

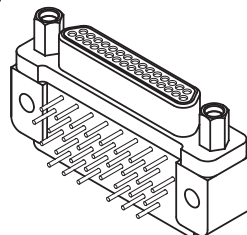
Right Angle Boardmount (Thru Clearance Cut)

.050"
9 thru 100 Contacts

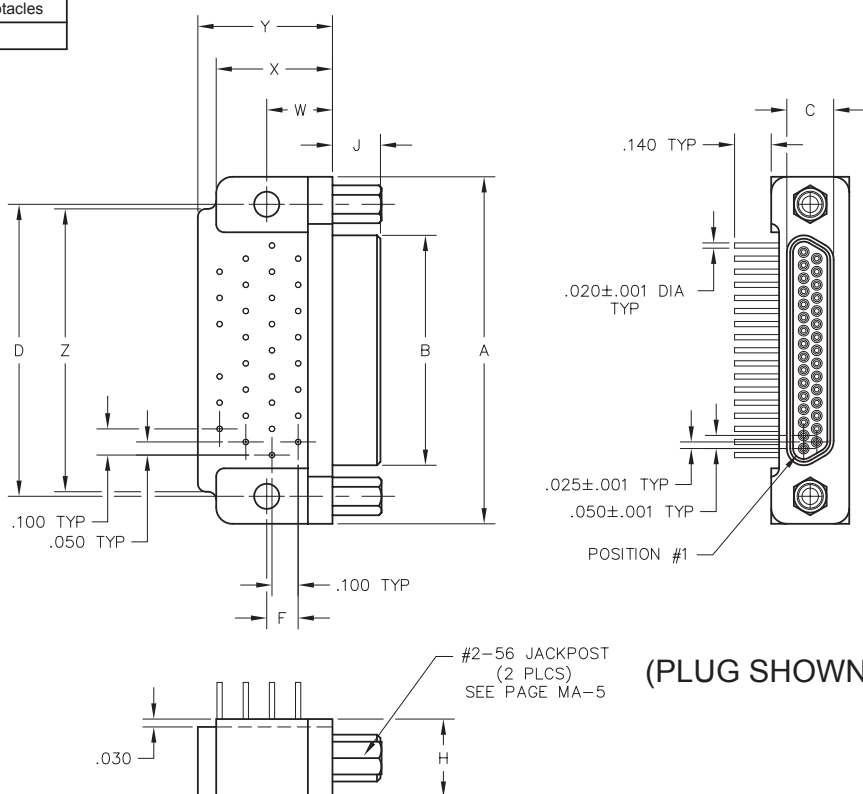
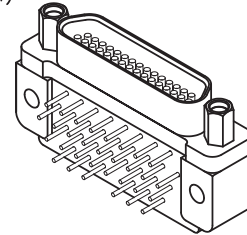
MK

MATING MATRIX	
CONNECTOR	MATES WITH
MK-2R...	MK, ML, MM, MN receptacles
MK-2S..	MK, ML, MM, MN plugs

MK-2R2-031-335-220S (PLUG)



MK-2S2-031-445-220S (RCPT)



(PLUG SHOWN)

DIMENSIONS														HARDWARE	MOUNTING HOLE	
SIZE	CONTACT ROWS	A	B		C		D	F	H	J		W	X MAX			Y MAX
			PLUG MAX	RCPT MAX	PLUG MAX	RCPT MAX				PLUG	RCPT					
9	2	.775	.334	.400	.185	.251	.565	.020	.120	.298	.183	.195	.250	.420	.420	.775
15		.925	.484	.550			.715	1.075								1.175
21		1.075	.634	.700			.865	1.175								1.220
25		1.175	.734	.800			.965	1.180								1.220
31		1.325	.884	.950			1.115	1.180								1.220
37		1.475	1.034	1.100	1.265	1.220	1.180									
51	3	1.425	.984	1.050	.228	.294	1.215	.150	.341				.300	.430	.650	1.220
69		1.725	1.284	1.350			1.515	1.450								.755

