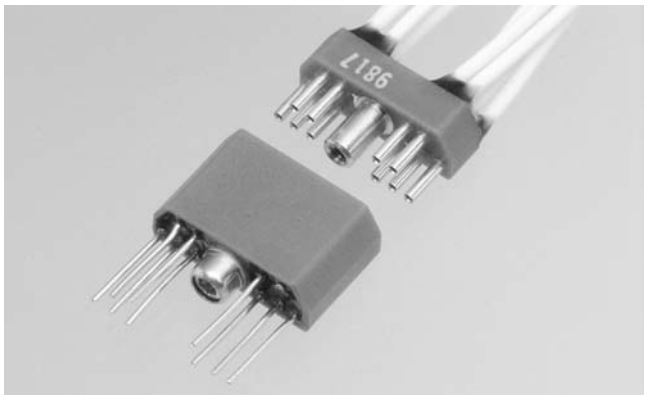
MICRODOT JACKMATE MCJ(M) Series Plastic (Metal) Shell Center Jackscrew Connectors



JACKMATE Connectors are the first Twist Pin contact assemblies designed to accommodate center jackscrews that provide jacking action when mating or unmating the connectors. Although the units were initially developed for high density cord-to-cord or in-line applications, either plug or receptacle can be adapted to a PC board. The jacking hardware consist of a threaded bushing and a captivated jackscrew which are made of corrosion resistant stainless steel and are molded into the JACKMATE Connector Insulator.

The twist pin contacts are on .050 [1.27] center-to-center linear spacing and contact terminations are available in solid wire or stranded wire. There is a high degree of flexibility with this JACKMATE connector design for commercial or military applications.

Available om MCJ(M) Series Plastic (Metal) Shells.

MICRODOT JACKMATE MCJ Series Plastic Shell Center Jackscrew Connectors

JACKMATE Technical & Performance Data for Plastic 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 257°F [-55° C to 125°C].

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 — Glass filled Nylon Type 6.
Contacts —
Pin contact — copper alloy and beryllium copper alloy make up the complete construction
Socket contact — copper alloy.

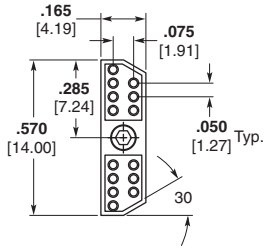
Hardware — Corrosive resistant stainless steel.

Finishes

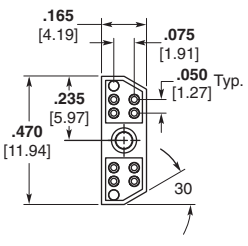
Contacts — Standard finish is 0.000050 [0.00127] gold over copper flash per MIL-G-45204, Type II.

Hardware — Passivated Per QQ-P-35.

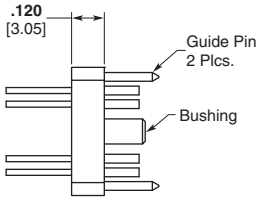
10 & 14 Contact Layout



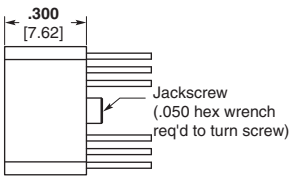
14 Layout



10 Layout



Receptacle



Plug

Catalog 1308638
Revised 4-08

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Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

