

PLUG: MK-332-051-125-2200

RECEPTACLE: MM-322-051-261-45WP

PLUG: ML-331-051-125-2200

RECEPTACLE: MN-321-051-261-45WP

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

BODY

2 2-Row (Sizes 9 thru 37)
3 3-Row (Size 51 & 69***)
4 4-Row (Size 100)

2 2-Row (Sizes 9 thru 37)
3 3-Row (Size 51 & 69***)
4 4-Row (Size 100)

BODY STYLE:
3 Plug, straight, standard footprint

BODY STYLE:
2 Receptacle, straight, with ears

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

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

SIZE

XXX 009, 015, 021, 025, 031, 037, 051, 069***, 100 | XXX 009, 015, 021, 025, 031, 037, 051, 069***, 100

CONTACTS

TYPE CONTACTS/TERMINATIONS:
12 Pin, straight, PCB leads, .109"
13 Pin, straight, PCB leads, .140"
14 Pin, straight, PCB leads, .172"

TYPE CONTACTS/TERMINATIONS:
21 Socket, straight, solder cup
24 Socket, straight, .500" pigtails (.018 dia)
25 Socket, straight, 1.000" pigtails (.018 dia)
26 Socket, straight, crimped wire

PLATING OPTIONS:
3 50 µ" Au contacts: 10 µ" Au terminations
5 50 µ" Au contacts; Sn/Pb alloy terminations ☐
7 50 µ" Au contacts; SAC305 terminations

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

HARDWARE

STYLE OF HARDWARE:
00 None
22 Two fixed jacknut assemblies (62*)
41 Two turning jackscrews, allen head, retaining ring**** (81*)
99 Keying hardware, see options below (Body material 2, 3 and 4 only)

STYLE OF HARDWARE:
00 None
22 Two fixed jacknut assemblies (62*)
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:
00 None

POLARIZATION / WIRING
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*)
0B7 Threaded inserts

KSXX Two turning jackscrews and interfacial sealing gasket. See page MA-6 for keying options (KJ*)
900 Interfacial sealing gasket

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

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

*** = 69 position connectors are available in metal only.

**** = Connector body has no mounting holes.

☐ = Option not RoHS compliant



Cable to Board (Standard Footprint)

.050"

9 thru 100 Contacts

Rugged Cable

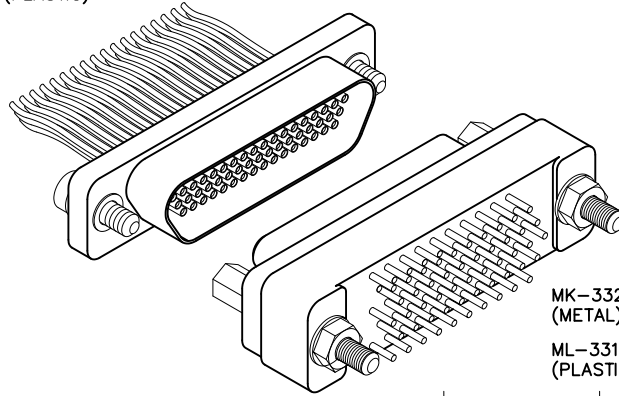
MM, MN

Rugged Board Mount

MK, ML

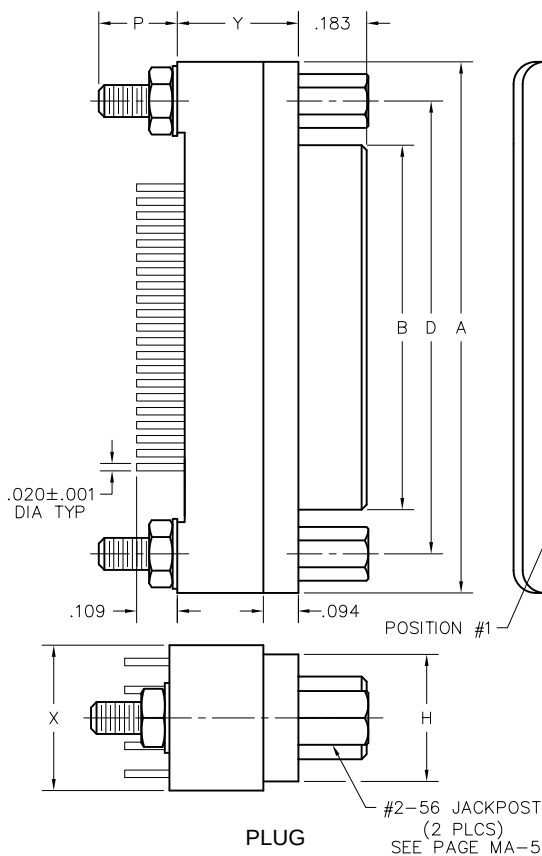
MM-322-051-261-45WP
(METAL)