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Polarized Keying Hardware

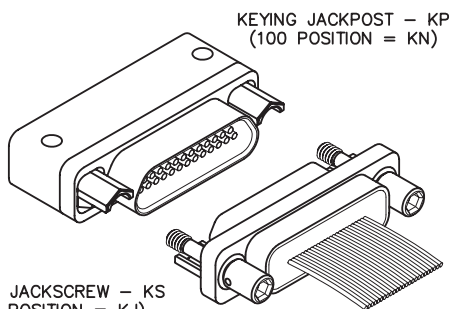


Select the appropriate two digit number above and include as the last two digits of the hardware code in the part number.
(Keying hardware is factory installed and non-removable).

Example:

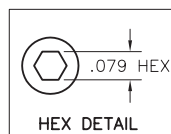
MM-213-025-161-99WA-KS11

MK-263-025-435-990S-KP11

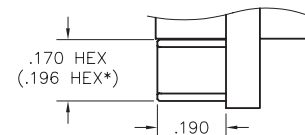


KEYING JACKSCREW - KS
(100 POSITION = KJ)

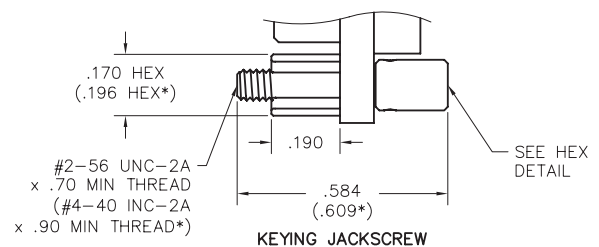
KEYING JACKPOST - KP
(100 POSITION = KN)



HEX DETAIL



KEYING JACKPOST



KEYING JACKSCREW

* = Dimensions for 100 position connectors

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PLUG: MK-2R2-031-335-220S
RECEPTACLE: MK-2S2-031-445-220S

XX-XXX-XXX-XXX-XXXX-XXX

BODY
CONTACTS
OPTIONS

SERIES
SIZE
HARDWARE

PLUG

SERIES

MK .050" Rugged Metal PC Board Mount Connector
(MK mates with MK, ML, MM, MN, receptacles)

BODY

- 2 2-Row (Sizes 9 thru 37)
 - 3 3-Row (Size 51 & 69)
- BODY STYLE: Blind Cut
- R Plug, right angle (thru clearance cut), narrow footprint, w/ mounting holes
- BODY MATERIAL:
- 2 Electroless nickel shell w/ PPS insulator
 - 3 Electrodeposited cadmium shell w/ PPS insulator
 - 4 Hard anodized black shell w/ PPS insulator
 - 5 Stainless steel shell w/ PPS insulator

SIZE

XXX 009, 015, 021, 025, 031, 037, 051, 069

CONTACTS

- TYPE CONTACTS/TERMINATIONS:
- 32 Pin, right angle, PCB leads, .109"
 - 33 Pin, right angle, PCB leads, .140"
 - 34 Pin, right angle, PCB leads, .172"
- PLATING OPTIONS:
- 3 50 μ" Au contacts: Au terminations
 - 5 50 μ" Au contacts; Sn/Pb alloy terminations
 - 7 50 μ" Au contacts; SAC305 terminations

HARDWARE

- STYLE OF HARDWARE:
- 00 None
 - 22 Two fixed jacknuts
 - 41 Two turning jackscrews, allen head, retaining ring****
 - 99 Keying hardware, see options below (Body material 2, 3 and 4 only)
- POLARIZATION / WIRING:
- 0R Reversed body polarization
 - 0S Standard body polarization

OPTIONS

- KPXX Two fixed jacknuts
- 0B7 Threaded inserts, standard body polarization

NOTES

See page MA-6 for keying options
**** = Connector body has no mounting holes.
 = Option not RoHS compliant

