



- High performance for use in harsh environments, including space flight.
- Size 20 **fixed** contacts.
- Female closed entry contacts utilize the “PosiBand®” system. See page 1 for details.
- Five connector variants include 9, 15, 25, 37, and 50 contacts.
- Suitable for use as connector saver or gender changer.
- A wide variety of jackscrew options allows for mechanical keying.

Conforming To Applicable Material, Dimensional and Performance Requirements:

- GSFC S-311-P4 & GSFC S-311-P10
- MIL-DTL-24308 Class M

Conforming To Outgassing Requirements:

- ASTM E-595 & NASA-RP-1124

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Connector Insulator:	Glass-filled DAP per ASTM-D-5948, UL 94V-0, ASTM E-595, NASA-RP-1124.
Contacts:	Precision machined copper alloy. 0.000050 inch [1.27 microns] gold over copper plate. Other finishes are available; see page 95.
Connector Housing (Shells), Spacers and Jackscrew Systems:	Brass with 0.000050 inch [1.27 microns] gold over copper plate.

MECHANICAL CHARACTERISTICS:

Size 20 Fixed:	Male contact - 0.040 inch [1.02 mm] mating diameter. Female contact - PosiBand closed entry design; see page 1 for details.
Connector Saver:	Male to female, or male to male.
Contact Retention:	9 lbs. [40 N].
Connector Housing (Shells):	Male connector housings may be dimpled for EMI/ESD ground paths.

Polarization:	Trapezoidally-shaped connector housings.
Mechanical Operations:	1,000 operations, minimum, per IEC 60512-5.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	7.5 amperes, nominal.
Initial Contact Resistance:	0.008 ohms, maximum.
Proof Voltage:	1,000 V r.m.s.
Insulator Resistance:	5 G ohms.
Clearance and Creepage Distance:	0.039 inch [1.0 mm], minimum.
Working Voltage:	300 V r.m.s.

CLIMATIC CHARACTERISTICS:

Temperature Range:	-55°C to +125°C.
---------------------------	------------------



Positronic
connectpositronic.com

SAD SERIES

MILITARY / SPACE FLIGHT QUALITY

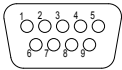
STANDARD DENSITY CONNECTOR SAVER

High
Performance
D-sub

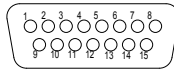
SAD SERIES SIZE 20 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

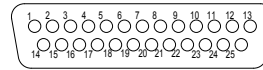
FACE VIEW OF MALE OR REAR VIEW OF FEMALE



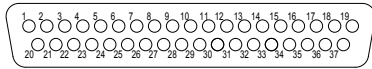
SAD 9



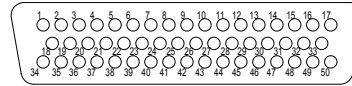
SAD 15



SAD 25



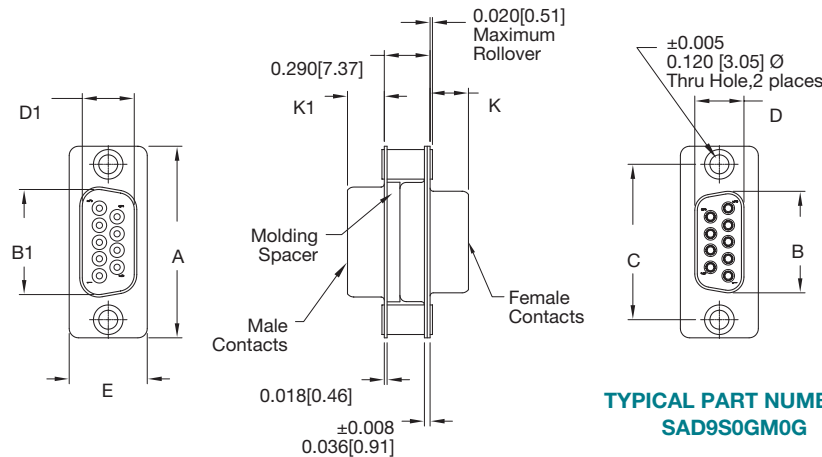
SAD 37



SAD 50

STANDARD CONNECTOR HOUSING (SHELLS) ASSEMBLY DIMENSIONS

SIZE 20 CONTACTS



CONNECTOR VARIANT SIZES	A ±0.015 [0.38]	B ±0.005 [0.13]	B1 ±0.005 [0.13]	C ±0.005 [0.13]	D ±0.005 [0.13]	D1 ±0.005 [0.13]	E ±0.015 [0.38]	K ±0.005 [0.13]	K1 ±0.005 [0.13]
9 M	1.213 [30.81]		0.666 [16.92]	0.984 [24.99]		0.329 [8.36]	0.494 [12.55]		0.233 [5.92]
9 S	1.213 [30.81]	0.643 [16.33]		0.984 [24.99]	0.311 [7.90]		0.494 [12.55]	0.243 [6.17]	
15 M	1.541 [39.14]		0.994 [25.25]	1.312 [33.32]		0.329 [8.36]	0.494 [12.55]		0.233 [5.92]
15 S	1.541 [39.14]	0.971 [24.66]		1.312 [33.32]	0.311 [7.90]		0.494 [12.55]	0.243 [6.17]	
25 M	2.088 [53.04]		1.534 [38.96]	1.852 [47.04]		0.329 [8.36]	0.494 [12.55]		0.230 [5.84]
25 S	2.088 [53.04]	1.511 [38.38]		1.852 [47.04]	0.311 [7.90]		0.494 [12.55]	0.243 [6.17]	
37 M	2.729 [69.32]		2.182 [55.42]	2.500 [63.50]		0.329 [8.36]	0.494 [12.55]		0.230 [5.84]
37 S	2.729 [69.32]	2.159 [54.84]		2.500 [63.50]	0.311 [7.90]		0.494 [12.55]	0.243 [6.17]	
50 M	2.635 [66.93]		2.079 [52.81]	2.406 [61.11]		0.441 [11.20]	0.605 [15.37]		
50 S	2.635 [66.93]	2.064 [52.43]		2.406 [61.11]	0.423 [10.74]		0.605 [15.37]	0.243 [6.17]	

