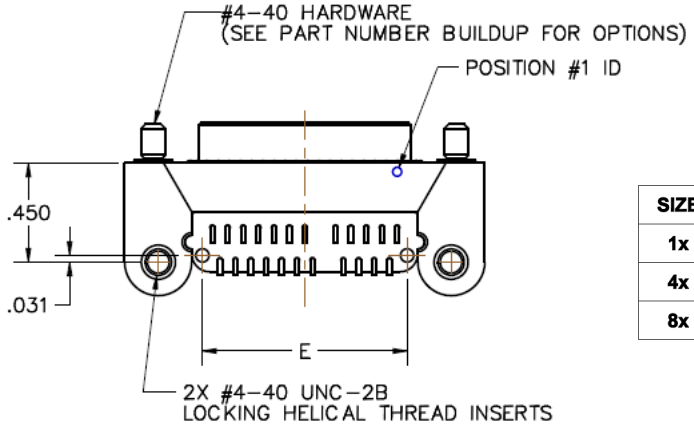




ISOMETRIC VIEW
MKSI–01L–1000–175–2810
FOR REFERENCE ONLY





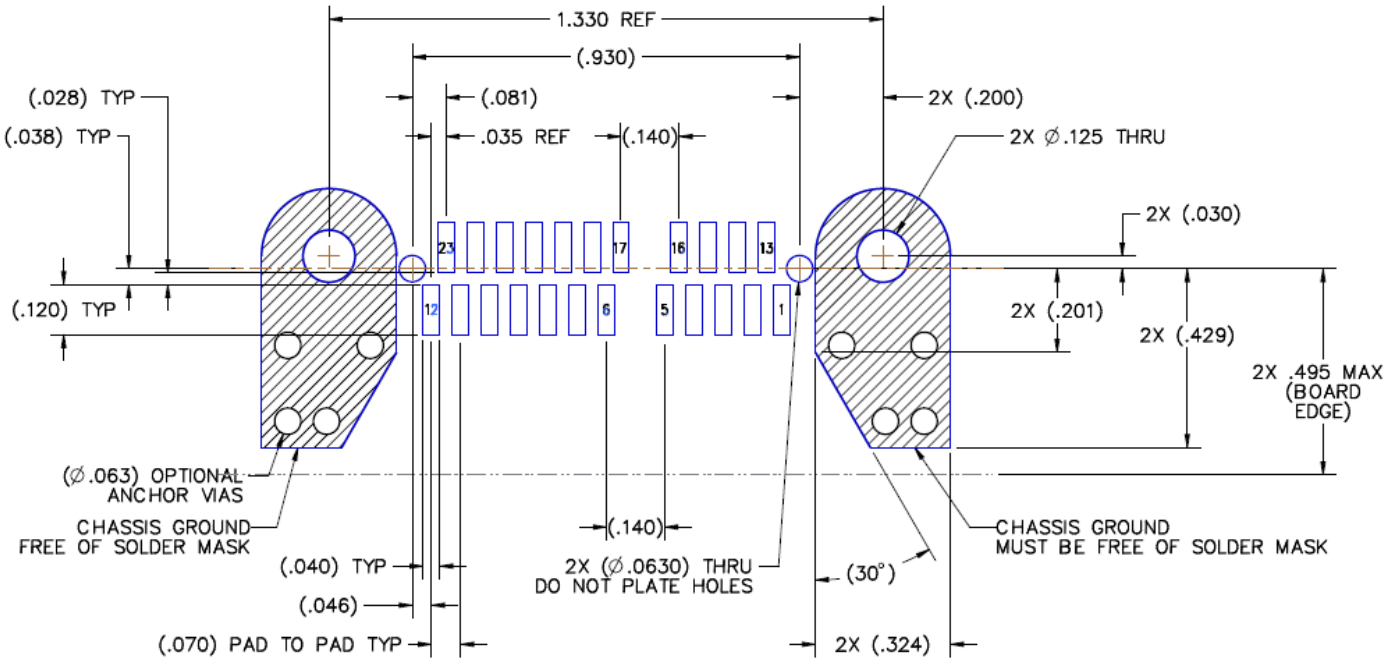


SIZE	A	B	C	D	E
1x	1.636	1.330	1.377	.840	.930
4x	2.266	1.960	2.007	1.470	1.560
8x	3.106	2.800	2.847	2.310	2.400

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

1X Sample with Left Polarization

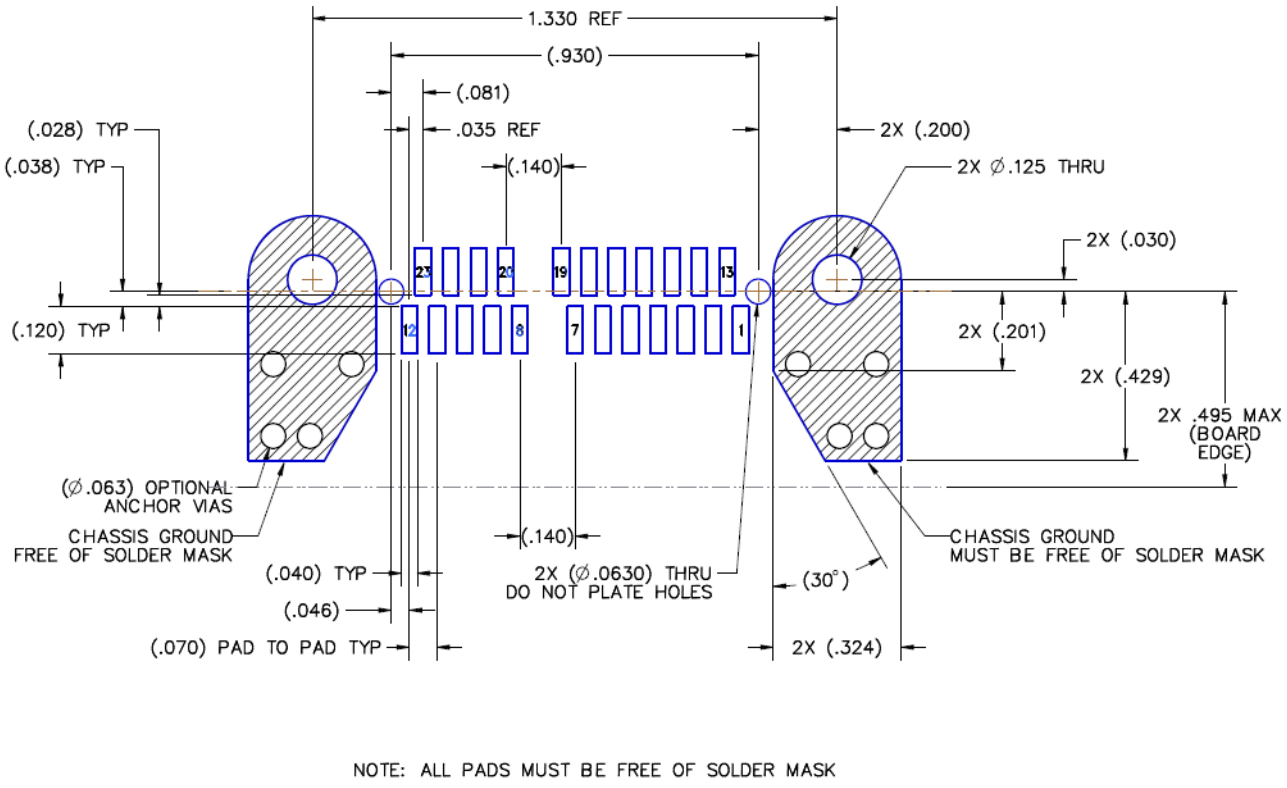


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

1X Sample with Right Polarization

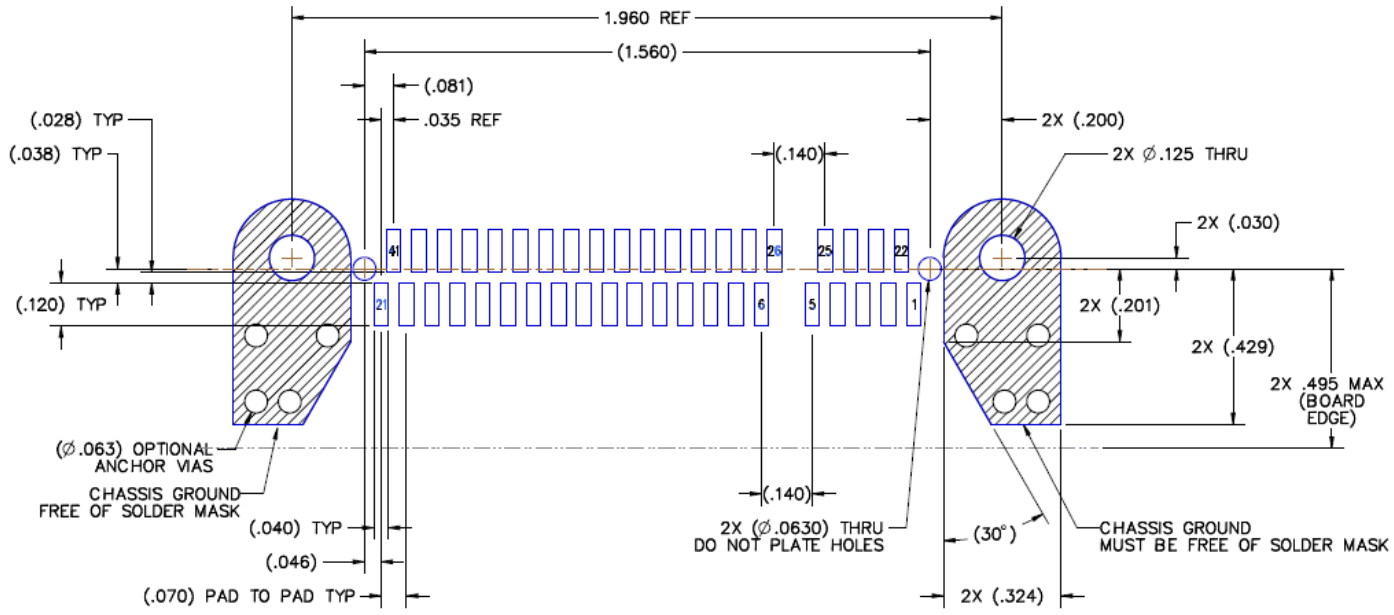


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

4X Sample with Left Polarization

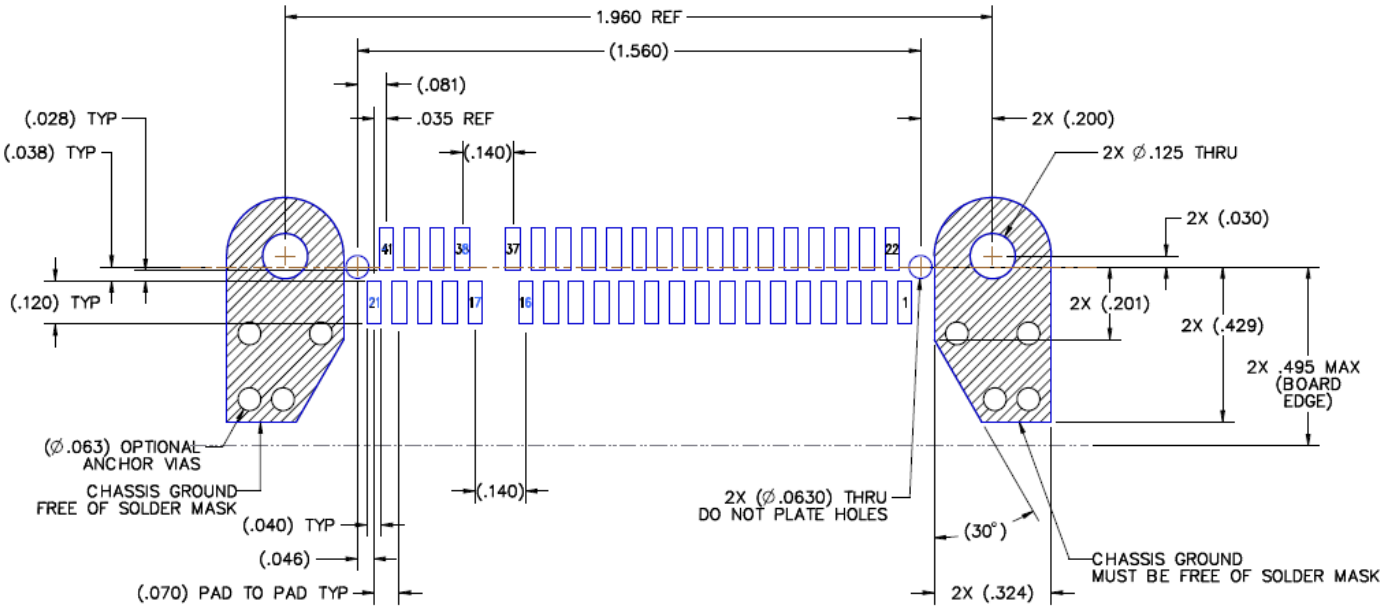


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

4X Sample with Right Polarization

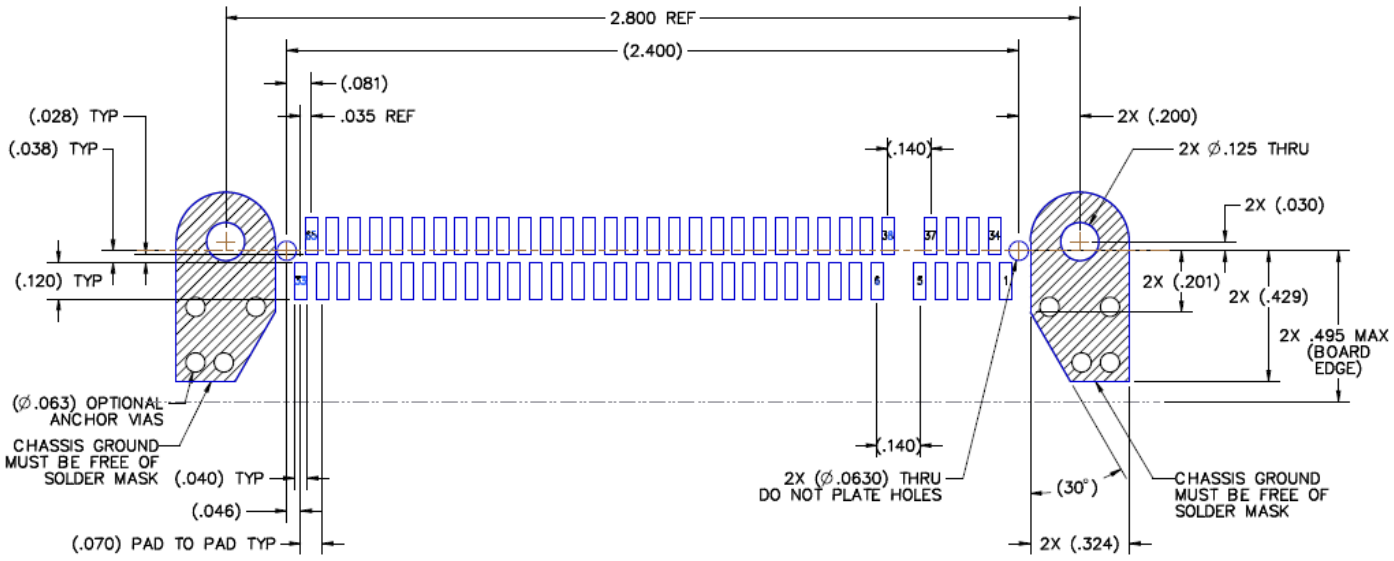


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

8X Sample with Left Polarization

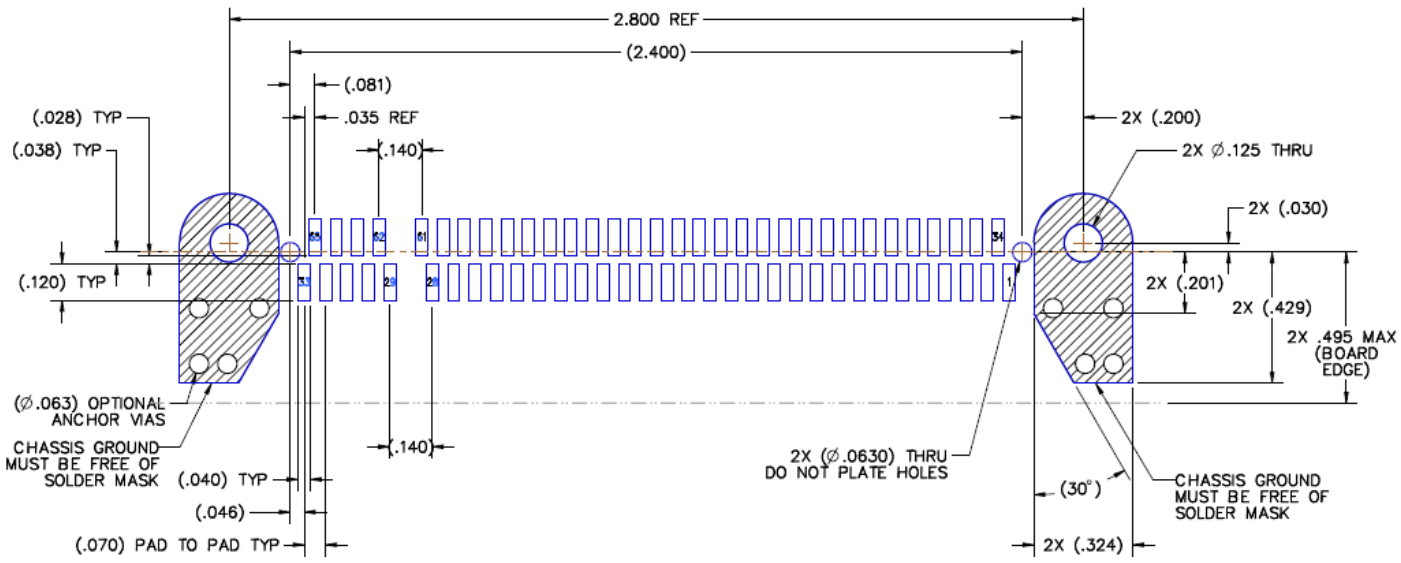


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (PLUG)

8X Sample with Right Polarization



NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

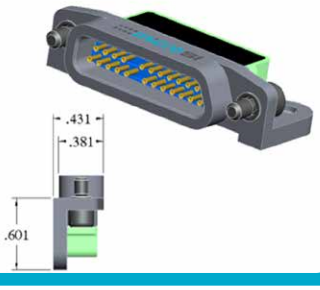
microSI™

MKSI – Right Angle (Female)

MKSI right angle board surface mount connectors are used in applications where signal integrity is desired. The connector interface controls the polarization of the connector. Comes with a variety of hardware options.

GENERAL DIMENSIONS

SIZE	A	B	C	D	E
1X	1.636	1.330	1.377	0.840	0.930
4X	2.266	1.960	2.007	1.470	1.560
8X	3.106	2.800	2.847	2.310	2.400



Sample Part Number Format: MKSI-01L-2000-275-2620

MKSI – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Right Angle
(Female)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
2000 – Female

SOCKET TERMINATION (50 µ" Au Contact)
275 – Sn/Pb alloy ☒
278 – SAC305

BODY PLATING
2 – Electroless nickel
6 – Gold

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513

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

NOTES

1. All microSI females have fluorosilicone interfacial seals installed.

☒ Option not RoHS-compliant.

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable. Refer to "Keying Hardware Options" on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

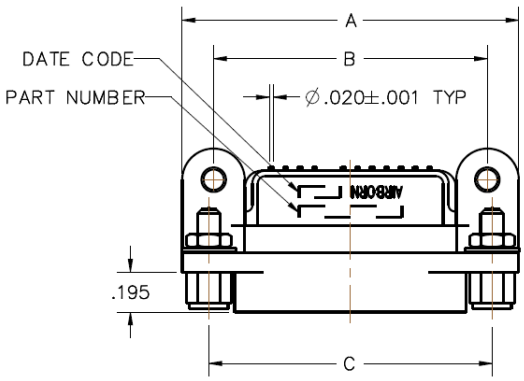
NOTE: AirBorn can manufacture special configurations to your exact specifications.

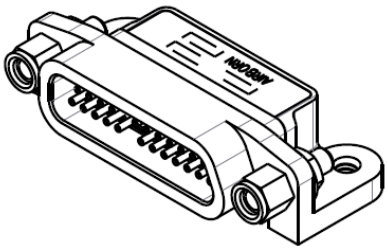
PERFORMANCE

Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, 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

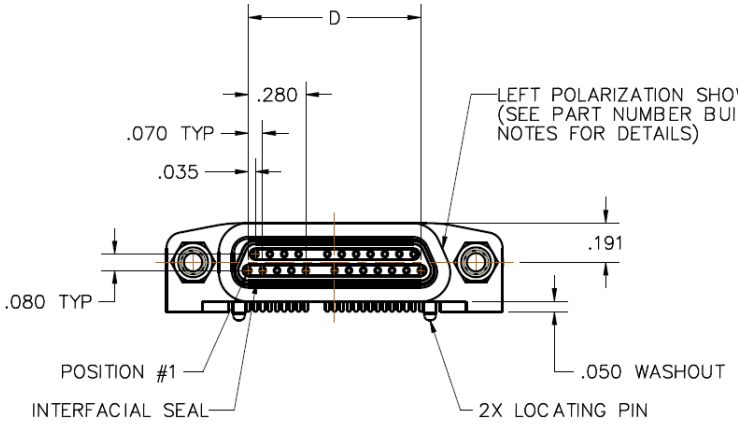
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

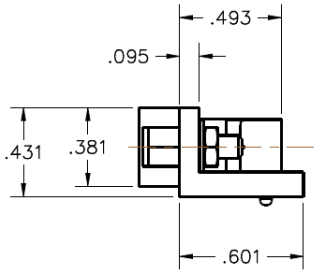
MKSI DIMENSIONS (RECEPTACLE)

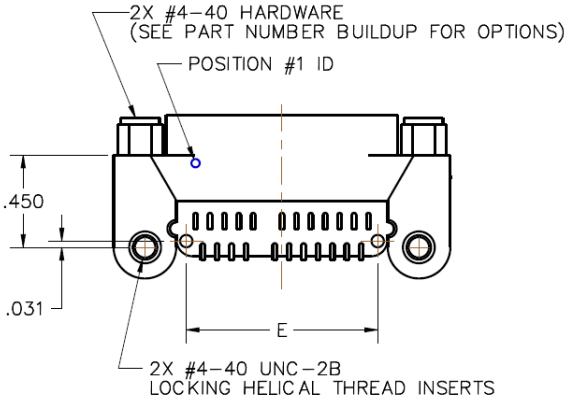




ISOMETRIC VIEW
MKSI-01L-2000-275-2620
FOR REFERENCE ONLY





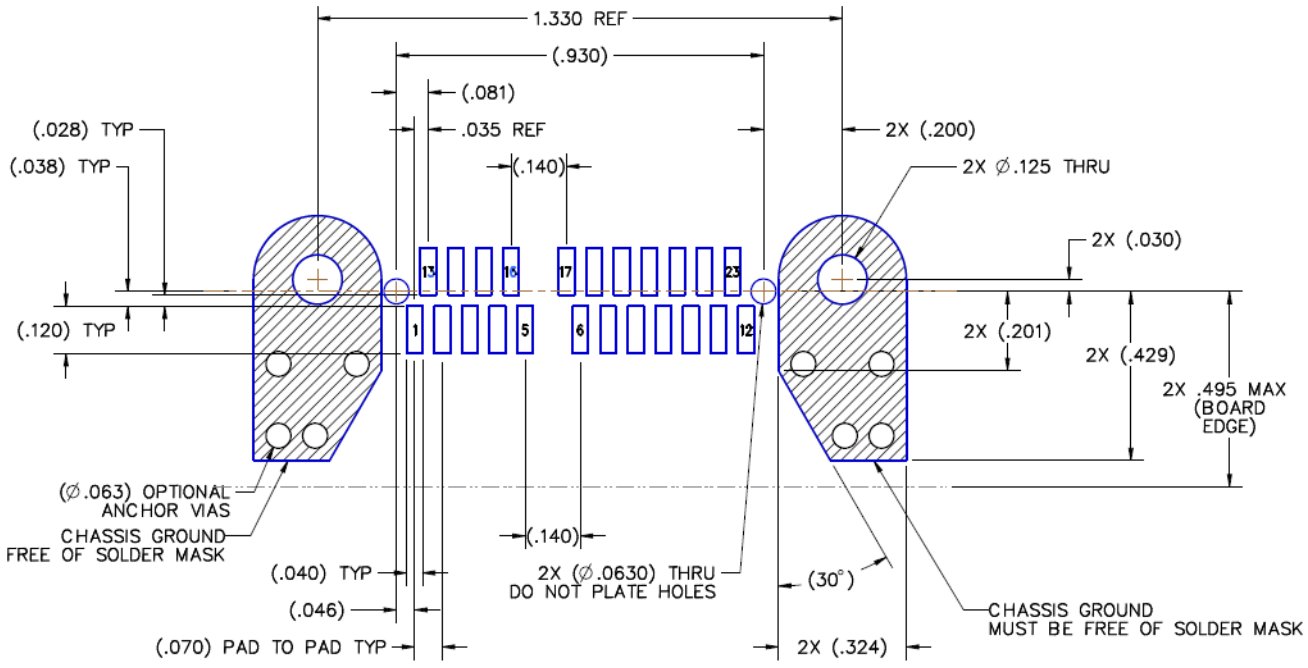


SIZE	A	B	C	D	E
1x	1.636	1.330	1.377	.840	.930
4x	2.266	1.960	2.007	1.470	1.560
8x	3.106	2.800	2.847	2.310	2.400

