



Cable to Board (Narrow Footprint)

.050"

9 thru 100 Contacts

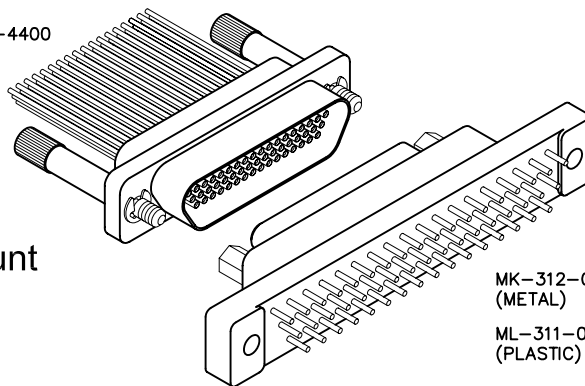
Rugged Cable Rugged Board Mount

MM, MN

MK, ML

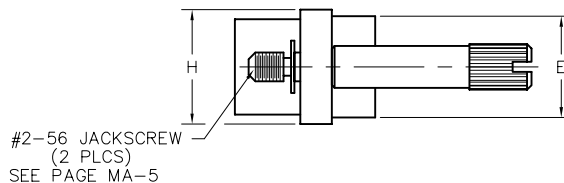
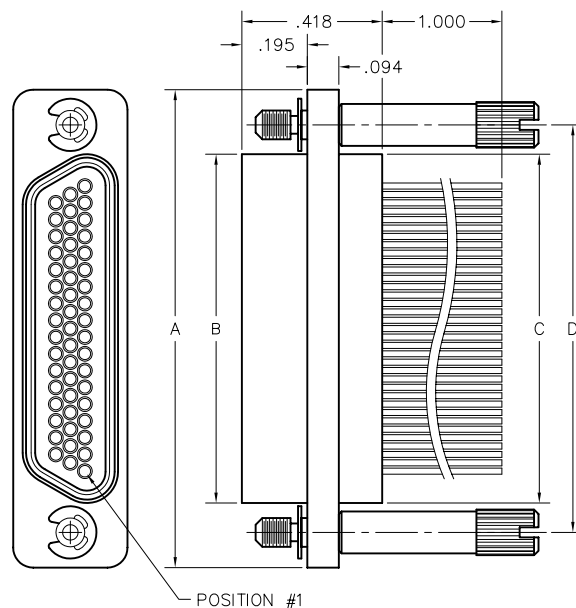
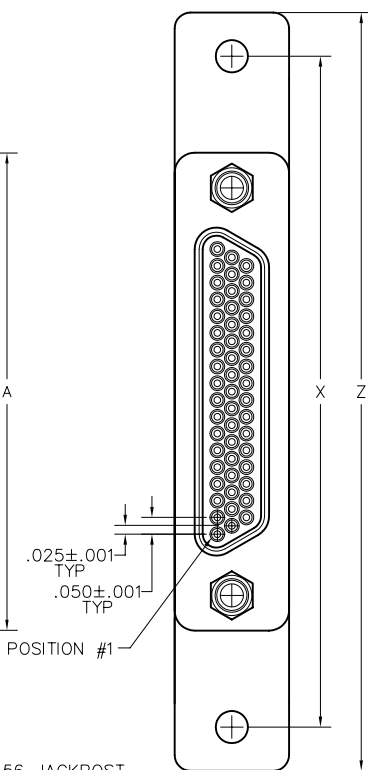
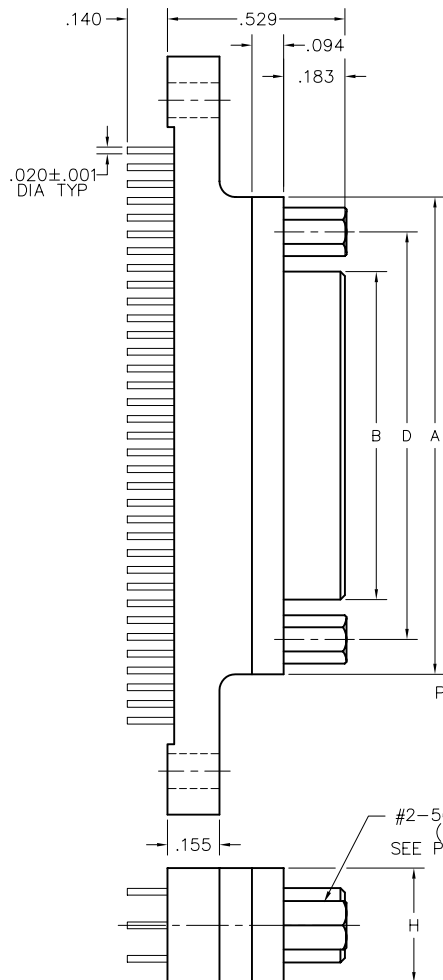
MM-322-051-253-4400
(METAL)

