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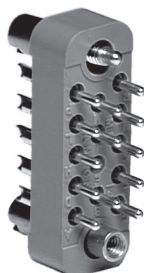
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# Rack and Panel Connectors Subminiature Rectangular



SMP20



SMS20

## ELECTRICAL SPECIFICATIONS

**Current Rating:** 7.5 A

**Breakdown Voltage:**

At sea level: 2000 V<sub>RMS</sub>

At 70 000 feet [21 336 meters]: 500 V<sub>RMS</sub>

## PHYSICAL SPECIFICATIONS

**Number of Contacts:** 5, 7, 11, 14, 20, 26, 34, 42, 50, 75

**Contact Spacing:** 0.120" [3.05 mm]

**Contact Gauge:** #20 AWG

**Minimum Creepage Path Between Contacts:**

0.080" [2.03 mm]

**Minimum Air Space Between Contacts:** 0.050" [1.27 mm]

## FEATURES

- Lightweight
- Polarized by guides or screwlocks
- Screwlocks lock connectors together to withstand vibration and accidental disconnect
- Overall height kept to a minimum
- Floating contacts aid in alignment and in withstanding vibration
- Contacts, precision machined and individually gauged, provide high reliability
- Insertion and withdrawal forces kept low without increasing contact resistance
- Contact plating provides protection against corrosion, assures low contact resistance and ease of soldering

## APPLICATIONS

For use wherever space is at a premium and a high quality connector is required in avionics, automation, communications, controls, instrumentation, missiles, computers and guidance systems.

## MATERIAL SPECIFICATIONS

**Contact Pin:** Brass, gold plated

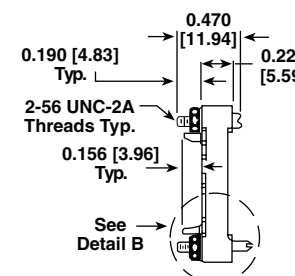
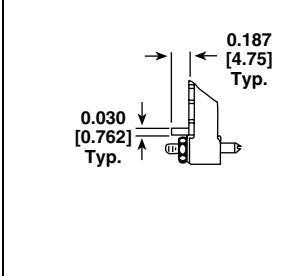
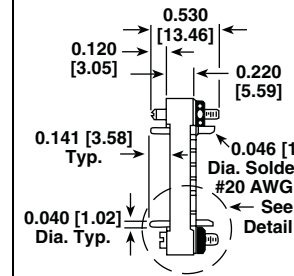
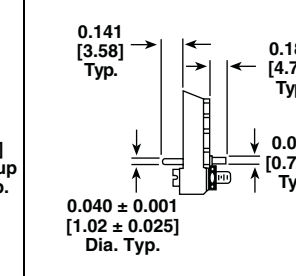
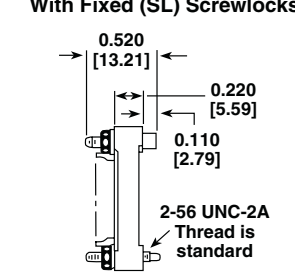
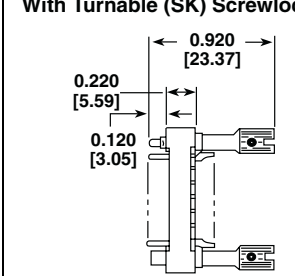
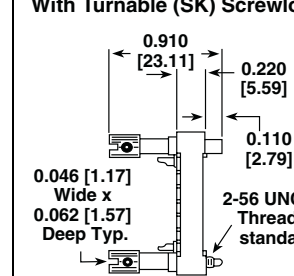
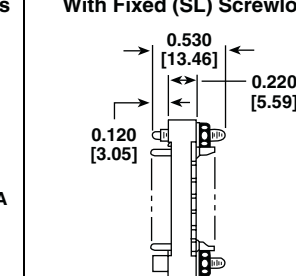
**Contact Socket:** Phosphor bronze, gold plated