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

1X Sample with Left Polarization

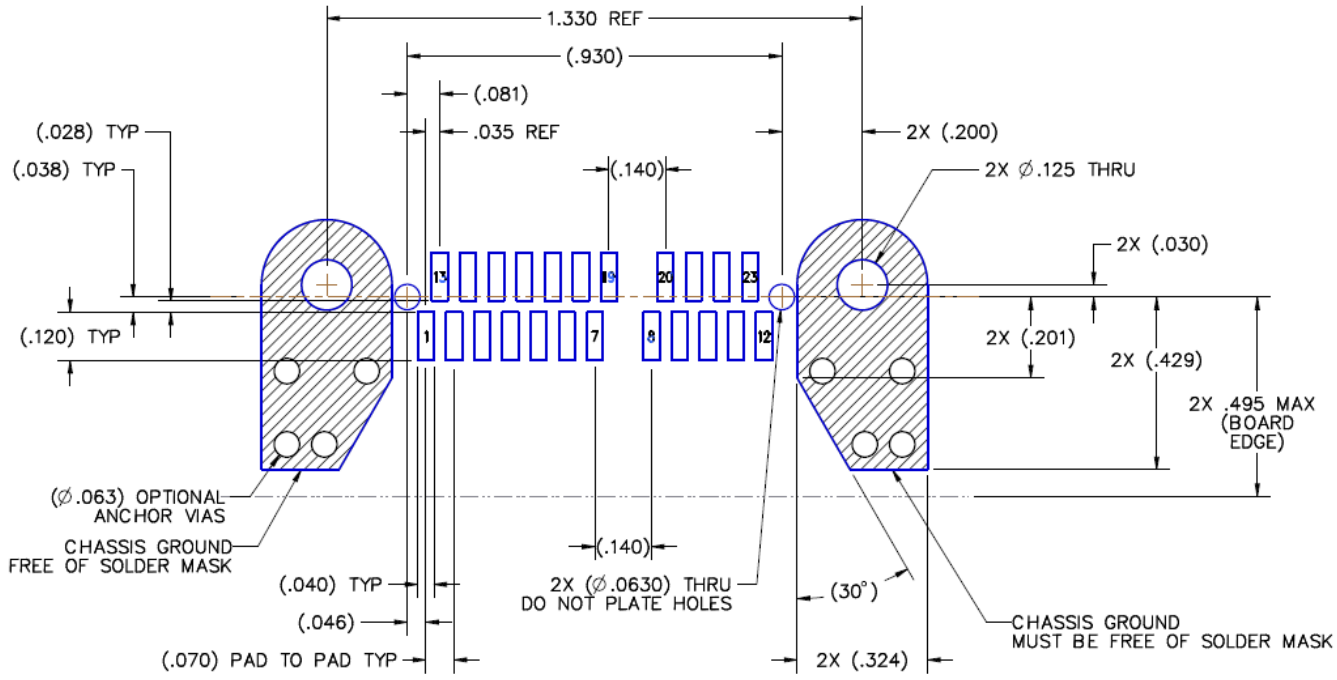


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

1X Sample with Right Polarization

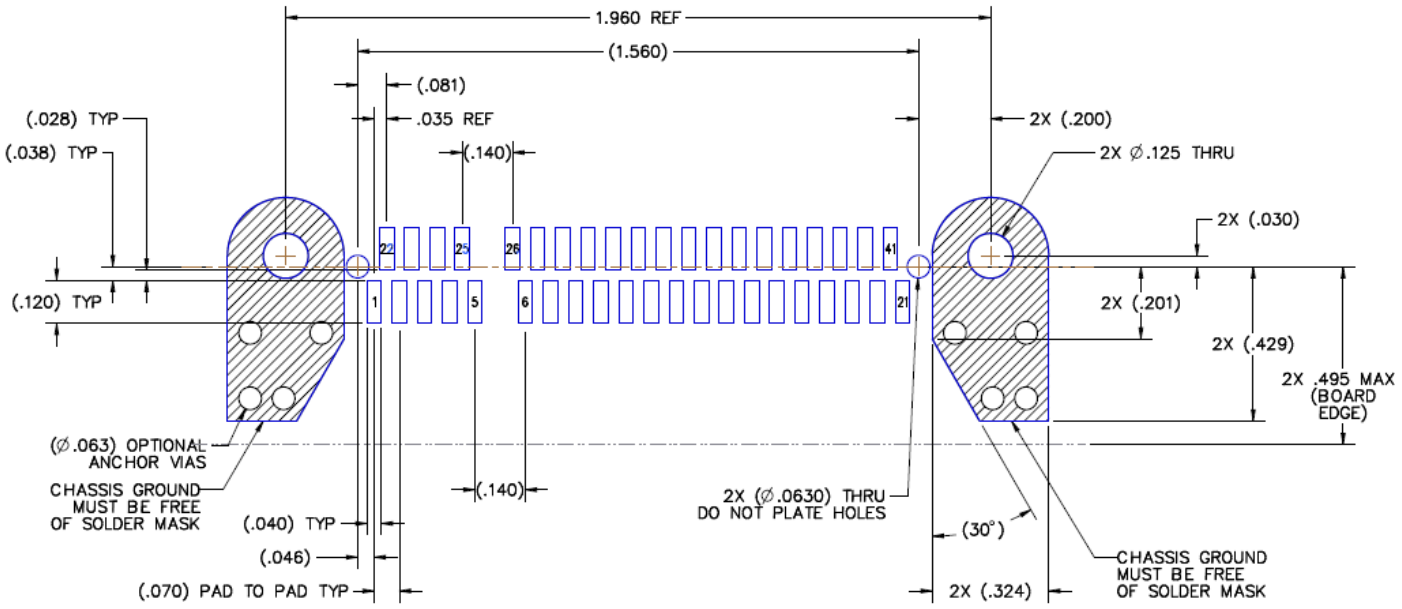


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

4X Sample with Left Polarization

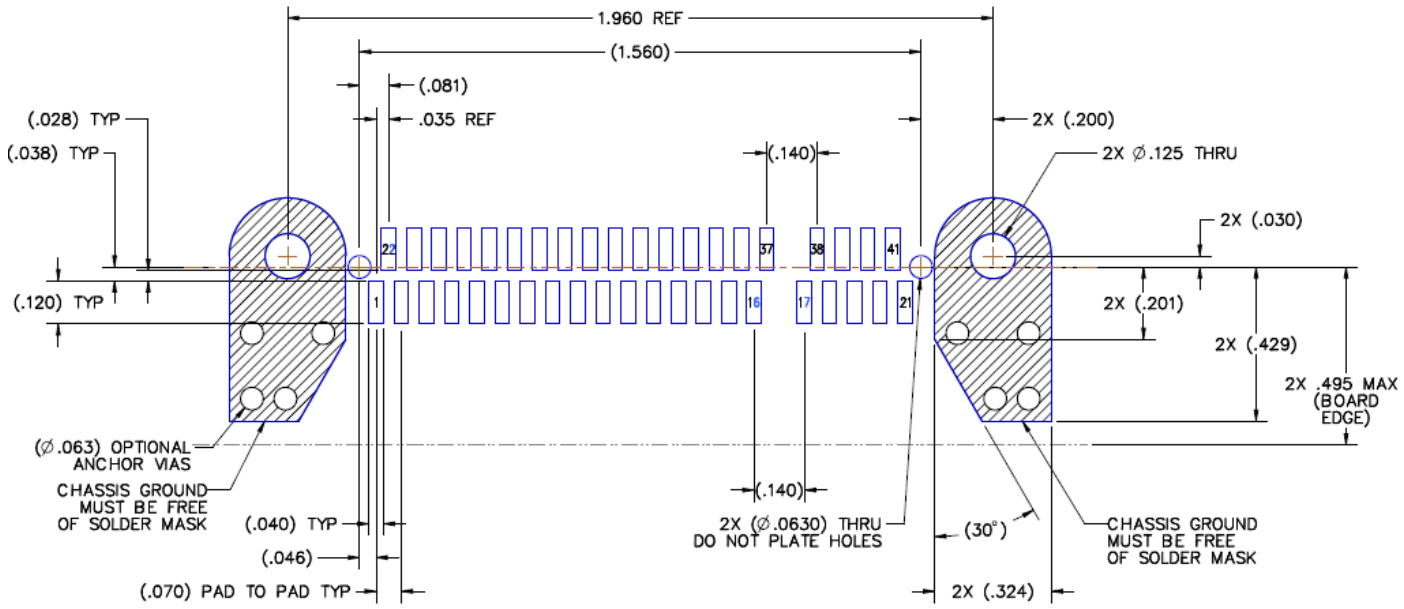


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

4X Sample with Right Polarization

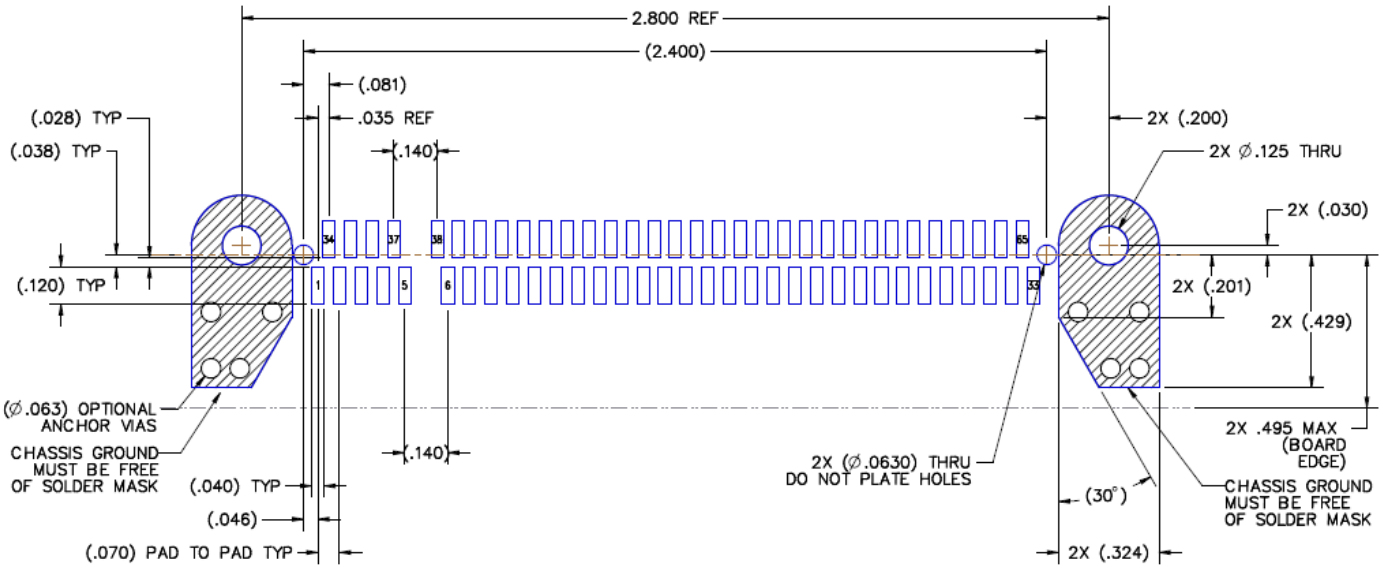


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

8X Sample with Left Polarization

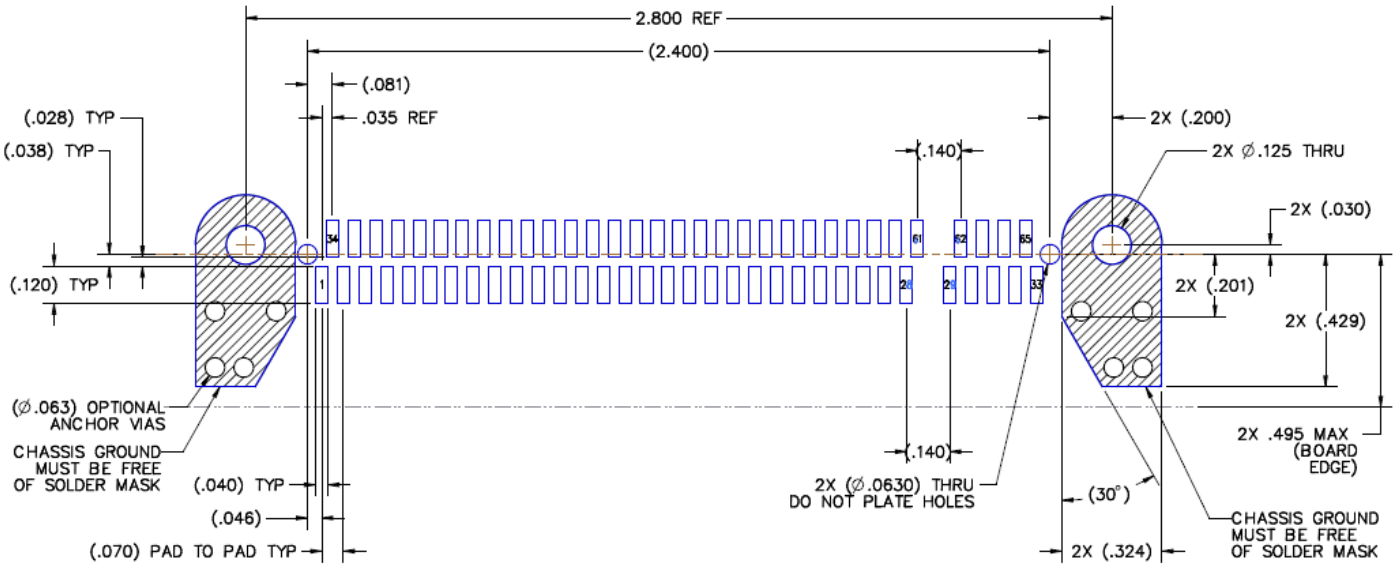


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MKSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

8X Sample with Right Polarization



NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

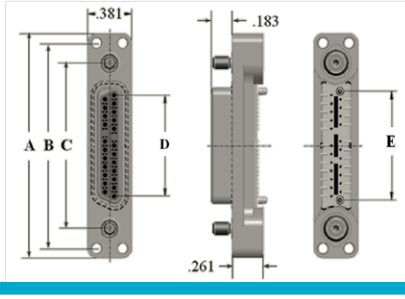
1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

microSI™

MLSI – Vertical (Male)

MLSI vertical board surface mount connectors are used in applications where signal integrity is desired. The connector interface controls the polarization of the connector. Comes with a variety of hardware options.

GENERAL DIMENSIONS



SIZE	A	B	C	D	E
1X	1.863	1.708	1.377	0.840	0.906
4X	2.493	2.338	2.007	1.470	1.536
8X	3.333	3.178	2.847	2.310	2.376

Sample Part Number Format: MLSI-08L-1000-378-2810

MLSI – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Vertical (Male)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
1000 – Male

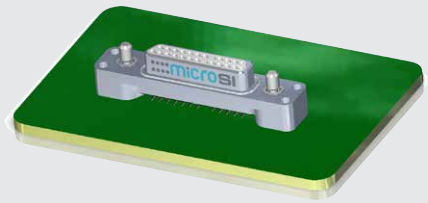
PIN TERMINATION (50 µ" Au Contact)
375 – Sn/Pb alloy ☒
378 – SAC305

BODY PLATING
2 – Electroless nickel
6 – Gold

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513



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

NOTES

☒ Option not RoHS-compliant.

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable. Refer to "Keying Hardware Options" on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

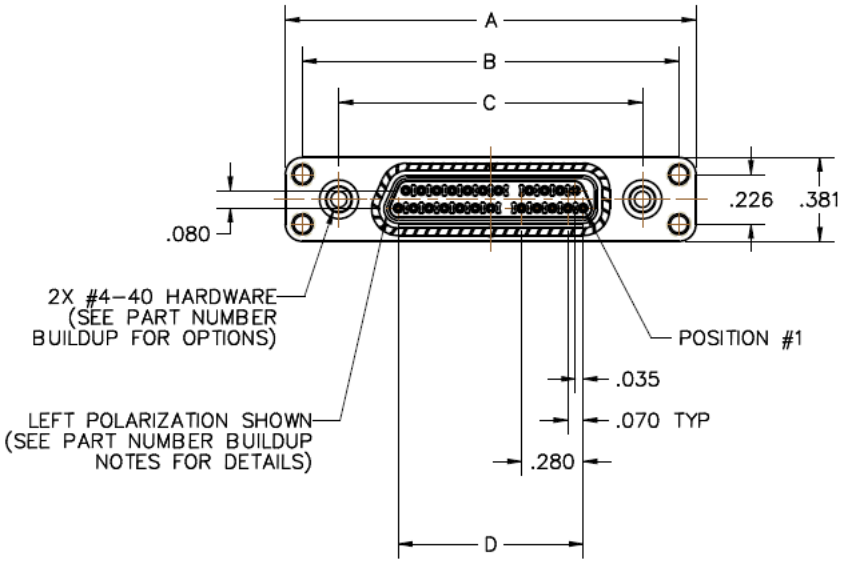
NOTE: AirBorn can manufacture special configurations to your exact specifications.

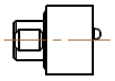
PERFORMANCE

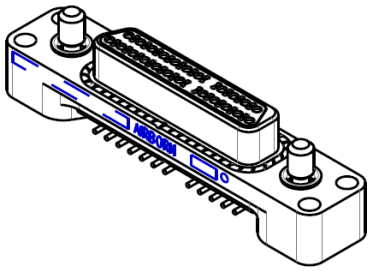
Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, RMS, 60Hz
Insulation Resistance . . . . . 5,000 megohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Engaging Force: . . . . . 6.0 ounces maximum/contact
Contact Separating Force: . . . . . 0.5 ounces minimum/contact
Mating and Unmating Force: . . . . . 10 ounces maximum/contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

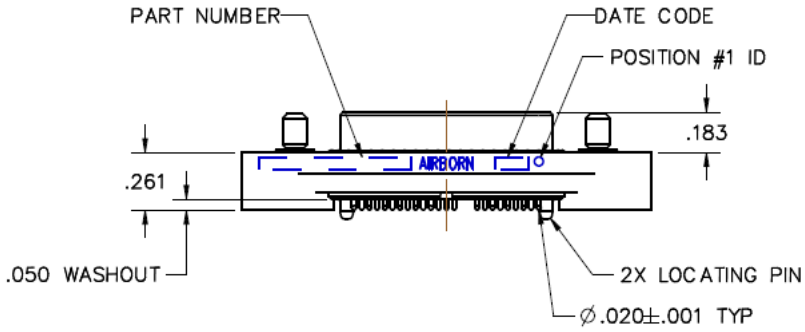
MLSI DIMENSIONS (PLUG)

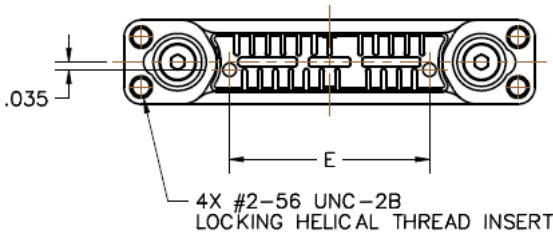






ISOMETRIC VIEW
MLSI-01L-1000-375-2810
FOR REFERENCE ONLY



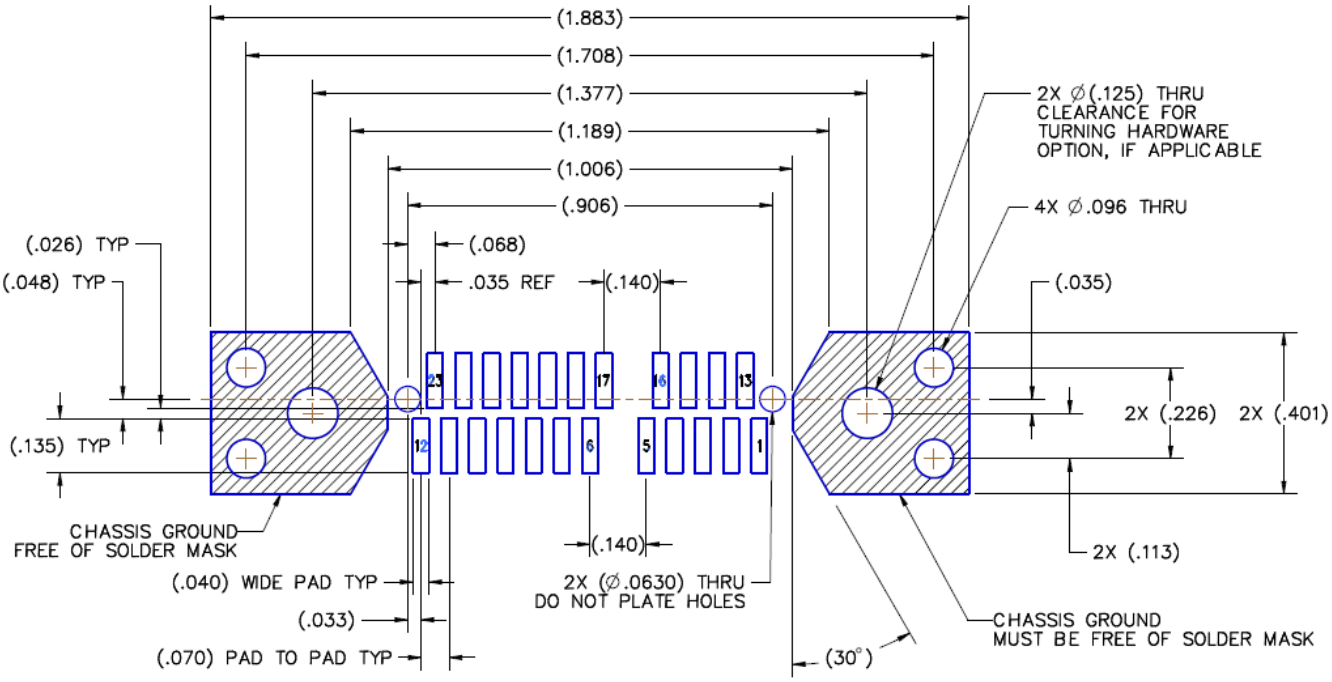


SIZE	A	B	C	D	E
1x	1.863	1.708	1.377	.840	.906
4x	2.493	2.338	2.007	1.470	1.536
8x	3.333	3.178	2.847	2.310	2.376

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

1X Sample with Left Polarization

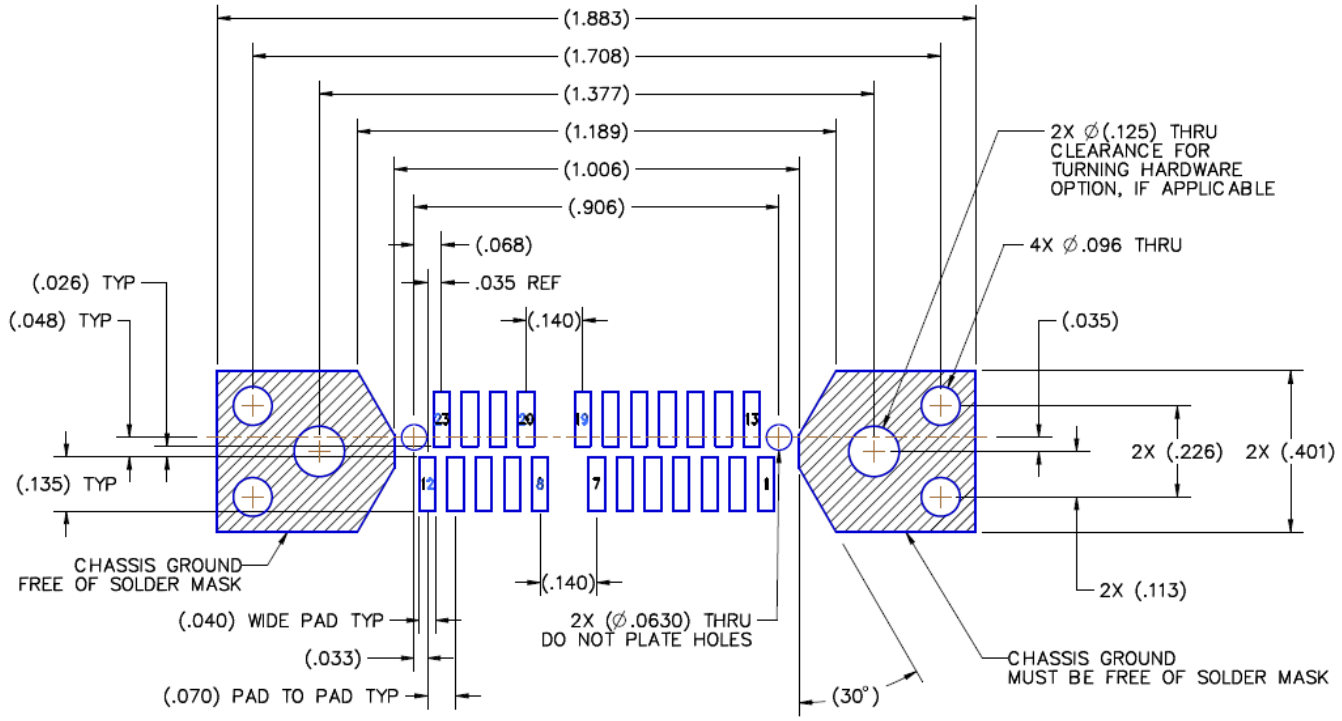


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

1X Sample with Right Polarization

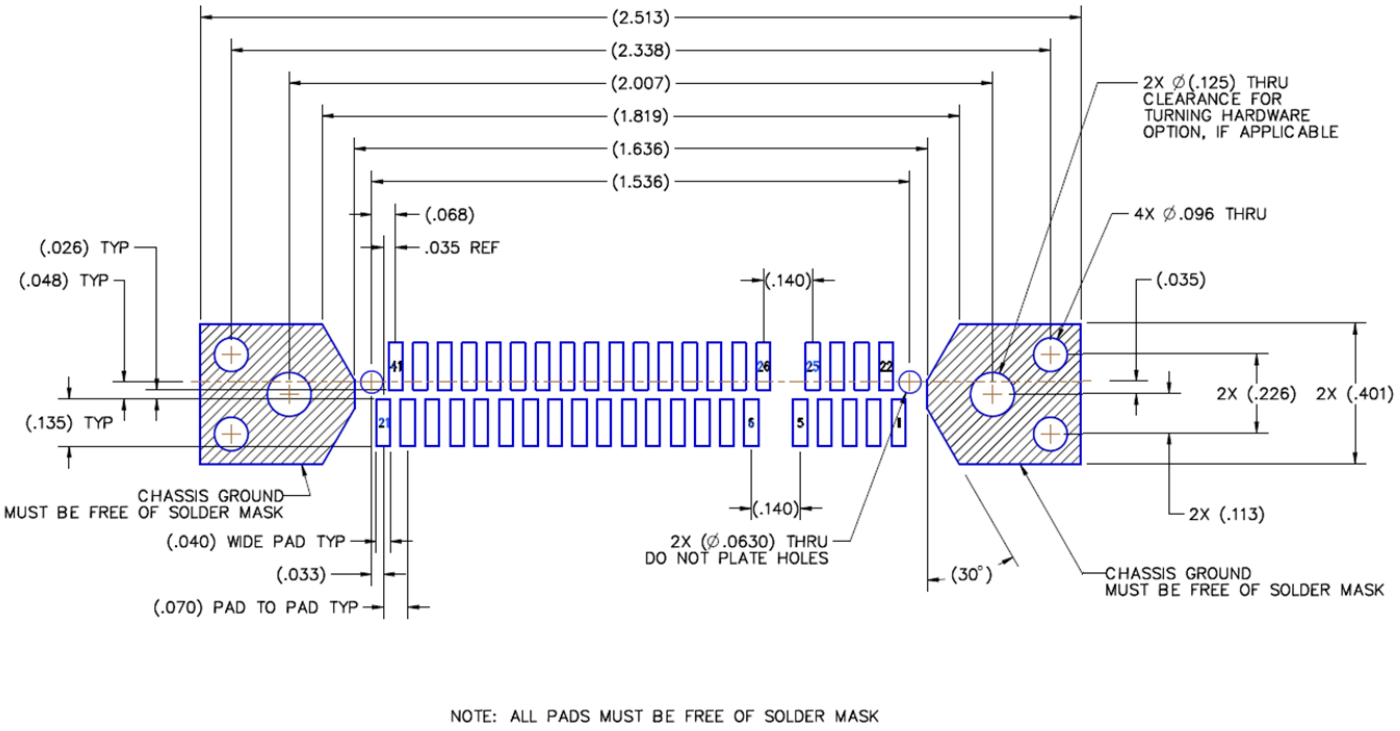


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

4X Sample with Left Polarization

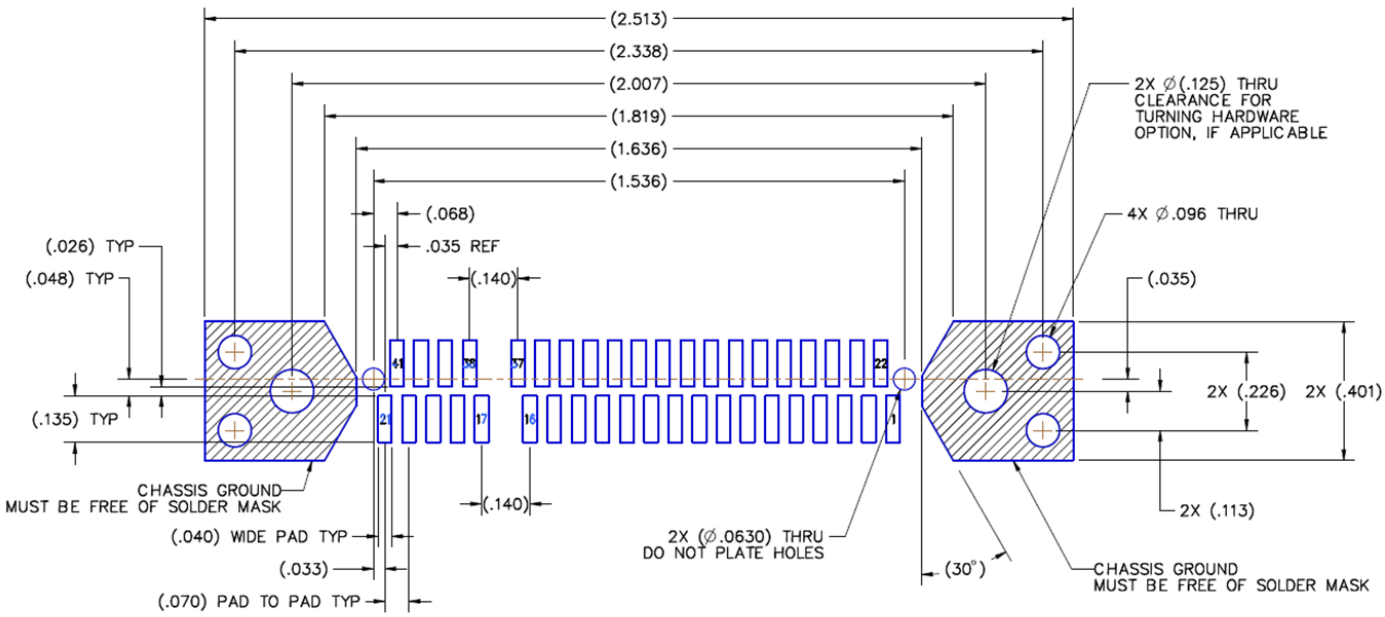


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

4X Sample with Right Polarization

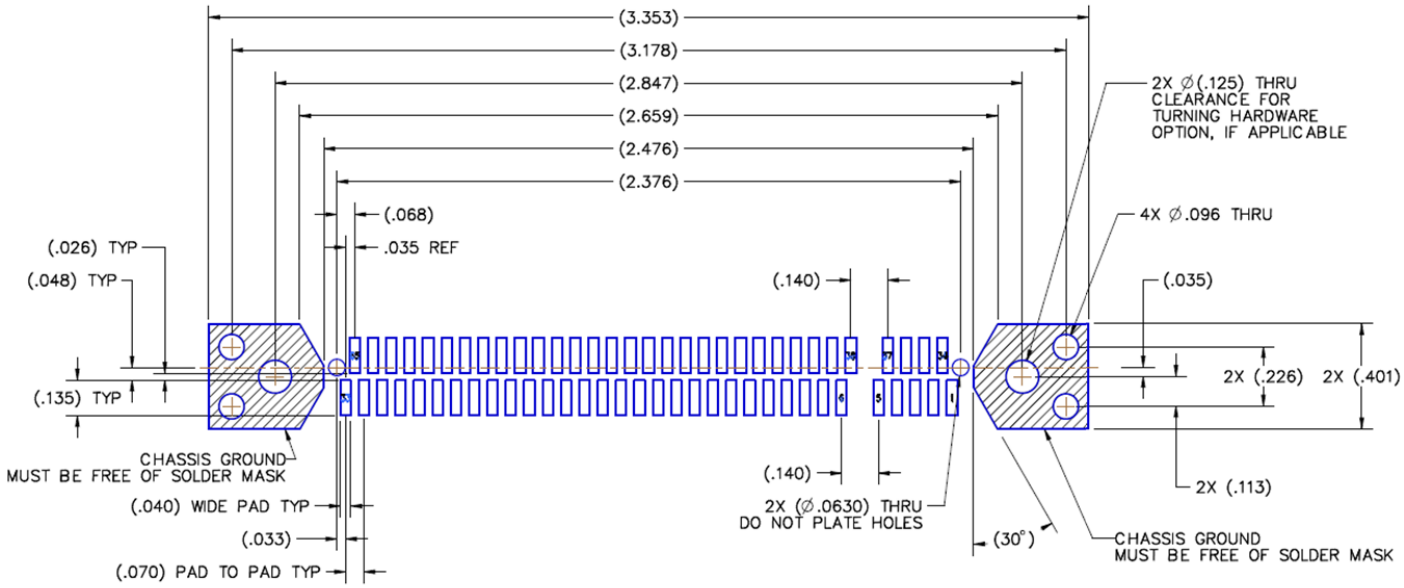


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

8X Sample with Left Polarization

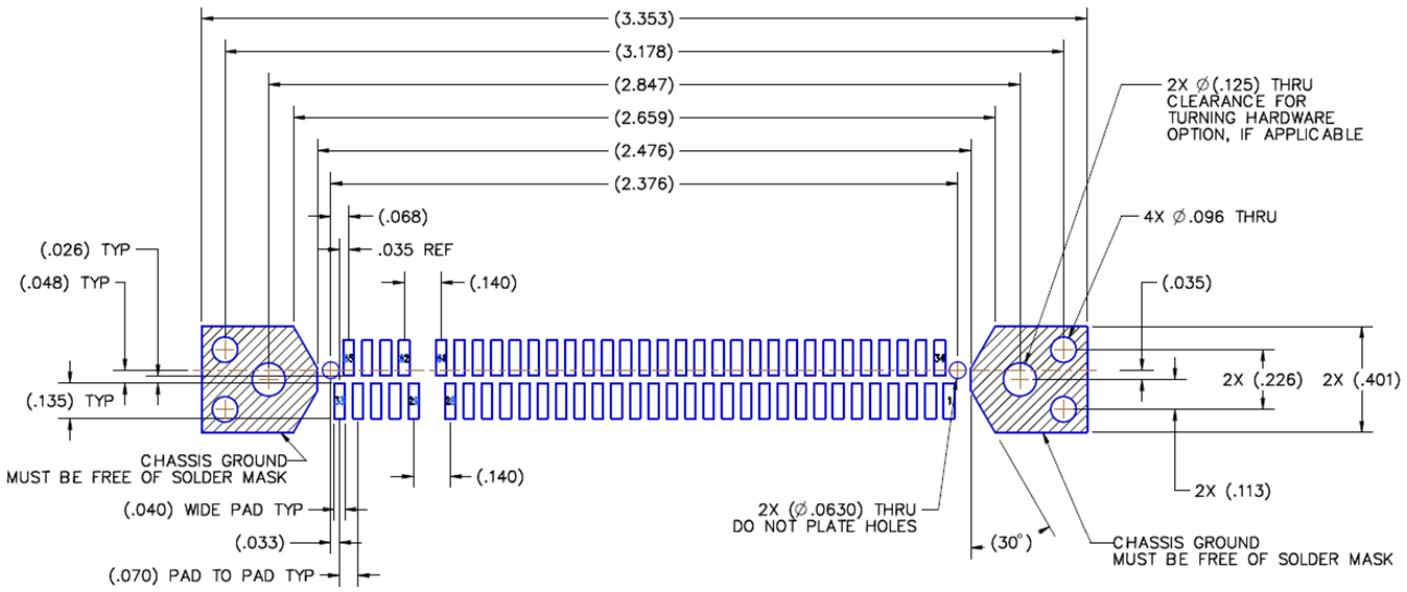


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (PLUG)

8X Sample with Right Polarization



NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

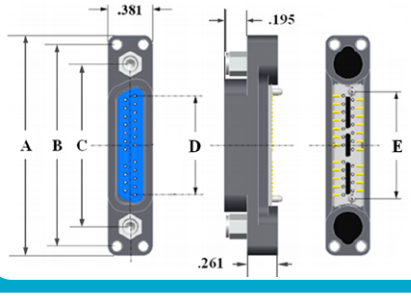
1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

microSI™

MLSI – Vertical (Female)

MLSI vertical board surface mount connectors are used in applications where signal integrity is desired. The connector interface controls the polarization of the connector. Comes with a variety of hardware options.

