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## Rack and Panel Connectors Subminiature Rectangular


**SMP20**

**SMS20**

### 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

### 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:**

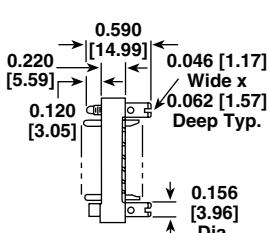
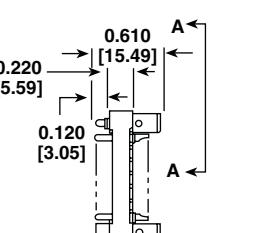
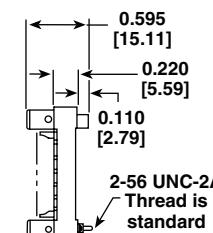
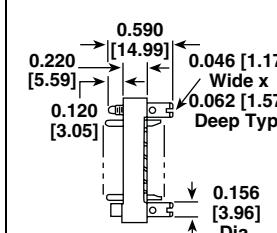
0.080" [2.03 mm]

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

### DIMENSIONS in inches [millimeters]

<b>SMS</b> With Fixed Standard Guides	<b>SMDS - DETAIL B</b> Dip Solder Contact Option	<b>SMP</b> With Fixed Standard Guides	<b>SMDP - DETAIL C</b> Dip Solder Contact Option
<b>SMS</b> With Fixed (SL) Screwlocks	<b>SMP</b> With Turnable (SK) Screwlocks	<b>SMS</b> With Turnable (SK) Screwlocks	<b>SMP</b> With Fixed (SL) Screwlocks

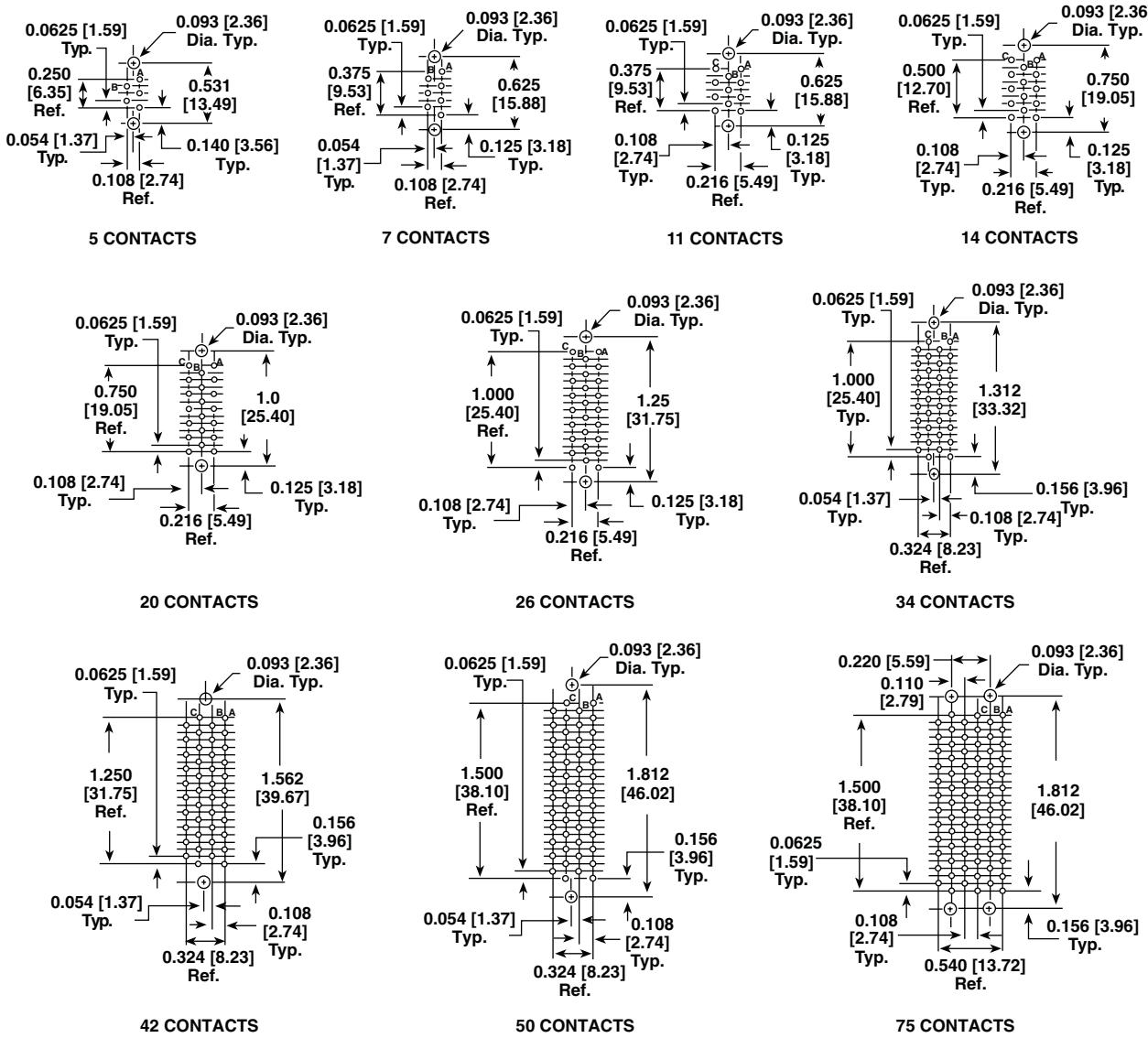
**DIMENSIONS** in inches [millimeters]