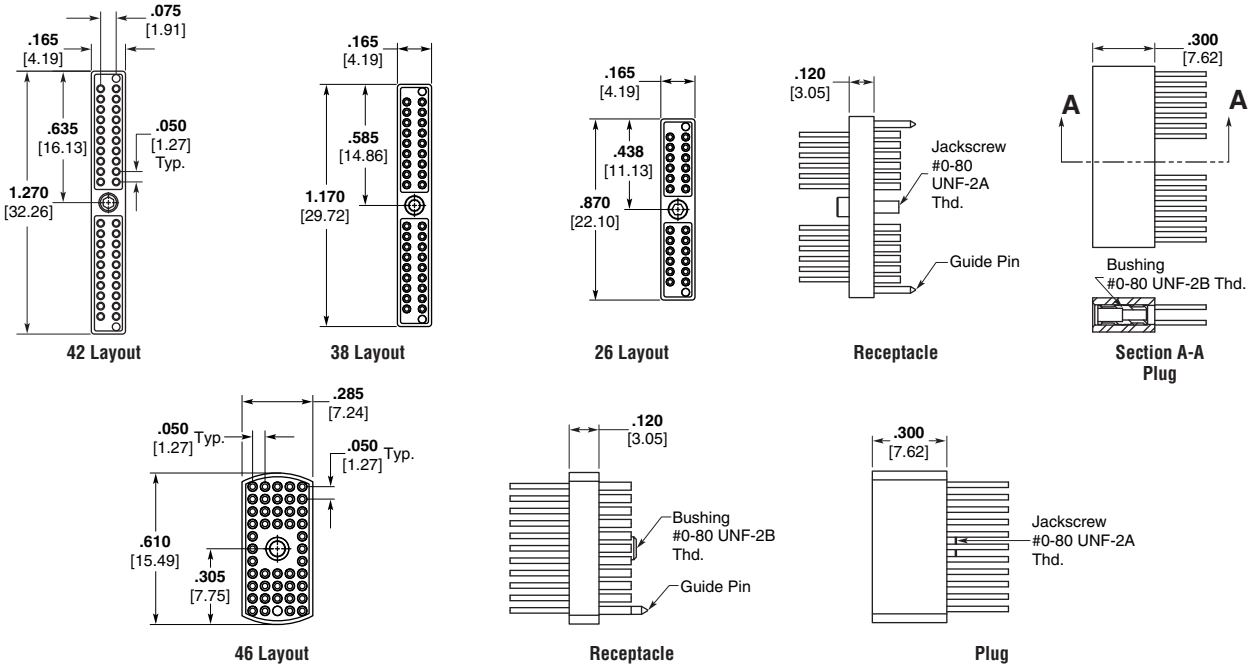
Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803

South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

MICRODOT JACKMATE MCJ Series Plastic Shell Center Jackscrew Connectors (Continued)

26, 38 & 46 Contact Layout



How To Specify

MCJ B2 — 10 P 4 L 4 — 0.5

Connector Series

Shell Material
B2 Glass filled nylon, type 6/10, blue

Layout (Positions)
10, 14, 26, 38, 42, 46

Contact Type
P Pin
S Socket

Lead Length in Inches (min.)
S Solder pot for 26 AWG maximum stranded wire.
X Special, does not fit description below.

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)

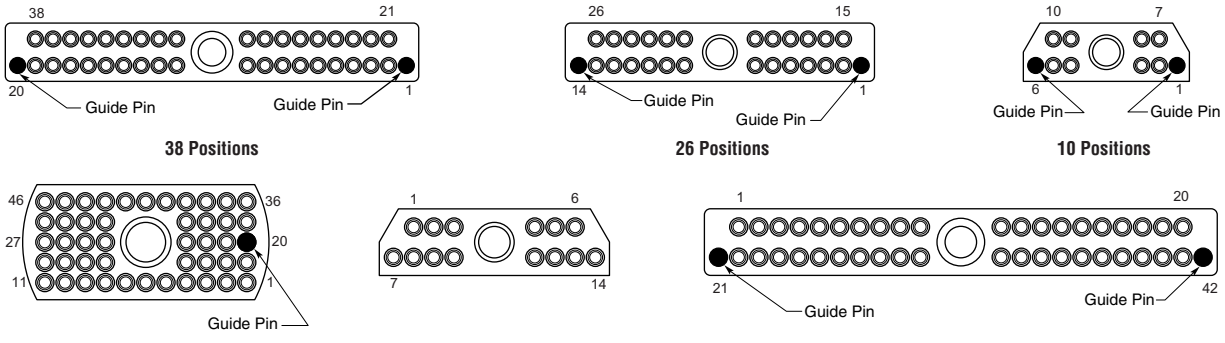
Wire Type

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

Contact Arrangement as Viewed from the Engaging Face of the Pin Side



Guide pin locations illustrated are for standards configuration only. Any location is available.
Guide pins are supplied in socket connectors and blank cavities are in pin connector.

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MICRODOT 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.