GENERAL DIMENSIONS



SIZE	A	B	C	D	E
1X	1.863	1.708	1.377	0.840	0.906
4X	2.493	2.338	2.007	1.470	1.536
8X	3.333	3.178	2.847	2.310	2.376

Sample Part Number Format: MLSI-04L-2000-478-2810

MLSI – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Vertical
(Female)
1.78 mm

SIZE & INTERFACE POLARIZATION*
01L – 1X Left (23 pins, 4 DP +9SB)
01R – 1X Right (23 pins, 4 DP +9SB)
04L – 4X Left (41 pins, 10 DP +9SB)
04R – 4X Right (41 pins, 10 DP +9SB)
08L – 8X Left (65 pins, 18 DP +9SB)
08R – 8X Right (65 pins, 18 DP +9SB)

STYLE
2000 – Female

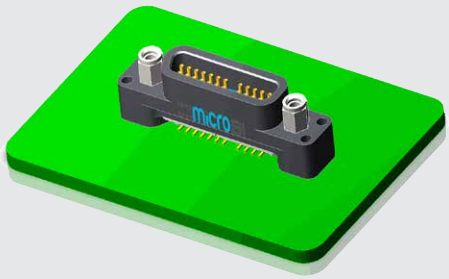
SOCKET TERMINATION (50 µ" Au Contact)
475 – Sn/Pb alloy ☒
478 – SAC305

BODY PLATING
2 – Electroless nickel
6 – Gold

HARDWARE
620 – Fixed jacknut
810 – Turning jackscrews, captivated**
NXX – Keying jacknuts***
JXX – Keying jackscrews***

High-Reliability Contact

MIL-DTL-83513



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

NOTES

1. All microSI females have fluorosilicone interfacial seals installed.

☒ Option not RoHS-compliant.

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. Polarization matches the angled side. Sidebands are on the non-angled side.

** Captivated hardware is factory-installed and non-removable.

*** Factory-installed and non-removable. Refer to "Keying Hardware Options" on page 61.

SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

1	Diff. Impedance, filtered to 79 ps (20-80%)	100 ohm
2	Diff. Insertion Loss	10 GHz @ -3 dB
3	Diff. Return Loss	7.5 GHz @ -10 dB
4	Intra-Pair	< 2 ps

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 or gold
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

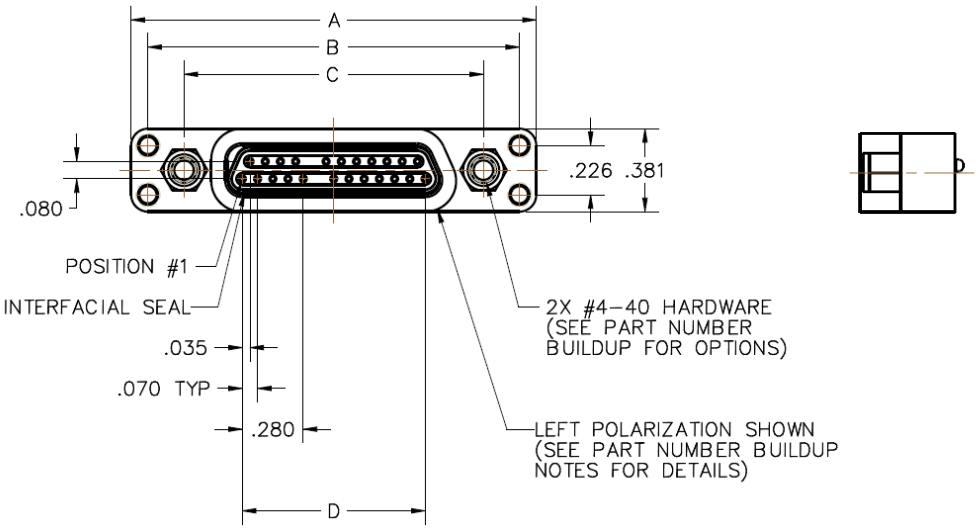
NOTE: AirBorn can manufacture special configurations to your exact specifications.

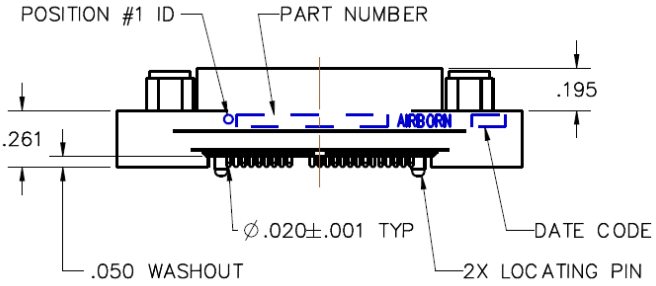
PERFORMANCE

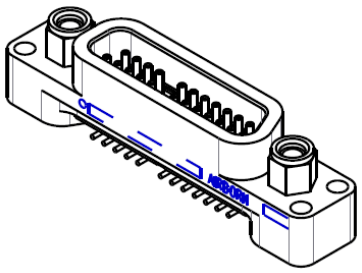
Contact Rating: . . . . . 3 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Maximum Working Voltage: . . . . . 200V, RMS, 60Hz
Insulation Resistance . . . . . 5,000 megohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Engaging Force: . . . . . 6.0 ounces maximum/contact
Contact Separating Force: . . . . . 0.5 ounces minimum/contact
Mating and Unmating Force: . . . . . 10 ounces maximum/contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

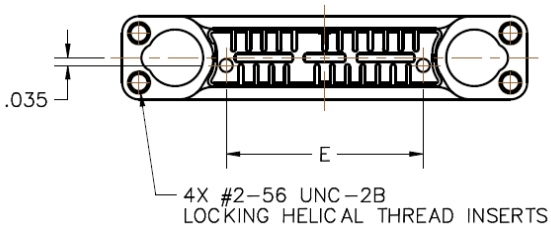
MLSI DIMENSIONS (RECEPTACLE)







ISOMETRIC VIEW
MLSI-01L-2000-475-2620
FOR REFERENCE ONLY

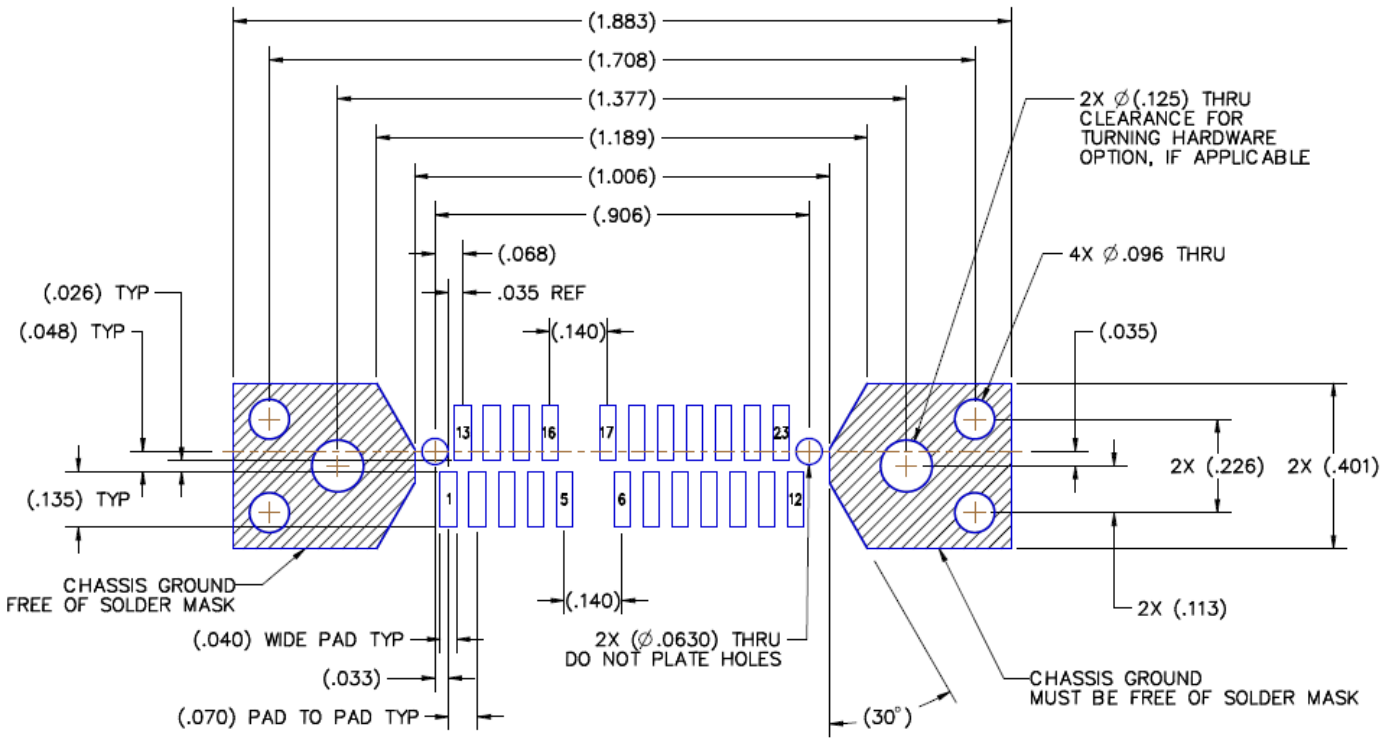


SIZE	A	B	C	D	E
1x	1.863	1.708	1.377	.840	.906
4x	2.493	2.338	2.007	1.470	1.536
8x	3.333	3.178	2.847	2.310	2.376

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

1X Sample with Left Polarization

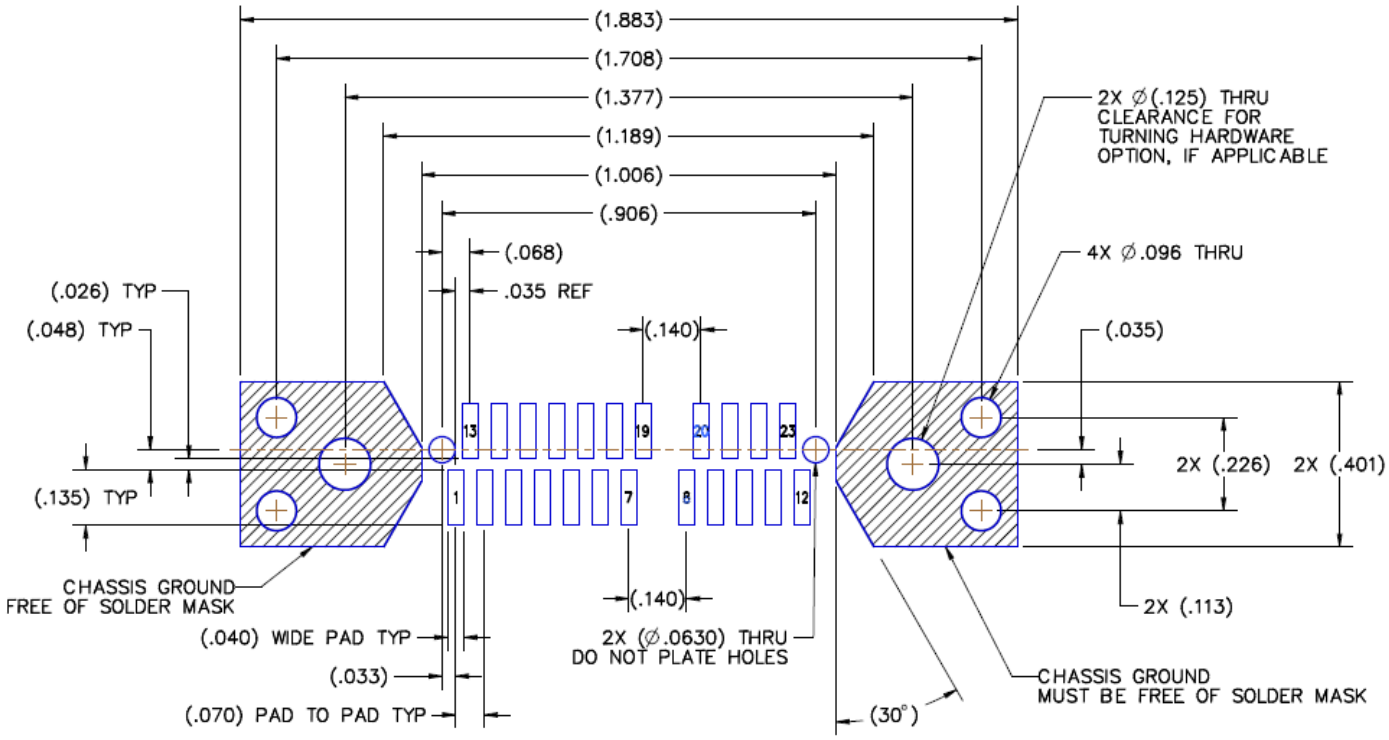


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

1X Sample with Right Polarization

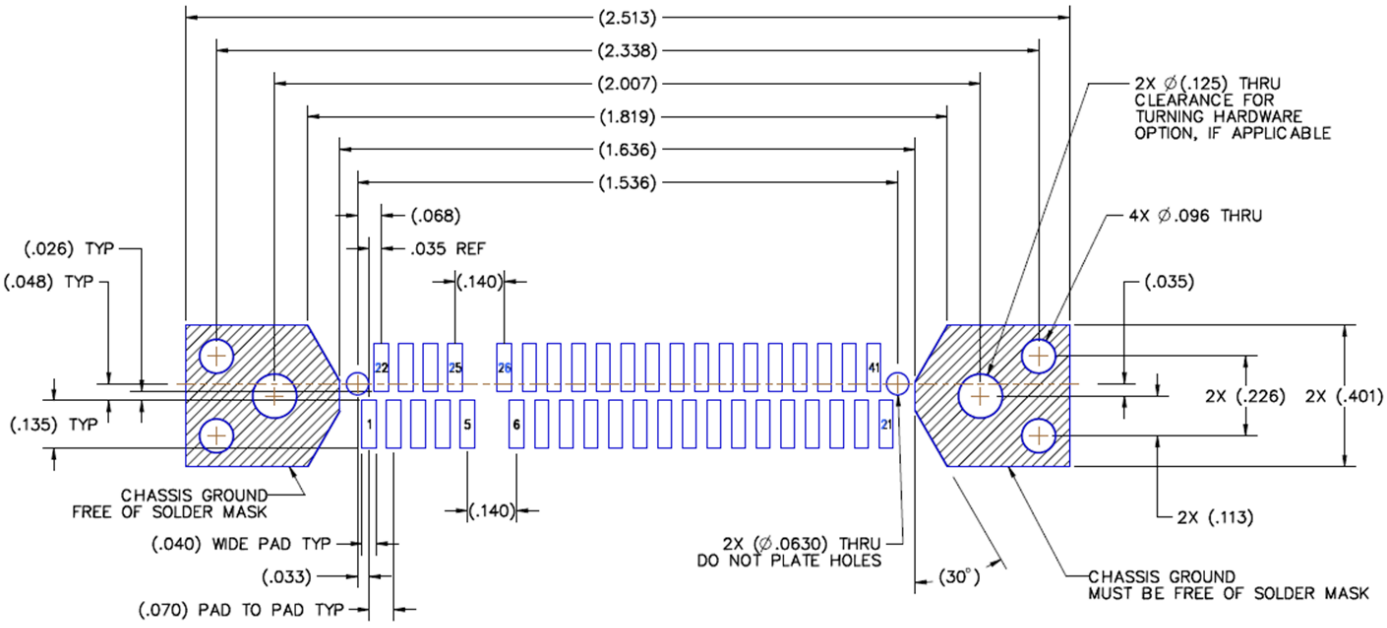


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

4X Sample with Left Polarization

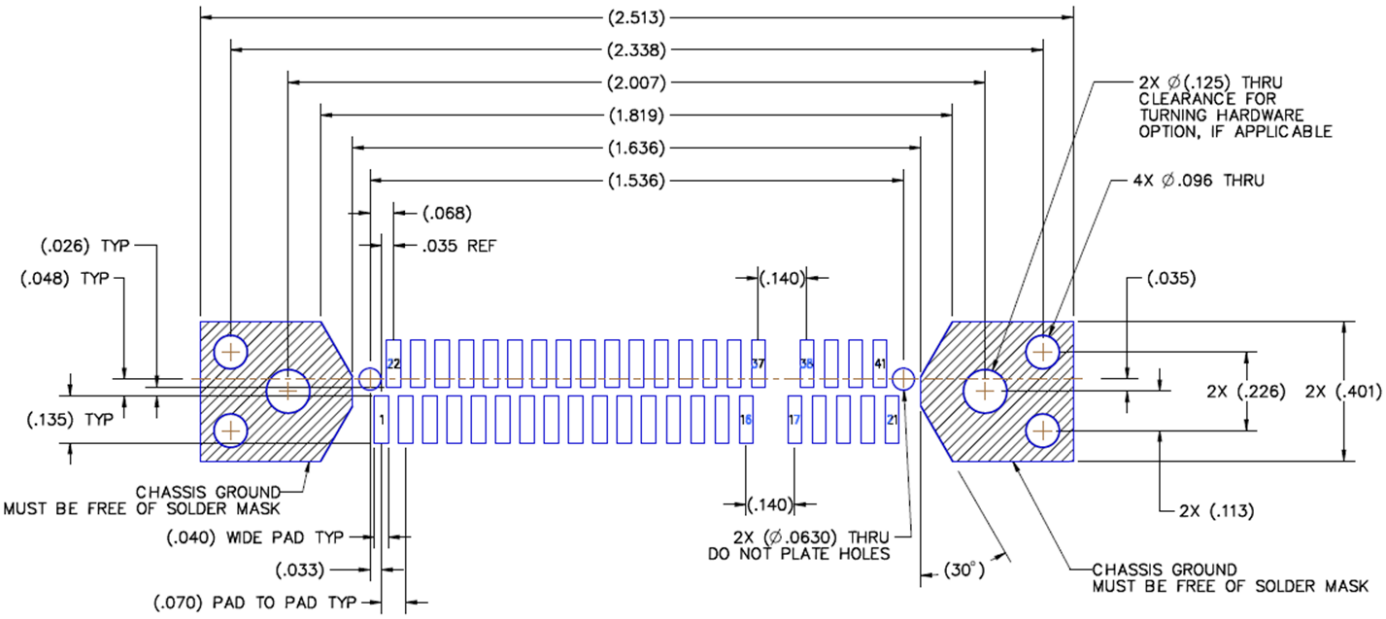


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

4X Sample with Right Polarization

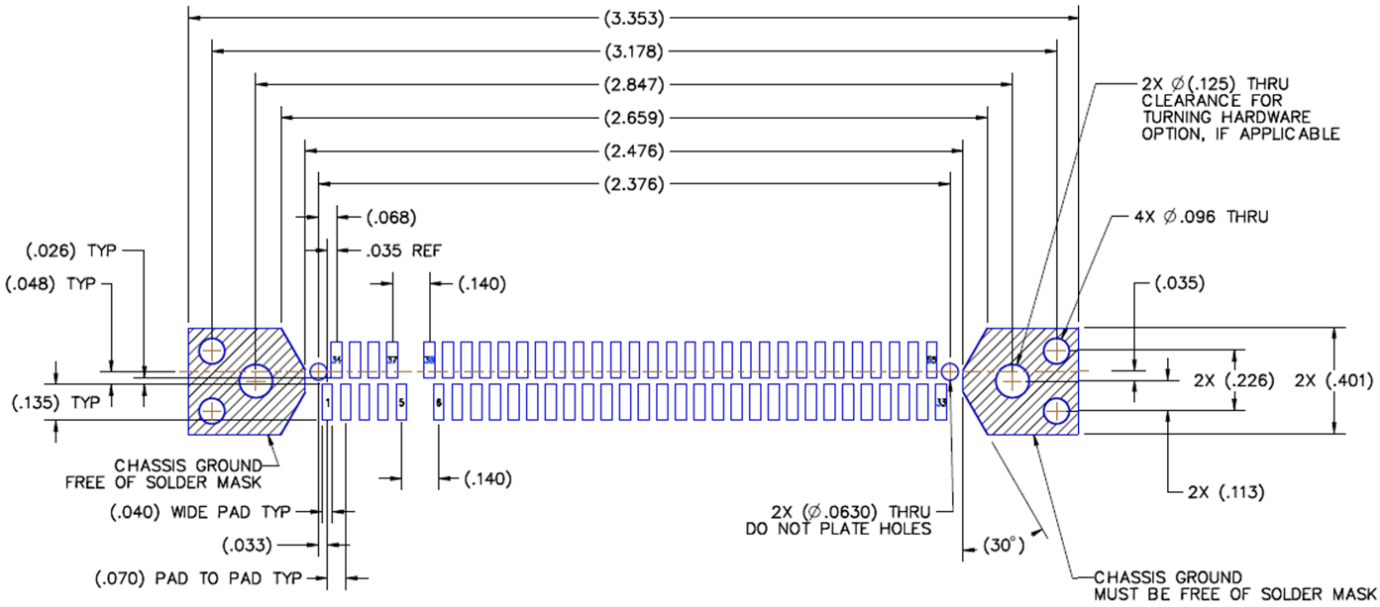


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

8X Sample with Left Polarization

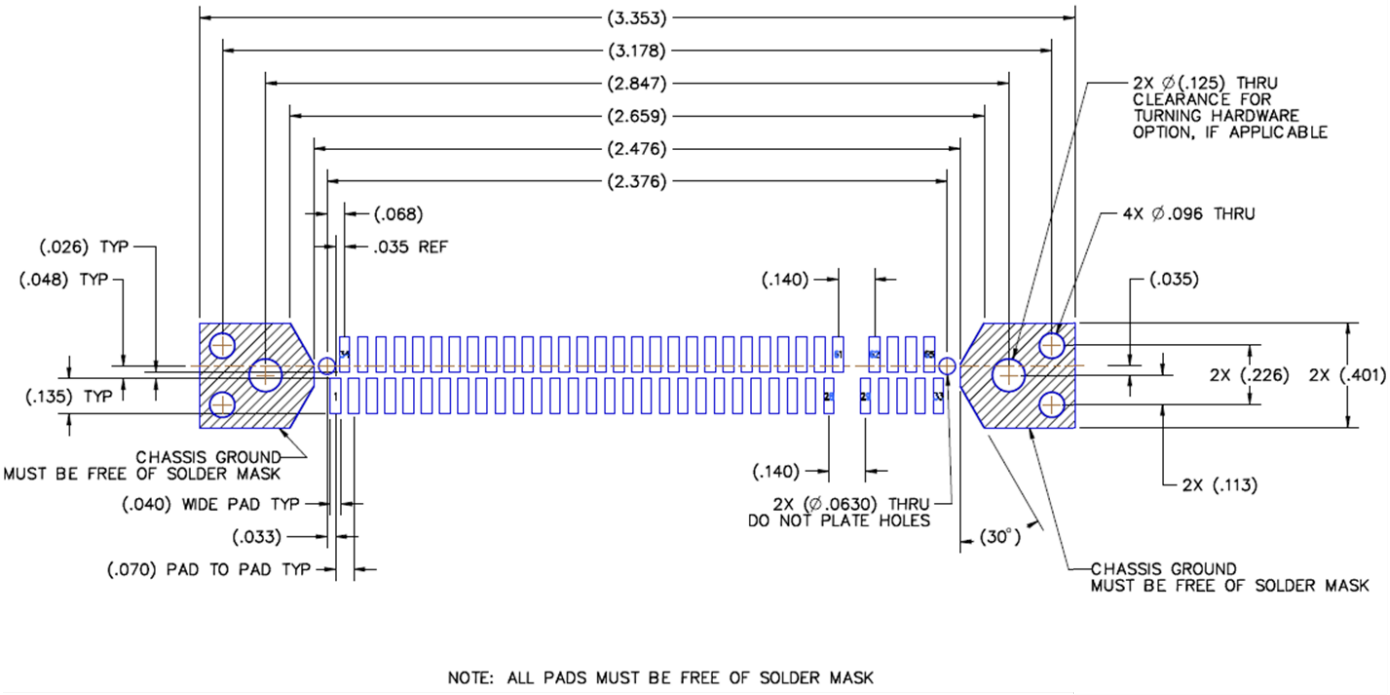


NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. See “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

MLSI RECOMMENDED PC BOARD LAYOUT (RECEPTACLE)

8X Sample with Right Polarization



NOTE: ALL PADS MUST BE FREE OF SOLDER MASK

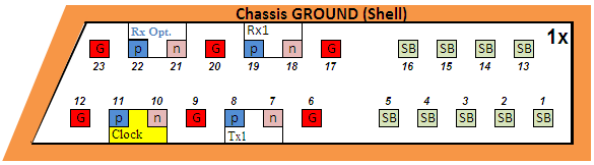
1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.
4. “Polarized Interface Pinouts” on page 59
5. See “Keying Hardware Options” on page 61

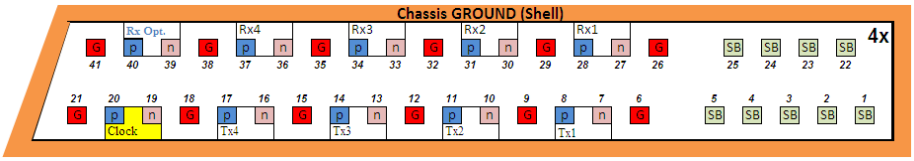
INTERFACE PINOUT, LEFT POLARIZATION

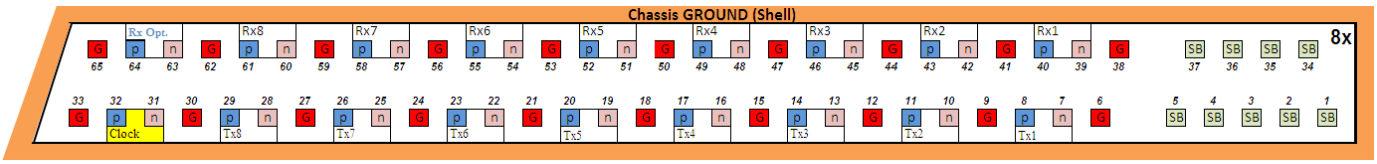
microSI

Plug

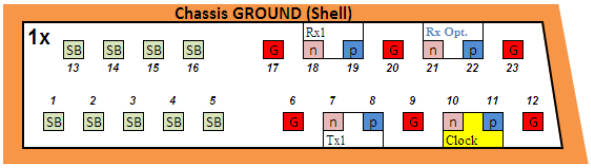
G	=	Ground
p	=	Positive
n	=	Negative
SB	=	Sideband

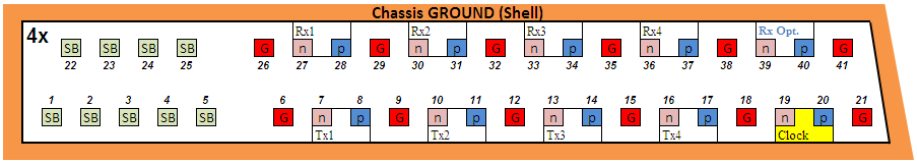


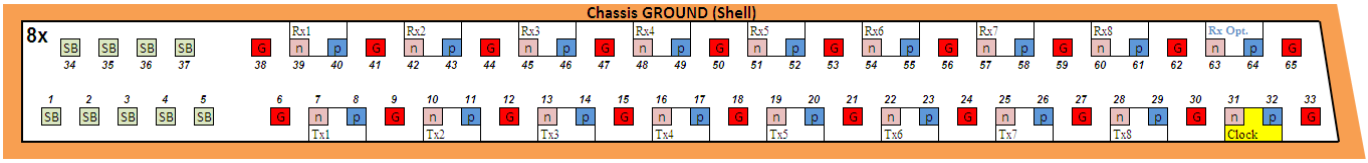




Receptacle







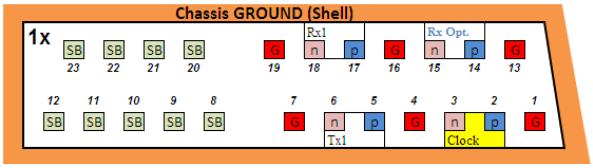
Polarization Mating:

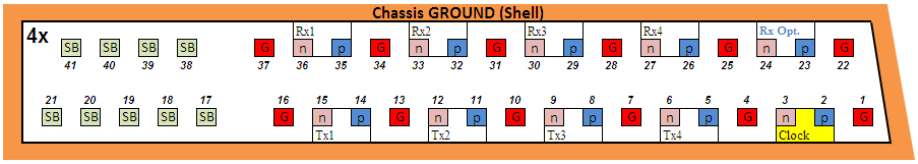
1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.