RECEPTACLE

SERIES

MK .050" Rugged Metal PC Board Mount Connector
(MK mates with MK, ML, MM, MN plugs)

BODY

- 2 2-Row (Sizes 9 thru 37)
 - 3 3-Row (Size 51 & 69)
- BODY STYLE: Blind Cut
- S Receptacle, right angle (thru clearance cut), narrow footprint, w/ mounting holes
- BODY MATERIAL:
- 2 Electroless nickel shell w/ PPS insulator
 - 3 Electrodeposited cadmium shell w/ PPS insulator
 - 4 Hard anodized black shell w/ PPS insulator
 - 5 Stainless steel shell w/ PPS insulator

SIZE

XXX 009, 015, 021, 025, 031, 037, 051, 069

CONTACTS

- TYPE CONTACTS/TERMINATIONS:
- 43 Socket, right angle, PCB leads, .109"
 - 44 Socket, right angle, PCB leads, .140"
 - 45 Socket, right angle, PCB leads, .172"
- PLATING OPTIONS:
- 3 50 μ" Au contacts: Au terminations
 - 5 50 μ" Au contacts; Sn/Pb alloy terminations
 - 7 50 μ" Au contacts; SAC305 terminations

HARDWARE

- STYLE OF HARDWARE:
- 00 None
 - 22 Two fixed jacknuts
 - 41 Two turning jackscrews, allen head, retaining ring****
 - 99 Keying hardware, see options below (Body material 2, 3 and 4 only)
- POLARIZATION / WIRING:
- 0R Reversed body polarization
 - 0S Standard body polarization

OPTIONS

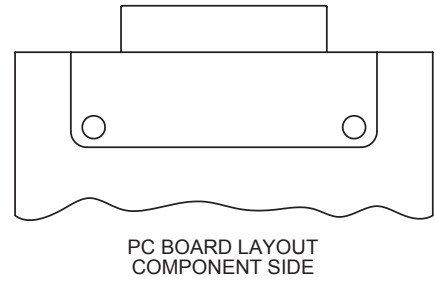
- KPXX Two fixed jacknuts and interfacial sealing gasket.
- 900 Interfacial sealing gasket
- 0B7 Threaded inserts and interfacial sealing gasket, standard body polarization.

NOTES

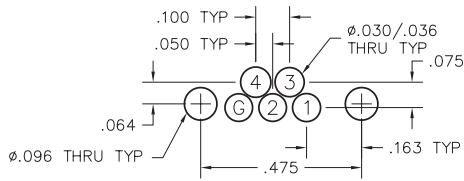
See page MA-6 for keying options
**** = Connector body has no mounting holes.
 = Option not RoHS compliant

- CLICK HERE -

Recommended PC Board Layout
RIGHT ANGLE
Standard Polarization
Pos 4 thru 9



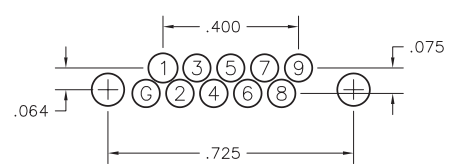
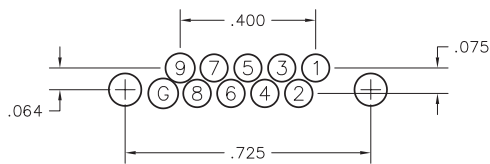
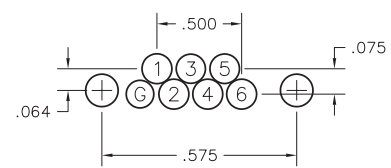
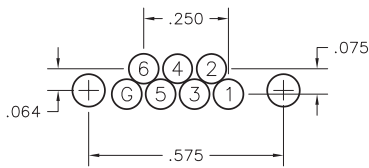
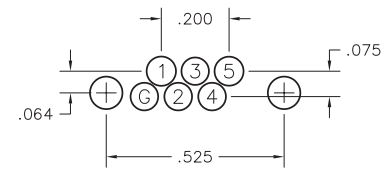
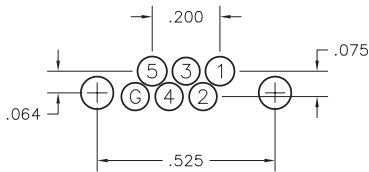
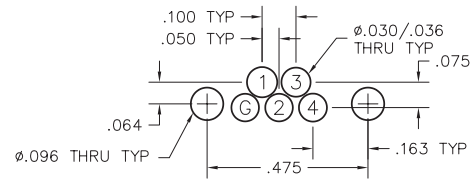
PLUG
PC BOARD LAYOUT
COMPONENT SIDE



