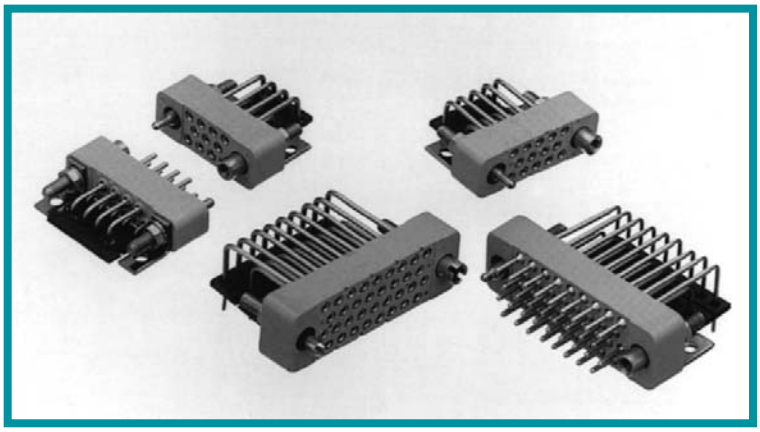
HIGH DENSITY RECTANGULAR RIGHT ANGLE PRINTED BOARD MOUNT CONNECTORS

Size 22 Contacts

Conforms to MIL-DTL-28748

IEC Publication 807-1

Telecommunication
U.L. File #E140980



SMPL Series connectors are high reliability, high density, rectangular connectors meeting the performance requirements of MIL-DTL-28748. Termination style is right angle printed board mount. SMPL Series connectors are intermateable with Positronic SGM and SGMC series connectors.

Twelve connector variants, four through 50 poles, are offered. Contact spacing is 0.094 inch [2.39mm] between centers, and contact diameters are 0.030 inch [0.76mm], rated to five amperes per contact.

A complete array of mounting, locking and polarizing accessories is available for the SMPL Series. For details, see the High Density Rectangular Connector Accessories section.

Ideal applications for the SMPL Series are where low weight and high density are requirements. The high reliability of the "closed entry" female contacts insures numerous couplings of the connector without substantial degradation of contact resistance. SMPL Series connectors are used in the aerospace, avionics, telecommunications, instrumentation, medical and robotics industries.

POSITRONIC INDUSTRIES · RoHS Compliant · per EU Directive 2002/95/EC

For RoHS options see page 25.

SMPL SERIES TECHNICAL CHARACTERISTICS

MILITARY SPECIFICATIONS:

Conforms to MIL-DTL-28748.

INTERNATIONAL STANDARDS:

IEC 807-1

MATERIALS AND FINISHES:

Insulator:	Glass filled DAP per ASTM-D-5948 type SDG-F. Grey color is standard, black or green available.
Fixed Contacts:	Copper alloy, 0.000015 inch [0.38 microns] gold over nickel. Other finishes available upon request.
Jackscrew System:	Passivated stainless steel.
Polarizing Guides:	Copper alloy with nickel plate or passivated stainless steel.
Vibration Locks:	Copper alloy with nickel plate.

MECHANICAL CHARACTERISTICS:

Fixed Contacts:	**Male** – Size 22: 0.030 inch [0.76 mm] diameter. **Female** – "Closed entry" design for highest reliability.
Contact Retention in Insulator:	6 lbs. [26.5N] minimum.
Contact Termination:	0.025 inch [0.64 mm] diameter.
Locking Systems:	Friction, vibration locks and jackscrews.
Polarization:	Polarized guides, polarized shells and jackscrew system.
Mechanical Operations:	1000 operations per IEC 512-5.
Jackscrews:	Standard threads, 2-56 UNC. M2X0.4 metric threads available.