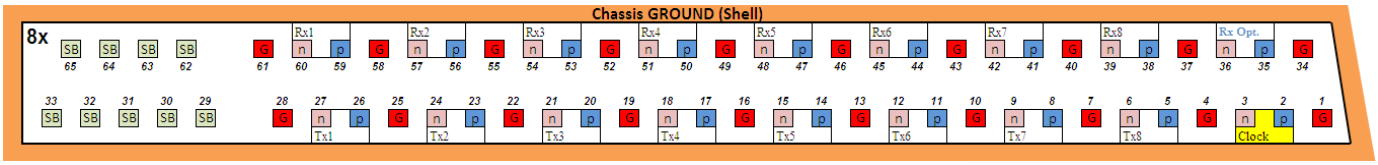
INTERFACE PINOUT, RIGHT POLARIZATION

microSI

Plug

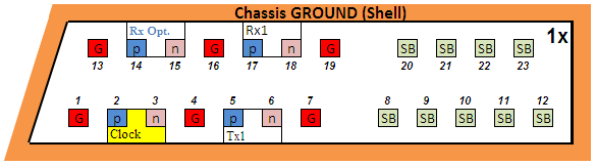


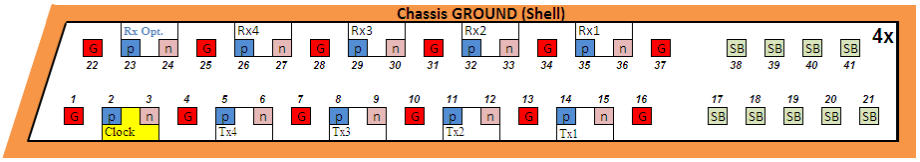


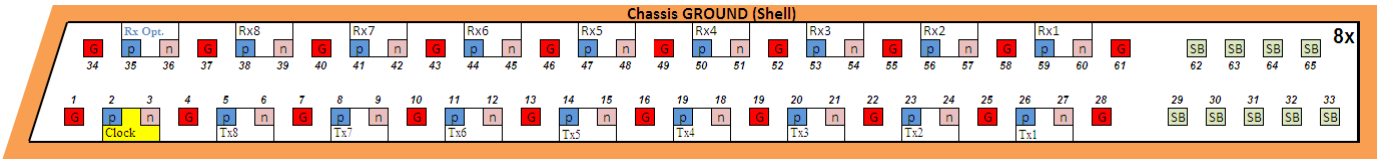


Receptacle

G	=	Ground
p	=	Positive
n	=	Negative
SB	=	Sideband





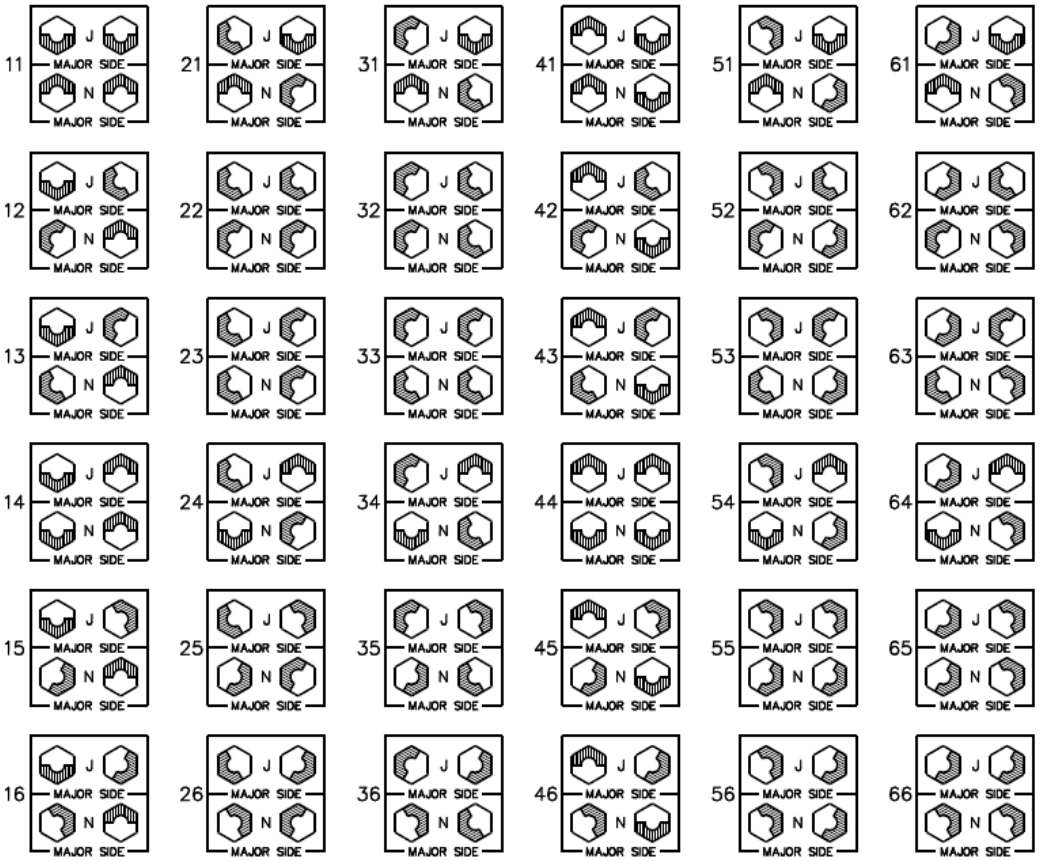


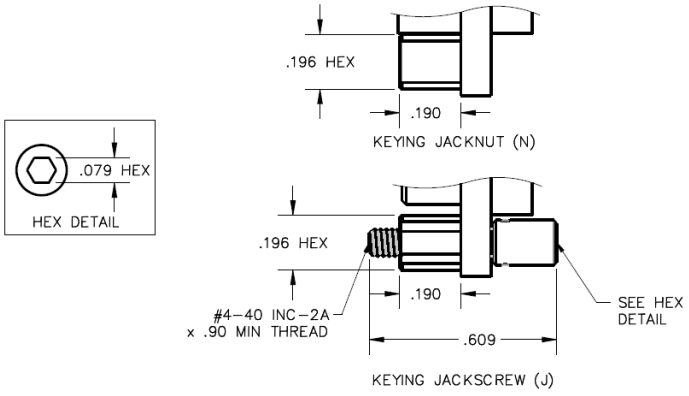
Polarization Mating:

1. A LEFT plug mates with a LEFT receptacle.
2. A RIGHT plug mates with a RIGHT receptacle.
3. Left-polarization connectors will not mate with right-polarization connectors.

POLARIZED KEYING HARDWARE OPTIONS (PLUG)

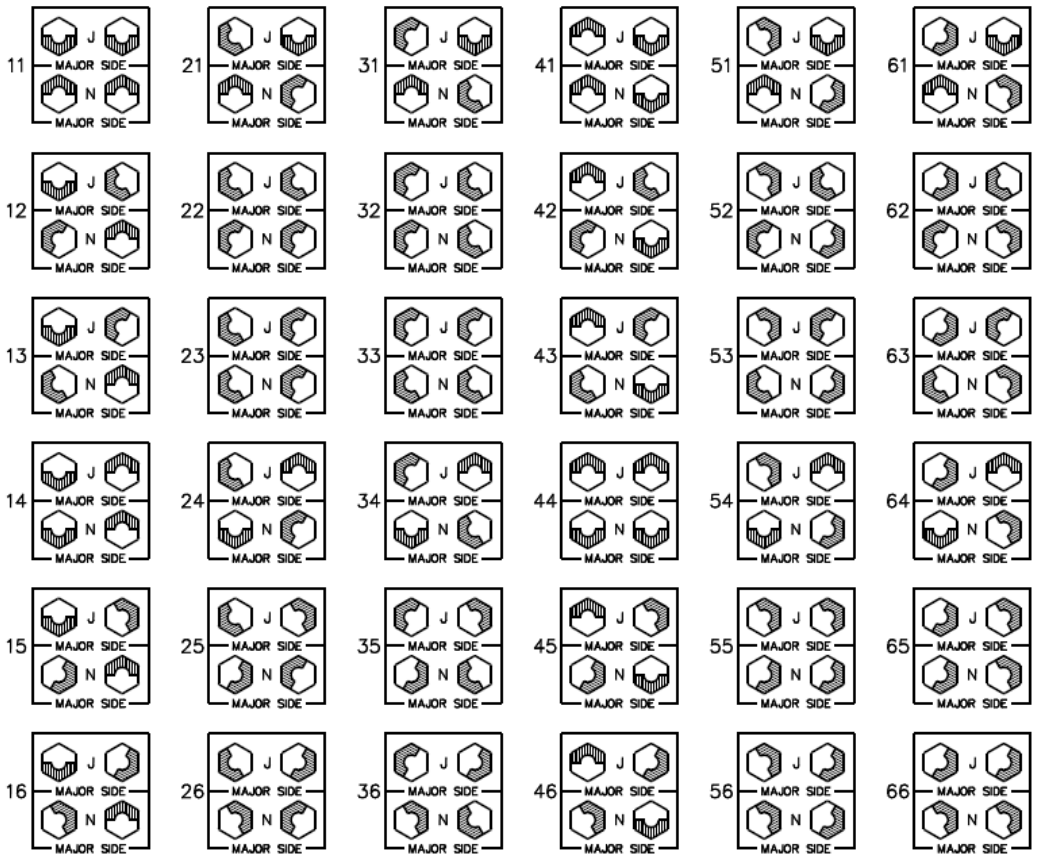
microSI

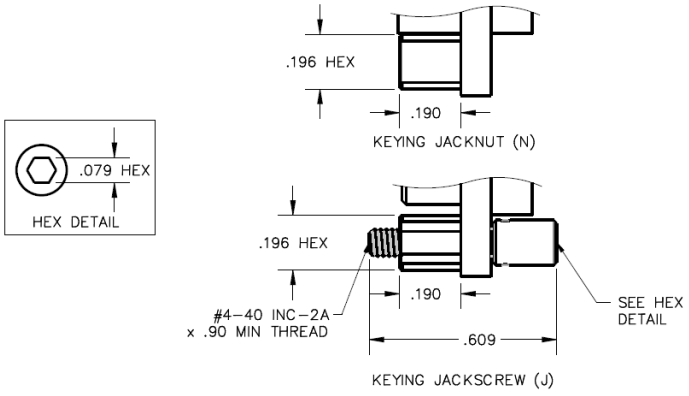




Select the appropriate two-digit number and include as the last two digits of the hardware code in the part number.
Keying hardware is factory-installed and non-removable.

POLARIZED KEYING HARDWARE OPTIONS (RECEPTACLE) microSI



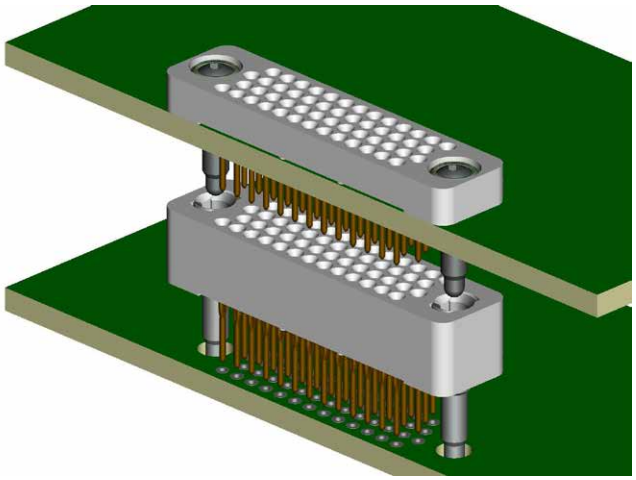


Select the appropriate two-digit number and include as the last two digits of the hardware code in the part number.
Keying hardware is factory-installed and non-removable.

RC™

The AirBorn stackable compliant connector family is one of AirBorn's solutions for high-density, board-to-board stacking applications. This connector family is available in 0.075" contact spacing and 100 Ω and 85 Ω differential serial buses.

- **Wide variety of standard pin/tail lengths accommodate any board-to-board spacing**
- **0.075" contact spacing**
- **Reliable "eye of the needle"-compliant section design eliminates soldering**
- **BeCu contacts (special high-conductivity, high-temperature alloy)**
- **Very robust socket contact (low-stress design)**
- **Individually repairable contacts**



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RC™

RC422 - Full Profile Board-to-Board Stackable Connector

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used in board-to-board stacking applications.

DIMENSIONS

TABLE 1

SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675
252	5.214	4.984	4.650
300	6.114	5.884	5.550

Tolerances: ± 0.010″

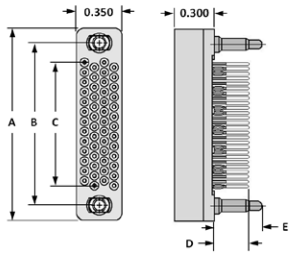


TABLE 2

CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195
20	0.270	0.370
21	0.300	0.400
22	0.400	0.500
23	0.500	0.600
24	0.700	0.800
25	0.800	0.900
26	0.900	1.000
27	0.600	0.700
28	1.000	1.100

Sample Part Number Format: RC422-052-211-4000

RC422 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075" Spacing

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns
200 – 4 Rows/50 Columns
252 – 4 Rows/63 Columns
300 – 4 Rows/75 Columns

CONTACT
10 – 0.095" Long
20 – 0.270" Long
21 – 0.300" Long
22 – 0.400" Long
23 – 0.500" Long
24 – 0.700" Long
25 – 0.800" Long
26 – 0.900" Long
27 – 0.600" Long
28 – 1.000" Long
30 – 0.270" Long
31 – 0.300" Long
32 – 0.400" Long
33 – 0.500" Long
34 – 0.700" Long
35 – 0.800" Long
36 – 0.900" Long
37 – 0.600" Long
38 – 1.000" Long

PLATING
1 – 50 µ" Au
3 – 30 µ" Au
7 – 50 µ" Au / 20 µ" Au
9 – 30 µ" Au / 20 µ" Au

HARDWARE
30 – 0.195" Long (use with #10 contact)
39 – 0.370" Long (use with #20 contact)
40 – 0.400" Long (use with #21 contact)
41 – 0.500" Long (use with #22 contact)
42 – 0.600" Long (use with #23 contact)
43 – 0.800" Long (use with #24 contact)
44 – 0.900" Long (use with #25 contact)
45 – 1.000" Long (use with #26 contact)
46 – 0.700" Long (use with #27 contact)
47 – 1.100" Long (use with #28 contact)

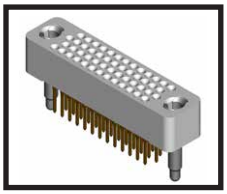
TYPE
00 – None
FT – Female thread
MT – Male thread
(#39 hardware, only)

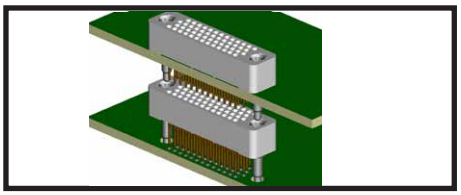
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300" and, when used with the -20 or -30 (0.270") contact, the mounting is flush (board-bottom-mounted to connector top). This board-bottom to connector-top spacing can be modified based on the contact selected by approximately the difference in pin length (see Table 2 in top window).





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	5.0 GHz @ -3 dB
2	Diff. Return Loss	2.0 GHz @ -8 dB
3	NEXT	4.0 GHz @ -25 dB
4	FEXT	4.0 GHz @ -35 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A582, passivated per ASTM 967
Guide Pin/Socket: . . . . . BeCu per ASTM B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length-dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246" dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226" dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb (10.21 Kg) max. per contact
Compliant Removal Force: . . . . . 4.5 lb (2.04 Kg) min. per contact

RC™

RC422 - Bottom-of-Stack Board Mount Connector

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used at the bottom of the stack in board-to-board stacking applications.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675
252	5.214	4.984	4.650
300	6.114	5.884	5.550

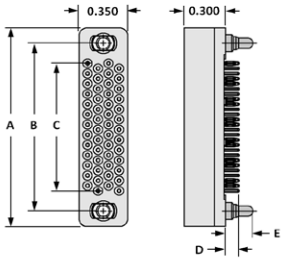


TABLE 2		
CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195

Tolerances: ± 0.010″

Sample Part Number Format: RC422-052-101-3000

RC422 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075" Spacing

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns
200 – 4 Rows/50 Columns
252 – 4 Rows/63 Columns
300 – 4 Rows/75 Columns

CONTACT
10 - 0.095" Long

PLATING
1 – 50 µ" Au
3 – 30 µ" Au
7 – 50 µ" Au / 20 µ" Au
9 – 30 µ" Au / 20 µ" Au

HARDWARE
30 - 0.195" Long
(use with #10 contact)

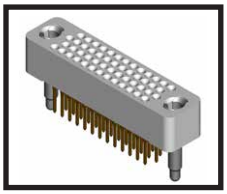
TYPE
00 – None
FT – Female thread

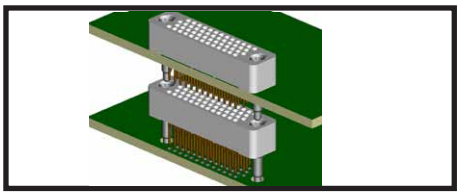
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300" and, when used with the -20 or -30 (0.270") contact, the mounting is flush (board-bottom-mounted to connector top). This board-bottom to connector-top spacing can be modified based on the contact selected by approximately the difference in pin length (see Table 2 in top window).





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	5.0 GHz @ -3 dB
2	Diff. Return Loss	2.0 GHz @ -8 dB
3	NEXT	4.0 GHz @ -25 dB
4	FEXT	4.0 GHz @ -35 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A582, passivated per ASTM 967
Guide Pin/Socket: . . . . . BeCu per ASTM B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length-dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246" dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226" dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb (10.21 Kg) max. per contact
Compliant Removal Force: . . . . . 4.5 lb (2.04 Kg) min. per contact

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RC™

RC442 - Low Profile Board-to-Board Stackable Connector

Contact spacing: 0.075″ (1.91 mm)

A low profile bodied, high-density press-fit connector. Uses a patented female/compliant/male stacking contact system. Used in board-to-board stacking applications.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675
252	5.214	4.984	4.650
300	6.114	5.884	5.550

Tolerances: ± 0.010″

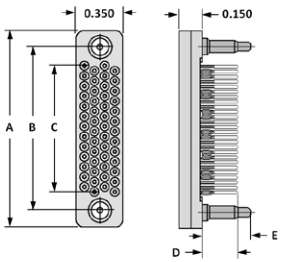


TABLE 2		
CONTACT SELECTION	CONTACT D	HARDWARE E
30	0.270	0.370
31	0.300	0.400
32	0.400	0.500
33	0.500	0.600
34	0.700	0.800
35	0.800	0.900
36	0.900	1.000
37	0.600	0.700
38	1.000	1.100

Sample Part Number Format: RC442-052-311-4000

RC442 – [ ] – [ ] [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Low-Profile
4 Rows
0.075″ Spacing

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns
200 – 4 Rows/50 Columns
252 – 4 Rows/63 Columns
300 – 4 Rows/75 Columns

CONTACT
30 – 0.270″ Long
31 – 0.300″ Long
32 – 0.400″ Long
33 – 0.500″ Long
34 – 0.700″ Long
35 – 0.800″ Long
36 – 0.900″ Long
37 – 0.600″ Long
38 – 1.000″ Long

PLATING
1 – 50 µ″ Au
3 – 30 µ″ Au
7 – 50 µ″ Au / 20 µ″ Au
9 – 30 µ″ Au / 20 µ″ Au

HARDWARE
39 – 0.370″ Long (use with #30 contact)
40 – 0.400″ Long (use with #31 contact)
41 – 0.500″ Long (use with #32 contact)
42 – 0.600″ Long (use with #33 contact)
43 – 0.800″ Long (use with #34 contact)
44 – 0.900″ Long (use with #35 contact)
45 – 1.000″ Long (use with #36 contact)
46 – 0.700″ Long (use with #37 contact)
47 – 1.100″ Long (use with #38 contact)

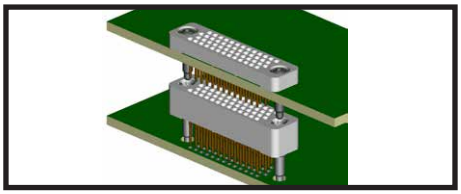
TYPE
00 – None

VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.150″ but the functional spacing (the bottom surface of the board, on which the connector is mounted, to the top of the connector below it) can be modified based on the contact/pin length selected (see Table 2 in top window).



SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	5.0 GHz @ -3 dB
2	Diff. Return Loss	2.0 GHz @ -8 dB
3	NEXT	4.0 GHz @ -25 dB
4	FEXT	4.0 GHz @ -35 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A582, passivated per ASTM 967
Guide Pin/Socket: . . . . . BeCu per ASTM B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246″ dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226″ dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb (10.21 Kg) max. per contact
Compliant Removal Force: . . . . . 4.5 lb (2.04 Kg) min. per contact

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RC™

RC4B2 - Bottom-of-Stack Cable Mating Connector (Female)

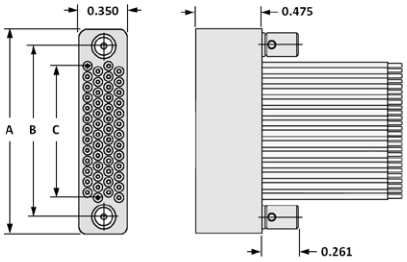
Contact spacing: 0.075″ (1.91 mm)

A full profile bodied female cable connector for use at the bottom of an RC board stack application.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775

Tolerances: ± 0.010″



Sample Part Number Format: RC4B2-052-281-62ED

RC4B2 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075” Spacing
Bottom-of-Stack
Cable Female

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns

CONTACT
28 – Socket, crimp, 26-24 AWG
29 – Socket, crimp, 30-28 AWG

PLATING
1 – 50 µ” Au
3 – 30 µ” Au

HARDWARE
00 – None
58 – Guide socket, non-polarized
62 – Jacksocket, hex, turning

TYPE
00 – None
XX – See Wire Codes

VARIATION
Blank – None
XXX – Consult factory

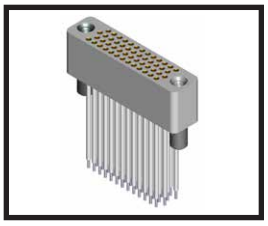
WIRE CODES

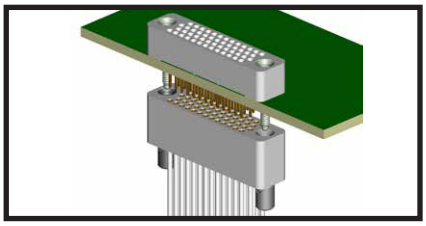
TYPE and COLOR			LENGTH	
Code	Size	Color	Code	Length (+1"/-0")
Mil-W-16878/4				
C	24 awg	Ten repeating	A	6"
D	24 awg	White	B	12"
E	26 awg	Ten repeating	C	18"
F	26 awg	White	D	24"
G	28 awg	Ten repeating	E	30"
H	28 awg	White	F	36"
J	30 awg	Ten repeating	G	42"
K	30 awg	White	H	48"
			J	54"
Mil-W-22759/33			K	60"
N	24 awg	Ten repeating	L	66"
P	24 awg	White	M	72"
R	26 awg	Ten repeating	N	84"
S	26 awg	White	P	96"
T	28 awg	Ten repeating	R	108"
U	28 awg	White	S	120"
V	30 awg	Ten repeating		
W	30 awg	White		

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

MATED HEIGHT

Connector body height is 0.475” and is designed to mount flush to the board bottom of the mating connector.





NOTES

1. The RC4B2 connector is designed to mate with an RC422 connector using contact option -21 (0.270” long) and -39MT hardware. This contact length and hardware combination assures proper connector mating when using boards having a thickness of 0.058”–0.125”.
2. When guide hardware is required on the RC4B2 connector, use hardware option -3900 on the mating connector.
3. When jacksocket hardware is required on the RC4B2 connector, use hardware option -39MT on the mating connector.

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226” dia. test pin

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RC™

RC4C2 - Top-of-Stack Cable Mating Connector (Male)

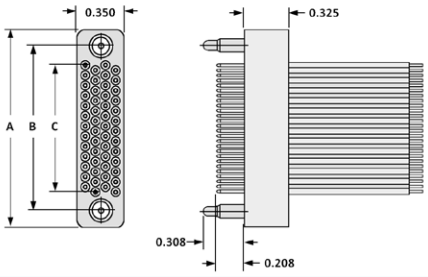
Contact spacing: 0.075″ (1.91 mm)

A full profile bodied male pre-wired cable connector for use at the top of an RC board stack application.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775

Tolerances: ± 0.010″



Sample Part Number Format: RC4C2-052-181-57ED

RC4C2 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075” Spacing
Top-of-Stack
Cable Mate

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns

CONTACT
18 – Pin, crimp, 26-24 AWG
19 – Pin, crimp, 30-28 AWG

PLATING
1 – 50 µ” Au
3 – 30 µ” Au

HARDWARE
00 – None
57 – Guide pin, non-polarized
61 – Jackscrew, hex, turning*

TYPE
XX – See Wire Codes

VARIATION
Blank – None
XXX – Consult factory

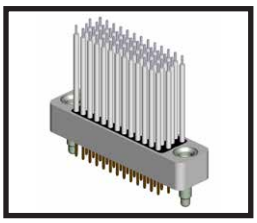
WIRE CODES

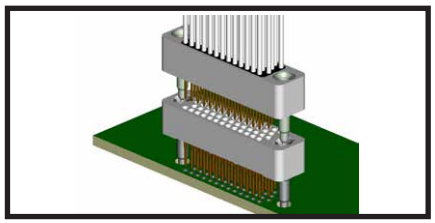
TYPE and COLOR			LENGTH	
Code	Size	Color	Code	Length (+1”/-0”)
Mil-W-16878/4				
C	24 awg	Ten repeating	A	6”
D	24 awg	White	B	12”
E	26 awg	Ten repeating	C	18”
F	26 awg	White	D	24”
G	28 awg	Ten repeating	E	30”
H	28 awg	White	F	36”
J	30 awg	Ten repeating	G	42”
K	30 awg	White	H	48”
			J	54”
Mil-W-22759/33			K	60”
N	24 awg	Ten repeating	L	66”
P	24 awg	White	M	72”
R	26 awg	Ten repeating	N	84”
S	26 awg	White	P	96”
T	28 awg	Ten repeating	R	108”
U	28 awg	White	S	120”
V	30 awg	Ten repeating		
W	30 awg	White		

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

MATED HEIGHT

Connector body height is 0.325” and is designed to mount flush to the mating connector.





NOTES

* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226” dia. test pin

RC™

RC4C2 - Top-of-Stack Flex Circuit Mating Connector (Male)

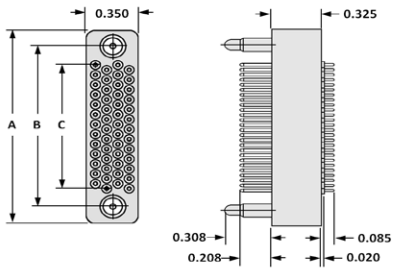
Contact spacing: 0.075″ (1.91 mm)

A full profile bodied flex-circuit-ready male connector for use at the top of an RC board stack application.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775

Tolerances: ± 0.010″



Sample Part Number Format: RC4C2-052-151-5700

RC4C2 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075” Spacing
Top-of-Stack
Cable Mate

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns

CONTACT
15 – Pin, flex circuit

PLATING
1 – 50 µ” Au
3 – 30 µ” Au

HARDWARE
00 – None
57 – Guide pin, non-polarized
61 – Jackscrew, hex, turning*

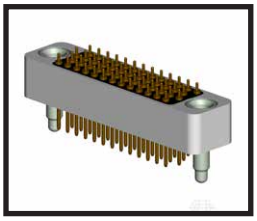
TYPE
00 – None

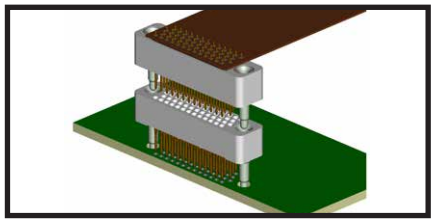
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

Connector body height is 0.325” and is designed to mount flush to the mating connector.





NOTES

* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226” dia. test pin

RC™

RC4C2 - Top-of-Stack Solder Cup Cable Mating Connector (Male)

Contact spacing: 0.075" (1.91 mm)

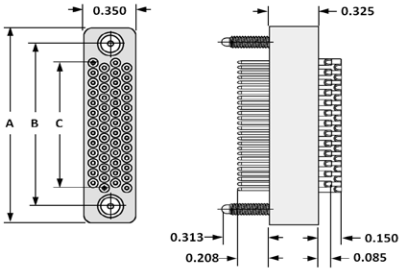
A full profile bodied male wire-ready connector for use at the top of an RC board stack application.

DIMENSIONS

TABLE 1

SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775

Tolerances: ± 0.010"



Sample Part Number Format: RC4C2-052-111-6100

RC4C2 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075" Spacing
Top-of-Stack
Cable Mate

CONFIGURATION
028 – 4 Rows/7 Columns
052 – 4 Rows/13 Columns
076 – 4 Rows/19 Columns
100 – 4 Rows/25 Columns
128 – 4 Rows/32 Columns
152 – 4 Rows/38 Columns

CONTACT
11 – Pin, solder cup

PLATING
1 – 50 µ" Au
3 – 30 µ" Au

HARDWARE
00 – None
57 – Guide pin, non-polarized
61 – Jackscrew, hex, turning*

TYPE
00 – None

VARIATION
Blank – None
XXX – Consult factory

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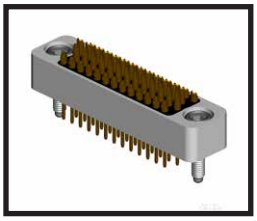
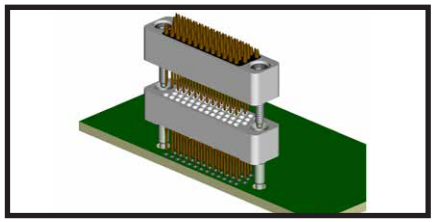
MATED HEIGHT

Connector body height is 0.325" and is designed to mount flush to the mating connector.





NOTES

* To use the -61 jackscrew hardware option, the fixed jacknut hardware (-XXMT) must be in place on the mating board connector.

MATERIALS and FINISHES

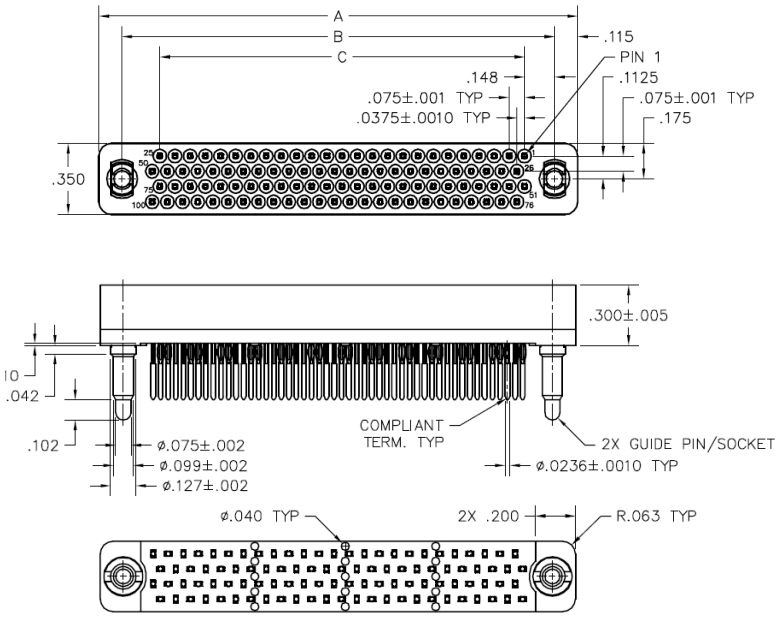
Contact: . . . . . BeCu per ASTM B196 or B197 (BeCu alloy 172 or 173)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A484/A484M and ASTM A582/A582M, passivated per SAE AMS-2700

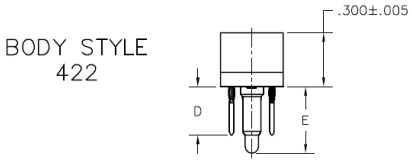
NOTE: AirBorn can manufacture special configurations to your exact specifications.