CONNECTOR
MATING FACE*
(RECEPTACLE)



RECEPTACLE
PC BOARD LAYOUT
COMPONENT SIDE



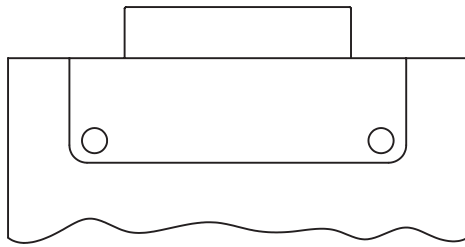
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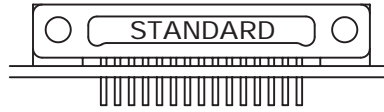
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PC BOARD LAYOUT
COMPONENT SIDE



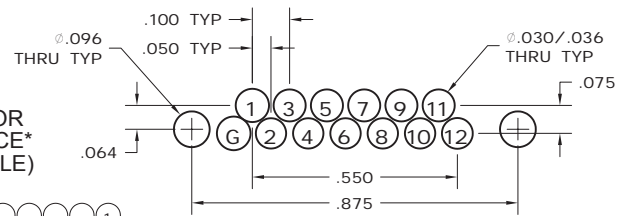
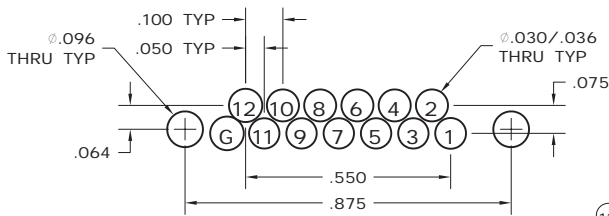
CONNECTOR MATING FACE

Recommended PC Board Layout

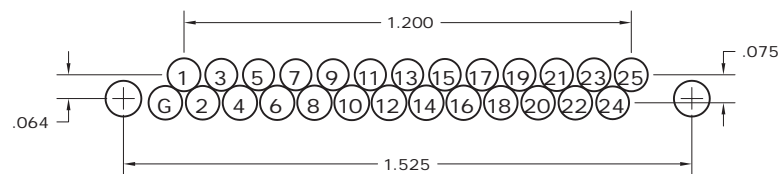
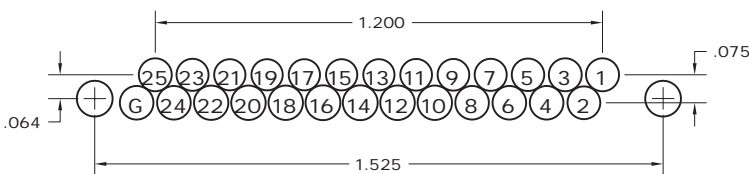
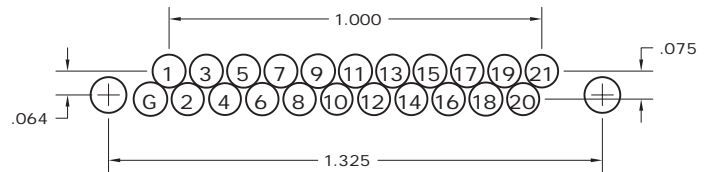
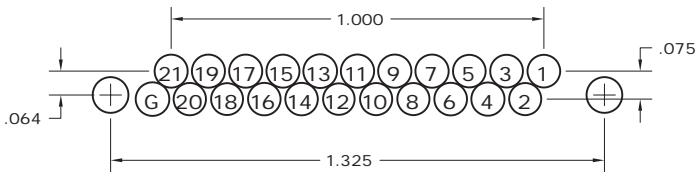
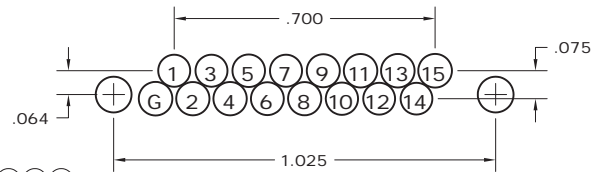
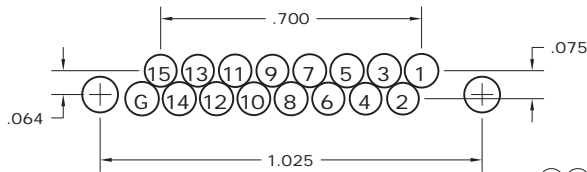
RIGHT ANGLE
Standard Polarization
Pos 12 thru 25

