

JACKMATE MCJM Series Metal Shell Center Jackscrew Connectors

Technical and Performance Data for Metal Shell

Electrical

Contact Resistance — The average mated contact resistance is 4 milliohms, with a maximum value of 8 milliohms, using standard 24 AWG solid copper leads when measured directly behind the crimp joints of the mated pin and socket contacts. The average resistance value at 100 microvolts is 4.8 milliohms.

Dielectric Withstanding Voltage (60 Hz rms room temperature) — Solder Pots: 600 VAC at sea level; 150 VAC at 70,000 feet [21,336m].

Wire Terminations: 750 VAC at sea level; 200 VAC at 70,000 feet [21,336m].

Corrosion Resistance (Per MIL-STD-202C, Method 101B, Condition B) — Both mated and unmated samples do not exceed the maximum allowable contact resistance (8 milliohms) when subjected to the 48 hour salt spray test.

Durability — The contact resistance after 500 mating cycles is less than the maximum allowable, 8 milliohms.

Insulation Resistance — Greater than 5,000 megohms at room temperature for the materials listed under "Materials".

Maximum Current Carrying Capacity — No. 24 contact 3 amperes. It must be recognized, however, that all the wires to a connector will not carry their maximum current under all environmental conditions due to wire temperature.

Mechanical

Contact Engaging & Separation Forces — 8.0 oz. max. [2.22N] (eng.), 0.5 oz. min. [.14N] (sep.).

Environmental

Temperature Range (Operating) — -67°F to 302°F [-55°C to 150°C] for Diallyl Phthalate.

Vibration (Per MIL-STD-202C, Method 204-A, Condition D) — No discontinuity in excess of 1 μ sec. during twelve 20 minute sweeps from 10 to 2000 CPS at .06 double amplitude or 20 G forces, whichever is less.

Materials

Insulator — Diallyl Phthalate per MIL-M-14, Type SDG-F.

Contacts — Pin contact: copper alloy and beryllium copper alloy make up the complete construction; Socket contact: copper alloy.

Body Shells — Pin body shell: stainless steel, Types 304, Condition A per QQ-S-766; Socket body shell: aluminum alloy per QQ-A-591, A-380 alloy.

Hardware — Corrosion resistant stainless steel.

Finishes

Contacts — Standard finish is 0.000050 [0.00127] gold over copper flash per MIL-G-45204, Type II.

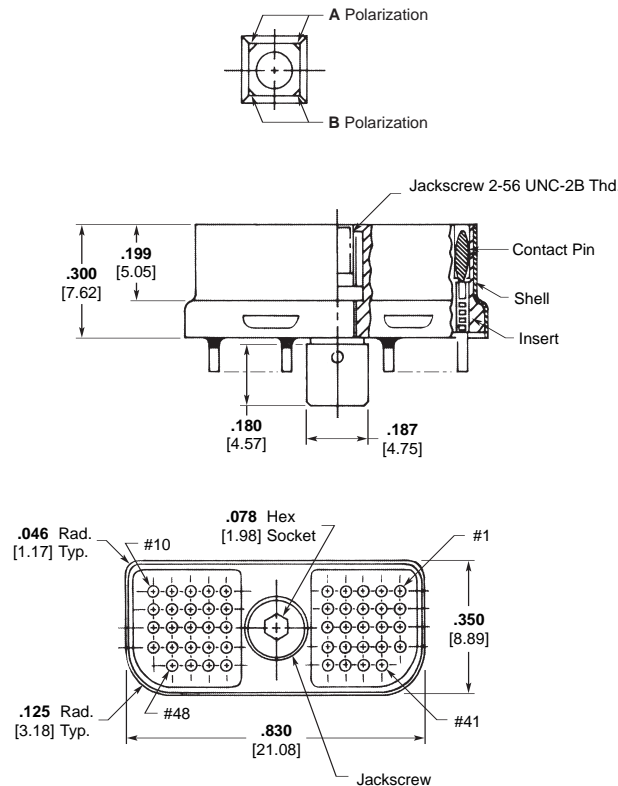
Body Shells — Pin body shell: passivated per MIL-F-14072 (E-300); Socket body shell: electroless nickel per AMS 204, Class 3, except thickness is 0.001/0.0015 [0.025/0.038].