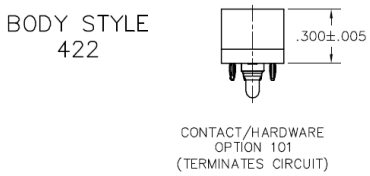
PERFORMANCE

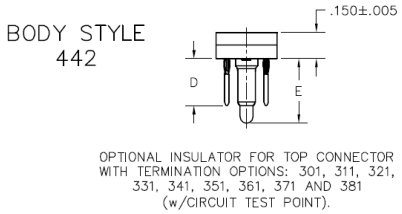
Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz (113 g) max. w/0.0246" dia. test pin
Contact Separation Force: . . . . . 0.5 oz (14 g) min. w/0.0226" dia. test pin

RC 4-ROW DIMENSIONS









DIMENSIONS			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675
252	5.214	4.984	4.650
300	6.114	5.884	5.500

TABLE 1		
CONTACT TERMINATION	CONTACT D	HARDWARE E
201, 301	0.270	0.370
211, 311	0.300	0.400
221, 321	0.400	0.500
231, 331	0.500	0.600
241, 341	0.700	0.800
251, 351	0.800	0.900
261, 361	0.900	1.000
271, 371	0.600	0.700
281, 381	1.000	1.100
101	0.095	0.195

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

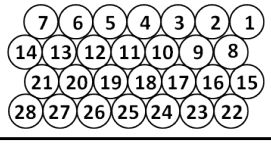
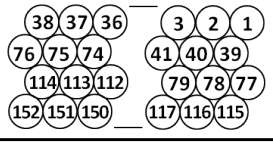
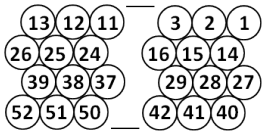
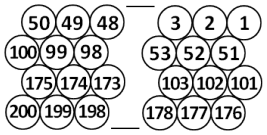
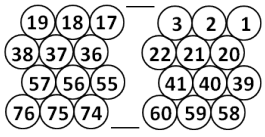
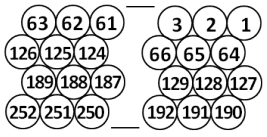
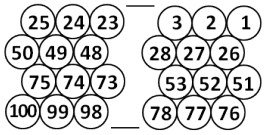
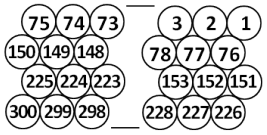
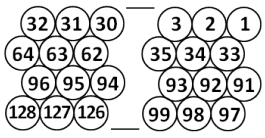
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

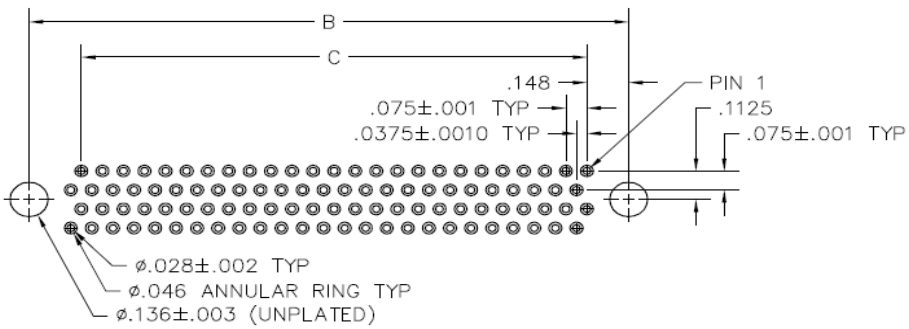
Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RC 4-ROW DRAWINGS

Board Footprint and Dimensions

SIZE	CONTACT ID	SIZE	CONTACT ID
28		152	
52		200	
76		252	
100		300	
128			

DIMENSIONS			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675
252	5.214	4.984	4.650
300	6.114	5.884	5.500



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

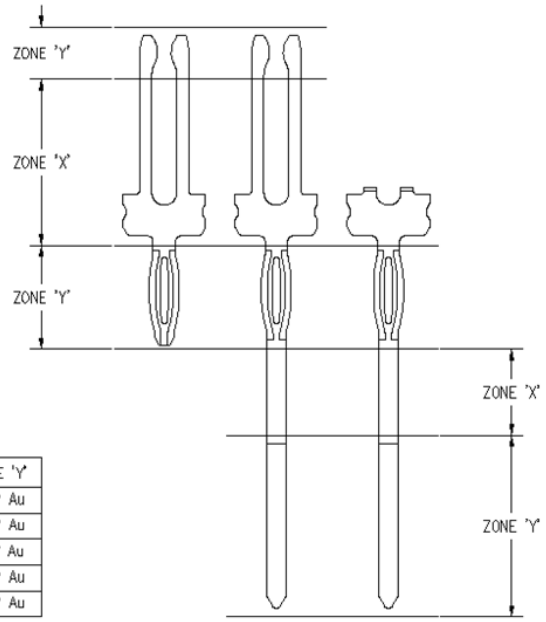
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RC 4-ROW DIMENSIONS

Plating Options



PLATING OPTIONS	ZONE 'X'	ZONE 'Y'
1	50µ" Au	50µ" Au
3	30µ" Au	30µ" Au
5	10µ" Au	10µ" Au
7	10µ" Au	50µ" Au
9	10µ" Au	30µ" Au

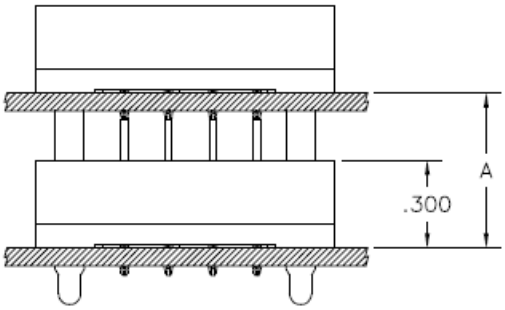
Determining the Required Temination Lead Length

To calculate the required termination lead length, use the example below. Measurements listed are in inches.

Dimension A = 0.720
0.720 – 0.300 (insulator height) = 0.420
0.420 + 0.114 (minimum pin engagement) = 0.534
0.420 + 0.214 (maximum pin engagement) = 0.634

In this example, the termination option to choose is 0.600 lead length.

The contact termination option will be a length that falls between the calculated numbers resulting from using the minimum and maximum pin engagement.

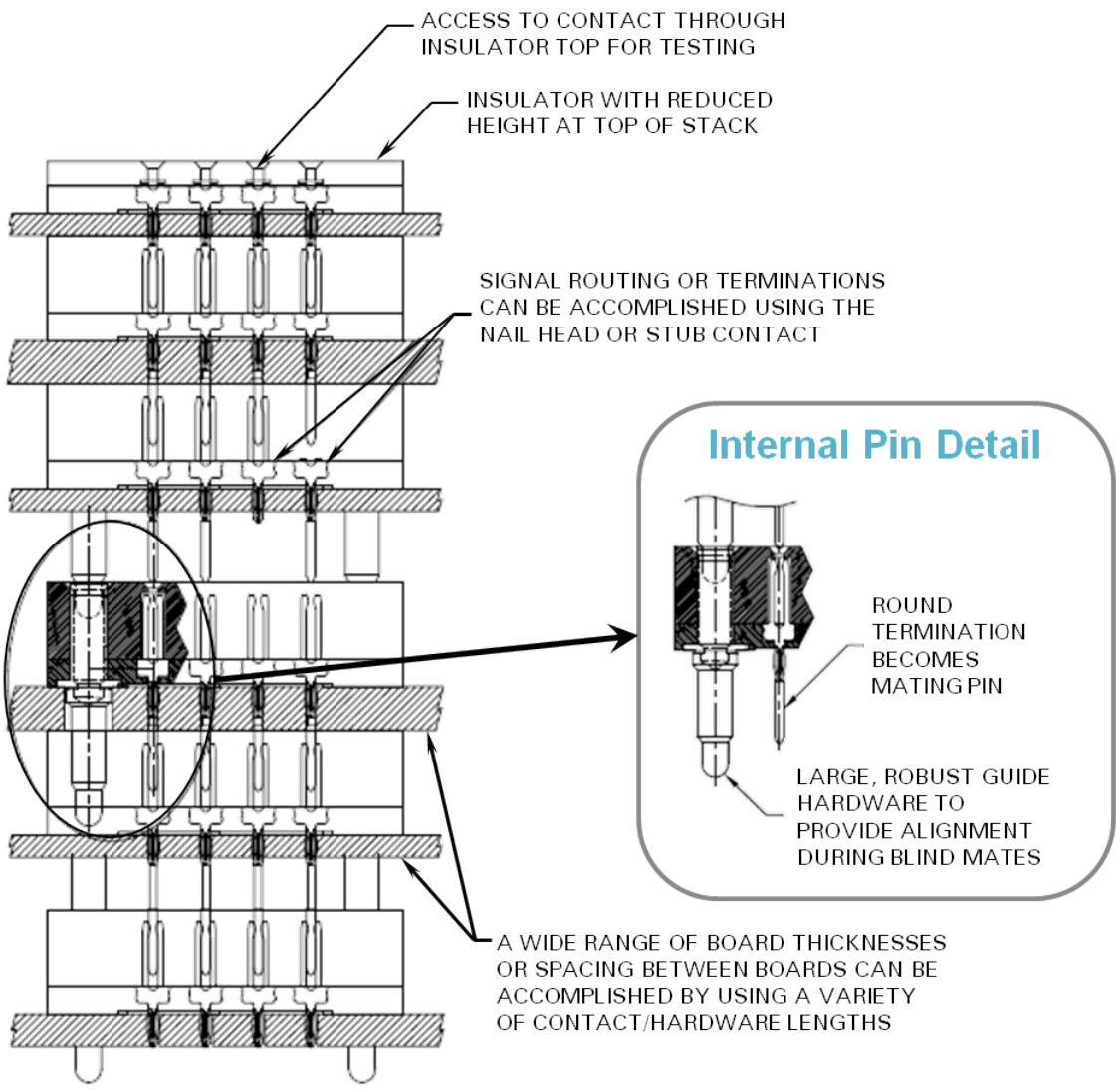


PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper
Board thickness: 0.058" minimum
Drilled hole: Ø 0.033"
Copper plating thickness: 0.0020"
Tin-lead plating thickness: 0.0005"
Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)

RC 4-ROW DRAWINGS

Stacking Detail



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

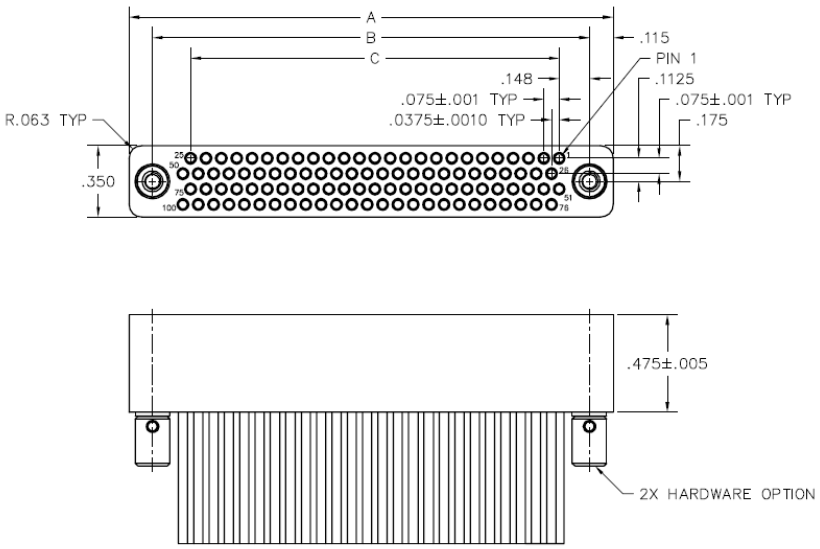
Drilled hole: Ø 0.033”

Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

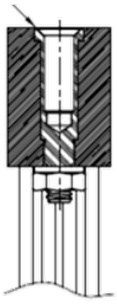
Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RC 4-ROW, BOTTOM-COMPLIANT DIMENSIONS



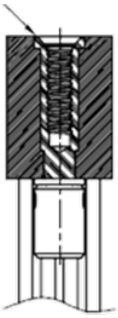
DIMENSIONS			
SIZE	A	B	C
28	1.014	0.784	0.450
52	1.464	1.234	0.900
76	1.914	1.684	1.350
100	2.364	2.134	1.800
128	2.889	2.659	2.325
152	3.339	3.109	2.775
200	4.239	4.009	3.675

GUIDE SOCKET



HARDWARE STYLE 58

#2-56 JACKSOCKET

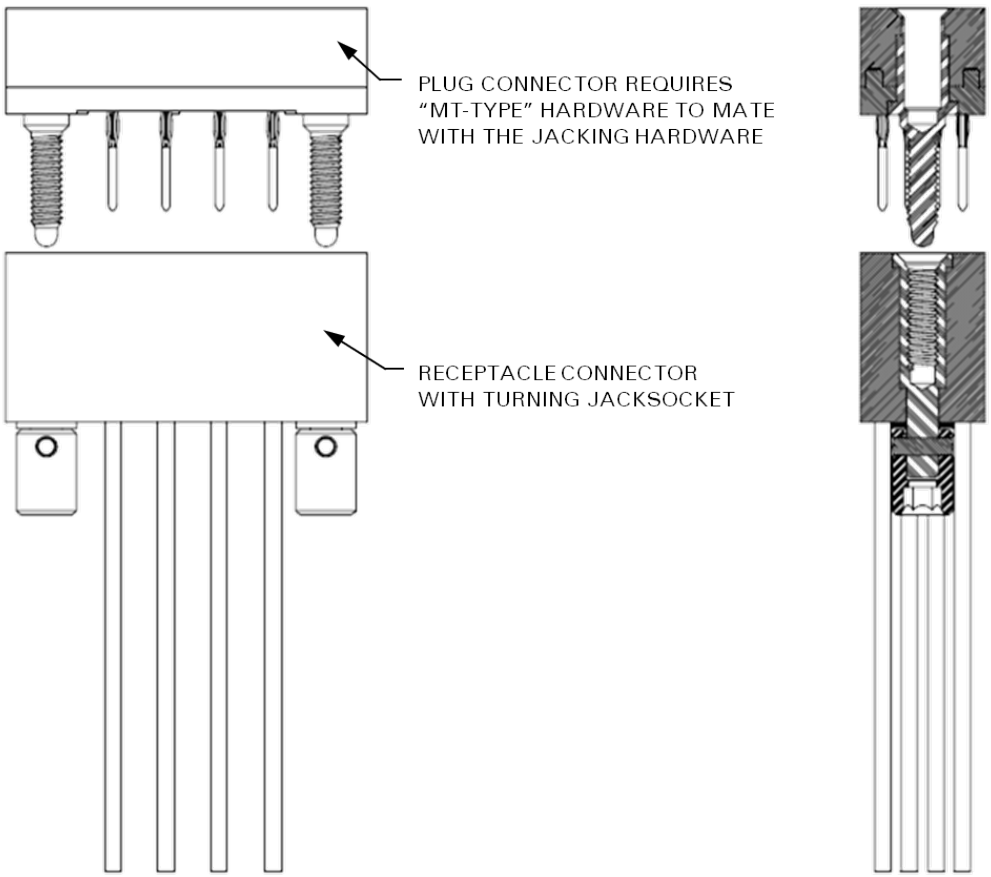


HARDWARE STYLE 62

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper
Board thickness: 0.058” minimum
Drilled hole: Ø 0.033”
Copper plating thickness: 0.0020”
Tin-lead plating thickness: 0.0005”
Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RC 4-ROW, BOTTOM-COMPLIANT DRAWINGS



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

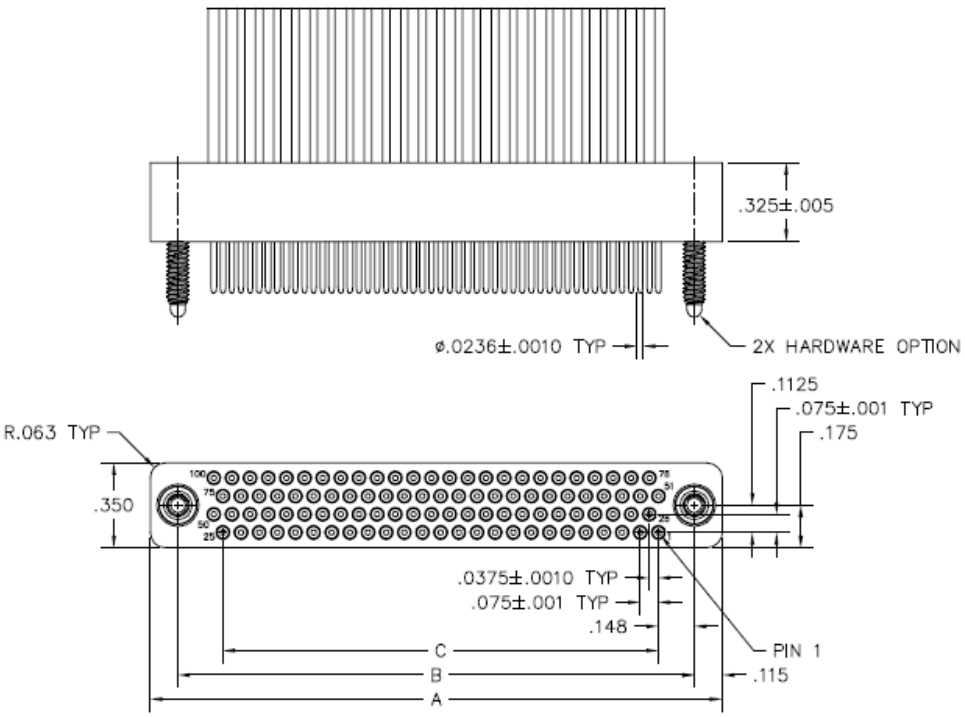
Drilled hole: Ø 0.033"

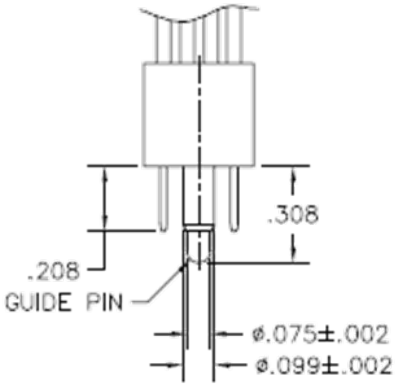
Copper plating thickness: 0.0020"

Tin-lead plating thickness: 0.0005"

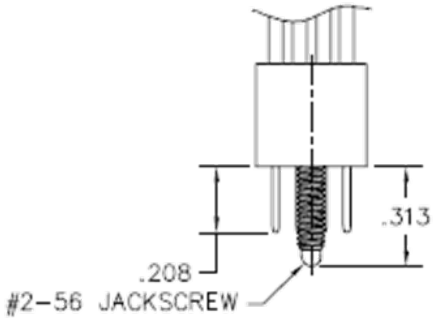
Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)

RC 4-ROW, TOP-COMPLIANT DIMENSIONS





HARDWARE STYLE 57



HARDWARE STYLE 61

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

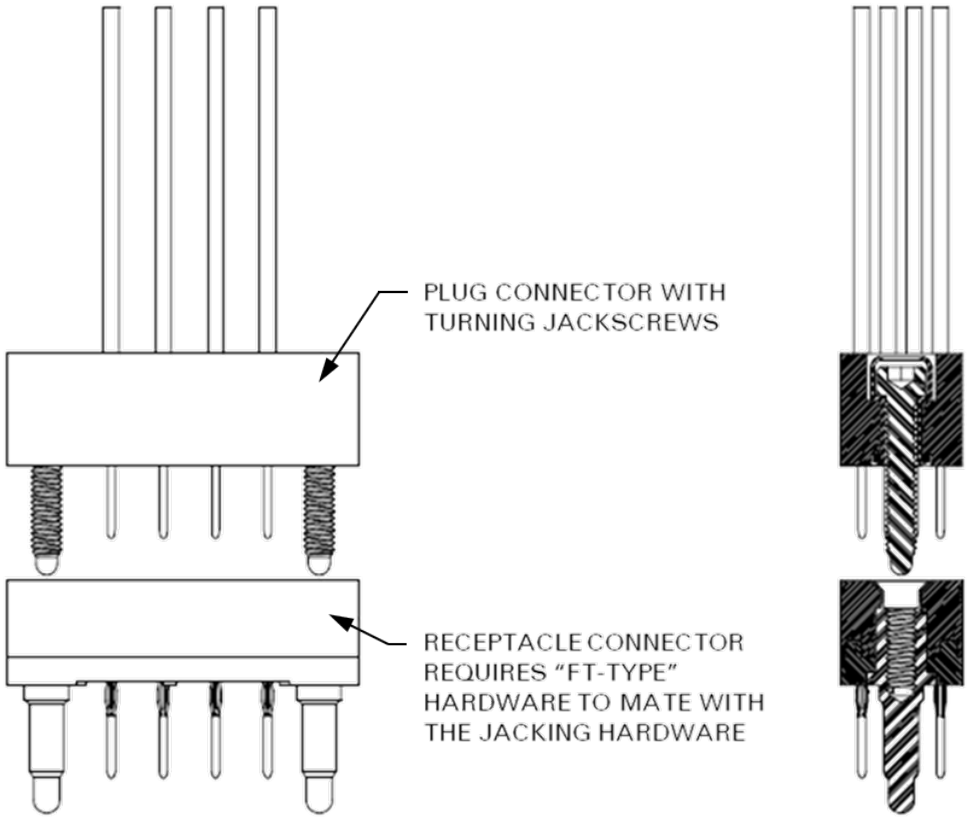
Drilled hole: Ø 0.033”

Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RC 4-ROW, TOP-COMPLIANT DRAWINGS



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058" minimum

Drilled hole: Ø 0.033"

Copper plating thickness: 0.0020"

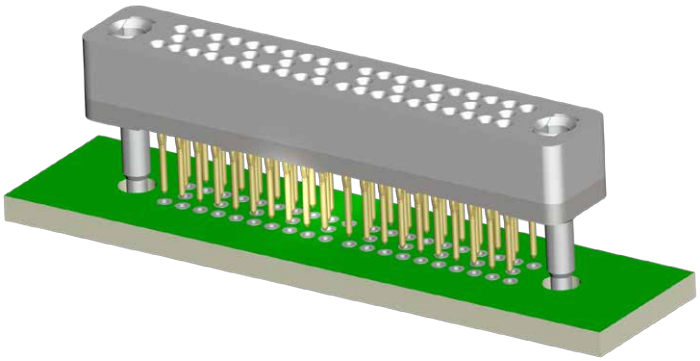
Tin-lead plating thickness: 0.0005"

Finished hold diameter: Ø 0.028" (Ø 0.028" ±0.002" required)

RCII™

The AirBorn stackable compliant connector family is one of AirBorn's solutions for high-density, board-to-board stacking applications. This connector family is available in 0.075" contact spacing and 100 Ω and 85 Ω differential serial buses.

- **Wide variety of standard pin/tail lengths accommodate any board-to-board spacing**
- **0.075" contact spacing**
- **Reliable "eye of the needle"-compliant section design eliminates soldering**
- **BeCu contacts (special high-conductivity, high-temperature alloy)**
- **Very robust socket contact (low-stress design)**
- **Individually repairable contacts**



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RCII™

RC324 - 3-Row Bottom-of-Stack Board Mount Connector with SI

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector with a 3-row aligned contact field for improved signal integrity. Use at the bottom of an RCII board stack application.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
25	1.235	1.005	0.675
50	2.010	1.780	1.450
75	2.785	2.555	2.225
100	3.560	3.330	3.000

Tolerances: ± 0.010″

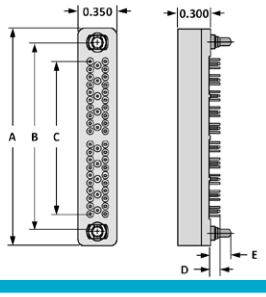


TABLE 2		
CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195

Sample Part Number Format: RC324-050-101-3000

RC324 – [ ] – [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
3 Rows
0.075” Spacing

CONFIGURATION
025 – 3 Rows/1 Bay
050 – 3 Rows/2 Bays
075 – 3 Rows/3 Bays
100 – 3 Rows/4 Bays

CONTACT
10 – 0.095” Long

PLATING
1 – 50 µ” Au
3 – 30 µ” Au
7 – 50 µ” Au / 20 µ” Au
9 – 30 µ” Au / 20 µ” Au

HARDWARE
30 – 0.195” Long
(use with #10 contact)

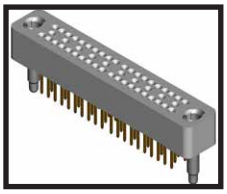
TYPE
00 – None

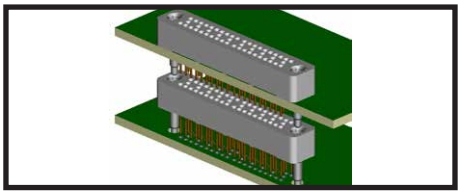
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300” and, when used with the -20 or -30 (0.270”) contact, the mounting is flush (board-bottom mounted to connector top). This board-bottom to connector top spacing can be modified based on the contact selected by approximately the difference in pin length. See Table 2.





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	6.0 GHz @ -3 dB
2	Diff. Return Loss	4.6 GHz @ -20 dB
3	NEXT	4.0 GHz @ -50 dB
4	FEXT	4.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM-B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM-A582, passivated per ASTM-A967
Guide Pin/Socket: . . . . . BeCu per ASTM-B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz. (113 g.) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz. (14 g.) min. w/0.0226” dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb. (10.21 Kg.) max. per contact
Compliant Removal Force: . . . . . 4.5 lb. (2.04 Kg.) min. per contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

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RCII™

RC324 - 3-Row Mid/Top-of-Stack Connector with SI

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector with a 4-row aligned contact field for improved signal integrity. Use in RCII board-to-board stacking applications and/or at the top of the board stack.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
25	1.235	1.005	0.675
50	2.010	1.780	1.450
75	2.785	2.555	2.225
100	3.560	3.330	3.000

Tolerances: ± 0.010″

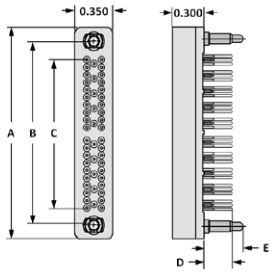


TABLE 2		
CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195

Sample Part Number Format: RC324-050-201-3900

RC324 – [ ] – [ ] [ ] [ ] – [ ] [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
3 Rows
0.075″ Spacing

CONFIGURATION
025 – 3 Rows/1 Bay
050 – 3 Rows/2 Bays
075 – 3 Rows/3 Bays
100 – 3 Rows/4 Bays

CONTACT
10 – 0.095″ Long
20 – 0.270″ Long
21 – 0.300″ Long
22 – 0.400″ Long
23 – 0.500″ Long
24 – 0.700″ Long
25 – 0.800″ Long
26 – 0.900″ Long
27 – 0.600″ Long
28 – 1.000″ Long

PLATING
1 – 50 µ″ Au
3 – 30 µ″ Au
7 – 50 µ″ Au / 20 µ″ Au
9 – 30 µ″ Au / 20 µ″ Au

HARDWARE
30 – 0.195″ Long (use with #10 contact)
39 – 0.370″ Long (use with #20 contact)
40 – 0.400″ Long (use with #21 contact)
41 – 0.500″ Long (use with #22 contact)
42 – 0.600″ Long (use with #23 contact)
43 – 0.800″ Long (use with #24 contact)
44 – 0.900″ Long (use with #25 contact)
45 – 1.000″ Long (use with #26 contact)
46 – 0.700″ Long (use with #27 contact)
47 – 1.100″ Long (use with #28 contact)

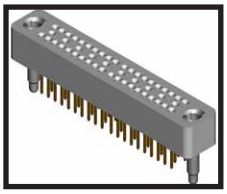
TYPE
00 – None

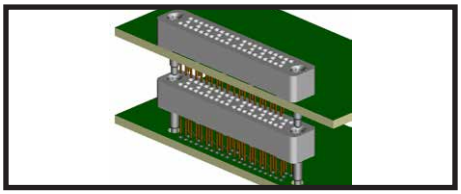
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300” and, when used with the -20 or -30 (0.270”) contact, the mounting is flush (board-bottom mounted to connector top). This board-bottom to connector top spacing can be modified based on the contact selected by approximately the difference in pin length. See Table 2.





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	6.0 GHz @ -3 dB
2	Diff. Return Loss	4.6 GHz @ -20 dB
3	NEXT	4.0 GHz @ -50 dB
4	FEXT	4.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM-B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM-A582, passivated per ASTM-A967
Guide Pin/Socket: . . . . . BeCu per ASTM-B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz. (113 g.) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz. (14 g.) min. w/0.0226” dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb. (10.21 Kg.) max. per contact
Compliant Removal Force: . . . . . 4.5 lb. (2.04 Kg.) min. per contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

RCII™

RC424 - 4-Row Bottom-of-Stack Board Mount Connector with SI

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector with a 4-row aligned contact field for improved signal integrity. Use at the bottom of an RCII board stack application.

DIMENSIONS

TABLE 1			
SIZE	A	B	C
30	1.235	1.005	0.675
60	2.010	1.780	1.450
90	2.785	2.555	2.225
120	3.560	3.330	3.000

Tolerances: ± 0.010″

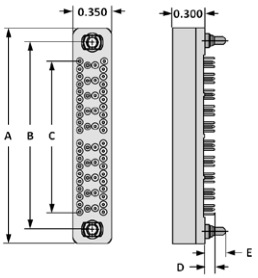


TABLE 2		
CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195

Sample Part Number Format: RC424-060-101-3000

RC424 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075” Spacing

CONFIGURATION
030 – 4 Rows/1 Bay
060 – 4 Rows/2 Bays
090 – 4 Rows/3 Bays
120 – 4 Rows/4 Bays

CONTACT
10 – 0.095” Long

PLATING
1 – 50 µ” Au
3 – 30 µ” Au
7 – 50 µ” Au / 20 µ” Au
9 – 30 µ” Au / 20 µ” Au

HARDWARE
30 – 0.195” Long (use with #10 contact)

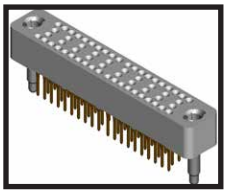
TYPE
00 – None

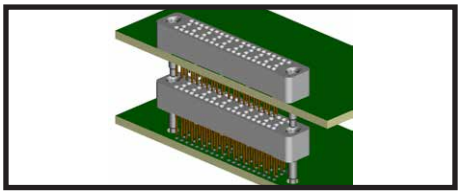
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300” and, when used with the -20 or -30 (0.270”) contact, the mounting is flush (board-bottom mounted to connector top). This board-bottom to connector top spacing can be modified based on the contact selected by approximately the difference in pin length. See Table 2.





SI DATA

1	Diff. Insertion Loss	6.0 GHz @ -3 dB
2	Diff. Return Loss	4.6 GHz @ -20 dB
3	NEXT	4.0 GHz @ -50 dB
4	FEXT	4.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM-B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM-A582, passivated per ASTM-A967
Guide Pin/Socket: . . . . . BeCu per ASTM-B196/197, nickel-plated per QQ-N-290

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

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz. (113 g.) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz. (14 g.) min. w/0.0226” dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb. (10.21 Kg.) max. per contact
Compliant Removal Force: . . . . . 4.5 lb. (2.04 Kg.) min. per contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

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x6464

RCII™

RC424 - 4-Row Mid/Top-of-Stack Connector with SI

Contact spacing: 0.075″ (1.91 mm)

A full bodied high-density press-fit connector with a 4-row aligned contact field for improved signal integrity. Use in RCII board-to-board stacking applications and/or at the top of the board stack.

