



# Model SM20

Vishay Dale

## Rack and Panel Connectors

Subminiature Rectangular



### 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.

### ELECTRICAL SPECIFICATIONS

**Current Rating:** 7.5 amps.

**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:** .120" [3.05mm].

**Contact Gauge:** #20 AWG.

**Minimum Creepage Path Between Contacts:**

.080" [2.03mm].

**Minimum Air Space Between Contacts:** .050" [1.27mm].

### 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, Type GDI-30F, green.

### DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]

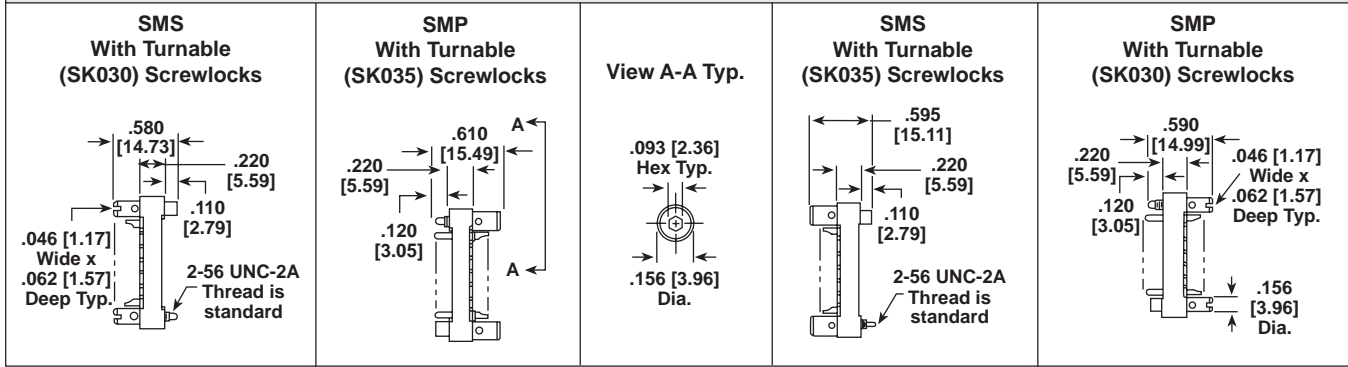
SMS With Fixed Standard Guides	SMDS - DETAIL B Dip Solder Contact Option	SMP With Fixed Standard Guides	SMDP - DETAIL C Dip Solder Contact Option
SMS With Fixed (SL) Screwlocks	SMP With Turnable (SK) Screwlocks	SMS With Turnable (SK) Screwlocks	SMP With Fixed (SL) Screwlocks