MN-321-051-253-4400
(PLASTIC)



MK-312-051-135-2200
(METAL)

ML-311-051-135-2200
(PLASTIC)



PLUG

RECEPTACLE

DIMENSIONS												
SIZE	CONTACT ROWS	A	B		C	D	E POTTING WELL MAX	H	X	Z MAX	HARDWARE	MOUNTING HOLE
			PLUG MAX	RCPT MAX								
9	2	.775	.334	.400	.390	.565	.270	.298	1.150	1.390	#2-56 UNC THD (.092 DIA THRU)	.096 DIA OR #2-56 UNC THREADED INSERT
15		.925	.484	.550	.540	.715			1.450	1.690		
21		1.075	.634	.700	.690	.865			1.500	1.740		
25		1.175	.734	.800	.790	.965			1.800	2.040		
31		1.325	.884	.950	.940	1.115			2.100	2.340		
37	3	1.475	1.034	1.100	1.090	1.265	.310	.341	2.000	2.270	#4-40 UNC THD (.147 DIA THRU)	.125 DIA OR #2-56 UNC THREADED INSERT
51		1.425	.984	1.050	1.040	1.215			2.800	3.240		
100	4	2.160	1.384	1.508	1.432	1.800	.360	.384	2.800	3.240	#4-40 UNC THD (.147 DIA THRU)	.125 DIA OR #2-56 UNC THREADED INSERT

PLUG: MK-312-051-135-2200

RECEPTACLE: MM-322-051-253-4400

PLUG: ML-311-051-135-2200

RECEPTACLE: MN-321-051-253-4400

XX-XXX-XXX-XXX-XXXX-XXX

PLUG
RECEPTACLE

SERIES	
MK .050" Rugged Metal PC Board Mount Connector	MM .050" Rugged Metal I/O Connector
ML .050" Rugged Plastic PC Board Mount Connector (MK & ML mate with MK, ML, MM, MN receptacles)	MN .050" Rugged Plastic I/O Connector (MM & MN mate with MK, ML, MM, MN plugs)

BODY	
2 2-Row (Sizes 9 thru 37)	2 2-Row (Sizes 9 thru 37)
3 3-Row (Size 51)	3 3-Row (Size 51)
4 4-Row (Size 100)	4 4-Row (Size 100)

BODY STYLE:	BODY STYLE:
1 Plug, straight, narrow footprint, w/ mtg holes	2 Receptacle, straight, with ears

BODY MATERIAL:	BODY MATERIAL:
1 Polyphenylene Sulfide (ML only)	1 Polyphenylene Sulfide (MN only)
2 Polyphenylene Sulfide with electroless nickel shell	2 Polyphenylene Sulfide with electroless nickel shell
3 Polyphenylene Sulfide with electrodeposited cadmium shell ☒	3 Polyphenylene Sulfide with electrodeposited cadmium shell ☒
4 Polyphenylene Sulfide with hard anodized black shell	4 Polyphenylene Sulfide with hard anodized black shell
5 Polyphenylene Sulfide with stainless steel shell	5 Polyphenylene Sulfide with stainless steel shell