DIMENSIONS

TABLE 1

SIZE	A	B	C
30	1.235	1.005	0.675
60	2.010	1.780	1.450
90	2.785	2.555	2.225
120	3.560	3.330	3.000

Tolerances: ± 0.010″

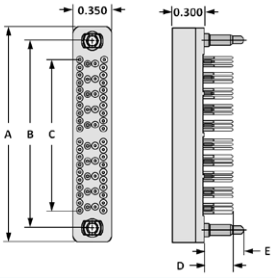


TABLE 2

CONTACT SELECTION	CONTACT D	HARDWARE E
10	0.095	0.195
20	0.270	0.370
21	0.300	0.400
22	0.400	0.500
23	0.500	0.600
24	0.700	0.800
25	0.800	0.900
26	0.900	1.000
27	0.600	0.700
28	1.000	1.100

Sample Part Number Format: RC424-060-201-3900

RC424 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Stackable
Compliant
Full-Profile
4 Rows
0.075” Spacing

CONFIGURATION
030 – 4 Rows/1 Bay
060 – 4 Rows/2 Bays
090 – 4 Rows/3 Bays
120 – 4 Rows/4 Bays

CONTACT
10 – 0.095” Long
20 – 0.270” Long
21 – 0.300” Long
22 – 0.400” Long
23 – 0.500” Long
24 – 0.700” Long
25 – 0.800” Long
26 – 0.900” Long
27 – 0.600” Long
28 – 1.000” Long

PLATING
1 – 50 µ” Au
3 – 30 µ” Au
7 – 50 µ” Au / 20 µ” Au
9 – 30 µ” Au / 20 µ” Au

HARDWARE
30 – 0.195” Long (use with #10 contact)
39 – 0.370” Long (use with #20 contact)
40 – 0.400” Long (use with #21 contact)
41 – 0.500” Long (use with #22 contact)
42 – 0.600” Long (use with #23 contact)
43 – 0.800” Long (use with #24 contact)
44 – 0.900” Long (use with #25 contact)
45 – 1.000” Long (use with #26 contact)
46 – 0.700” Long (use with #27 contact)
47 – 1.100” Long (use with #28 contact)

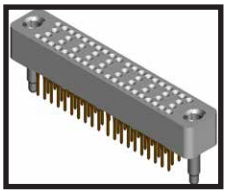
TYPE
00 – None

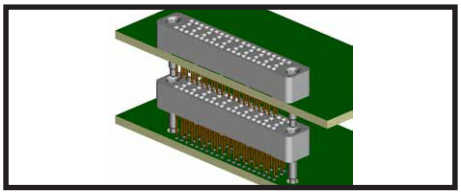
VARIATION
Blank – None
XXX – Consult factory

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

MATED HEIGHT

The connector body height is 0.300” and, when used with the -20 or -30 (0.270”) contact, the mounting is flush (board-bottom mounted to connector top). This board-bottom to connector top spacing can be modified based on the contact selected by approximately the difference in pin length. See Table 2.





SI DATA

1	Diff. Insertion Loss	6.0 GHz @ -3 dB
2	Diff. Return Loss	4.6 GHz @ -20 dB
3	NEXT	4.0 GHz @ -50 dB
4	FEXT	4.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu per ASTM-B768 (BeCu C17410 brush alloy 174)
Contact Finish: . . . . . Gold per MIL-G-45204 over nickel per IAW QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM-A582, passivated per ASTM-A967
Guide Pin/Socket: . . . . . BeCu per ASTM-B196/197, nickel-plated per QQ-N-290

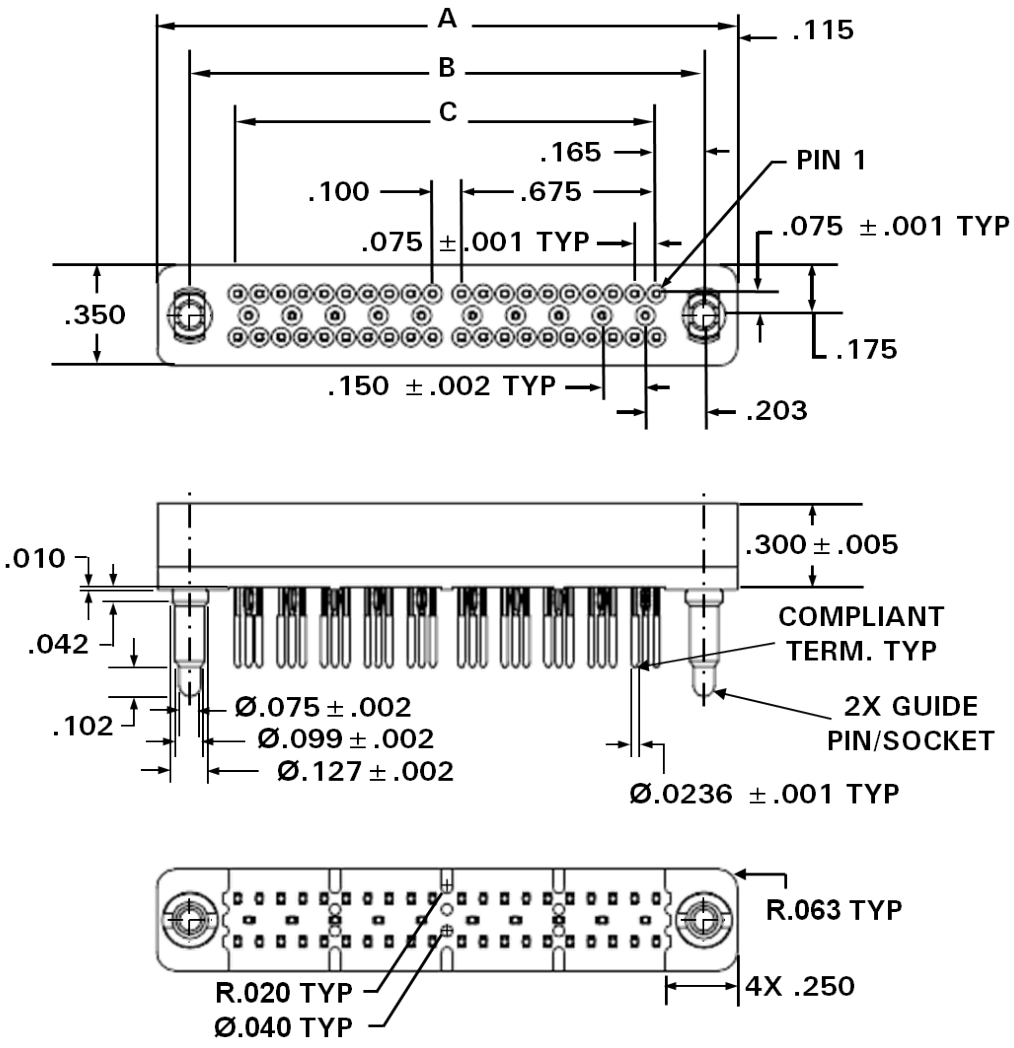
NOTE: AirBorn can manufacture special configurations to your exact specifications.

PERFORMANCE

Contact Rating: . . . . . 3 amperes
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 500 connector mating cycles
Contact Resistance: . . . . . 3 to 5 milliohms (contact length dependent)
Contact Engagement Force: . . . . . 4.0 oz. (113 g.) max. w/0.0246” dia. test pin
Contact Separation Force: . . . . . 0.5 oz. (14 g.) min. w/0.0226” dia. test pin
Compliant Insertion Force: . . . . . 22.5 lb. (10.21 Kg.) max. per contact
Compliant Removal Force: . . . . . 4.5 lb. (2.04 Kg.) min. per contact

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

RCII 3-ROW DIMENSIONS



DIMENSIONS			
SIZE/BANKS	A	B	C
25/1	1.235	1.005	0.675
50/2	2.010	1.780	1.450
75/3	2.785	2.555	2.225
100/4	3.560	3.330	3.000

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

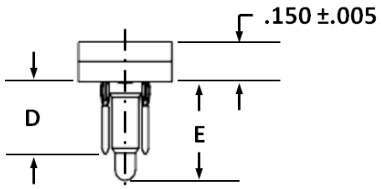
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RCII 3-ROW DIMENSIONS

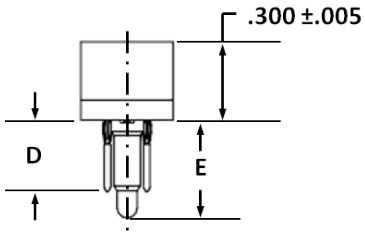
Hardware Options



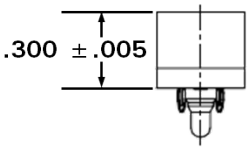
BODY STYLE 344

OPTIONAL INSULATOR FOR TOP CONNECTOR WITH TERMINATION OPTIONS 301, 311, 321, 331, 341, 351, 361, 371 AND 381 (w/CIRCUIT TEST POINT).

TABLE 1		
CONTACT TERMINATION	CONTACT D	HARDWARE E
201, 301	0.270	0.370
211, 311	0.300	0.400
221, 321	0.400	0.500
231, 331	0.500	0.600
241, 341	0.700	0.800
251, 351	0.800	0.900
261, 361	0.900	1.000
271, 371	0.600	0.700
281, 381	1.000	1.100
101	0.095	0.195



BODY STYLE 324



BODY STYLE 324

CONTACT/HARDWARE OPTION 101 (TERMINATES CIRCUIT)

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

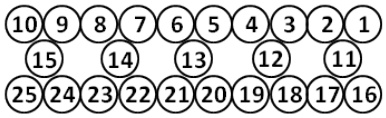
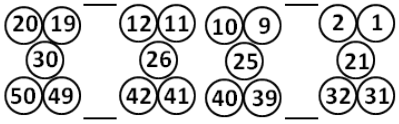
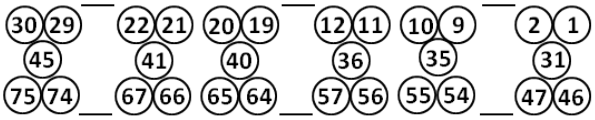
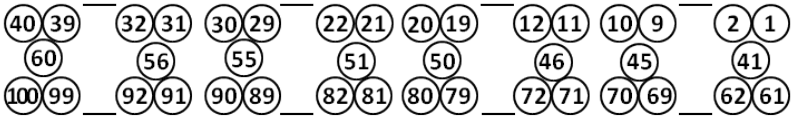
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

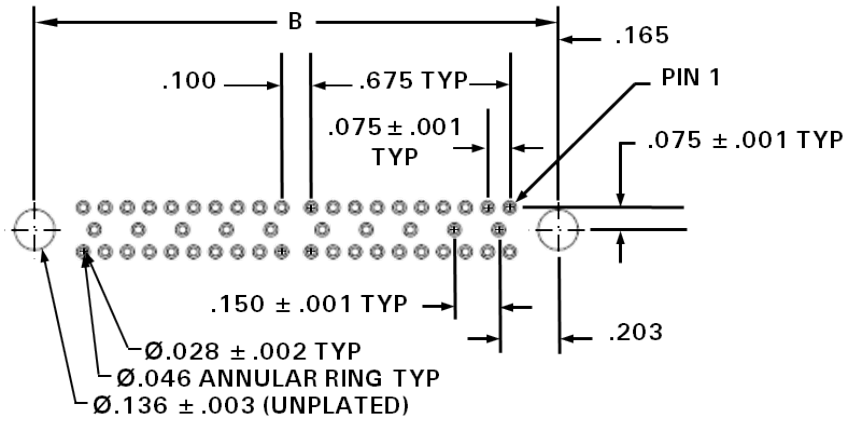
Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RCII 3-ROW DRAWINGS

Board Footprint and Dimensions

SIZE	CONTACT ID
25	
50	
75	
100	

DIMENSIONS			
SIZE/BANKS	A	B	C
30/1	1.235	1.005	0.675
60/2	2.010	1.780	1.450
90/3	2.785	2.555	2.225
120/4	3.560	3.330	3.000



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

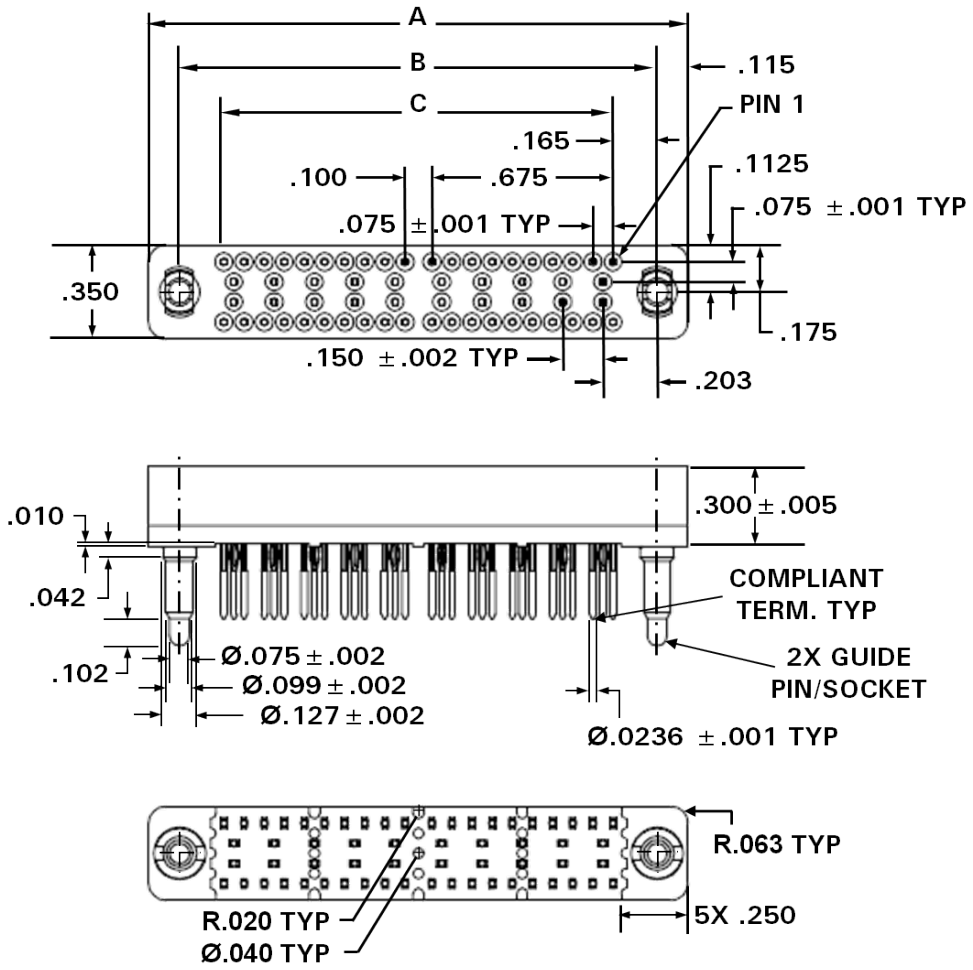
Drilled hole: Ø 0.033”

Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RCII 4-ROW DIMENSIONS



DIMENSIONS			
SIZE/BANKS	A	B	C
30/1	1.235	1.005	0.675
60/2	2.010	1.780	1.450
90/3	2.785	2.555	2.225
120/4	3.560	3.330	3.000

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

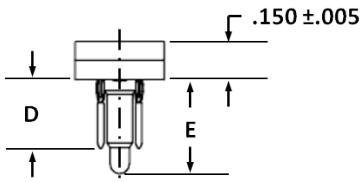
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RCII 4-ROW DIMENSIONS

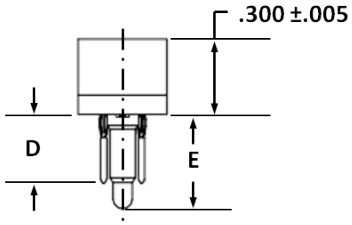
Hardware Options



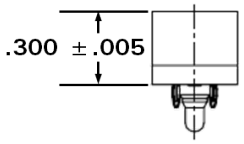
BODY STYLE 444

OPTIONAL INSULATOR FOR TOP CONNECTOR WITH TERMINATION OPTIONS 301, 311, 321, 331, 341, 351, 361, 371 AND 381 (w/CIRCUIT TEST POINT).

TABLE 1		
CONTACT TERMINATION	CONTACT D	HARDWARE E
201, 301	0.270	0.370
211, 311	0.300	0.400
221, 321	0.400	0.500
231, 331	0.500	0.600
241, 341	0.700	0.800
251, 351	0.800	0.900
261, 361	0.900	1.000
271, 371	0.600	0.700
281, 381	1.000	1.100
101	0.095	0.195



BODY STYLE 424



BODY STYLE 424

CONTACT/HARDWARE OPTION 101 (TERMINATES CIRCUIT)

PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

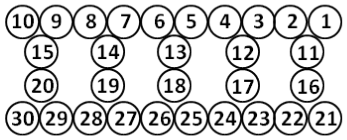
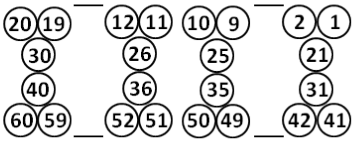
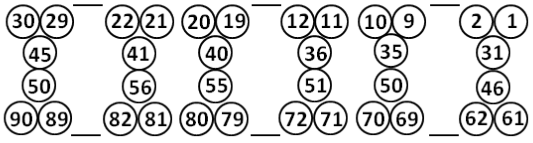
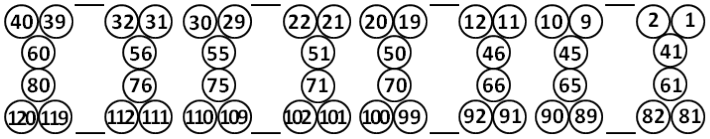
Copper plating thickness: 0.0020”

Tin-lead plating thickness: 0.0005”

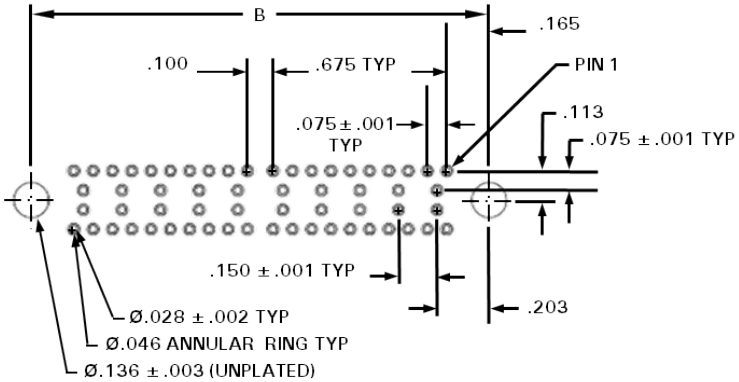
Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RCII 4-ROW DRAWINGS

Board Footprint and Dimensions

SIZE	CONTACT ID
30	
60	
70	
120	

DIMENSIONS			
SIZE/BANKS	A	B	C
30/1	1.235	1.005	0.675
60/2	2.010	1.780	1.450
90/3	2.785	2.555	2.225
120/4	3.560	3.330	3.000



PWB-PLATED THRU-HOLE RECOMMENDATIONS:

Board material: FR-4 (or equivalent) with 1.0 oz. copper

Board thickness: 0.058” minimum

Drilled hole: Ø 0.033”

Copper plating thickness: 0.0020”

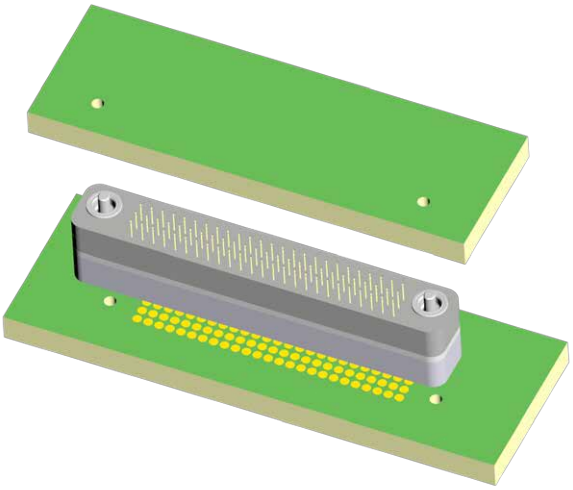
Tin-lead plating thickness: 0.0005”

Finished hold diameter: Ø 0.028” (Ø 0.028” ±0.002” required)

RZ™

The RZ family of high-density, board-to-board or flex circuit stacking applications is unique, offering users a reliable one-piece contact system. Its solder-less interconnect is compressed or "sandwiched" under pressure between parallel printed wiring boards or between a printed wiring board and other electronic components such as an IC or multichip module.

- **0.050" staggered grid array**
- **Up to 400 contacts per square inch**
- **BeCu contacts for reliable mating**
- **Standard heights from 0.100" to 0.350"**
- **Custom configurations available to meet your specific design needs.**



AirBorn
AN INTEGRATED SOLUTIONS PROVIDER

CONTACT CUSTOMER SERVICE
CALL 512-863-5585
x6464

RZ™

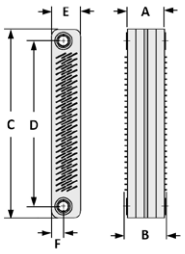
Vertical Compression (Z-axis), Open-Pin Field

Contact spacing: 0.050" (1.27 mm)

A high-density, open-field, vertically-compressed connector utilizing a patented z-axis contact system configured for between-board (board-to-board) compression applications.

DIMENSIONS

COLUMNS	C	D
10	0.952	0.742
15	1.202	0.992
20	1.452	1.242
25	1.702	1.492
ROWS	E	F
2	0.210	0.105
3	0.260	0.105
4	0.310	0.155
5	0.360	0.155
6	0.410	0.205
7	0.460	0.205



HARDWARE HEIGHT (A)	CONTACT HEIGHT (B)
0.100	0.120
0.150	0.170
0.200	0.230
0.250	0.280
0.300	0.330
0.350	0.380

Sample Part Number Format: RZ250-320-115-1000

RZ □ – □ □ – □ □ – □ □ – □

SERIES
Vertical (Z-Axis) Compression Multi-Rows 0.050" Spacing Open-Field

HEIGHT
100 – 0.100"
150 – 0.150"
200 – 0.200"
250 – 0.250"
300 – 0.300"
350 – 0.350"

ROWS
2 – 2 Rows
3 – 3 Rows
4 – 4 Rows
5 – 5 Rows
6 – 6 Rows
7 – 7 Rows

COLUMNS
10 – 10 Columns
15 – 15 Columns
20 – 20 Columns
25 – 25 Columns

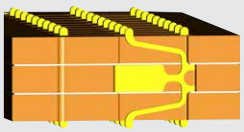
CONTACT
11 – Double compression

PLATING
5 – 50 µ" Au
3 – 30 µ" Au

HARDWARE
10 – Ø.090" Thru-hole
20 – Ø.050" Guide pin

TYPE
00 – No polarization

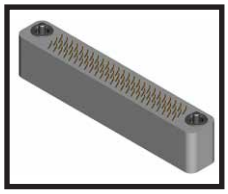
VARIATION
Blank – None
XXX – Consult factory

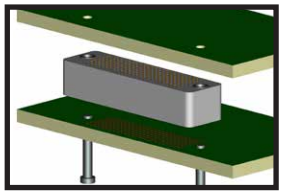


PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

MATED HEIGHT

Mated height is defined as the space between the hardware clamping surfaces (top hardware surface to bottom hardware surface.) See Table 1.





SI DATA – Differential 100 Ohm

1	Diff. Insertion Loss	3.0 GHz @ -3 dB
2	Diff. Return Loss	1.0 GHz @ -20 dB
3	NEXT	2.0 GHz @ -50 dB
4	FEXT	2.0 GHz @ -48 dB

MATERIALS and FINISHES

Contact: . . . . . BeCu C17200 per ASTM B194 (brush alloy 190)
Contact Finish: . . . . . Gold per ASTM B488 over nickel per SAE AMS-QQ-N-290
Molded Insulator: . . . . . Glass-filled polyphenylene sulfide (PPS) per MIL-M-24519
Hardware: . . . . . Stainless steel per ASTM A582/582M, passivated per SAE AMS-2700

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

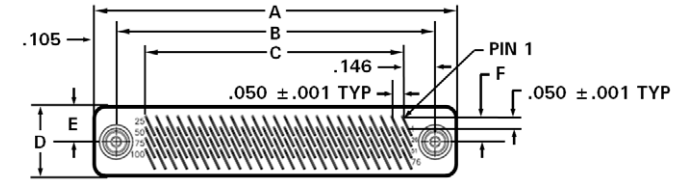
PERFORMANCE

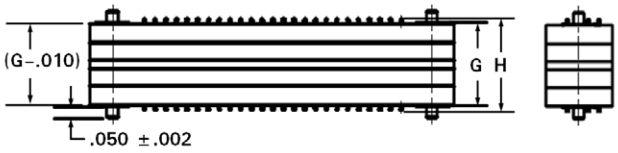
Contact Compression: . . . . . 0.010 inches per side (nominal) for 0.100" and 0.150" connector heights; 0.015" per side (nominal) for 0.200", 0.250", 0.300" and 0.350" connector heights
Compression Force: . . . . . .25-40 grams per contact having a 0.010" deflection
35-50 grams per contact having a 0.015" deflection
Contact Wipe: . . . . . ≈0.007" for 0.100" and 0.150" connector heights
≈0.014" for 0.200", 0.250", 0.300" and 0.350" connector heights
Current Rating: . . . . . 0.5 amperes
Contact Resistance: . . . . . 0.025 ohms typical (contact height-dependent)
Operating Temperature: . . . . . -65° C to +125° C
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 100 VDC
Durability: . . . . . 50 connector mating cycles
Dielectric Withstanding: . . . . . 250 VDC @ sea level, 100 VDC @ altitude

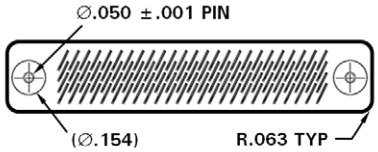
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

RZ DIMENSIONS

Guide Pin Hardware Option

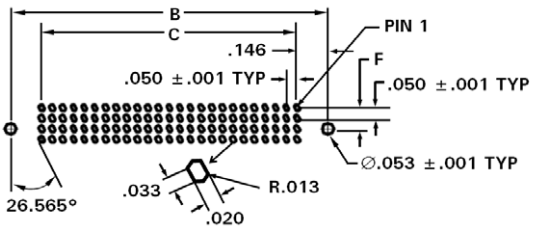






DIMENSIONS								
SIZE	ROWS	COLS	A	B	C	D	E	F
20	2	10	0.952	0.742	0.450	0.210	0.105	0.050
30	2	15	1.202	0.992	0.700	0.210	0.105	0.050
40	2	20	1.452	1.242	0.950	0.210	0.105	0.050
50	2	25	1.702	1.492	1.200	0.210	0.105	0.050
30	3	10	0.952	0.742	0.450	0.260	0.105	0.050
45	3	15	1.202	0.992	0.700	0.260	0.105	0.050
60	3	20	1.452	1.242	0.950	0.260	0.105	0.050
75	3	25	1.702	1.492	1.200	0.260	0.105	0.050
40	4	10	0.952	0.742	0.450	0.310	0.155	0.100
60	4	15	1.202	0.992	0.700	0.310	0.155	0.100
80	4	20	1.452	1.242	0.950	0.310	0.155	0.100
100	4	25	1.702	1.492	1.200	0.310	0.155	0.100
50	5	10	0.952	0.742	0.450	0.360	0.155	0.100
75	5	15	1.202	0.992	0.700	0.360	0.155	0.100
100	5	20	1.452	1.242	0.950	0.360	0.155	0.100
125	5	25	1.702	1.492	1.200	0.360	0.155	0.100
60	6	10	0.952	0.742	0.450	0.410	0.205	0.150
90	6	15	1.202	0.992	0.700	0.410	0.205	0.150
120	6	20	1.452	1.242	0.950	0.410	0.205	0.150
150	6	25	1.702	1.492	1.200	0.410	0.205	0.150
70	7	10	0.952	0.742	0.450	0.460	0.205	0.150
105	7	15	1.202	0.992	0.700	0.460	0.205	0.150
140	7	20	1.452	1.242	0.950	0.460	0.205	0.150
175	7	25	1.702	1.492	1.200	0.460	0.205	0.150

PWB Layout



DIMENSIONS	
HARDWARE 'G'	CONTACT 'H'
0.100	0.120
0.150	0.170
0.200	0.230
0.250	0.280
0.300	0.330
0.350	0.380

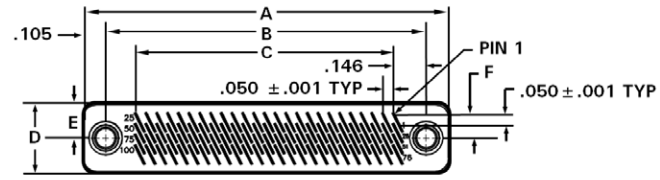
Note: All dimensions are in inches.

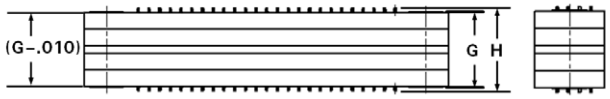
PWB-PLATED PAD RECOMMENDATIONS:

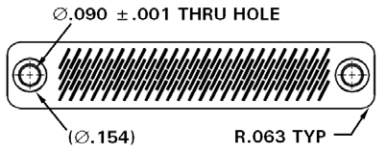
Board to be made in accordance with ANSI/EIA-616
Laminate material per MIL-P-13949, Type GF
Copper foil thickness: 1 oz per square foot
Plate all surface features with 50 µ", minimum, electrolytic hard gold over 50-150 µ" nickel.
(Optionally, plate all surface features with 50 µ", minimum, electrolytic hard gold over 5-10 µ" of electrolytic soft gold over 100 µ", minimum, nickel.)