SMP With Turnable (SK030) Screwlocks	SMP With Turnable (SK035) Screwlocks	View A-A Typ.	SMS With Turnable (SK035) Screwlocks	SMP With Turnable (SK030) Screwlocks
				

**TERMINAL VARIATIONS** in inches [millimeters]

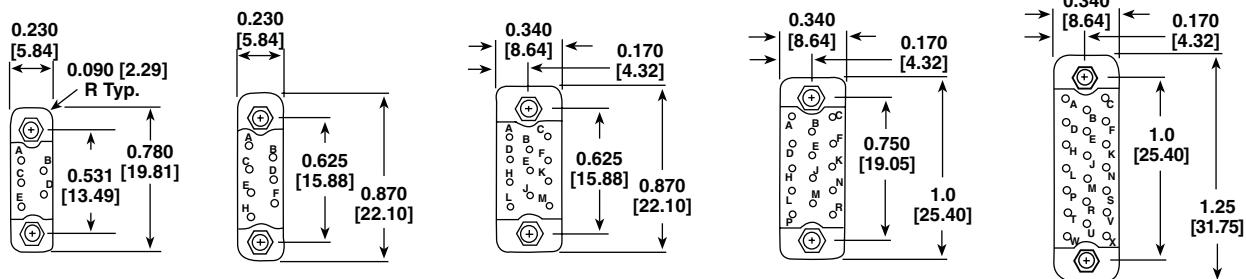
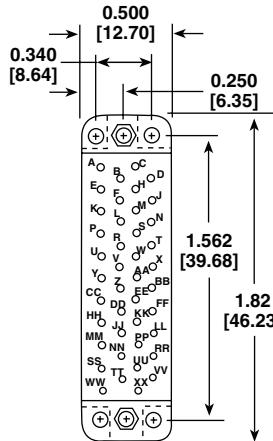
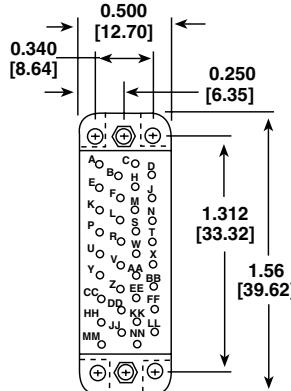
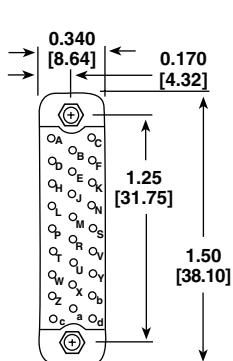
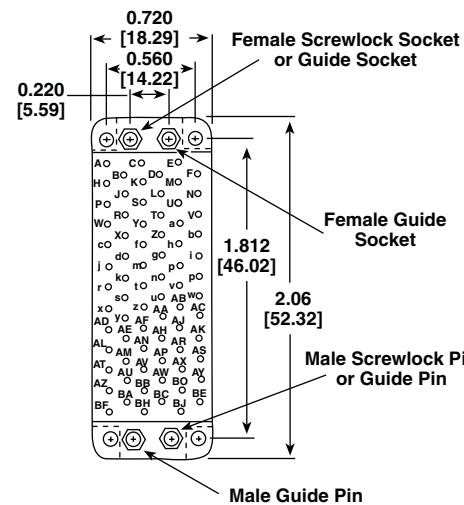
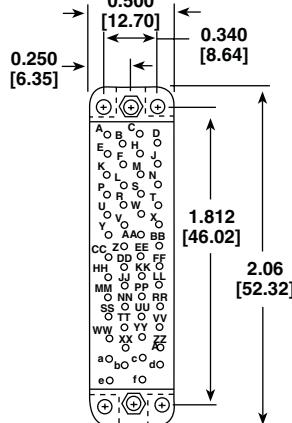
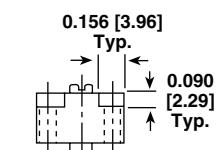
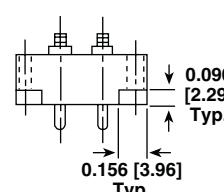
**DIP SOLDER PC BOARD MOUNTING PATTERNS**

Male (SMP) Connector is shown - Female is opposite. Contact row and Mating Hole C to C 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]	
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

FIGURE I

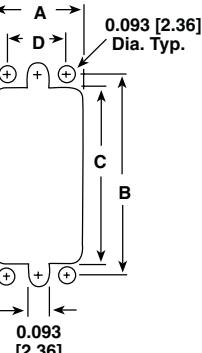


FIGURE II

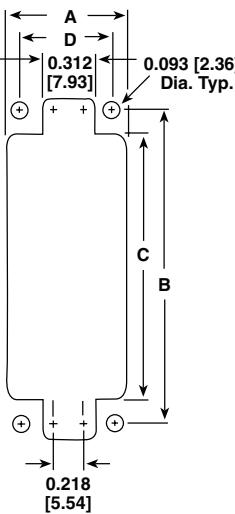


FIGURE III

**ORDERING INFORMATION**

C CONTACTS	SM MODEL	B CONTACT TYPE	S CONTACT STYLE	20 CONTACT SIZE	G PLATING	- 26	R (OPTIONAL)	027 <sup>(1)</sup> HARDWARE OPTIONS
(OPTIONAL) Closed entry socket contacts only. Omit for standard contacts.	Subminiature		P = Pin S = Socket	#20 AWG	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	5, 7, 11, 14, 20, 26, 34, 42, 50, 75	(OPTIONAL) R = Reversed guides or screwlocks Omit for standard	
								(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
<b>EXAMPLES:</b>	SMBS20-26SK035	B = Beryllium copper, socket contacts (Solder cup) D = Dip solder contacts						

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

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