ELECTRICAL CHARACTERISTICS:

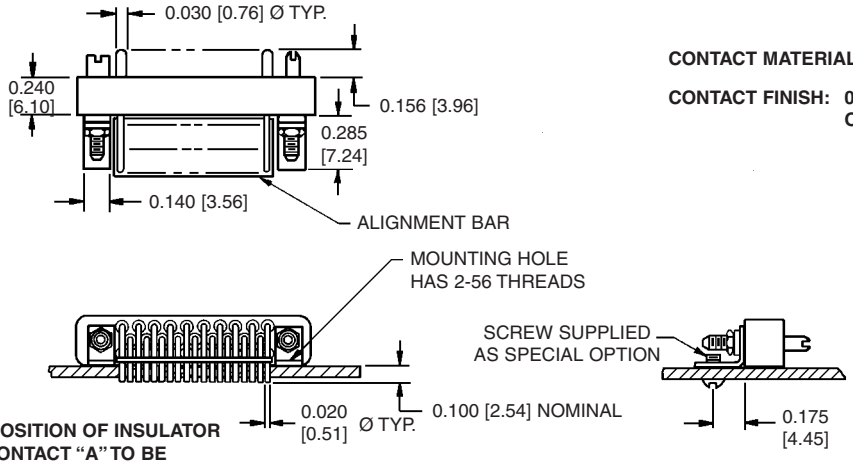
Contact Current Rating [maximum]:	5 amps.
Initial Contact Resistance:	0.012 ohms
Flash over Voltage:	2200 V.AC [rms]
Test Voltage:	1000 V.AC [rms]
Insulation Resistance [minimum]:	5 G ohms
Clearance and Creepage Distance [minimum]:	0.028 inch [0.71 mm]
Working Temperature:	-55°C to 135°C
Working Voltage:	250 V.AC [rms]

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

HIGH DENSITY RECTANGULAR RIGHT ANGLE PRINTED BOARD MOUNT CONNECTORS

RIGHT ANGLE SOLDER CONTACTS

MALE CONNECTOR SHOWN



CONTACT MATERIAL: COPPER ALLOY

CONTACT FINISH: 0.000015 [0.38 MICRONS] GOLD OVER NICKEL OR COPPER

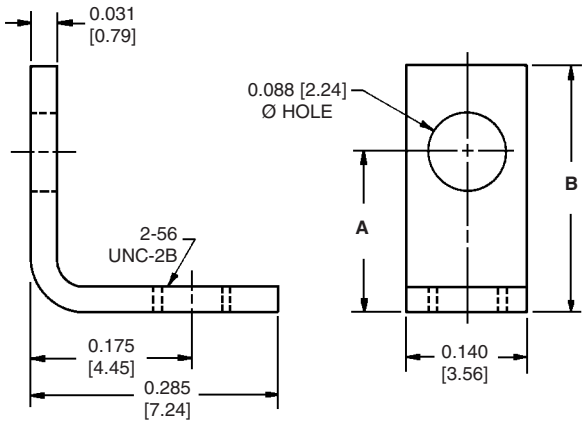
CONTACTS NOT SHOWN FOR CLARITY

STANDARD POSITION OF INSULATOR REQUIRES CONTACT "A" TO BE ADJACENT TO THE PRINTED BOARD

FOR FACE DIMENSIONS OF INSULATOR VARIANT DESIRED, SEE SGM SERIES INSULATOR DIMENSION PAGE 18.

ADD 0.030 [0.76] TO THE HOLE LOCATION DIMENSION 0.175 [4.48] WHEN MOUNTING BRACKET (LB) AND VIBRATION LOCK TAB (V) ARE USED IN COMBINATION ON CONNECTOR

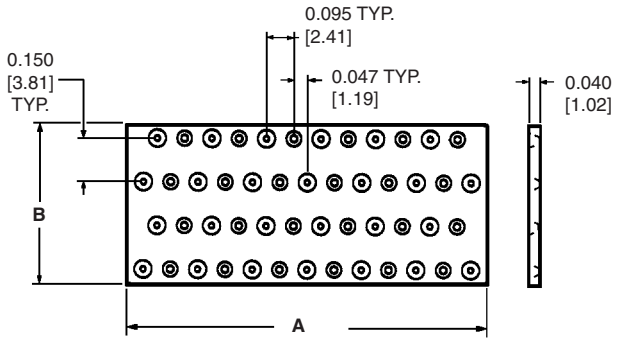
CONNECTOR MOUNTING BRACKET



PART NUMBER	A	B	CONNECTOR VARIANTS
80213-0	0.105 [2.67]	0.205 [5.21]	4, 5, 7, 9
80213-1	0.140 [3.56]	0.240 [6.10]	11, 14, 20, 26, 29
80213-2	0.195 [4.95]	0.295 [7.49]	34, 44, 50

