

Rack and Panel Connectors Subminiature Rectangular


SMP20

SMS20

ELECTRICAL SPECIFICATIONS

Current Rating: 7.5 A

Breakdown Voltage:

At sea level: 2000 V_{RMS}

At 70 000 feet [21 336 meters]: 500 V_{RMS}

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]

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



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.

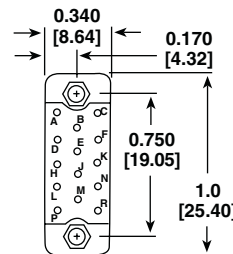


5 CONTACTS

7 CONTACTS



11 CONTACTS



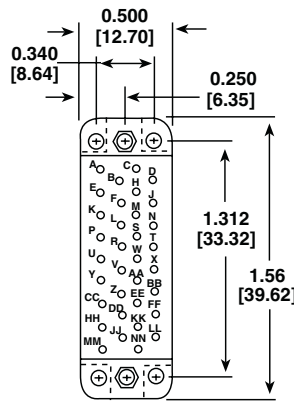
14 CONTACTS



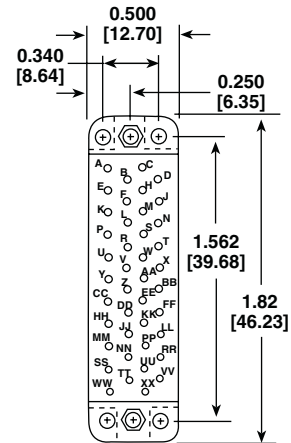
20 CONTACTS



26 CONTACTS



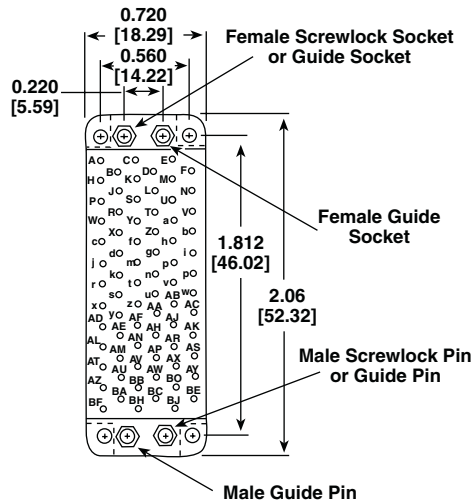
34 CONTACTS



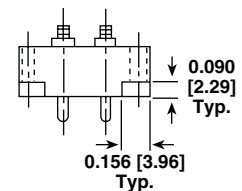
42 CONTACTS



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 | |
| <p>FIGURE I</p> | <p>FIGURE II</p> | <p>FIGURE III</p> | 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 | | | |

| ORDERING INFORMATION | | | | | | | | |
|--|--------------|---|-----------------------|--------------|--|---|--|--|
| C | SM | B | S | 20 | G | 26 | R | 027 ⁽¹⁾ |
| 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 |
| <p>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.</p> | | | | | | | | |

Note

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



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