PLUG
PC BOARD LAYOUT
COMPONENT SIDE

RECEPTACLE
PC BOARD LAYOUT
COMPONENT SIDE



CONNECTOR MATING FACE*
(RECEPTACLE)



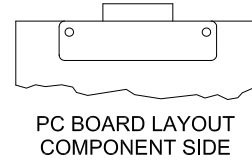
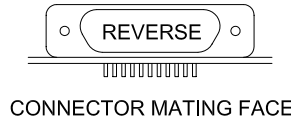
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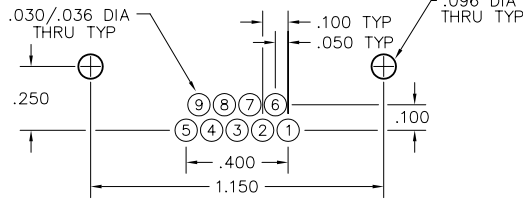
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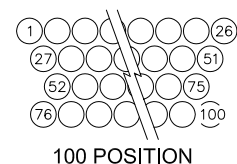
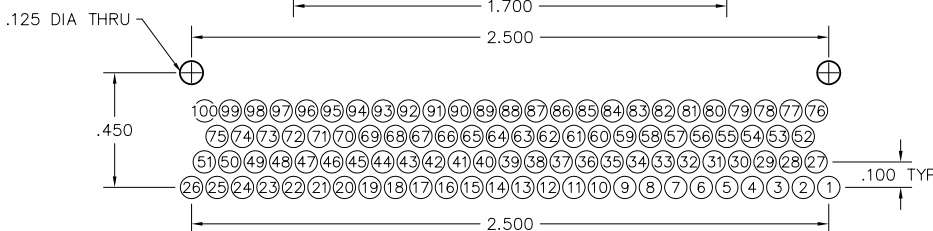
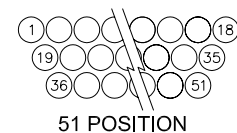
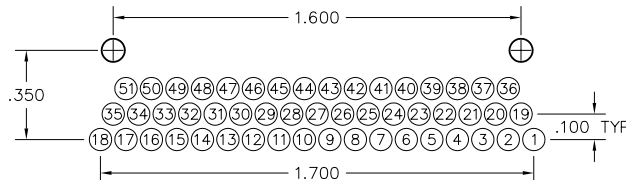
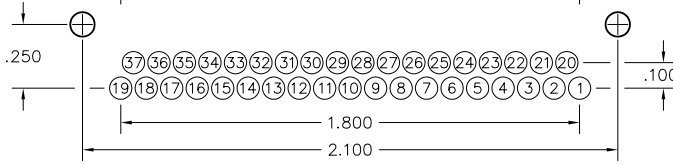
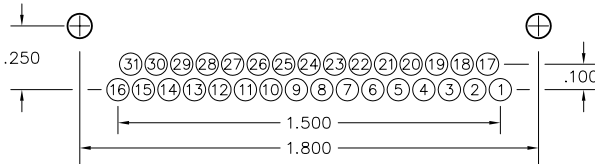
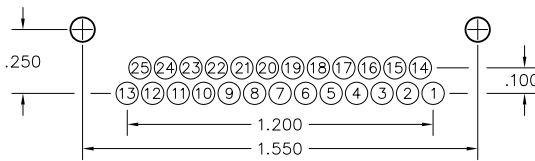
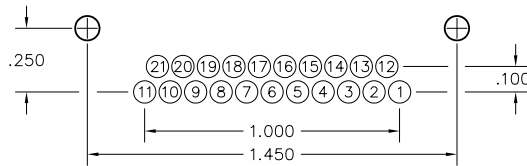
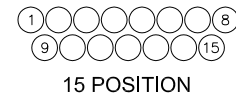
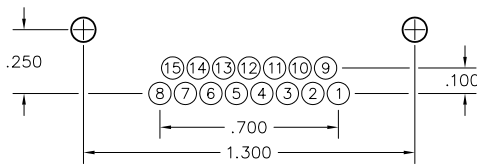
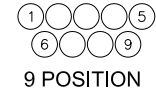
Recommended PC Board Layout