SIZE	
XXX 009, 015, 021, 025, 031, 037, 051, 100	XXX 009, 015, 021, 025, 031, 037, 051, 100

CONTACTS	
TYPE CONTACTS/TERMINATIONS:	TYPE CONTACTS/TERMINATIONS:
12 Pin, straight, PCB leads, .109"	21 Socket, straight, solder cup
13 Pin, straight, PCB leads, .140"	24 Socket, straight, .500" pigtails (.018 dia)
14 Pin, straight, PCB leads, .172"	25 Socket, straight, 1.000" pigtails (.018 dia)
	26 Socket, straight, crimped wire

PLATING OPTIONS:	PLATING OPTIONS:
3 50 μ " Au contacts; 10 μ " Au terminations	1 50 μ " Au contacts (crimp wire)
5 50 μ " Au contacts; Sn/Pb alloy terminations ☒	3 50 μ " Au contacts; 10 μ " Au terminations (solder cup, pigtail)
7 50 μ " Au contacts; SAC305 terminations	5 50 μ " Au contacts; Sn/Pb alloy terminations (pigtail) ☒
	7 50 μ " Au contacts; SAC305 terminations (pigtail)

HARDWARE	
STYLE OF HARDWARE:	STYLE OF HARDWARE:
00 None	00 None
22 Two fixed jacknut assemblies (62*)	22 Two fixed jacknut assemblies (62*)
99 Keying hardware, see options below (Body material 2, 3 and 4 only)	41 Two turning jackscrews, allen head, retaining ring (81*)
	42 Two long turning jackscrews, allen head, retaining ring (82*)
	43 Two turning jackscrews, slot head, retaining ring (83*)
	44 Two long turning jackscrews, slot head, retaining ring (84*)
	45 Two turning jackscrews, allen head, captivated** (85*)
	99 Keying hardware, see options below (Body material 2, 3 and 4 only)

POLARIZATION / WIRING:	POLARIZATION / WIRING
00 None	00 None
	XX For wiring codes, see page MA-3 & MA-4

OPTIONS	
KPXX Two fixed jacknuts. See page MA-6 for keying options (KN*)	KSXX Two turning jackscrews and interfacial sealing gasket. See page MA-6 for keying options (KJ*)
0B7 Threaded inserts	900 Interfacial sealing gasket

* = Use numbers or letters in parenthesis when ordering size 100.