MN-321-051-261-45WP
(PLASTIC)

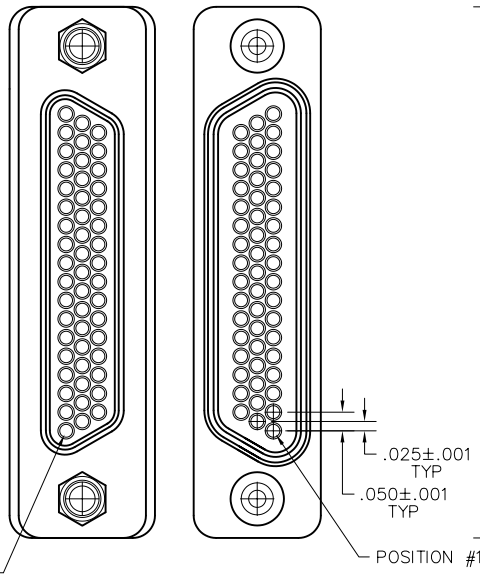


MK-332-051-125-2200
(METAL)

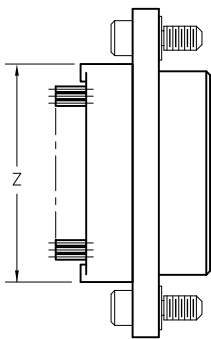
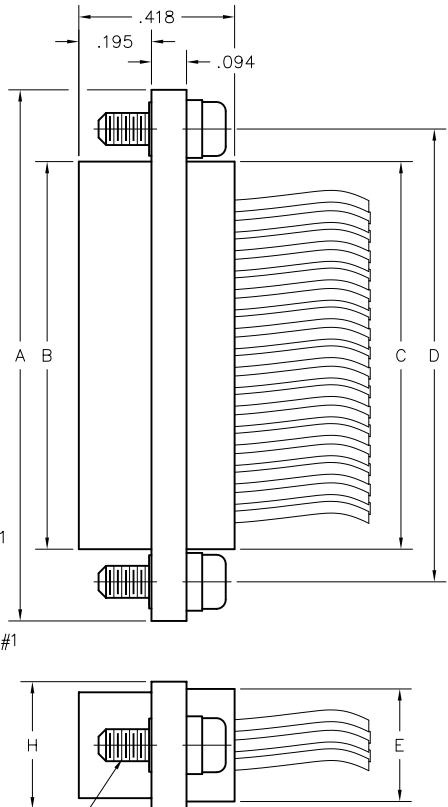
ML-331-051-125-2200
(PLASTIC)



PLUG



RECEPTACLE



DIMENSIONS														
SIZE	CONTACT ROWS	A	B		C	D	E	H	P	X	Y	Z***	HARDWARE	
			PLUG MAX	RCPT MAX			POTTING WELL MAX							
9	2	.775	.334	.400	.390	.565	.270	.298	.210	.298	.280	.390	#2-56 UNC THD (#2-56 CLEARANCE OR #2-56 UNC THREADED INSERT)	
15		.925	.484	.550	.540	.715						.540		
21		1.075	.634	.700	.690	.865						.690		
25		1.175	.734	.800	.790	.965						.780		
31		1.325	.884	.950	.940	1.115						.930		
37	3	1.475	1.034	1.100	1.090	1.265	.214	.330**	1.080					
51		1.425	.984	1.050	1.040	1.215	.310	.341	.219	.390	.325	1.046		
69		1.725	1.284	1.350	1.340	1.515	.360	.384	.216	.490	.379	1.346		
100	4	2.160	1.384	1.508	1.432	1.800	.360	.384	.216	.490	.379	1.530		#4-40 UNC THD (#4-40 CLEARANCE OR #4-40 UNC THREADED INSERT)
* = 69 POSITION CONNECTORS ARE AVAILABLE IN METAL ONLY.														
** = 37 POSITION WITH TURNING HARDWARE "Y" DIMENSION IS .280.														
*** = .375" DIMENSION FOR 100 POSITION														