RZ DIMENSIONS

Thru-Hole Hardware Option

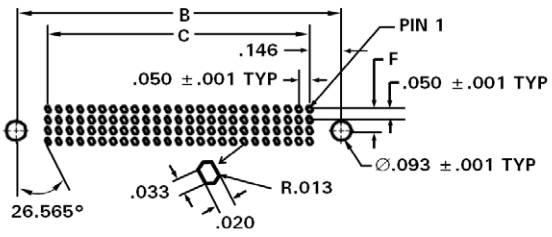






DIMENSIONS								
SIZE	ROWS	COLS	A	B	C	D	E	F
20	2	10	0.952	0.742	0.450	0.210	0.105	0.050
30	2	15	1.202	0.992	0.700	0.210	0.105	0.050
40	2	20	1.452	1.242	0.950	0.210	0.105	0.050
50	2	25	1.702	1.492	1.200	0.210	0.105	0.050
30	3	10	0.952	0.742	0.450	0.260	0.105	0.050
45	3	15	1.202	0.992	0.700	0.260	0.105	0.050
60	3	20	1.452	1.242	0.950	0.260	0.105	0.050
75	3	25	1.702	1.492	1.200	0.260	0.105	0.050
40	4	10	0.952	0.742	0.450	0.310	0.155	0.100
60	4	15	1.202	0.992	0.700	0.310	0.155	0.100
80	4	20	1.452	1.242	0.950	0.310	0.155	0.100
100	4	25	1.702	1.492	1.200	0.310	0.155	0.100
50	5	10	0.952	0.742	0.450	0.360	0.155	0.100
75	5	15	1.202	0.992	0.700	0.360	0.155	0.100
100	5	20	1.452	1.242	0.950	0.360	0.155	0.100
125	5	25	1.702	1.492	1.200	0.360	0.155	0.100
60	6	10	0.952	0.742	0.450	0.410	0.205	0.150
90	6	15	1.202	0.992	0.700	0.410	0.205	0.150
120	6	20	1.452	1.242	0.950	0.410	0.205	0.150
150	6	25	1.702	1.492	1.200	0.410	0.205	0.150
70	7	10	0.952	0.742	0.450	0.460	0.205	0.150
105	7	15	1.202	0.992	0.700	0.460	0.205	0.150
140	7	20	1.452	1.242	0.950	0.460	0.205	0.150
175	7	25	1.702	1.492	1.200	0.460	0.205	0.150

PWB Layout



DIMENSIONS	
HARDWARE 'G'	CONTACT 'H'
0.100	0.120
0.150	0.170
0.200	0.230
0.250	0.280
0.300	0.330
0.350	0.380

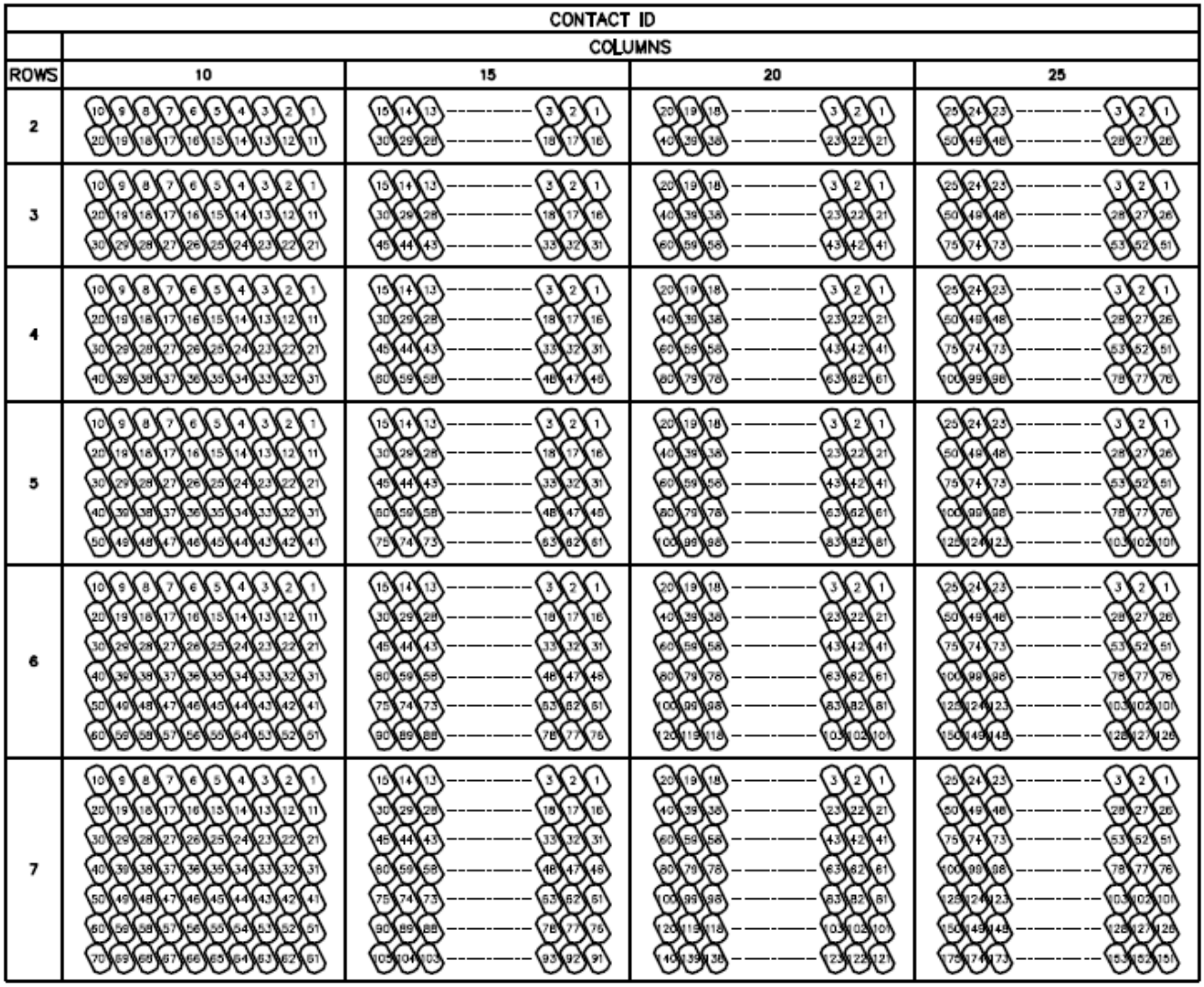
Note: All dimensions are in inches.

PWB-PLATED PAD RECOMMENDATIONS:

Board to be made in accordance with ANSI/EIA-616
Laminate material per MIL-P-13949, Type GF
Copper foil thickness: 1 oz per square foot
Plate all surface features with 50 µ", minimum, electrolytic hard gold over 50-150 µ" nickel.
(Optionally, plate all surface features with 50 µ", minimum, electrolytic hard gold over 5-10 µ" of electrolytic soft gold over 100 µ", minimum, nickel.)

RZ DRAWINGS

Board Footprint

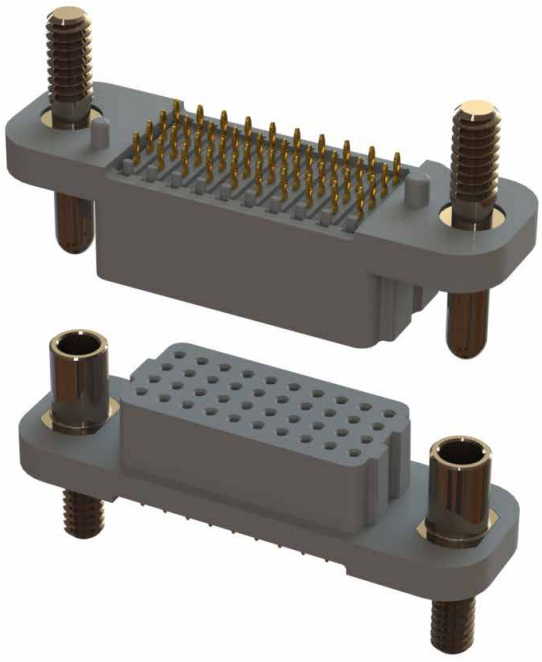


PWB-PLATED PAD RECOMMENDATIONS:

Board to be made in accordance with ANSI/EIA-616
Laminate material per MIL-P-13949, Type GF
Copper foil thickness: 1 oz per square foot
Plate all surface features with 50 µ", minimum, electrolytic hard gold over 50-150 µ" nickel.
(Optionally, plate all surface features with 50 µ", minimum, electrolytic hard gold over 5-10 µ" of electrolytic soft gold over 100 µ", minimum, nickel.)

verSI™

The AirBorn verSI (versatile connectors with high-speed signal integrity) open-pin field product line is designed to meet the requirements for high-speed/high-density/signal integrity 100 Ω and 85 Ω differential serial bus applications while still delivering the reliability customers have come to expect from AirBorn.



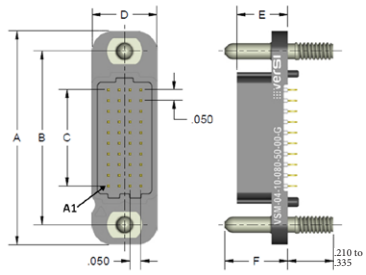
verSI™

VSM – Vertical (Male)

Pitch: 1.27 mm

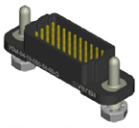
VSM signal-integrity connectors are used in vertical, PCB-mount applications where a male interface is required. Termination styles include press-fit, paste-in-hole, plated thru-hole, and surface-mount.

DIMENSIONS



COLUMNS	A	B	C	ROWS	D
10	1.000	0.813	0.450	4	0.300
20	1.500	1.313	0.950	5	0.350
30	2.000	1.813	1.450	6	0.400
40	2.500	2.313	1.950	8	0.500
50	3.000	2.813	2.450	10	0.700

SPACING OPTION CODES	E		F	
	inches	mm	inches	mm
–080	0.235	5.96	0.290	7.36
–100	0.314	7.79	0.369	9.37
–120	0.392	9.95	0.447	11.35
–160	0.550	13.96	0.605	15.36
–200	0.707	17.94	0.762	19.34
–250	0.904	22.94	0.959	24.34



SPACING OPTIONS	E	F
8 mm	0.235	0.290
10 mm	0.314	0.369
12 mm	0.392	0.447
16 mm	0.550	0.605
20 mm	0.707	0.762
25 mm	0.904	0.959

Sample Part Number Format: VSM-04-10-080-50-02-G

VSM – ☐ – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Vertical (Male)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

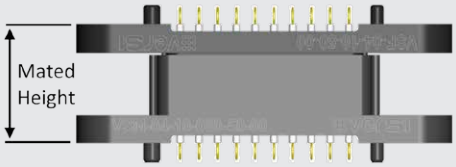
BOARD SPACING*
080 – 8 mm
100 – 10 mm
120 – 12 mm
160 – 16 mm
200 – 20 mm
250 – 25 mm

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-In-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide pin[1]
G1 – Guide pin[2]
J – #2-56 jackscrew[1]
J1 – #2-56 jackscrew[2]
L – #2-56 locking screw[1]
L1 – #2-56 locking screw[2]
N – #2-56 locking jacknut[1]
N1 – #2-56 locking jacknut[2]

SPACING OPTIONS	OPTION CODE	MATED HEIGHT
8 mm	–080	0.315
10 mm	–100	0.394
12 mm	–120	0.473
16 mm	–160	0.630
20 mm	–200	0.788
25 mm	–250	0.985



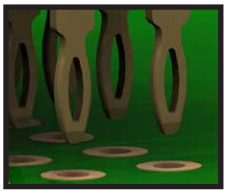
NOTES

Connector potting is standard.
* Consult factory for additional board spacing options.
[1] Used for PC board thickness up to 0.125"
[2] Used for PC board thickness 0.125" up to 0.250"

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

FEATURES

verSI board-mount connectors feature low mating force/high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



MATERIALS and FINISHES

Pin Contacts: . . . . . .Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M, or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

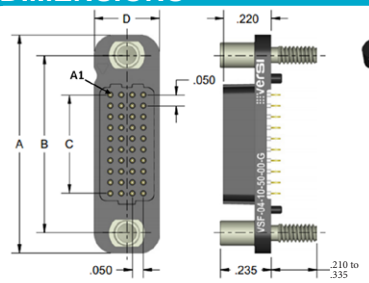
verSI™

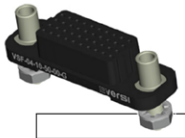
VSF – Vertical (Female)

Pitch: 1.27 mm

VSF signal-integrity connectors are used in vertical, PCB-mount applications where a female interface is required. Termination styles include press-fit, paste-in-hole, plated thru-hole, and surface-mount.

DIMENSIONS





VSF DIMENSIONS					
Columns	A	B	C	Rows	D
10	1.000	0.813	0.450	4	0.300
20	1.500	1.313	0.950	5	0.350
30	2.000	1.813	1.450	6	0.400
40	2.500	2.313	1.950	8	0.500
50	3.000	2.813	2.450	10	0.600

Sample Part Number Format: VSF-04-10-30-02

VSF – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Vertical
(Female)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-In-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide socket (boards up to .125" thk)
G1 – Guide socket (boards .125"-.250" thk)
J – #2-56 Jackscrew (boards up to .125" thk)
J1 – #2-56 Jackscrew (boards .125"-.250" thk)
L – #2-56 Locking screw (boards up to .125" thk)
L1 – #2-56 Locking screw (boards .125"-.250" thk)
N – #2-56 Locking jacknut (boards up to .125" thk)
N1 – #2-56 Locking jacknut (boards .125"-.250" thk)

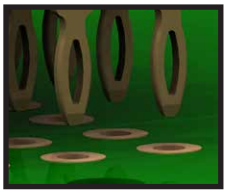
NOTES

Connector potting is standard.
[1] Used for PC board thickness up to 0.125"
[2] Used for PC board thickness 0.125" up to 0.250"

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Socket Contacts: . . . . . .BeCu ASTM B194
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M, or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

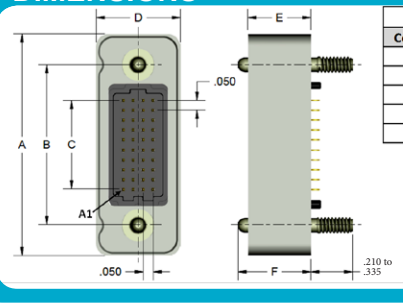
verSI™

VRM – Vertical Rugged (Male)

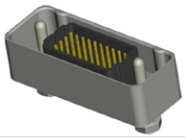
Pitch: 1.27 mm

VRM signal-integrity connectors are ruggedized versions of the standard VSM male connectors. These connectors can be used in extreme environmental conditions while maintaining high reliability and continuous performance.

DIMENSIONS



VRM DIMENSIONS					
Columns	A	B	C	Rows	D
10	1.125	0.813	0.450	4	0.425
20	1.625	1.313	0.950	5	0.475
30	2.125	1.813	1.450	6	0.525
40	2.625	2.313	1.950	8	0.625
50	3.125	2.813	2.450	10	0.725



BOARD SPACING		
	E	F
8 mm	0.239	n/a
10 mm	0.319	0.374
12 mm	0.397	0.452
16 mm	0.555	0.610
20 mm	0.712	0.767
25 mm	0.909	0.964

Sample Part Number Format: VRM-04-10-100-30-02-G

VRM – ☐ – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Vertical Rugged (Male)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

BOARD SPACING*
080 – 8 mm
100 – 10 mm
120 – 12 mm
160 – 16 mm
200 – 20 mm
250 – 25 mm

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide pin**[1]
G1 – Guide pin**[2]
J – #2-56 Jackscrew**[1]
J1 – #2-56 Jackscrew**[2]
L – #2-56 Locking screw**[1]
L1 – #2-56 Locking screw**[2]
N – #2-56 Locking jacknut**[1]
N1 – #2-56 Locking jacknut**[2]

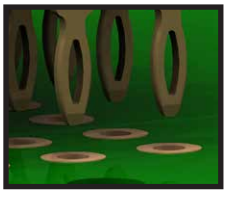
NOTES

Connector potting is standard.
* Consult factory for additional board spacing options.
** **Not available with 8 mm board spacing**
[1] Used for PC board thickness up to 0.125"
[2] Used for PC board thickness 0.125" up to 0.250"

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . Electroless nickel per SAE AMS-C-26074, Grade B, Class 3
Pin Contacts: . . . . . Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M, or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . 35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

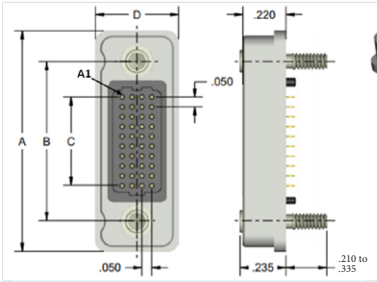
verSI™

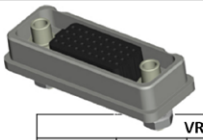
VRF – Vertical Rugged

Pitch: 1.27 mm

VRF signal-integrity connectors are ruggedized versions of the standard VSF female connectors. These connectors can be used in extreme environmental conditions while maintaining high reliability and continuous performance.

DIMENSIONS





VRF DIMENSIONS

Columns	A	B	C	Rows	D
10	1.125	0.813	0.450	4	0.425
20	1.625	1.313	0.950	5	0.475
30	2.125	1.813	1.450	6	0.525
40	2.625	2.313	1.950	8	0.625
50	3.125	2.813	2.450	10	0.725

Sample Part Number Format: VRF-04-10-30-04-J

VRF – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Vertical Rugged
(Female)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide socket (boards up to .125" thk)
G1 – Guide socket (boards .125"-.250" thk)
J – #2-56 Jackscrew (boards up to .125" thk)
J1 – #2-56 Jackscrew (boards .125"-.250" thk)
L – #2-56 Locking screw (boards up to .125" thk)
L1 – #2-56 Locking screw (boards .125"-.250" thk)
N – #2-56 Locking jacknut (boards up to .125" thk)
N1 – #2-56 Locking jacknut (boards .125"-.250" thk)
GE – Guide pin/EMI gasket (boards up to .125" thk)
G1E – Guide pin/EMI gasket (boards .125"-.250" thk)
NE – #2-56 Locking jacknut/EMI gasket (boards up to .125" thk)
N1E – #2-56 Locking jacknut/EMI gasket (boards .125"-.250" thk)

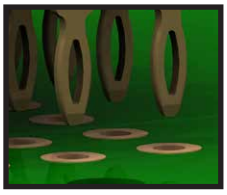
NOTES

Connector potting is standard.

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . Electroless nickel per SAE AMS-C-26074, Grade B, Class 3
Socket Contact: . . . . . BeCu per ASTM B194
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . 35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

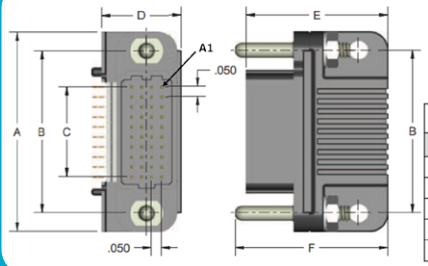
verSI™

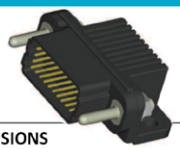
VSRAM – Right Angle (Male)

Pitch: 1.27 mm

VSRAM signal-integrity connectors are used in right angle, PCB-mount applications where a male interface is required. Termination styles include press-fit, paste-in-hole or plated thru-hole.

DIMENSIONS





VSRAM DIMENSIONS

Columns	A	B	C	Rows	D	E	F
10	1.000	.813	.450	4	.400	.713	.768
20	1.500	1.313	.950	5	.450	.763	.818
30	2.000	1.813	1.450	6	.500	.813	.868
40	2.500	2.313	1.950	8	.600	.913	.968
50	3.000	2.813	2.450	10	.700	1.013	1.068

Sample Part Number Format: VSRAM-04-10-30-02-G

VSRAM – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Right Angle (Male)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide pin
N – #2-56 Locking jacknut

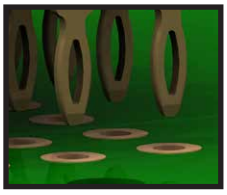
NOTES

Connector potting is standard.

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Pin Contacts (Mating Face): . . . . . Phos bronze per ASTM B103
Pin Contacts (Termination): . . . BeCu ASTM B768 (press-fit contact) or brass alloy per ASTM B36 (PIH or PTH)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M, or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

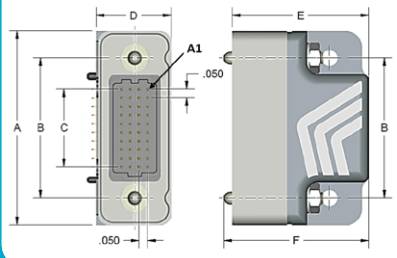
verSI™

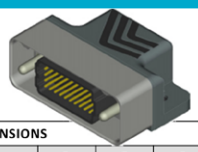
VRRAM – Rugged Right Angle (Male)

Pitch: 1.27 mm

VRRAM signal-integrity connectors are ruggedized versions of the standard VSRAM male connectors. These connectors can be used in extreme environmental conditions while maintaining high reliability and continuous performance.

DIMENSIONS





VRRAM DIMENSIONS

Columns	A	B	C	Rows	D	E	F
10	1.125	0.813	0.450	4	0.438	0.798	0.847
20	1.625	1.313	0.950	5	0.488	0.848	0.897
30	2.125	1.813	1.450	6	0.538	0.898	0.947
40	2.625	2.313	1.950	8	0.638	0.998	1.047
50	3.125	2.813	2.450	10	0.738	1.098	1.147

Sample Part Number Format: VRRAM-04-10-50-02-N

VRRAM – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Rugged Right Angle (Male) 1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide pin
N – #2-56 Locking jacknut

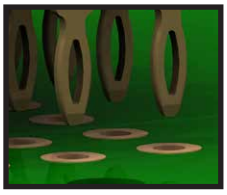
NOTES

Connector potting is standard.

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . .Electroless nickel per SAE AMS-C-26074, Grade B, Class 3
Pin Contacts (Mating Face): . . . . . Phos bronze per ASTM B103
Pin Contacts (Termination): . . . .BeCu ASTM B768 (press-fit contact) or brass alloy per ASTM B36 (PIH or PTH)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M, or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

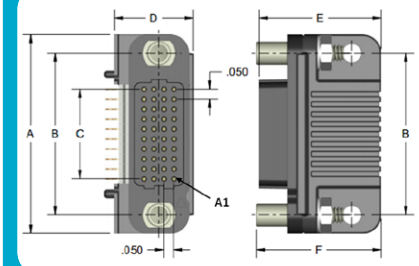
verSI™

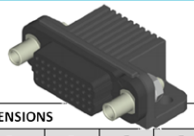
VSRAF – Right Angle (Female)

Pitch: 1.27 mm

VSRAF signal-integrity connectors are used in right angle, PCB-mount applications where a female interface is required. Termination styles include press-fit, paste-in-hole or plated thru-hole.

DIMENSIONS





VSRAF DIMENSIONS

Columns	A	B	C	Rows	D	E	F
10	1.000	.813	.450	4	.400	.619	.634
20	1.500	1.313	.950	5	.450	.669	.684
30	2.000	1.813	1.450	6	.500	.719	.734
40	2.500	2.313	1.950	8	.550	.769	.784
50	3.000	2.813	2.450	10	.600	.819	.834

Sample Part Number Format: VSRAF-04-10-30-02-N

VSRAF – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Right Angle
(Female)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
G – Guide socket
N – #2-56 Locking jacknut

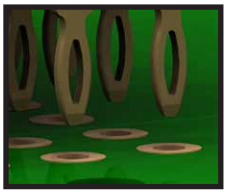
NOTES

Connector potting is standard.

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

FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Socket Contact (Mating Face): . . . . . .BeCu per ASTM B194
Socket Contact (Termination): . . . . . Brass alloy per ASTM B36 (PIH or PTH) or BeCu per ASTM B194 (press-fit contact)
Contact Finish: . . . . . .Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . .Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

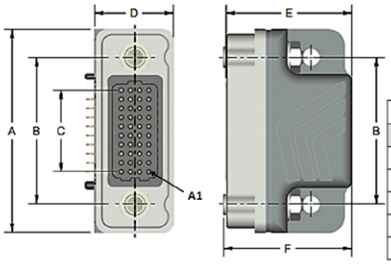
verSI™

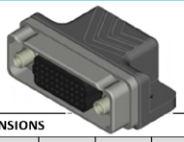
VRRAF – Rugged Right Angle (Female)

Pitch: 1.27 mm

VRRAM signal-integrity connectors are ruggedized versions of the standard VSRAF female connectors. These connectors can be used in extreme environmental conditions while maintaining high reliability and continuous performance.

DIMENSIONS





VRRAF DIMENSIONS

Columns	A	B	C	Rows	D	E	F
10	1.125	0.813	0.450	4	0.438	0.698	0.714
20	1.625	1.313	0.950	5	0.488	0.748	0.764
30	2.125	1.813	1.450	6	0.538	0.798	0.814
40	2.625	2.313	1.950	8	0.638	0.898	0.914
50	3.125	2.813	2.450	10	0.738	0.998	1.014

Sample Part Number Format: VRRAF-04-10-30-00-G

VRRAF – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Rugged Right Angle (Female)
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
00 – Press-fit
01 – Paste-in-hole
02 – PTH 0.078"
03 – PTH 0.109"
04 – PTH 0.140"
05 – PTH 0.156"
06 – PTH 0.172"

OPTIONS
Blank – No options
E – EMI gasket
G – Guide socket
N – #2-56 Locking jacknut
GE – Guide pin/EMI gasket
NE – #2-56 Locking jacknut/EMI gasket

NOTES

Connector potting is standard.

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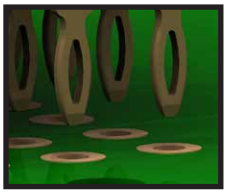
FEATURES

verSI board-mount connectors feature low mating force / high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.



SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . .Electroless nickel per SAE AMS-C-26074, Grade B, Class 3
Socket Contact (Mating Face): . . . . . .BeCu per ASTM B194
Socket Contact (Termination): . . . . . Brass alloy per ASTM B36 (PIH or PTH) or BeCu per ASTM B194 (press-fit contact)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . .Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

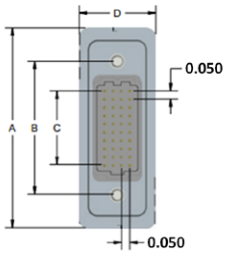
VerSI™

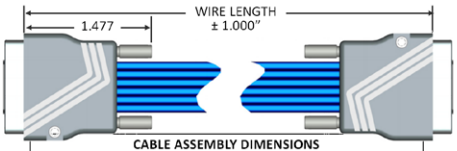
VRD – Differential Pair Twinax Cable Assembly

Pitch: 1.27 mm

VRD cable assemblies are designed for twinax applications. These cable assemblies come in standard lengths but custom lengths and configurations can also be requested. Ruggedized hoods are standard

DIMENSIONS





CABLE ASSEMBLY DIMENSIONS

Columns	A	B	C	Rows	D
10	1.222	0.813	0.450	4	0.470
20	1.722	1.313	0.950	5	0.520
30	2.222	1.813	1.450	6	0.570
40	2.722	2.313	1.950	8	0.670
50	3.222	2.813	2.450	10	0.770

Sample Part Number Format: VRD-04-10-30-01-03-060

VRD – ☐ – ☐ – ☐ – ☐ – ☐ – ☐ – ☐

SERIES
Differential Pair Twinax Cable Assembly 1.27 mm

ROWS
04 – 4 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

CONNECTOR 1
01G – Male with guide pins
01N – Male with threaded nut #2-56
01L – Male with locking screw #2-56
01J – Male with jackscrew #2-56
03G – Female with guide sockets
03N – Female with threaded nut #2-56
03L – Female with locking screw #2-56
03J – Female with jackscrew #2-56

CONNECTOR 2
000 – Flying Leads
01G – Male with guide pins
01N – Male with threaded nut #2-56
01L – Male with locking screw #2-56
01J – Male with jackscrew #2-56
03G – Female with guide sockets
03N – Female with threaded nut #2-56
03L – Female with locking screw #2-56
03J – Female with jackscrew #2-56

LENGTH*
030 – 0.30 M
040 – 0.40 M
050 – 0.50 M
060 – 0.60 M
070 – 0.70 M
080 – 0.80 M
090 – 0.90 M
100 – 1.00 M
150 – 1.50 M
200 – 2.00 M
300 – 3.00 M

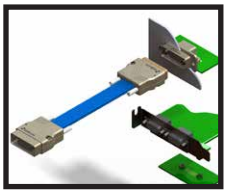
NOTES

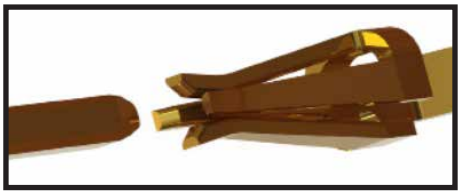
* Other cable lengths and configurations available.

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

FEATURES

VerSI connectors feature low mating force/high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design.





SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . .Electroless nickel per SAE AMS-C-26074, Grade B, Class 3
Socket Contact: . . . . . .BeCu per ASTM B194
Pin Contacts: . . . . . Phos bronze per ASTM B103 or per BeCu ASTM B194 (press-fit contact)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Wire: . . . . . 30 AWG*; 19/42 silver-plated copper
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . .Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

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

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature:. . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . .35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance:. . . . . 5,000 megaohms minimum @ 500 VDC
Durability:. . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

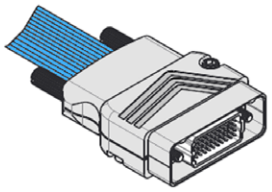
VerSI™

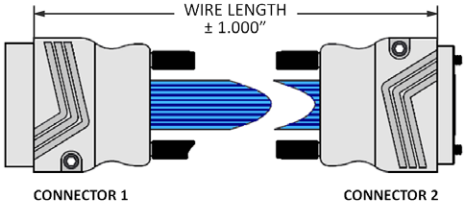
VRW – Discrete Wire Cable Assembly with Internal Solder Connection

Pitch: 1.27 mm

VRW cable assemblies come in standard wire and lengths but custom wire and length options are available. Ruggedized shells are standard.

DIMENSIONS





See next page for detailed drawings

Sample Part Number Format: VRW-04-10-30-03J-01J-A030

VRW – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Discrete Wire Cable Assembly 1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

CONNECTOR 1
01G – Male with guide pins
01N – Male with threaded nut #2-56
01L – Male with locking screw #2-56
01J – Male with jackscrew #2-56
03G – Female with guide sockets
03N – Female with threaded nut #2-56
03L – Female with locking screw #2-56
03J – Female with jackscrew #2-56

CONNECTOR 2
000 – Flying Leads
01G – Male with guide pins
01N – Male with threaded nut #2-56
01L – Male with locking screw #2-56
01J – Male with jackscrew #2-56
03G – Female with guide sockets
03N – Female with threaded nut #2-56
03L – Female with locking screw #2-56
03J – Female with jackscrew #2-56

WIRE CODE
XXXX
(Four characters are required -- see blue columns in the chart below.)

NOTES

All VRW part numbers are non-RoHS-compliant.

Wire colors per M83513 are ten (10) solid colors, repeating.

Per M83513, corrosion has been experienced on connectors that are pre-wired with 22759/33 and stored in sealed environments. Caution should be exercised when using this wire.

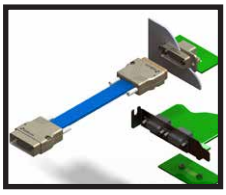
PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

FEATURES

VerSI connectors feature low mating force/high-reliability contact system with four points of contact. The open pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design.