** = Captive hardware is factory installed and non-removable.

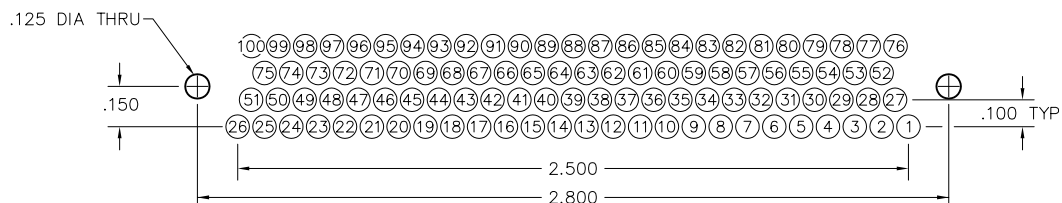
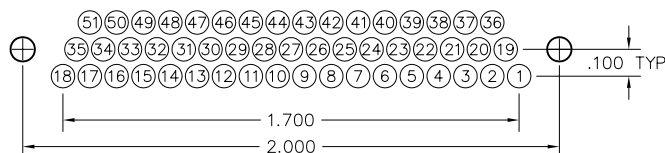
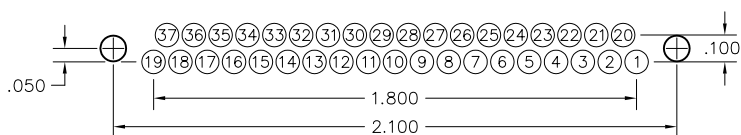
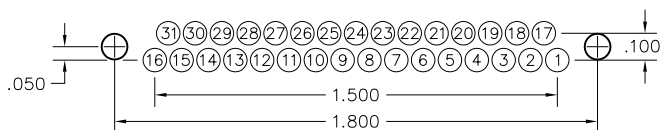
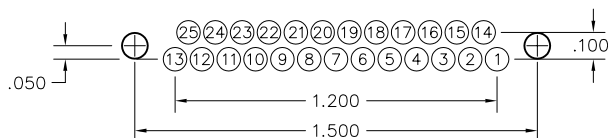
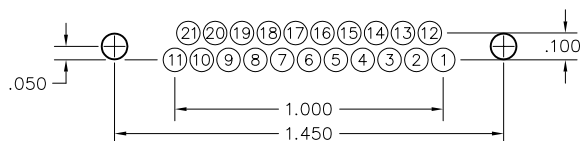
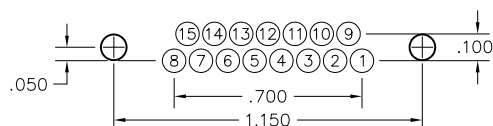
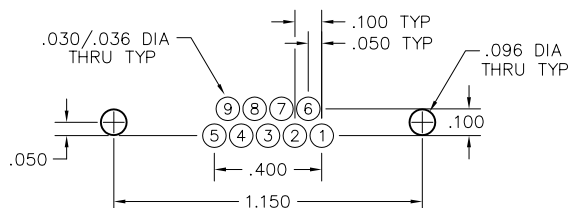
☒ = Option not RoHS compliant



Recommended PC Board Layout

Straight, Narrow Footprint

PLUG PC BOARD LAYOUT COMPONENT SIDE



CONNECTOR MATING FACE (PLUG)