* = 69 POSITION CONNECTORS ARE AVAILABLE IN METAL ONLY.
** = 37 POSITION WITH TURNING HARDWARE "Y" DIMENSION IS .280.
*** = "Z" DIMENSION FOR TURNING JACKSCREW ONLY

#2-56 UNC THD
(#2-56 CLEARANCE
OR #2-56 UNC
THREADED INSERT)

#4-40 UNC THD
(#4-40 CLEARANCE
OR #4-40 UNC
THREADED INSERT)

Call (972) 931-3200 Fax (972) 931-9305 www.AirBorn.com



Wire Codes

NEMA HP3-EXBEB (Formerly M16878/4-24 TFE 7 strand)

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
MIL-STD-681*	WA	WB	WC	UD	UE	WD	UG	UH	UJ	UK	UL	UM	UN	UP	UQ	UR
WHITE	WE	WF	WG	VD	VE	WH	VG	VH	VJ	VK	VL	VM	VN	VP	VQ	VR
YELLOW	WJ	WK	WL			WM										

NEMA HP3-EXBDB (Formerly M16878/4-26 TFE 7 strand)

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
MIL-STD-681*	WN	WP	WQ	YD	YE	WR	YG	YH	YJ	YK	YL	YM	YN	YP	YQ	YR
WHITE	WS	WT	WU	ZD	ZE	WV	ZG	ZH	ZJ	ZK	ZL	ZM	ZN	ZP	ZQ	ZR
YELLOW	WW	WX	WY			WZ										

NEMA HP3-EXBCB (Formerly M16878/4-28 TFE 7 strand)

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
MIL-STD-681*	XA	XB	XC	1D	1E	XD	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R
WHITE	XE	XF	XG	2D	2E	XH	2G	2H	2J	2K	2L	2M	2N	2P	2Q	2R
YELLOW	XJ	XK	XL			XM										

TWISTED PAIR per NEMA WC27500-XXRC2U00 (SAE AS22759/11)

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
24 AWG	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR
26 AWG	BA	BB	BC	BD	BE	BF	BG	BH	BJ	BK	BL	BM	BN	BP	BQ	BR

TWISTED PAIR per NEMA WC27500-XXSC2U00 (SAE AS22759/33)*** ☒

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
24 AWG	JA	JB	JC	JD	JE	JF	JG	JH	JJ	JK	JL	JM	JN	JP	JQ	JR
26 AWG	KA	KB	KC	KD	KE	KF	KG	KH	KJ	KK	KL	KM	KN	KP	KQ	KR

For twisted pair wire connect charts, see page MA-9

Twisted pair wire not available on MA, MC or Hybrid connectors

* = Connectors with more than 100 contacts will repeat color code after 100 colors.

*** = 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.

☒ = Option not RoHS compliant

Wire Codes

SAE AS22759/11-24

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
M83513**	5A	5B	5C	5D	5E	5F	5G	5H	5J	5K	5L	5M	5N	5P	5Q	5R
MIL-STD-681*	CA	CB	CC	CD	CE	CF	CG	CH	CJ	CK	CL	CM	CN	CP	CQ	CR
WHITE	DA	DB	DC	DD	DE	DF	DG	DH	DJ	DK	DL	DM	DN	DP	DQ	DR

SAE AS22759/11-26

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
M83513**	6A	6B	V1	6D	6E	V2	6G	6H	6J	6K	6L	Y6	6N	6P	6Q	6R
MIL-STD-681*	X3	X4	W3	ED	EE	W4	EG	EH	EJ	EK	EL	EM	EN	EP	EQ	ER
WHITE	X1	X2	W1	FD	FE	W2	FG	FH	FJ	FK	FL	Y5	FN	FP	FQ	FR

SAE AS22759/33-24*** ☒

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
M83513**	LA	LB	LC	LD	LE	LF	LG	LH	LJ	LK	LL	LM	LN	LP	LQ	LR
WHITE	MA	MB	MC	MD	ME	MF	MG	MH	MJ	MK	ML	MM	MN	MP	MQ	MR

SAE AS22759/33-26*** ☒

	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	108"	120"
M83513**	NA	NB	Y3	ND	NE	Y4	NG	NH	NJ	NK	NL	Y8	NN	NP	NQ	NR
WHITE	PA	PB	Y1	PD	PE	Y2	PG	PH	PJ	PK	PL	Y7	PN	PP	PQ	PR

* = Connectors with more than 100 contacts will repeat color code after 100 colors.

** = Wire colors per M83513 are ten 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.

☒ = Option not RoHS compliant