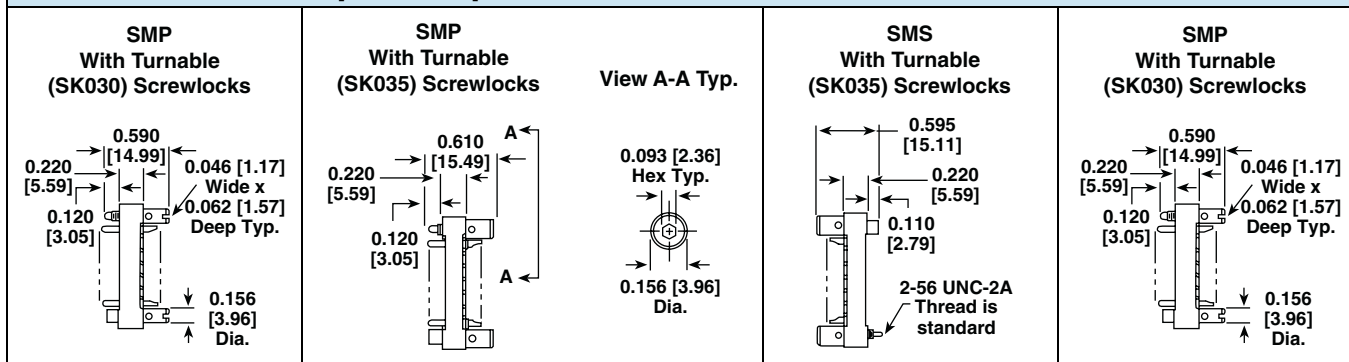
(Beryllium copper available on request)

**Guides:** Stainless steel, passivated

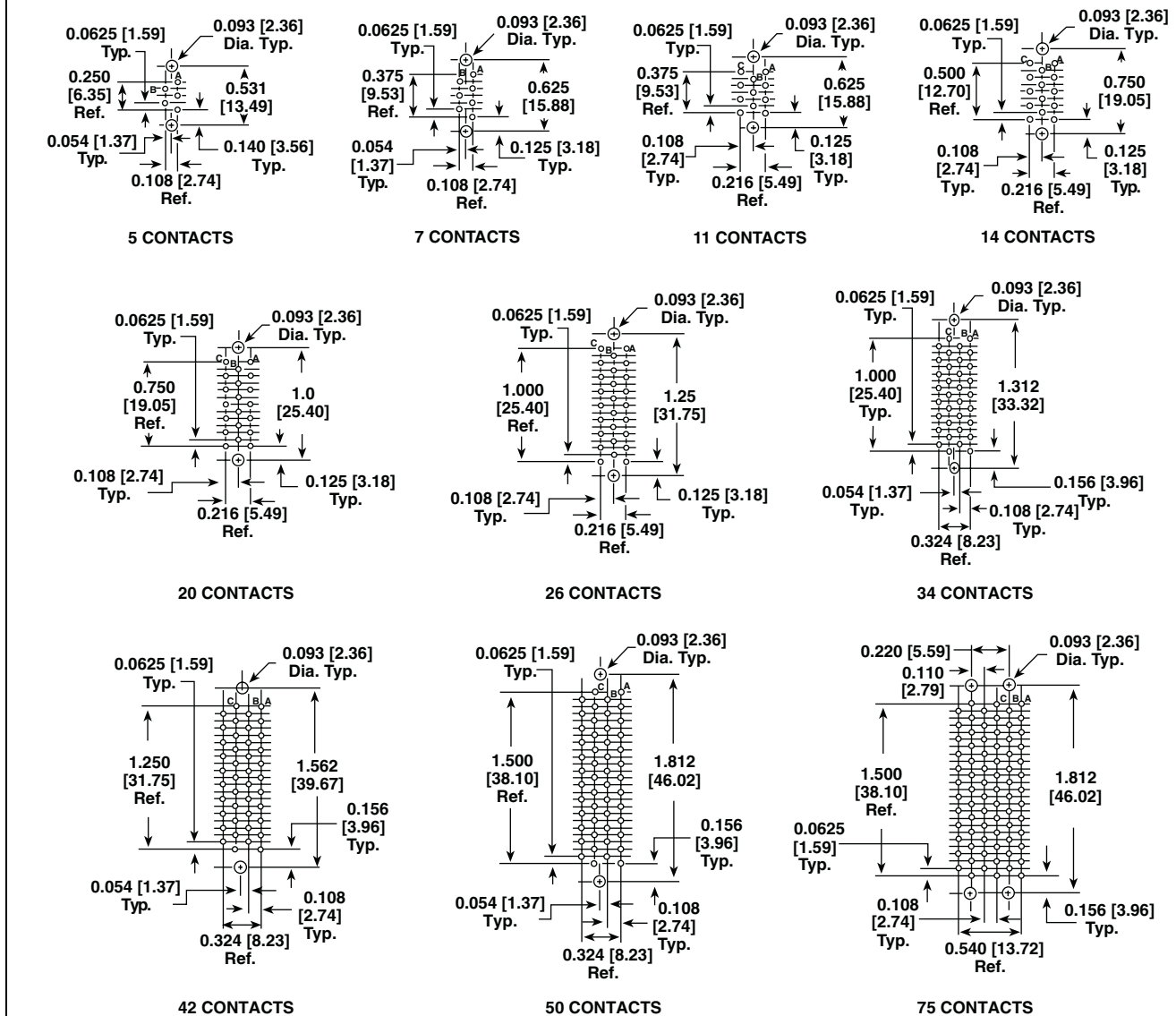
**Screwlocks:** Stainless steel, passivated