MATERIALS and FINISHES

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8
Finish: . . . . . .Electroless nickel per SAE AMS-2404, Class 3; 500 µ", min.
Socket Contact: . . . . . .BeCu per ASTM B194
Pin Contacts: . . . . . .Phos bronze per ASTM B103 or BeCu per ASTM B768
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . .Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Embedment: . . . . . Frey Eng. Co. insulating compound CF3003-80 and L-II-49 or equiv.
Hardware: . . . . . .Stainless steel per ASTM A582/A582M or ASTM A320; passivated per SAE AMS-2700



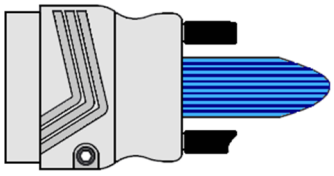
WIRE CODES

COLOR (per 83513) and GAGE		LENGTH		
			M	FT
NEMA HP3 EXBEB (24 AWG) – Multicolored	A			
White	B	010	0.10	0.328
NEMA HP3 EXBDB (26 AWG) – Multicolored	C	020	0.20	0.656
White	D	030	0.30	0.984
NEMA HP3 EXBCB (28 AWG) – Multicolored	E	040	0.40	1.312
White	F	050	0.50	1.640
NEMA HP3 EXBBB (30 AWG) – Multicolored	G	060	0.60	1.969
White	H	070	0.70	2.297
SAE AS22759/33-24 (AWG) – Multicolored	J	080	0.80	2.625
White	K	090	0.90	2.953
SAE AS22759/33-26 (AWG) – Multicolored	L	100	1.00	3.281
White	M	150	1.50	4.921
SAE AS22759/33-28 (AWG) – Multicolored	N	200	2.00	6.562
White	P	300	3.00	9.843
SAE AS22759/33-30 (AWG) – Multicolored	R			
White	S			

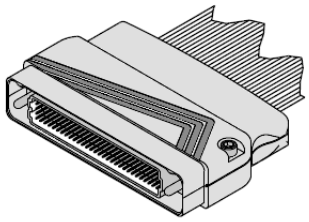
★AirBorn can manufacture special configurations to your exact specifications.★

VRW DIMENSIONS

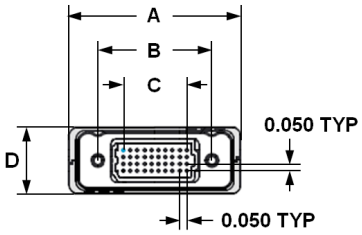
Male (Connector 1)

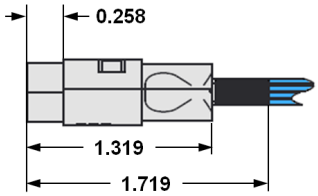


(Dimensional drawings shown with turning hardware)



(Connector with guide pin hardware)

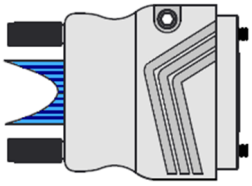




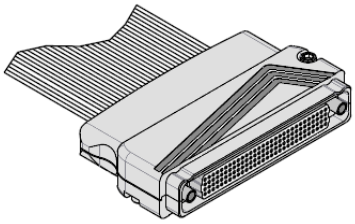
Columns	A	B	C	Rows	D
10	1.222	0.813	0.450	4	0.470
20	1.722	1.313	0.950	5	0.520
30	2.222	1.813	1.450	6	0.570
40	2.722	2.313	1.950	8	0.670
50	3.222	2.813	2.450	10	0.770

Tolerances (unless othewise specified): ±0.010”

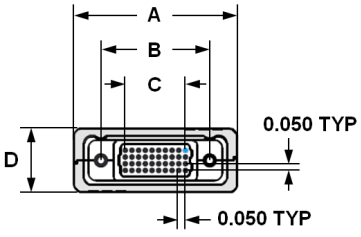
Female (Connector 2)

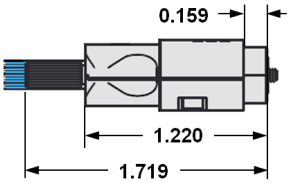


(Dimensional drawings shown with turning hardware)



(Connector with guide socket hardware)





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

VRW PINOUTS

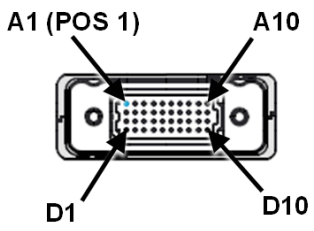
1-TO-1 WIRE CHART FOR JUMPER ASSEMBLIES

(Table illustrates connections for a 4-row, 10-column connector)

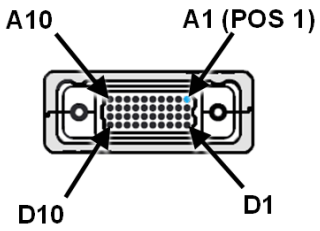
Connector 1			Connector 2	Connector 1			Connector 2	Connector 1			Connector 2	Connector 1			Connector 2
A1	—	BLK	A1	B1	—	BLK	B1	C1	—	BLK	C1	D1	—	BLK	D1
A2	—	BRN	A2	B2	—	BRN	B2	C2	—	BRN	C2	D2	—	BRN	D2
A3	—	RED	A3	B3	—	RED	B3	C3	—	RED	C3	D3	—	RED	D3
A4	—	ORN	A4	B4	—	ORN	B4	C4	—	ORN	C4	D4	—	ORN	D4
A5	—	YEL	A5	B5	—	YEL	B5	C5	—	YEL	C5	D5	—	YEL	D5
A6	—	GRN	A6	B6	—	GRN	B6	C6	—	GRN	C6	D6	—	GRN	D6
A7	—	BLU	A7	B7	—	BLU	B7	C7	—	BLU	C7	D7	—	BLU	D7
A8	—	VIO	A8	B8	—	VIO	B8	C8	—	VIO	C8	D8	—	VIO	D8
A9	—	GRY	A9	B9	—	GRY	B9	C9	—	GRY	C9	D9	—	GRY	D9
A10	—	WHT	A10	B10	—	WHT	B10	C10	—	WHT	C10	D10	—	WHT	D10

Wire colors per M83513 are ten (10) solid colors, repeating when there are more than 10 columns.

MALE



FEMALE



Sample part number:
VRW-04-10-30-01G-03G-A030

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

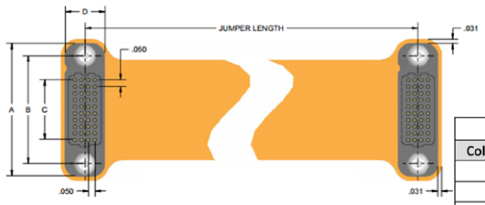
verSI™

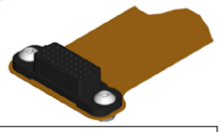
VSX – Flexible Circuit Jumper Assembly

Pitch: 1.27 mm

VSX flexible circuit jumpers come in standard lengths and wiring configurations, but custom specifications can be requested.

DIMENSIONS





FLEX JUMPER DIMENSIONS					
Columns	A	B	C	Rows	D
10	1.000	0.813	0.450	4	0.300
20	1.500	1.313	0.950	5	0.350
30	2.000	1.813	1.450	6	0.400
40	2.500	2.313	1.950	8	0.500
50	3.000	2.813	2.450	10	0.700

Sample Part Number Format: VSX-04-10-50-01G-03A-030

VSX	–		–		–		–		–		–	

SERIES
Flexible Circuit Jumper
1.27 mm

ROWS
04 – 4 Rows
05 – 5 Rows
06 – 6 Rows
08 – 8 Rows
10 – 10 Rows

COLUMNS
10 – 10 Columns
20 – 20 Columns
30 – 30 Columns
40 – 40 Columns
50 – 50 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

CONNECTOR 1
01A – Male; no hardware
03A – Female
01G – Male; guide pin
03G – Female; guide socket

CONNECTOR 2
01A – Male; no hardware
03A – Female
01G – Male; guide pin
03G – Female; guide socket

LENGTH*
015 – 0.15 M
030 – 0.30 M
045 – 0.45 M

NOTES

* Other cable lengths and configurations available.

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

FEATURES

verSI connectors feature low mating force/high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design.

SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	

MATERIALS and FINISHES

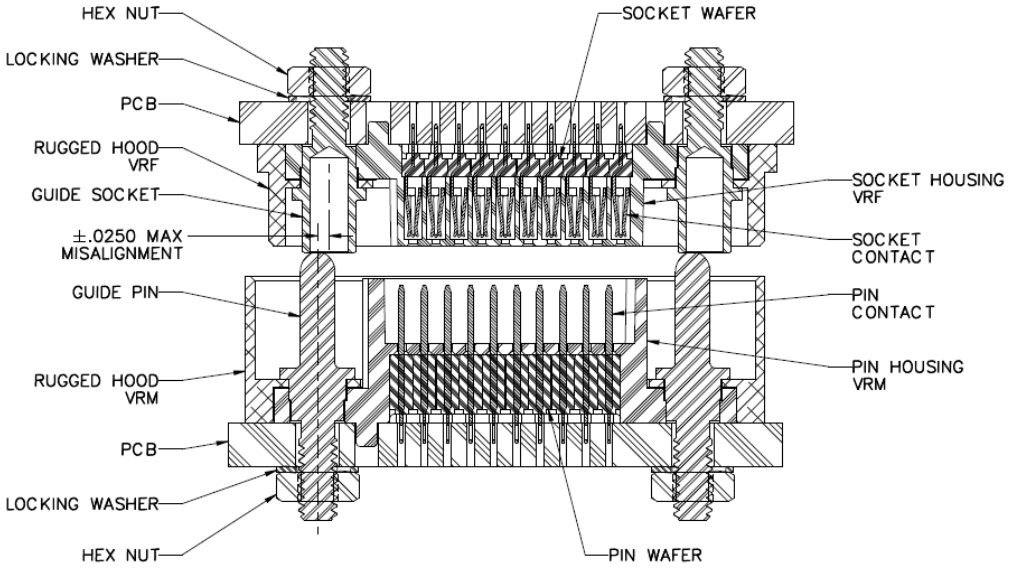
Socket Contact: . . . . . BeCu per ASTM B194
Pin Contacts: . . . . . Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM D5138
Hardware: . . . . . Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

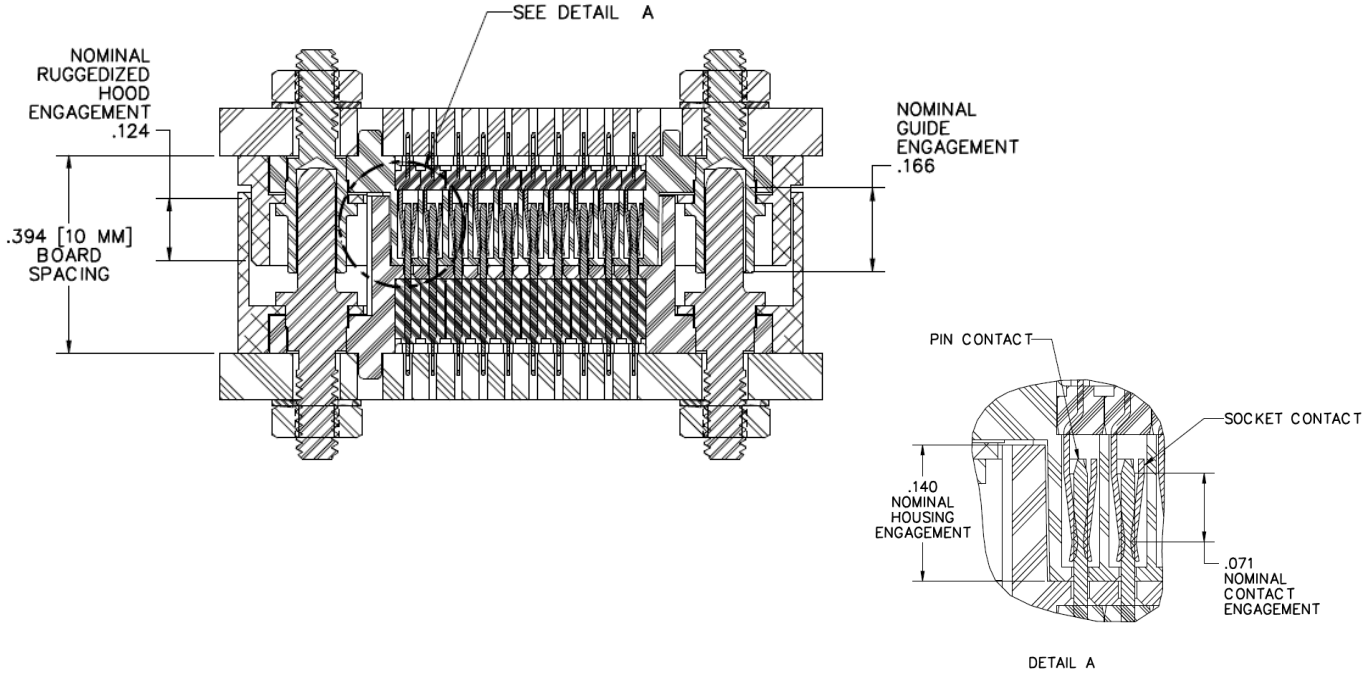
NOTE: AirBorn can manufacture other configurations to your exact specifications.

PERFORMANCE

Contact Rating: . . . . . 2 amperes maximum
Operating Temperature: . . . . . -55° C to 125° C
Min. Contact Wipe: . . . . . 1.27 mm (0.050")
Contact Normal Force: . . . . . 35–40 grams
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC
Durability: . . . . . 2500 connector mating cycles
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)
Shock: . . . . . 50 g (EIA-364-27, condition E)

verSI VERTICAL MISALIGNMENT AND ENGAGEMENT DIAGRAM



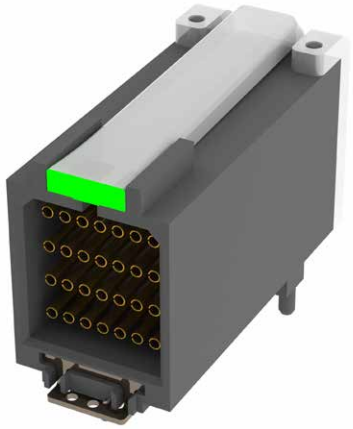


NOTICE

This document contains technical data whose export is governed by the U.S. Export Administration Regulations (EAR). Diversion contrary to U.S. law is prohibited.

HD4™

HD4™ expands on our verSI line adding high contact density in an open-pin field product. The requirements for high-speed, high-density, signal-integrity applications are assured while still delivering the reliability customers have come to expect from AirBorn.

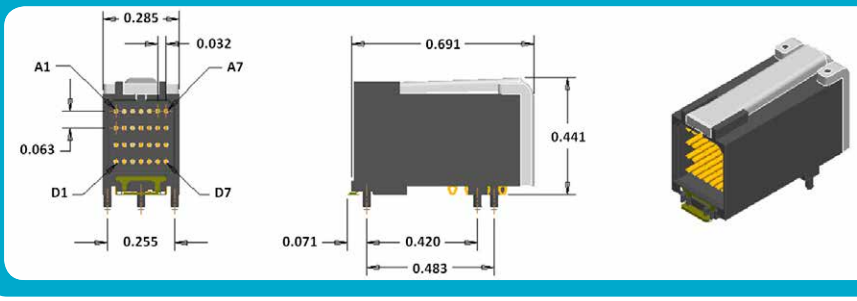


HD4™

HD4 – Right Angle SI Connector

HD4™ high-density, signal-integrity connectors are used in right angle, PCB-mount applications where a female interface is required. HD4™ connectors allow for six 4x interfaces in the low-profile PCIe add-on card when used with part number V4001-06.

DIMENSIONS



Sample Part Number Format: HD4-04-07-50-20-LP

HD4	–	☐	–	☐	–	☐	–	☐	–	☐
SERIES		ROWS		COLUMNS		CONTACT PLATING		TERMINATION		OPTIONS

SERIES
Right Angle
SI Connector
(Female)

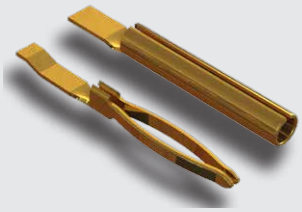
ROWS
04 – 4 Rows

COLUMNS
07 – 7 Columns

CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

TERMINATION
01 – Paste-in-hole
20 – Surface-mount

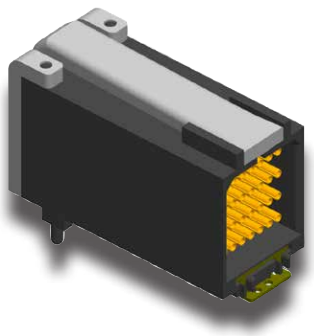
OPTIONS
LP – Light pipe
00 – Without light pipe



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

FEATURES

HD4™ connectors feature low mating force/high-reliability contact system with four points of contact.



MATERIALS and FINISHES

Socket Contact: . . . . . .BeCu per UNS C17460
Contact Finish: . . . . . .Localized gold finish per MIL-G-45204 over nickel per ASTM-B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

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

PERFORMANCE

Contact Rating . . . . . 1 amperes maximum
Operating Temperature . . . . . -55° to 125° C
Contact Wipe . . . . . 1.5 mm (0.060")
Contact Normal Force . . . . . 35-40 grams
Max Recommended Voltage . . . . . 200 VDC
Insulation Resistance . . . . . 1,000 megaohms @ 600 VDC
Durability . . . . . 1000 connector mating cycles
Sinusoidal Vibration . . . . . 15 g (EIA-364-28, condition IV)
Random Vibration . . . . . TBD
Shock . . . . . 100 g (EIA-364-27, condition G)

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

AirBorn
AN INTEGRATED SOLUTIONS PROVIDER

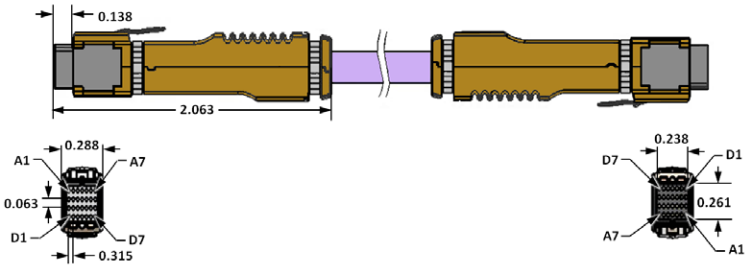
CONTACT CUSTOMER SERVICE
CALL 512-863-5585
x6464

HD4™

HD4C – Differential Pair Twinax Copper Cable Assembly

HD4C™ high-density cable assemblies are designed for differential pair, twinax applications. These cable assemblies come in two standard lengths but custom lengths and configurations can also be requested.

DIMENSIONS



Sample Part Number Format: HD4C-04-07-30-100-S08

HD4C	-	☐	-	☐	-	☐	-	☐	-	☐	☐
SERIES		ROWS		COLUMNS		CONTACT PLATING		IMPEDANCE VALUE		WIRE TYPE	LENGTH*

SERIES
Differential Pair, Twinax Assembly, Copper

ROWS
04 – 4 Rows

COLUMNS
07 – 7 Columns

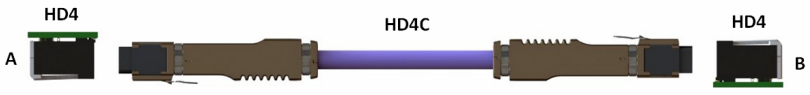
CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

IMPEDANCE VALUE
085 – 85 Ω
100 – 100 Ω

WIRE TYPE
S – Solid conductor
C – Stranded wire

LENGTH*
03 – 0.3 M
04 – 0.4 M
05 – 0.5 M
06 – 0.6 M
07 – 0.7 M
08 – 0.8 M
09 – 0.9 M
10 – 1.0 M
15 – 1.5 M
20 – 2.0 M
30 – 3.0 M

Insertion Loss (Point A to Point B)



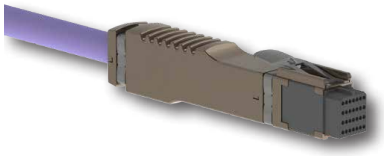
4.0 GHz = 8 Gb/s PCIe Gen III

	0.5 Meter	1 Meter	1.5 Meters	2 Meters	2.5 Meters	3.0 Meters
85 Ω	3.5 dB	7 dB	10.5 dB	14 dB	17.5 dB	21 dB
100 Ω	3 dB	6 dB	8.9 dB	11.9 dB	14.9 dB	17.9 dB

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

FEATURES

HD4™ connectors feature a low mating force/high-reliability contact system with four points of contact. HD4™ cables incorporate an integrated management interface accessed over I²C to query cable details such as unique device serial number, cable length, and cable nominal impedance.



		COLUMN						
		1	2	3	4	5	6	7
ROW	A	VDD	TX1p	TX1n	Gnd	TX3p	TX3n	SCL
	B	Gnd	TX2p	TX2n	Gnd	TX4p	TX4n	Gnd
	C	SS	Rx2p	Rx2n	Gnd	Rx4p	Rx4n	SDA
	D	Gnd	Rx1p	Rx1n	Gnd	Rx3p	Rx3n	Gnd

MATERIALS and FINISHES

Pin Contact: . . . . . BeCu per ASTM-B194
Contact Finish: . . . . . .Localized gold finish per MIL-G-45204 over nickel per ASTM-B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

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

PERFORMANCE

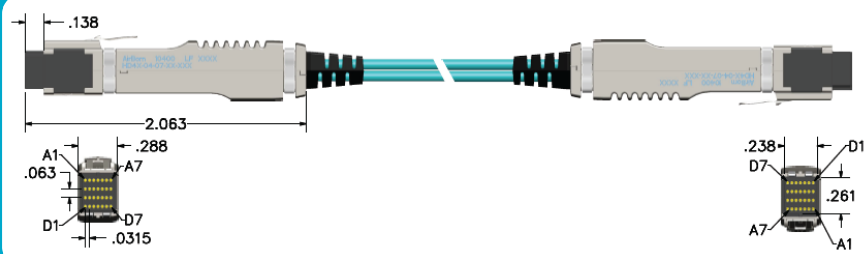
Contact Rating . . . . . 1 amperes maximum
Operating Temperature . . . . . -55° to 125° C
Contact Wipe . . . . . 1.5 mm (0.060")
Contact Normal Force . . . . . 35-40 grams
Max Recommended Voltage . . . . . 200 VDC
Insulation Resistance . . . . . 1,000 megaohms @ 600 VDC
Durability . . . . . 1000 connector mating cycles
Sinusoidal Vibration . . . . . 15 g (EIA-364-28, condition IV)
Random Vibration . . . . . .TBD
Shock . . . . . 100 g (EIA-364-27, condition G)

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

HD4X – Active Optical Cable Assembly

HD4™ high-density, active optical cable assemblies are capable of 10 Gb/s, full duplex over four independent transmit and receive channels. The HD4X AOC is interchangeable with our HD4C passive copper cable assembly having the same active electronics and board management interface.

DIMENSIONS



Sample Part Number Format: HD4X-04-07-30-050

HD4X – ☐ – ☐ – ☐ – ☐

SERIES
Active Optical
Cable Assembly

ROWS
04 – 4 Rows

COLUMNS
07 – 7 Columns

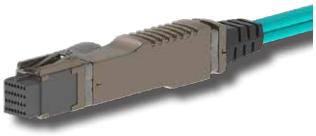
CONTACT PLATING
30 – 30 µ" Au
50 – 50 µ" Au

LENGTH
005 – 5 M
010 – 10 M
015 – 15 M
025 – 25 M
050 – 50 M
075 – 75 M
100 – 100 M

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

FEATURES

HD4™ connectors feature a low mating force/high-reliability contact system with four points of contact. HD4™ cables incorporate an integrated management interface accessed over I²C to query cable details such as unique device serial number, cable length, and cable nominal impedance.



		COLUMN						
		1	2	3	4	5	6	7
ROW	A	VDD	TX1p	TX1n	Gnd	TX3p	TX3n	SCL
	B	Gnd	TX2p	TX2n	Gnd	TX4p	TX4n	Gnd
	C	SS	Rx2p	Rx2n	Gnd	Rx4p	Rx4n	SDA
	D	Gnd	Rx1p	Rx1n	Gnd	Rx3p	Rx3n	Gnd

MATERIALS and FINISHES

Pin Contact: . . . . . BeCu per ASTM-B194
Contact Finish: . . . . . .Localized gold finish per MIL-G-45204 over nickel per ASTM-B689 Type I
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

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

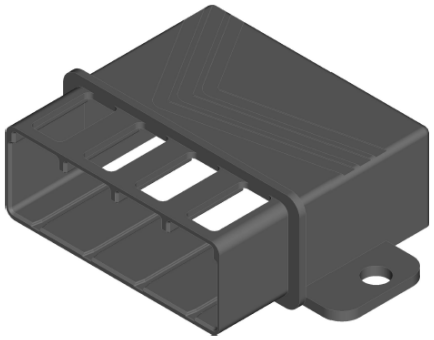
PERFORMANCE

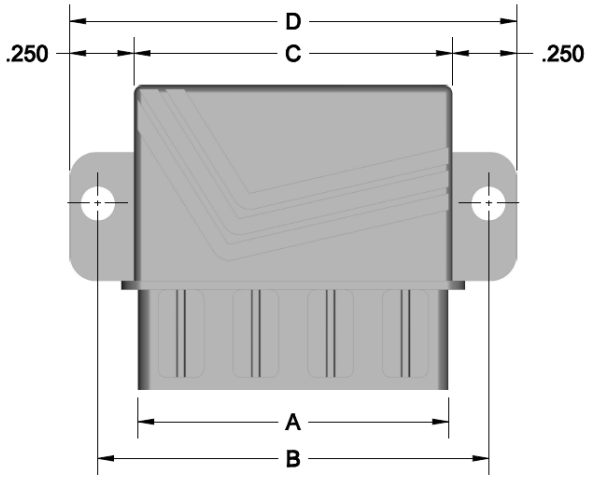
Contact Rating . . . . . 1 amperes maximum
Operating Temperature . . . . . 0° to 70° C
Operating Humidity . . . . . 5 to 90%, non-condensing
Storage Temperature. . . . . -40° to 85° C
Supply Voltage. . . . . 3.05 to 3.47 V (3.3, typ.)
Power Consumption . . . . . 490 mW, typ. (2 x 200 mVpp)
Power Supply Current . . . . . 150 mA, typ.
Contact Wipe. . . . . 1.5 mm (0.060")
Contact Normal Force . . . . . 35-40 grams
Durability . . . . . 1000 connector mating cycles

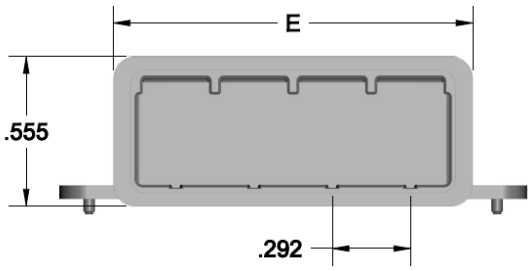
NOTE: Please refer to ESL6007 for further information.

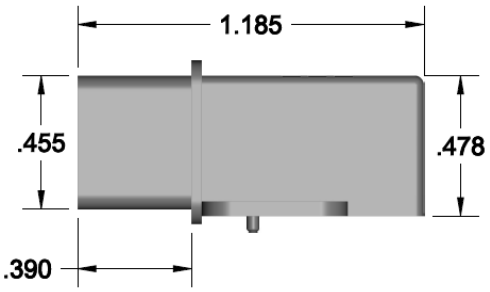
V4000-04 HOOD

XHD4™









Part Number	Positions	A	B	C	D	E
V4000-01	1	.335	.648	.365	.865	.465
V4000-02	2	.627	.940	.657	1.157	.757
V4000-04	4	1.211	1.524	1.241	1.741	1.341
V4000-08	8	2.379	2.692	2.409	2.909	2.509

MATERIALS and FINISHES

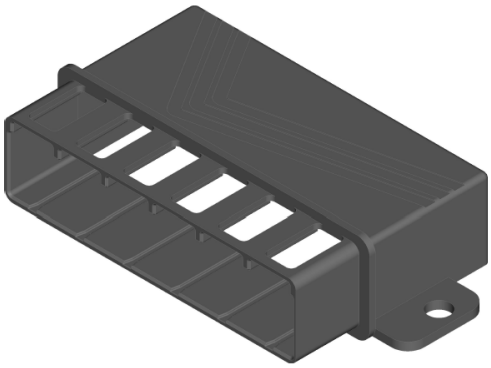
Material: Zinc alloy per ASTM-AG40A

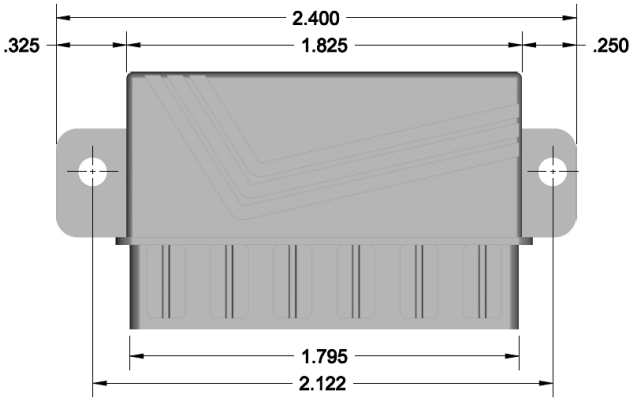
Finish: 50–100µ″ nickel per AMS-QQ-N-290

V4001-06 HOOD

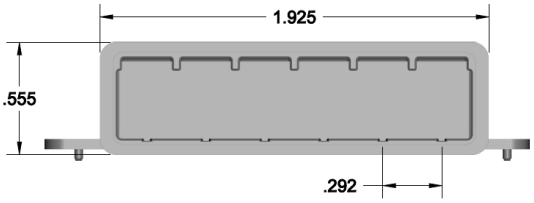
XCXHD4™

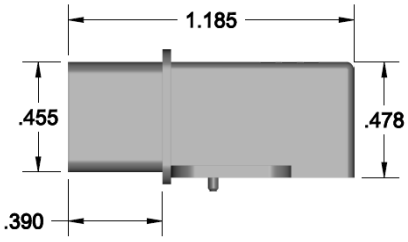
Specifically designed for PCIe applications.





Part Number	Positions
V4001-06	6





MATERIALS and FINISHES

Material: Zinc alloy per ASTM-AG40A

Finish: 50–100µ″nickel per AMS-QQ-N-290

Mouser Electronics

Authorized Distributor

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AirBorn:

VSF-06-40-50-05-G VRRAM-06-40-50-00-N VSM-04-50-160-50-00 VSF-04-50-50-00 VRRAF-04-30-30-01-N VRRAF-06-40-50-00-N VSF-05-50-50-00-G VSF-06-50-50-00-L VRRAM-04-20-50-03-G VRF-04-10-50-03-G VSF-04-30-50-04-N VSRAM-04-10-50-02-G VRRAF-04-10-50-03-N VRF-04-10-50-02-N VSF-06-40-50-00-G VSF-05-30-50-03-J VSF-06-40-30-03-G VRRAM-05-40-50-00-N VSF-04-50-50-00-L VSF-06-40-30-01-G VSRAM-04-50-50-00-G VSF-04-10-50-04-G VSF-04-10-30-04-N VSF-04-10-30-04-G VSRAM-06-40-50-00-G VSM-04-30-120-50-00 VSF-04-30-50-00 VSF-04-40-50-00-N VSM-04-50-080-30-00-G VSM-04-10-080-30-04-G VSM-04-30-100-50-04-J VSM-04-50-080-50-00-N VSF-06-40-50-03 VSF-04-10-50-01-J