



# Rack and Panel Connectors Military, MIL-C-28748/7/8 Qualified and Commercial Microminiature Rectangular with Optional Hoods



## FEATURES

- Qualified to MIL-C-28748/7/8
- Solder cup contacts
- Dip solder contacts
- Fixed and turnable screwlocks
- Optional closed entry socket contacts

## APPLICATIONS

Especially suited for use in airborne, instrumentation and portable equipment applications or wherever the following requirements must be met: Minimum space and weight without sacrifice of performance, high quality materials, long service life, high vibration and shock resistance and positive locking.

## ELECTRICAL SPECIFICATIONS

**Current Rating:** Model MM22 = 5 A

Model MM24 = 3 A

**Breakdown Voltage:** At sea level: 2000 V<sub>RMS</sub>

At 70 000 feet: 500 V<sub>RMS</sub>

## MATERIAL SPECIFICATIONS

**Contact Pin:** Phosphor bronze

**Contact Socket:** Phosphor bronze (Beryllium copper available on request)

**Contact Plating:** Gold

**Screwlocks:** Stainless steel, passivated

**Guides:** Brass, gold plated or stainless steel, passivated

**Standard Body:** Glass-filled diallyl phthalate per MIL-M-14, Model SDG-F, green

DIMENSIONS in inches [millimeters]				
<b>MMS</b> With Solder Cup Contacts 		<b>MMP</b> With Solder Cup Contacts 		
<b>MMDS</b> With Dip Solder Contacts 		<b>MMDP</b> With Dip Solder Contacts 		
CONTACT GAUGE	B DIAMETER	CONTACT GAUGE	C DIP TAIL LENGTH	D DIAMETER
22 AWG	0.030 ± 0.001 [0.762 ± 0.025]	22 AWG	0.160 or 0.350 [4.06 or 8.89] nom.	0.025 [0.635]
24 AWG	0.025 ± 0.001 [0.635 ± 0.025]	24 AWG	0.160 or 0.350 [4.06 or 8.89] nom.	0.025 [0.635]

DIMENSIONS in inches [millimeters]				
		HARDWARE TYPE	E DIAMETER	F DIAMETER
<p><b>MMS</b> With Fixed (026, 027) Guides</p> <p>0.520 [13.21] 0.230 [5.84] 2-56 UNC-2A Thread Typ. 0.140 [3.56] 0.030 [0.762] Wide x 0.040 [1.02] Deep Slot Typ. 0.110 [2.79] 0.034 [0.864] Dia. Solder Cup #22 or #24 AWG Max. F Dia.</p>	<p><b>MMP</b> With Fixed (026, 027) Guides</p> <p>0.490 [12.45] 0.230 [5.84] "A" End of Connector 0.140 [3.56] E Dia.</p>	026	0.078 [1.98]	0.125 [3.17]
		026L	0.078 [1.98]	0.125 [3.17]
		027	0.078 [1.98]	0.125 [3.17]
		027L	0.078 [1.98]	0.125 [3.17]
<p><b>MMS</b> With Fixed (026L, 027L) Guides</p> <p>0.620 [15.75] 0.230 [5.84] 0.140 [3.56] 0.040 [1.02] Typ. 0.034 [0.864] Dia. Solder Cup #22 or #24 AWG Max. 0.030 [0.762] Typ. 0.110 [2.79]</p>	<p><b>MMP</b> With Fixed (026L, 027L) Guides</p> <p>"A" End of Connector 0.590 [14.99] 0.250 [6.35] 2-56 UNC-2A Typ.</p>	<p><b>Short Turnable Screwlocks (SK030)</b></p> <p>0.540 [13.72] 0.160 [4.06] 0.030 [0.762] Wide x 0.040 [1.02] Deep Typ. 0.124 [3.15] Dia. 0.110 [2.79] 0.500 [12.70]</p>		<p><b>Turnable Screwlocks (SK)</b></p> <p>0.950 [24.13] 0.046 [1.17] Wide x 0.062 [1.57] Deep Typ. 0.187 [4.75] Dia. 0.110 [2.79] 0.910 [23.11]</p>
<p><b>Fixed Screwlocks (SL)</b></p> <p>0.490 [12.45] 0.140 [3.56] 0.520 [13.21]</p>	<p><b>Fixed Screwlocks (SLL)</b></p> <p>0.620 [15.75] 0.230 [5.84] 0.140 [3.56] 0.034 [0.864] Dia. Solder Cup #22 or #24 AWG Max. 0.250 [6.35] 0.590 [14.99] 0.110 [2.79]</p>	<p><b>Fixed Screwlocks And Nylon Retaining Nut And Fiber Washer (NSL)</b></p> <p>0.590 [14.99] 0.620 [15.75]</p>		<p><b>Short Turnable Screwlocks (SK2035)</b></p> <p>0.610 [15.49] 0.240 [6.10] Typ. 0.093 [2.36] Hex Socket 0.090 [2.29] Deep Typ. 0.180 [4.57] Dia. 0.110 [2.79] 0.580 [14.73]</p>