MATERIAL: PHOSPHOR BRONZE
FINISH: ZINC PLATE WITH CHROMATE SEAL

CONNECTOR ALIGNMENT BAR

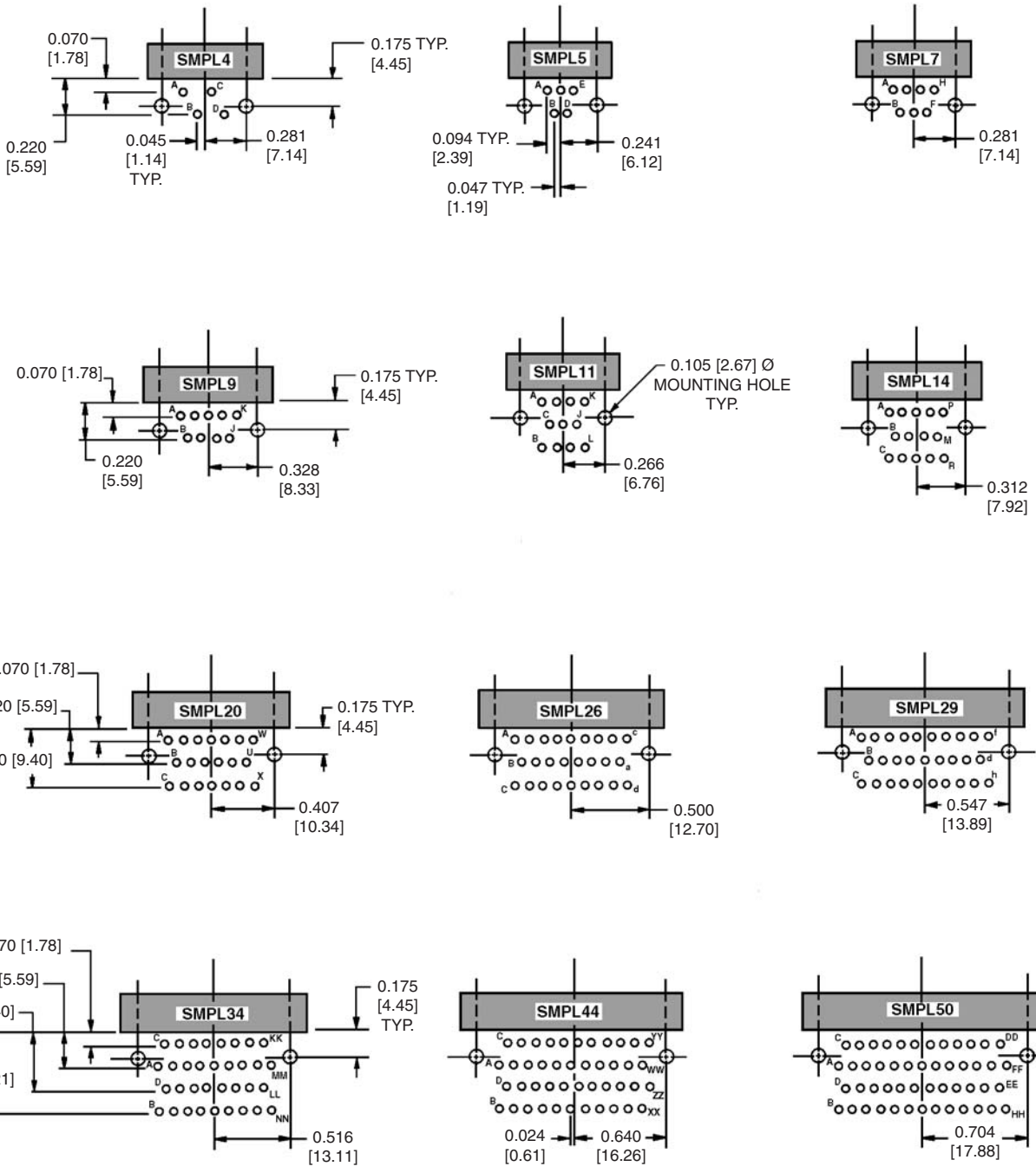


SIZE	A	B
5	0.314 [7.98]	0.290 [7.37]
7	0.394 [10.01]	0.290 [7.37]
9	0.488 [12.40]	0.290 [7.37]
11	0.364 [9.25]	0.415 [10.54]
14	0.456 [11.58]	0.415 [10.54]
20	0.646 [16.41]	0.415 [10.54]
26	0.832 [21.13]	0.415 [10.54]
29	0.926 [23.52]	0.415 [10.54]
34	0.864 [21.95]	0.550 [13.97]
44	1.112 [28.24]	0.550 [13.97]
50	1.240 [31.50]	0.550 [13.97]

MATERIAL: NYLON, BLACK

RIGHT ANGLE PRINTED BOARD HOLE PATTERN

HOLE IDENTIFICATION SHOWN IS FOR MALE CONNECTOR
USE MIRROR IMAGE FOR FEMALE CONNECTOR



SUGGEST 0.105 [2.66] Ø HOLES IN PRINTED BOARD FOR CONNECTOR MOUNTING HOLES

SUGGEST 0.040 [1.01] Ø HOLES IN PRINTED BOARD FOR CONTACT TERMINATIONS

ADD 0.030 [0.76] TO THE MOUNTING HOLE POSITION WHEN MOUNTING BRACKET (LB) AND VIBRATION LOCK TAB (V) ARE USED IN COMBINATION ON CONNECTOR

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

HIGH DENSITY RECTANGULAR RIGHT ANGLE PRINTED BOARD MOUNT CONNECTORS

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 7

STEP	1	2	3	4	5	6	7	8		9
EXAMPLE	SMPL	14	F	0	T	0	LB	/AA	—	-14

STEP 1 - BASIC SERIES

SMPL Series.

STEP 2 - CONNECTOR VARIANTS

4, 5, 7, 9, 11, 14, 20, 26, 29, 34, 44, 50

STEP 3 - CONNECTOR GENDER