**Standard Body:** Glass-filled diallyl phthalate per MIL-M-14, Model GDI-30F, green

DIMENSIONS in inches [millimeters]			
<p><b>SMS</b> With Fixed Standard Guides</p>  <p>0.190 [4.83] Typ. 0.470 [11.94] 0.220 [5.59] 2-56 UNC-2A Threads Typ. 0.156 [3.96] Typ. See Detail B</p>	<p><b>SMDS - DETAIL B</b> Dip Solder Contact Option</p>  <p>0.187 [4.75] Typ. 0.030 [0.762] Typ.</p>	<p><b>SMP</b> With Fixed Standard Guides</p>  <p>0.530 [13.46] 0.120 [3.05] 0.220 [5.59] 0.141 [3.58] Typ. 0.046 [1.17] Dia. Solder Cup #20 AWG Typ. 0.040 [1.02] Dia. Typ. See Detail C</p>	<p><b>SMDP - DETAIL C</b> Dip Solder Contact Option</p>  <p>0.141 [3.58] Typ. 0.187 [4.75] Typ. 0.030 [0.762] Typ. 0.040 ± 0.001 [1.02 ± 0.025] Dia. Typ.</p>
<p><b>SMS</b> With Fixed (SL) Screwlocks</p>  <p>0.520 [13.21] 0.220 [5.59] 0.110 [2.79] 2-56 UNC-2A Thread is standard</p>	<p><b>SMP</b> With Turnable (SK) Screwlocks</p>  <p>0.920 [23.37] 0.220 [5.59] 0.120 [3.05]</p>	<p><b>SMS</b> With Turnable (SK) Screwlocks</p>  <p>0.910 [23.11] 0.220 [5.59] 0.110 [2.79] 0.046 [1.17] Wide x 0.062 [1.57] Deep Typ. 2-56 UNC-2A Thread is standard</p>	<p><b>SMP</b> With Fixed (SL) Screwlocks</p>  <p>0.530 [13.46] 0.220 [5.59] 0.120 [3.05]</p>

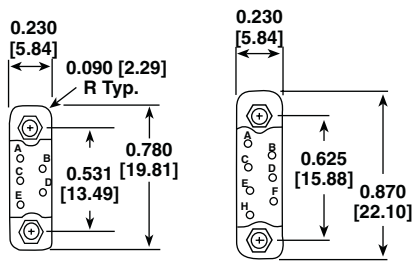
**DIMENSIONS** in inches [millimeters]**TERMINAL VARIATIONS** in inches [millimeters]**DIP SOLDER PC BOARD MOUNTING PATTERNS**

Male (SMP) Connector is shown - Female is opposite. Contact row and Mating Hole  $\varnothing$  to  $\varnothing$  Dimensions also applies to Solder Cup Connectors.