9 POSITION



15 POSITION



21 POSITION



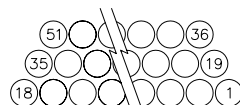
25 POSITION



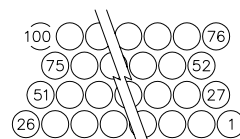
31 POSITION



37 POSITION

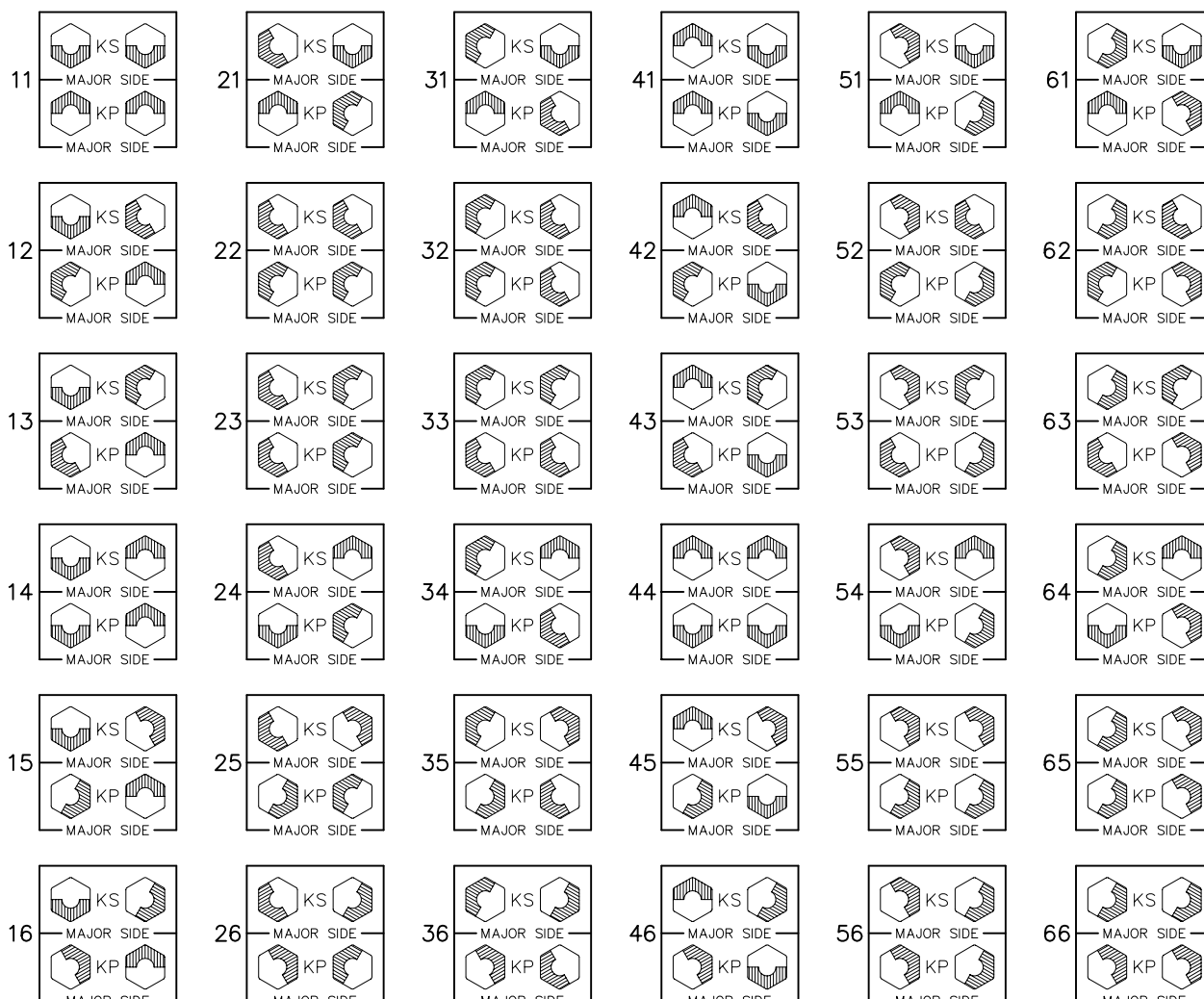


51 POSITION



100 POSITION

Polarized Keying Hardware

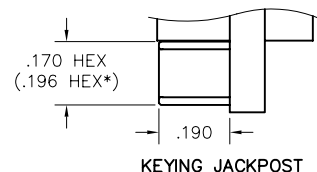
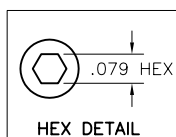
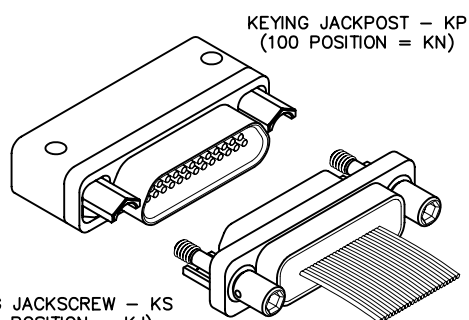


Select the appropriate two digit number above and include as the last two digits of the hardware code in the part number.
(Keying hardware is factory installed and non-removable).

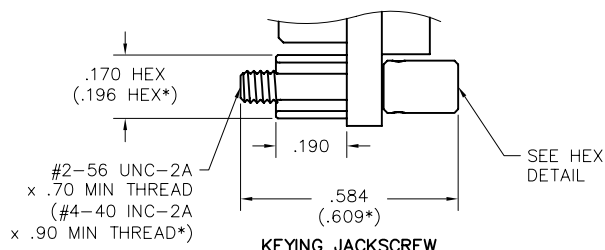
Example:

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

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



KEYING JACKPOST



KEYING JACKSCREW

* = Dimensions for 100 position connectors