HARDWARE MATING CHART		NOTE:
HARDWARE MODEL	MATES WITH HARDWARE MODEL	<p>EITHER MMP OR MMS CONNECTORS MAY BE ORDERED WITH ANY TYPE OF HARDWARE SHOWN.</p> <p>EXAMPLES:</p> <ol style="list-style-type: none"> <li>1. MMP WITH 026 HARDWARE WOULD MATE WITH AN MMS WITH 026 HARDWARE.</li> <li>2. MMS WITH SK HARDWARE WOULD MATE WITH AN MMP WITH SL OR NSL HARDWARE.</li> <li>3. MMS WITH SL2 HARDWARE WOULD MATE WITH AN MMP WITH SK2 OR SK2030 HARDWARE.</li> </ol>
026	026, 026L	
027	027, 027L	
SK	SL, NSL or SLL	
SK030	SL, NSL or SLL	
SK2	SL2, NSL2 or SL2L	
SK2030	SL2, NSL2 or SL2L	
SK2035	SL2, NSL2 or SL2L	



**MOUNTING VARIATIONS** in inches [millimeters]



PANEL CUTOUT in inches [millimeters]								
	NUMBER OF CONTACTS	A	B	C	NUMBER OF CONTACTS	A	B	C
	5	0.210 [5.33]	0.468 [11.89]	0.340 [8.64]	20	0.270 [6.86]	0.814 [20.68]	0.690 [17.53]
	7	0.210 [5.33]	0.562 [14.27]	0.440 [11.18]	26	0.270 [6.86]	1.0 [25.40]	0.870 [22.10]
	9	0.210 [5.33]	0.656 [16.66]	0.530 [13.46]	29	0.270 [6.86]	1.09 [27.69]	0.970 [24.64]
	11	0.270 [6.86]	0.532 [13.51]	0.410 [10.41]	34	0.380 [9.65]	1.03 [26.16]	0.910 [23.11]
	14	0.270 [6.86]	0.625 [15.88]	0.500 [12.70]	44	0.380 [9.65]	1.28 [32.51]	1.16 [29.46]
	18	0.380 [9.65]	0.656 [16.66]	0.530 [13.46]	50	0.380 [9.65]	1.41 [35.81]	1.28 [32.51]



**DIP SOLDER PC BOARD MOUNTING PATTERNS**

Male (MMP) connector shown - female is opposite. Contact, contact row and mating hole  $C_L$  to  $C_L$  dimensions also applies to solder cup style connectors.

**HOOD VARIATIONS** in inches [millimeters]

HOOD VARIATIONS in inches [millimeters]					
<b>027H</b>					
5, 7, 9 CONTACTS		11, 14, 20, 26, 29 CONTACTS		34, 44, 50 CONTACTS	
<b>SKH or SK2H</b>					
5, 7, 9 CONTACTS		11, 14, 20, 26, 29 CONTACTS		34, 44, 50 CONTACTS	
NUMBER OF CONTACTS	A ± 0.016 [0.406]	B ± 0.030 [0.76]	C	D ± 0.016 [0.406]	"E" CABLE OPENING SQ. IN. [mm <sup>2</sup> ]
5	0.690 [17.53]	0.650 [16.51]	0.468 [11.89]	0.310 [7.87]	0.028 [0.711]
7	0.780 [19.81]	0.650 [16.51]	0.562 [14.27]	0.440 [11.18]	0.037 [0.940]
9	0.870 [22.10]	0.650 [16.51]	0.656 [16.66]	0.500 [12.70]	0.052 [1.321]
11	0.780 [19.81]	0.650 [16.51]	0.532 [13.51]	0.440 [11.18]	0.054 [1.372]
14	0.870 [22.10]	0.650 [16.51]	0.625 [15.88]	0.500 [12.70]	0.076 [1.930]
20	1.06 [26.92]	0.650 [16.51]	0.814 [20.68]	0.620 [15.75]	0.105 [2.667]
26	1.25 [31.75]	0.650 [16.51]	1.00 [25.40]	0.620 [15.75]	0.105 [2.667]
29	1.34 [34.04]	0.650 [16.51]	1.09 [27.67]	0.620 [15.75]	0.105 [2.667]
34	1.25 [31.75]	0.650 [16.51]	1.03 [26.16]	0.500 [12.70]	0.160 [4.064]
44	1.50 [38.10]	1.17 [29.72]	1.28 [32.51]	0.500 [12.70]	0.190 [4.826]
50	1.62 [41.15]	1.17 [29.72]	1.41 [35.81]	0.620 [15.75]	0.202 [5.131]



ORDERING INFORMATION



Notes

- (1) To order complete connector with hardware supplied unassembled, add suffix "UA" on end of hardware designation.
- (2) 50 contact connectors are available in either the standard 4-row contact arrangement per MIL-C-28748 or a special 5-row contact arrangement. To order the special 5-row contact arrangement, use the designator "C50" for the number of contacts.





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