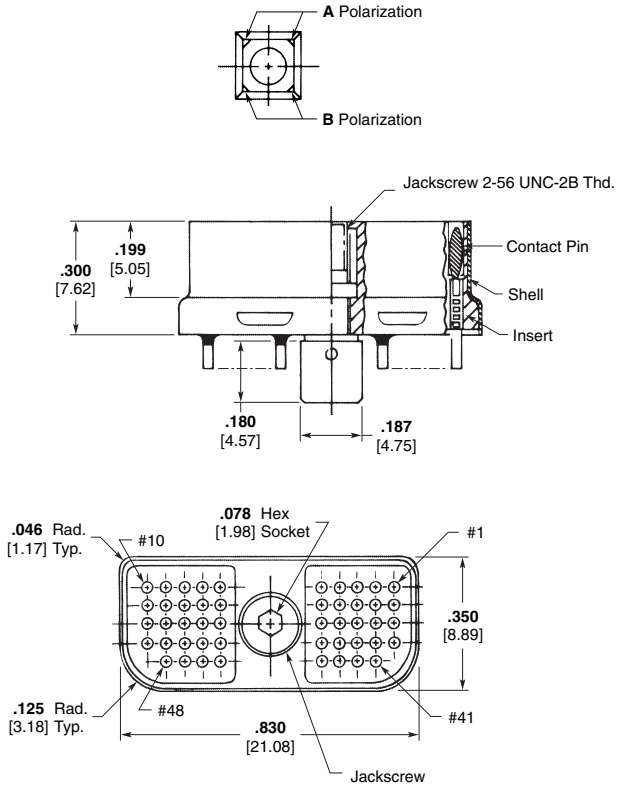
Body Shells —
Pin body shell — passivated per MIL-F-14072 (E-300);
Socket body shell — electroless nickel per AMS 204, Class 3, except thickness is 0.001/0.0015 [0.025/0.038].

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



Catalog 1308638
Revised 4-08

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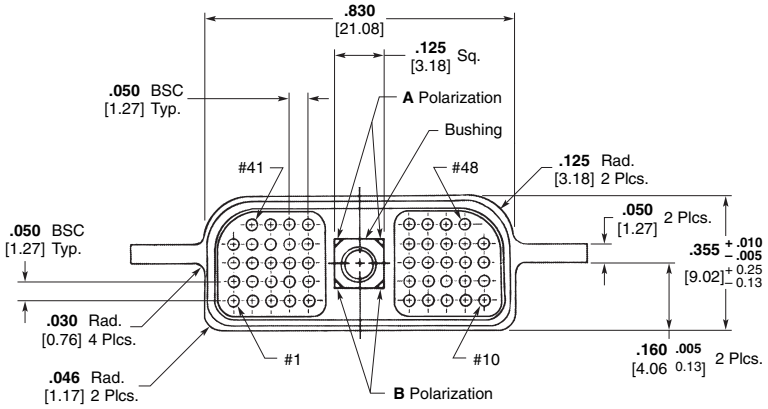
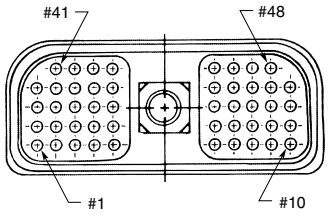
MICRODOT JACKMATE MCJM Series Metal Shell Center Jackscrew Connectors (Continued)

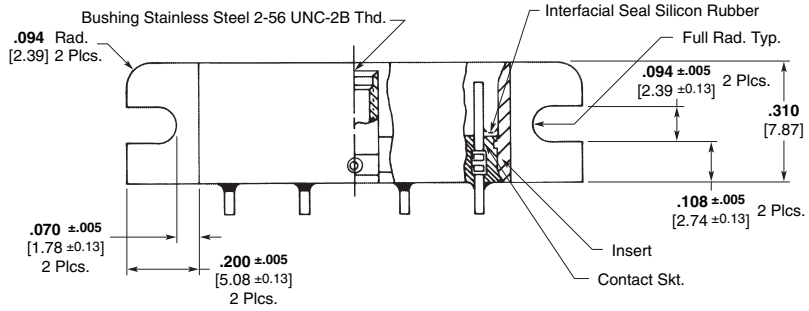
Receptacle (Socket Side)

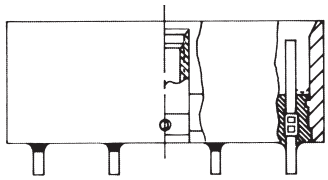
Shell Type M1



Shell Type M2







How To Specify

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

MCJ M1 A — 48 P 4 L 4 — 0.5

JACKMATE Connector Series

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

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

Wire Type

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

*Per MIL-W-16878

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)

Lead Length in Inches (min.)