# Model SM20

Vishay Dale



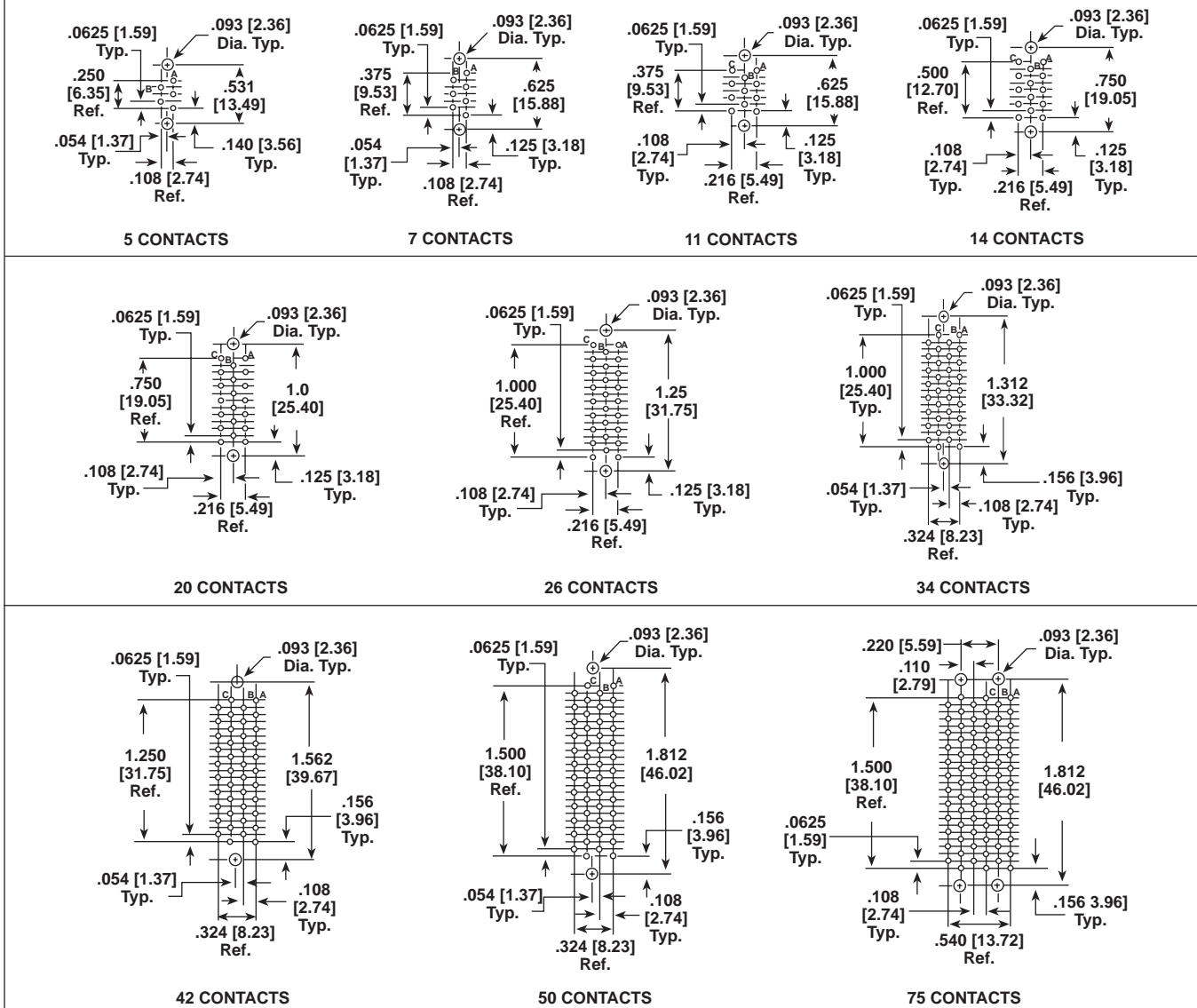
## DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]



## TERMINAL VARIATIONS [Numbers in brackets indicate millimeters]

### DIP SOLDER PC BOARD MOUNTING PATTERNS

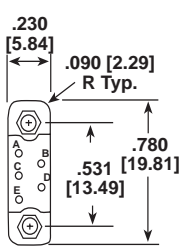
Male (SMP) Connector is shown - Female is opposite. Contact row and Mating Hole  $\varnothing$  to  $\varnothing$  Dimensions also applies to Solder Cup Connectors.



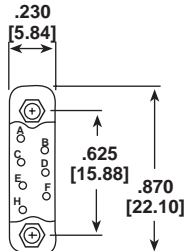


**DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]**

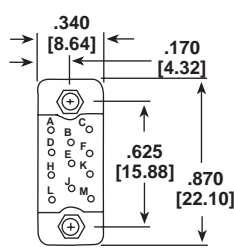
**NOTE:** The views below show the wiring side of a pin type connector (female is opposite). Socket hardware is assembled at "A" contact end of a pin type connector.