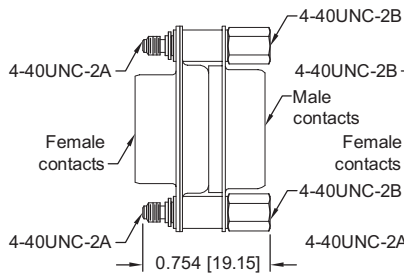


JACKSCREW SYSTEMS

CODE E, E6, T AND T6

**ROTATING
MALE AND FEMALE
JACKSCREWS**

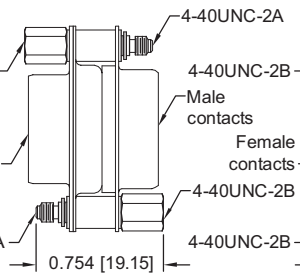
E



**EXAMPLE PART NUMBER:
SAD9SEGM0G**

**ROTATING
MALE AND FEMALE
POLARIZED
JACKSCREWS**

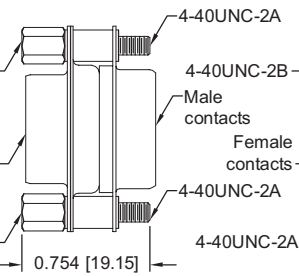
E6



**EXAMPLE PART NUMBER:
SAD9SE6GM0G**

**FIXED
MALE AND FEMALE
JACKSCREWS**

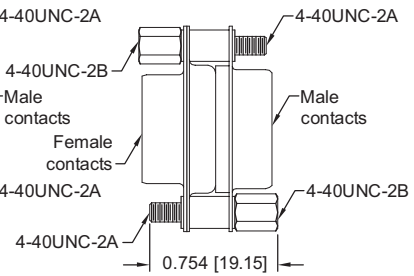
T



**EXAMPLE PART NUMBER:
SAD9STGM0G**

**FIXED
MALE AND FEMALE
POLARIZED
JACKSCREWS**

T6



**EXAMPLE PART NUMBER:
SAD9ST6GM0G**



SAD15S0GM0G connector saver mated to
SND15S5R70T2G connector.



ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 8

STEP	1	2	3	4	5	6	7	8	9
EXAMPLE	SAD	9	S	S	G	M	S	D	—

STEP 1 - BASIC SERIES

SAD series

STEP 2 - CONNECTOR VARIANT

9, 15, 25, 37, 50

STEP 3 - 1ST CONNECTOR GENDER

M - Male
S - Female - PosiBand closed entry contacts,
see page 1 for more information.

*1 STEP 4 - 1ST CONNECTOR MATING STYLE

- 0 - Swaged spacer 0.120 [3.05µ] mounting hole
- S - Swaged spacer 4-40 UNC-2B threads
- *2 E - Rotating male and female jackscrews
(Select 0 in Step 7)
- *2 E6 - Rotating male and female polarized jackscrew
(Select 0 in Step 7)
- *2 T - Fixed male and female jackscrews
(Select 0 in Step 7)
- *2 T6 - Fixed male and female polarized jackscrew
(Select 0 in Step 7)

STEP 5 - 1ST CONNECTOR HOUSING (SHELLS) OPTION

G - Gold over copper plate.
D - Gold over copper plate and dimpled
(male connectors only).

STEP 9 - SPECIAL OPTIONS

SEE APPENDIX ON PAGE 95.

STEP 8 - 2ND CONNECTOR HOUSING (SHELLS) OPTION

G - Gold over copper plate.
D - Gold over copper plate and dimpled
(male connectors only).

*1 STEP 7 - 2ND CONNECTOR MATING STYLE

- 0 - Swaged spacer 0.120 [3.05µ] mounting hole
- S - Swaged spacer 4-40 UNC-2B threads
- *2 E - Rotating male and female jackscrews
(Select 0 in Step 4)
- *2 E6 - Rotating male and female polarized jackscrew
(Select 0 in Step 4)
- *2 T - Fixed male and female jackscrews
(Select 0 in Step 4)
- *2 T6 - Fixed male and female polarized jackscrew
(Select 0 in Step 4)

STEP 6 - 2ND CONNECTOR GENDER

M - Male

NOTES

*1 Connector mating style for both connectors must be the same if 0 or S is used. If E or E6 is used in either Step 4 or 8 the other step must be 0.

*2 For hardware information, see page 64.