Right Angle, Standard Footprint
Reverse Polarization

PLUG
PC BOARD LAYOUT
COMPONENT SIDE

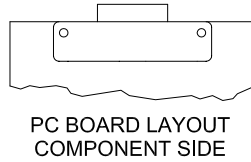
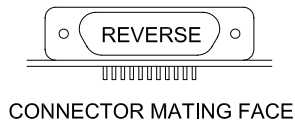


CONNECTOR
MATING FACE
(PLUG)



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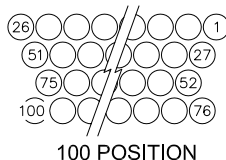
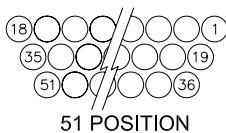
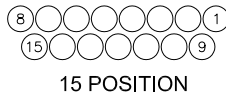
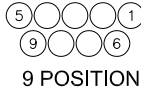
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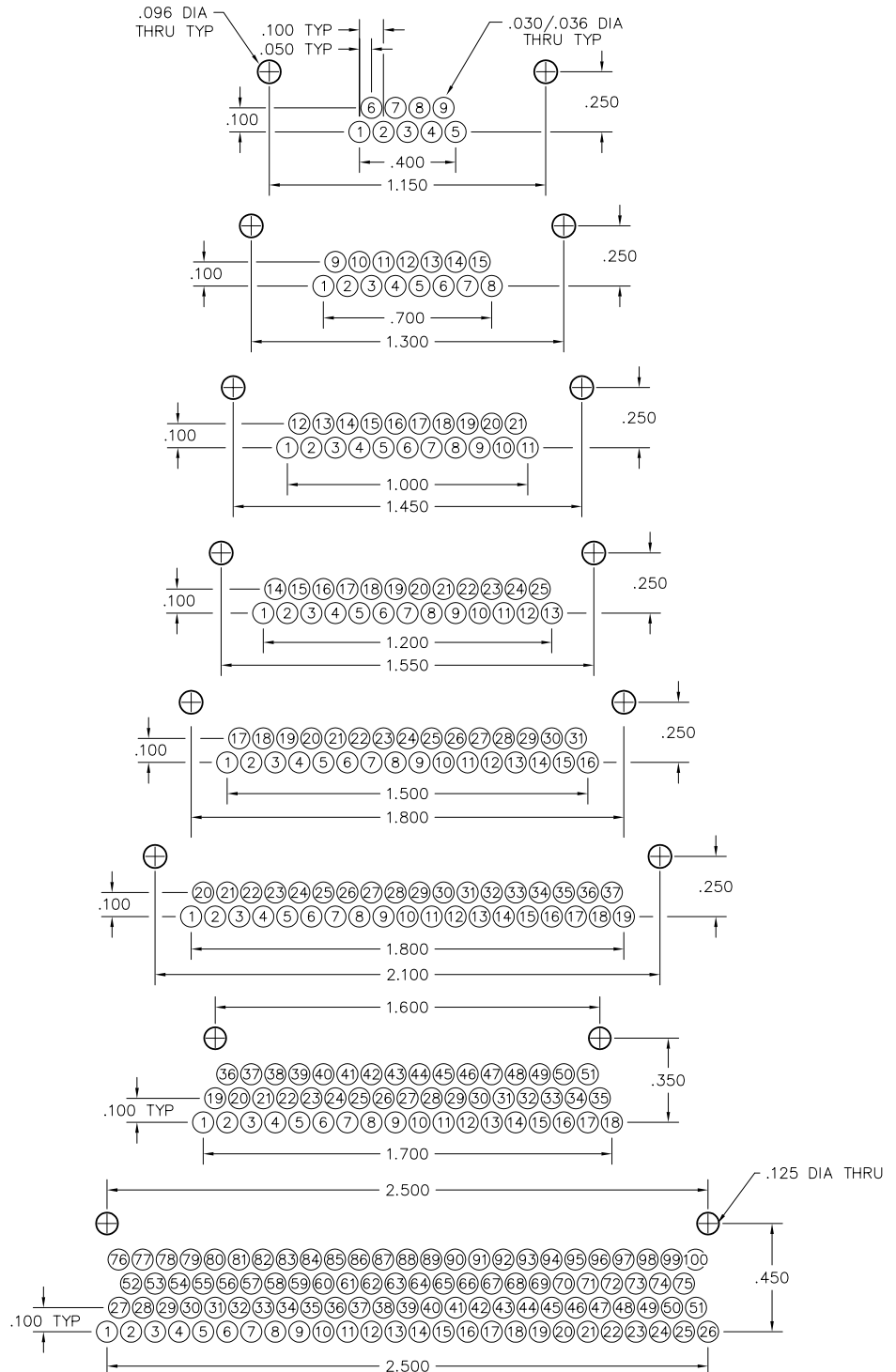
Recommended PC Board Layout

Right Angle, Standard Footprint
Reverse Polarization

CONNECTOR MATING FACE (RECEPTACLE)



RECEPTACLE PC BOARD LAYOUT COMPONENT SIDE



— CLICK HERE —

Mating Matrix for AirBorn "M" Series Connectors

RECEPTACLES

P L U G S	MA (Strip)	MC (Circular)	MM (Hybrid)	MK (Metal) PC Board	ML (Plastic) PC Board	MM (Metal) I/O	MN (Plastic) I/O	MP (Plastic) I/O	MQ (Metal) I/O	MR (Plastic) PC Board	MS (Metal) PC Board	
	MA (Strip)	XX										
	MC (Circular)		XX									
	MM (Hybrid)			XX								
	MK (Metal) PC Board				BB	BB	BI	BI				
	ML (Plastic) PC Board				BB	BB	BI	BI				
	MM (Metal) I/O				IB	IB	II	II				
	MN (Plastic) I/O				IB	IB	II	II				
	MP (Plastic) I/O								II	II	IB	IB
	MQ (Metal) I/O								II	II	IB	IB
	MR (Plastic) PC Board								BI	BI	BB	BB
	MS (Metal) PC Board								BI	BI	BB	BB

I/O Connectors

MM-MN-MP-MQ

PC Board Mounted Connectors

MK-ML-MR-MS

Inter-mateable Connectors

MK-ML-MM-MN
MP-MQ-MR-MS

KEY:

BB = PC Board Mounted Plug with PC Board Mounted Receptacle

BI = PC Board Mounted Plug with I/O Receptacle

IB = I/O Plug with PC Board Mounted Receptacle

II = I/O Plug with I/O Receptacle

For Military Configurations, See pages MIL-1 thru MIL-22

— CLICK HERE —

Specifications

Materials and Finishes *

Contacts:	Pins: BeCu alloy strip per ASTM B194 Sockets: Brass per ASTM B121 / B121M or ASTM B16 / B16M or ASTM B453
Contact Finish:**	Gold plate per ASTM B488
Shells:	Aluminum Alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T6511 per SAE AMS-QQ-A-200/8 or Stainless Steel 300 series per ASTM A484 / A484M and ASTM A582 / A582M Passivated per SAE AMS2700
Aluminum Shell Finishes:**	Electroless Nickel per SAE AMS2404 Electrodeposited Cadmium per SAE AMS-QQ-P-416 Black Anodized per MIL-A-8625 Gold per MIL-DTL-45204
Molded Insulators:	Glass filled polyphenylene sulfide per MIL-M-24519
Embedment:	Insulating compound per MIL-I-16923
Jackscrews, Jackposts and Nuts:	Corrosion resistant steel per ASTM A320 or ASTM A484 / A484M and ASTM A582 / A582M Passivated per SAE AMS2700
Clips and Washers:	Corrosion resistant steel per ASME 18.24 or NASM35333 Passivated per ASME 18.24 or NASM35333
Guide Pins	Corrosion resistant steel per ASTM A484 / A484M and ASTM A582 / A582M Passivated per SAE AMS2700
Latches	Beryllium copper in accordance with ASTM B194 Electroless Nickel plate per SAE AMS2404
Interfacial Seal Gaskets:	Fluorosilicone per SAE AMS-R-25988
Tolerances:**	Unless otherwise specified: Fractions = $\pm 1/64$ " Decimals = ± 0.010 " Angles = $\pm 5^\circ$ Wire lengths: insulated/stranded = $+1.0"/-0.0$ " uninsulated/solid = $+0.2"/-0.0$ "

Note: AirBorn can manufacture special configurations for your exact specifications.

* = Reference the above listed specifications or an equivalent industry standard when applicable

** = When ordering to Mil Spec P/N, Mil Spec requirements apply

Performance

Reference MIL-DTL-83513

AirBorn "M" Series meets or exceeds MIL-DTL-83513 Performance Specifications

Contact Rating:	3-amperes maximum
Solderability:	Terminals (except crimp) tested in accordance with MIL-STD-202, Method 208
Wire Size:	Stranded #26 AWG or solid #25 AWG standard (consult factory for other sizes and types)
Test Voltage:	600 V, RMS, 60 Hz
Operating Temperature:	-55° C to +125° C
Insulation Resistance:	5,000 megohms minimum @ 500 VDC
Durability:	500 connector mating cycles
Vibration:	Tested in accordance with MIL-STD-1344, Method 2005, Condition IV, according to MIL-83513
Shock:	Tested in accordance with MIL-STD-1344, Method 2004, Condition E, according to MIL-83513
Salt Spray:	Mated connectors tested in accordance with MIL-STD-1344, Method 1001, Test Condition B
Humidity:	Mated connectors tested in accordance with MIL-STD-1344, Method 1002, Type II (except steps 7a and 7b)
Thermal Shock:	Tested to the temperature extremes of MIL-STD-1344, Method 1003, Test Condition A (except step 3, temperature shall be 125° C)
Contact Resistance:	0.065 volt maximum drop @ 2.5 amps (.026 ohms)
Contact Engaging Force:	6.0 ounce maximum, with .0221 diameter test sleeve per contact
Contact Separating Force:	0.5 ounce minimum, with .0230 diameter test sleeve per contact
Crimp Strength:	5 pound minimum tensile strength
Mating & Unmating Force:	10 ounces maximum per contact