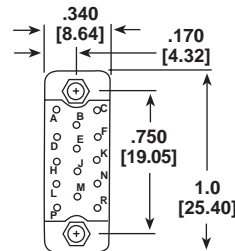
5 CONTACTS



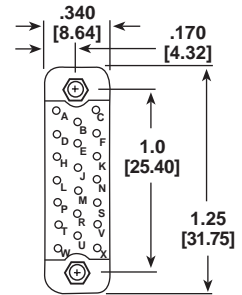
7 CONTACTS



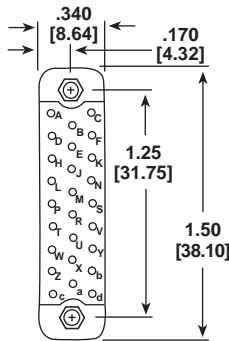
11 CONTACTS



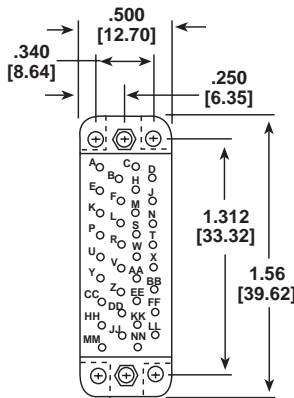
14 CONTACTS



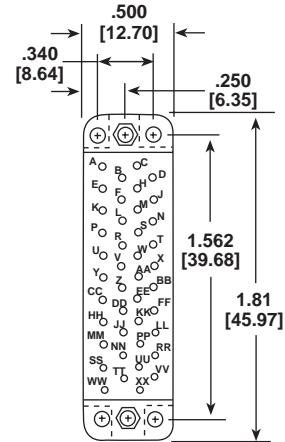
20 CONTACTS



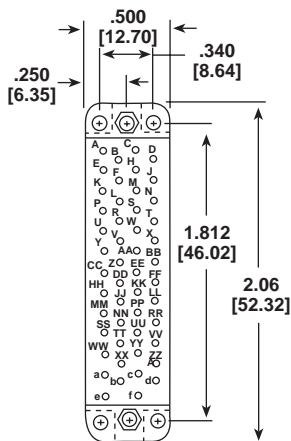
26 CONTACTS



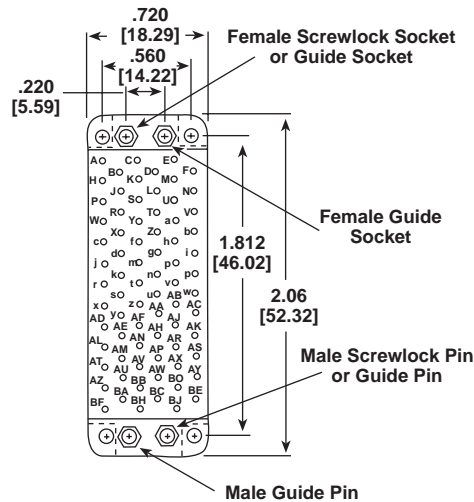
34 CONTACTS



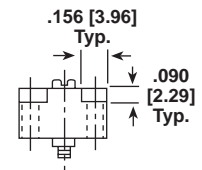
42 CONTACTS



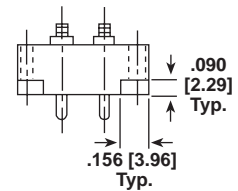
50 CONTACTS



75 CONTACTS



TYPICAL END VIEW  
34 THRU 50 CONTACTS



TYPICAL END VIEW  
75 CONTACTS

# Model SM20

Vishay Dale



## PANEL CUTOUT [Numbers in brackets indicate millimeters]

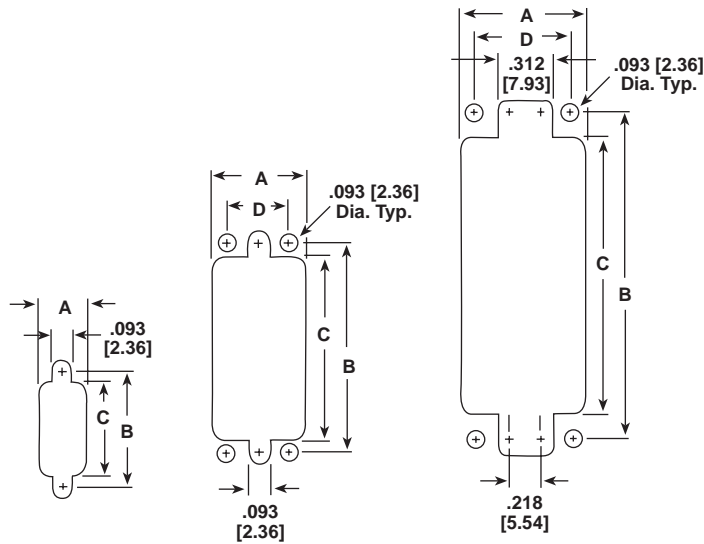


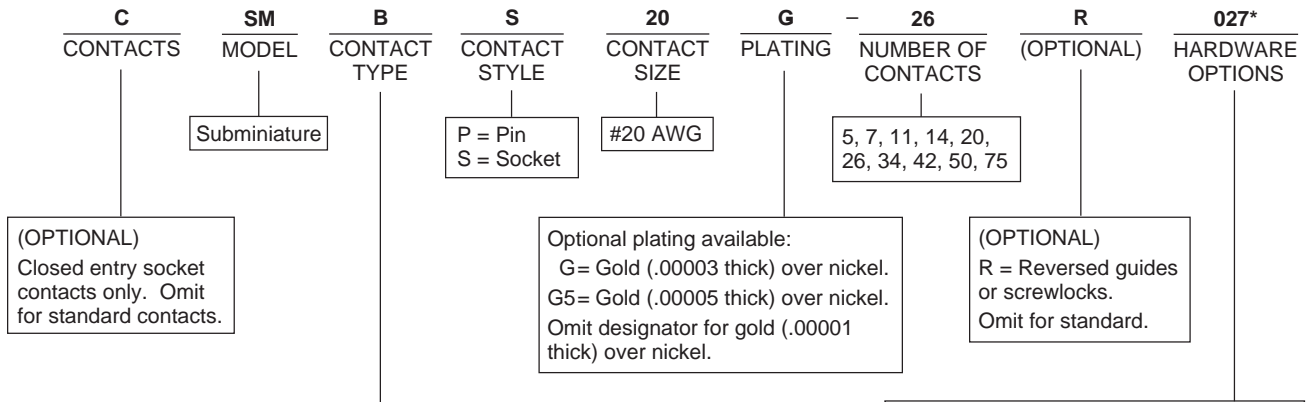
FIGURE I

FIGURE II

FIGURE III

NUMBER OF CONTACTS	A	B	C	D	FIGURE
5	.230 [5.84]	.531 [13.49]	.410 [10.41]	—	I
7	.230 [5.84]	.625 [15.88]	.500 [12.70]	—	
11	.340 [8.64]	.625 [15.88]	.530 [13.46]	—	
14	.340 [8.64]	.750 [19.05]	.620 [15.75]	—	
20	.340 [8.64]	1.0 [25.40]	.910 [23.11]	—	
26	.340 [8.64]	1.25 [31.75]	1.16 [29.46]	—	
34	.500 [12.70]	1.312 [33.32]	1.16 [29.46]	.343 [8.71]	II
42	.500 [12.70]	1.562 [39.68]	1.41 [35.81]	.343 [8.71]	
50	.500 [12.70]	1.812 [46.02]	1.66 [42.16]	.343 [8.71]	
75	.720 [18.29]	1.812 [46.02]	1.66 [42.16]	.562 [14.28]	

## HOW TO ORDER



**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.

(Omit if no hardware desired)  
 027 = Slotted cres guides .090" [2.29mm] 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.

\*To order complete connector with hardware supplied unassembled, add suffix "UA" on end of hardware designation.