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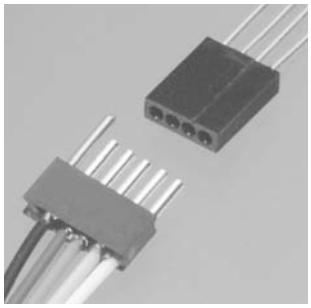
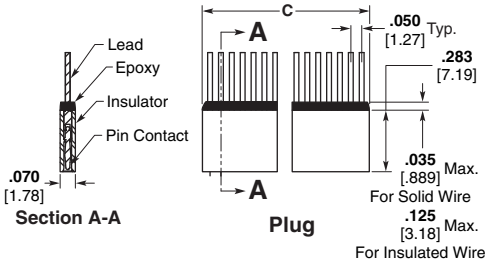
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

MICRODOT MCS Series Strip Connectors

Strip Connectors



MCS Plastic Strip



Part No. By Size	C Max.
MCSAR*-1**	**.070** [1.78]
MCSAR*-2**	**.120** [3.05]
MCSAR*-3**	**.170** [4.32]
MCSAR*-4**	**.220** [5.59]
MCSAR*-5**	**.270** [6.86]
MCSAR*-6**	**.320** [8.13]
MCSAR*-7**	**.420** [10.67]
MCSAR*-8**	**.420** [10.67]
MCSAR*-9**	**.470** [11.94]
MCSAR*-10**	**.520** [13.21]
MCSAR*-11**	**.570** [14.48]
MCSAR*-12**	**.620** [15.75]
MCSAR*-13**	**.670** [17.02]
MCSAR*-14**	**.720** [18.29]
MCSAR*-15**	**.770** [19.56]
MCSAR*-16**	**.820** [20.83]
MCSAR*-17**	**.870** [22.10]
MCSAR*-18**	**.920** [23.37]
MCSAR*-19**	**.970** [24.64]
MCSAR*-20**	**1.020** [25.91]
MCSAR*-21**	**1.070** [27.18]
MCSAR*-22**	**1.120** [28.45]
MCSAR*-23**	**1.170** [29.72]
MCSAR*-24**	**1.220** [30.99]
MCSAR*-25**	**1.270** [32.26]
MCSAR*-26**	**1.320** [33.53]
MCSAR*-27**	**1.370** [34.80]
MCSAR*-28**	**1.420** [36.07]
MCSAR*-29**	**1.470** [37.34]
MCSAR*-30**	**1.520** [38.61]

Part No. By Size	C Max.
MCSAR*-31**	**1.570** [39.88]
MCSAR*-32**	**1.620** [41.15]
MCSAR*-33**	**1.670** [42.42]
MCSAR*-34**	**1.720** [43.69]
MCSAR*-35**	**1.770** [44.96]
MCSAR*-36**	**1.820** [46.23]
MCSAR*-37**	**1.870** [47.50]
MCSAR*-38**	**1.920** [48.77]
MCSAR*-39**	**1.970** [50.04]
MCSAR*-40**	**2.020** [51.31]
MCSAR*-41**	**2.070** [52.58]
MCSAR*-42**	**2.120** [53.85]
MCSAR*-43**	**2.170** [55.12]
MCSAR*-44**	**2.220** [56.39]
MCSAR*-45**	**2.270** [57.66]
MCSAR*-46**	**2.320** [58.93]
MCSAR*-47**	**2.370** [60.20]
MCSAR*-48**	**2.420** [61.47]
MCSAR*-49**	**2.470** [62.74]
MCSAR*-50**	**2.520** [64.01]
MCSAR*-51**	**2.570** [65.28]
MCSAR*-52**	**2.620** [66.55]
MCSAR*-53**	**2.670** [67.82]
MCSAR*-54**	**2.720** [69.09]
MCSAR*-55**	**2.770** [70.36]
MCSAR*-56**	**2.820** [71.63]
MCSAR*-57**	**2.870** [72.90]
MCSAR*-58**	**2.920** [74.17]
MCSAR*-59**	**2.970** [75.44]
MCSAR*-60**	**3.020** [76.71]