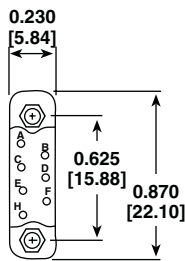


**DIMENSIONS** in inches [millimeters]

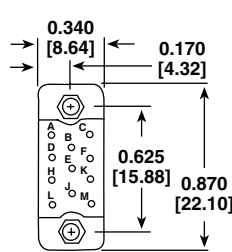
**NOTE:** The views below show the wiring side of a pin model connector (female is opposite). Socket hardware is assembled at "A" contact end of a pin model connector.



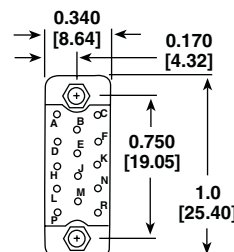
5 CONTACTS



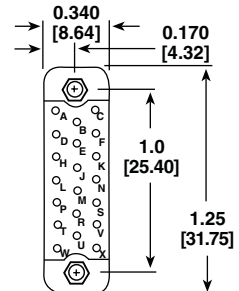
7 CONTACTS



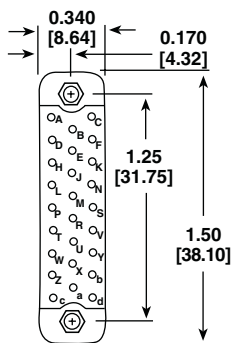
11 CONTACTS



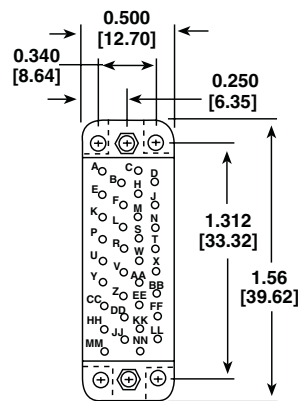
14 CONTACTS



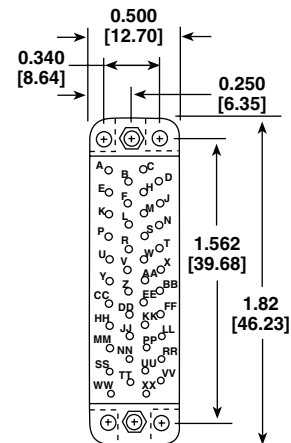
20 CONTACTS



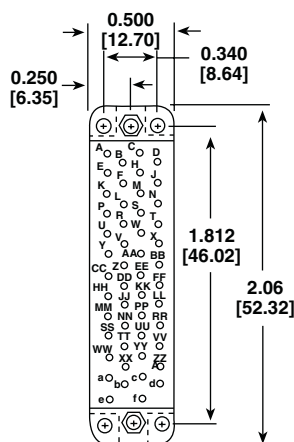
26 CONTACTS



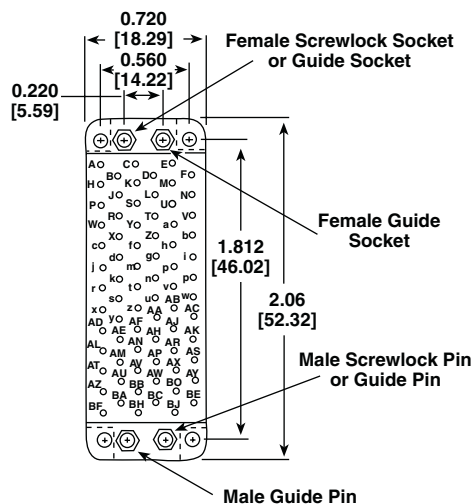
34 CONTACTS



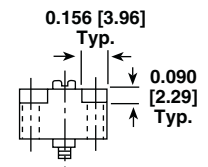
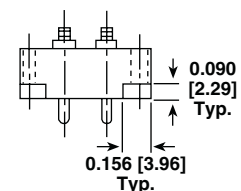
42 CONTACTS