Hardware — Passivated per QQ-P-35.

Note: Insulators are molded into their metal shells — No bonded joint is used.

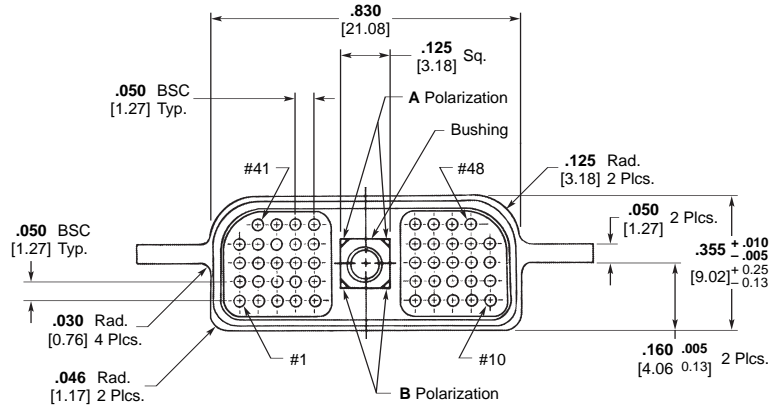
*Standard material used unless otherwise specified.

**Plug (Pin Side)
Shell Type M1**

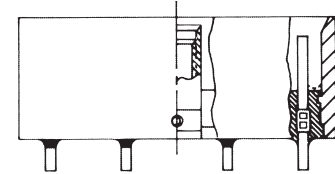
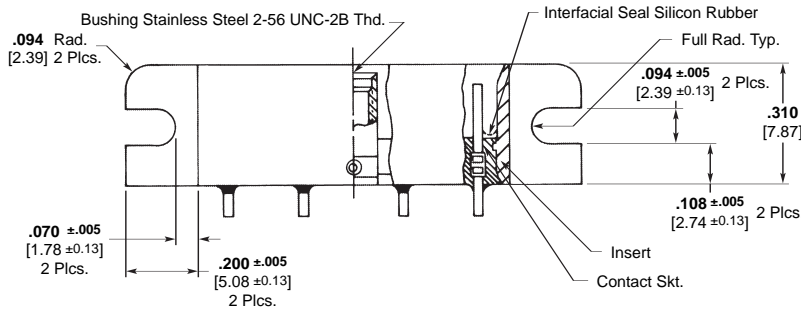
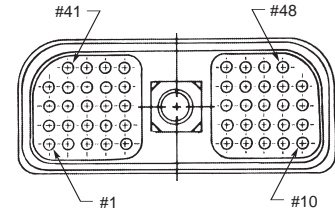


Receptacle (Socket Side)

Shell Type M1



Shell Type M2



How To Specify

JACKMATE Connector Series **MCJ** **M1** **A** — **48** **P** **4** **L** **4** — **0.5**

Lead Length in Inches (min.)

Insulation Color or Finish

1 All white wire	4 Gold plated	7 Color coded per MIL-STD-681, System 1
2 All yellow wire	5 Tin dipped gold plated	8 Special color code
3 All gray wire	6 Bare (unfinished)	9 Ten solid color repeating (starts with black)

Wire Type

*A Type E, 7 strand	*D Type ET, 19 strand	G 19 strand per MIL-C-22759/11
*B Type ET, 7 strand	F 7 strand per MIL-C-22759/11 (#28 AWG only)	26 AWG, 24 AWG
*C Type E, 19 strand		L Copper, solid
		Q Stranded per MIL-W-22759/33

*Per MIL-W-16878

Wire Size

4—24 AWG 5—25 AWG 6—26 AWG 8—28 AWG 0—30 AWG

S Solder pot for 26 AWG maximum stranded wire.
X Special, does not fit description below.

Shell Material
M1 Metal Shell (Standard)
M2 Metal Shell (Special receptacles only)

Polarizing Position
A, B

Layout (Positions)
48

Contact Type
P Pin
S Socket