Part No. By Size	C Max.
MCSAR*-61**	**3.070** [77.98]
MCSAR*-62**	**3.120** [79.25]
MCSAR*-63**	**3.170** [80.52]
MCSAR*-64**	**3.220** [81.79]
MCSAR*-65**	**3.270** [83.06]
MCSAR*-66**	**3.320** [84.33]
MCSAR*-67**	**3.370** [85.60]
MCSAR*-68**	**3.420** [86.87]
MCSAR*-69**	**3.470** [88.14]
MCSAR*-70**	**3.520** [89.41]
MCSAR*-71**	**3.570** [90.68]
MCSAR*-72**	**3.620** [91.95]
MCSAR*-73**	**3.670** [93.22]
MCSAR*-74**	**3.720** [94.49]
MCSAR*-75**	**3.770** [95.76]
MCSAR*-76**	**3.820** [97.03]
MCSAR*-77**	**3.870** [98.30]
MCSAR*-78**	**3.920** [99.57]
MCSAR*-79**	**3.970** [100.84]
MCSAR*-80**	**4.020** [102.11]
MCSAR*-81**	**4.070** [103.38]
MCSAR*-82**	**4.120** [104.65]
MCSAR*-83**	**4.170** [105.92]
MCSAR*-84**	**4.220** [107.19]
MCSAR*-85**	**4.270** [108.46]
MCSAR*-86**	**4.320** [109.73]
MCSAR*-87**	**4.370** [111.00]
MCSAR*-88**	**4.420** [112.27]
MCSAR*-89**	**4.470** [113.54]
MCSAR*-90**	**4.520** [114.81]

Part No. By Size	C Max.
MCSAR*-91**	**4.570** [116.08]
MCSAR*-92**	**4.620** [117.35]
MCSAR*-93**	**4.670** [118.62]
MCSAR*-94**	**4.720** [119.89]
MCSAR*-95**	**4.770** [121.16]
MCSAR*-96*	**4.820** [122.43]
MCSAR*-97**	**4.870** [123.70]
MCSAR*-98**	**4.920** [124.97]
MCSAR*-99**	**4.970** [126.24]
MCSAR*-100**	**5.020** [127.51]
MCSAR*-101**	**5.070** [128.78]
MCSAR*-102**	**5.120** [130.05]
MCSAR*-103**	**5.170** [131.32]
MCSAR*-104**	**5.220** [132.59]
MCSAR*-105**	**5.270** [133.86]
MCSAR*-106**	**5.320** [135.13]
MCSAR*-107**	**5.370** [136.40]
MCSAR*-108**	**5.420** [137.67]
MCSAR*-109**	**5.470** [138.94]
MCSAR*-110**	**5.520** [140.21]
MCSAR*-111**	**5.570** [141.48]
MCSAR*-112**	**5.620** [142.75]
MCSAR*-113**	**5.670** [144.02]
MCSAR*-114**	**5.720** [145.29]
MCSAR*-115**	**5.770** [146.56]
MCSAR*-116**	**5.820** [147.83]
MCSAR*-117**	**5.870** [149.10]
MCSAR*-118**	**5.920** [150.37]
MCSAR*-119**	**5.970** [151.64]
MCSAR*-120**	**6.020** [152.91]

How To Specify

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

MCS AR 2 — 26 P 6 A 1 — 18.0

Connector Series

Insulator Type and Material
AR — Polyphenylene Sulfide per MIL-M-24519
or Liquid Crystal Polymer per ASTM D5138

Contact Locations
1 — Contact in every cavity
2 — Contact in every other cavity 1, 3, 5...
3 — Contact in every cavity except guide pin cavity in each end cavity
4 — Contact in every other cavity 2, 4, 6... and guide pin in each end cavity
X — Other than above
Standard Polarization
Guide pins are in socket connectors.
Blank cavities are in pin connectors.

Number of Cavities (120 Max.)

Contact Type
P — Pin S — Socket

Lead Length in Inches (min.)

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

Wire Type
*A — Type E, 7 strand
*B — Type ET, 7 strand
*C — Type E, 19 strand
*D — Type ET, 19 strand
F — 7 strand per MIL-22759/11 (#28 AWG only)
G — 19 strand per MIL-22759/11 26 AWG, 24 AWG
M — 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

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