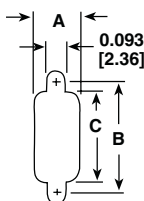
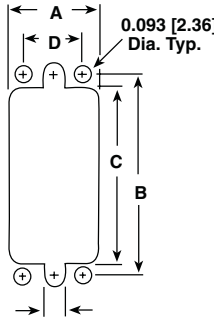
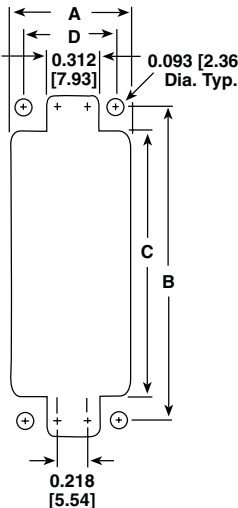
50 CONTACTS



75 CONTACTS


TYPICAL END VIEW  
34 THRU 50 CONTACTS

TYPICAL END VIEW  
75 CONTACTS

**PANEL CUTOUT** in inches [millimeters]

			NUMBER OF CONTACTS	A	B	C	D	FIGURE
			5	0.230 [5.84]	0.531 [13.49]	0.410 [10.41]	-	I
			7	0.230 [5.84]	0.625 [15.88]	0.500 [12.70]	-	
			11	0.340 [8.64]	0.625 [15.88]	0.530 [13.46]	-	
			14	0.340 [8.64]	0.750 [19.05]	0.620 [15.75]	-	
			20	0.340 [8.64]	1.0 [25.40]	0.910 [23.11]	-	
			26	0.340 [8.64]	1.25 [31.75]	1.16 [29.46]	-	
			34	0.500 [12.70]	1.312 [33.32]	1.16 [29.46]	0.343 [8.71]	II
			42	0.500 [12.70]	1.562 [39.68]	1.41 [35.81]	0.343 [8.71]	
			50	0.500 [12.70]	1.812 [46.02]	1.66 [42.16]	0.343 [8.71]	
			75	0.720 [18.29]	1.812 [46.02]	1.66 [42.16]	0.562 [14.28]	III

**ORDERING INFORMATION**

C	SM	B	S	20	G	- 26	R	027 <sup>(1)</sup>
CONTACTS	MODEL	CONTACT TYPE	CONTACT STYLE	CONTACT SIZE	PLATING	NUMBER OF CONTACTS	(OPTIONAL)	HARDWARE OPTIONS
	Subminiature		P = Pin S = Socket	#20 AWG		5, 7, 11, 14, 20, 26, 34, 42, 50, 75		
(OPTIONAL) Closed entry socket contacts only. Omit for standard contacts.					Optional plating available: G = Gold (0.00003 thick) over nickel G5 = Gold (0.00005 thick) over nickel Omit designator for gold (0.00001 thick) over nickel		(OPTIONAL) R = Reversed guides or screwlocks Omit for standard	
		(OPTIONAL) B = Beryllium copper, socket contacts (Solder cup) D = Dip solder contacts						(Omit if no hardware desired) 027 = Slotted cres guides 0.090" [2.29 mm] diameter SK = Turnable screwlocks with 2-56 threads SK3 = Turnable screwlocks with 3-48 threads SL = Fixed screwlocks with 2-56 threads SL3 = Fixed screwlocks with 3-48 threads SK030 = Turnable screwlocks with short slotted knobs SK035 = Turnable screwlocks with socket head knobs SK3030 = Turnable screwlocks with short slotted knobs with 3-48 threads SK3035 = Turnable screwlocks with socket head knobs with 3-48 threads

**EXAMPLES:**  
 SMBS20-26SK035 = Female, 26 beryllium copper socket contacts with socket head knobs on turnable screwlocks for #20 AWG wiring.  
 SMP20-14SL3 = Male, 14 contact pins, fixed screwlocks with 3-48 threads for #20 AWG wiring.

**Note**

<sup>(1)</sup> To order complete connector with hardware supplied unassembled, add suffix "UA" on end of hardware designation.



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