M - Male Insulator
F - Female Insulator

STEP 4 - CONTACT TERMINATION TYPE

0 – Standard termination, 90° angle.

*STEP 5 - POLARIZING GUIDES AND JACKSCREW SYSTEMS

N – Polarizing guides.
NSS – Stainless steel polarizing guides.
T – Fixed jackscrews.
0 – If no polarizing guides or jackscrews are required.

*STEP 6 - LOCKING DEVICES

V – Lock tab.
VL – Lock lever.
0 – If no locking devices are required.

STEP 7 - MOUNTING BRACKETS

LB – Mounting bracket.
0 – If no mounting bracket is required.

STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - Compliant per EU Directive 2002/95/EC (RoHS)

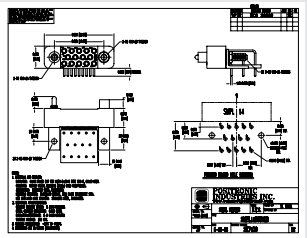
NOTE: If compliance to environmental legislation is not required, this step will not be used.
Example: SMPL14F0T0LB

STEP 9 - SPECIAL OPTIONS

-14 – Signal contacts plated 0.000030 [0.76µ] gold over nickel.
-50 – Signal contacts plated 0.000050 [1.27µ] gold over copper.

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

NOTE: Once you have made a connector selection, contact Technical Sales if you would like to receive a drawing in DXF, PDF format or a 3-dimensional IGES file.



SK Drawing

3-dimensional model

***NOTE:** FOR DETAILS OF ITEMS LISTED IN STEPS 5 AND 6, SEE HIGH DENSITY RECTANGULAR CONNECTOR ACCESSORIES SECTION ON PAGES 26-34.