CONNECTOR SAVERS

D-subminiature Connectors

Positronic®
global connector solutions

CONNECTOR SAVERS FOR:

- STANDARD DENSITY D-SUBMINIATURE
- HIGH DENSITY D-SUBMINIATURE
- COMBINATION D-SUBMINIATURE
- HIGH PERFORMANCE D-SUBMINIATURE

Rev J

C001 Rev G
C004 Rev F
C005 Rev B1

www.connectpositronic.com

Connector Excellence®

Positronic Provides Complete Capability

Mission Statement

"To utilize product flexibility and application assistance to present quality interconnect solutions which represent value to customers worldwide."

Experience

- Founded in **1966**
- **Involvement** in the development of international connector specifications through EIA®, IEC and ISO as well as PICMG®.
- Introduction of new and **unique connector products** to the electronics industry.
- Patent holder for many **unique connector features and manufacturing techniques.**
- **Vertically integrated** manufacturing – raw materials to finished connectors.

Technology

- **Expertise** with solid machined contacts provides a variety of high reliability connectors including high current density power connectors.
- Quality Assurance lab is **capable of testing** to IEC, EIA, UL, CUL, military and customer-specified requirements.
- **In-house design and development** of connectors based on market need or individual customer requirements.
- **Internal manufacturing capabilities** include automatic precision contact machining, injection molding, stamping, plating operations and connector assembly.
- **Manufacturing locations** in southwest Missouri, U.S.A. (headquarters); Puerto Rico, France, China, Singapore, and India. Total square footage: 407,441.

Support

- **Quality Systems:** Select locations qualified to ISO 9001, ISO 14001, AS9100, MIL-STD-790 and customer "dock to stock" programs. Applicable products qualified to MIL-DTL-24308, AS39029, DSCC 85039, MIL-DTL-28748, Space D32, GSFC S-311-P-4 and GSFC S-311-P-10.
- Compliance to a variety of international and customer specific **environmental requirements.**
- Large **in-house inventory** of finished connectors. Customer specific **stocking programs.**
- Factory direct **technical sales support** in major cities worldwide.
- **One-on-one customer support** from worldwide factory locations.
- World class **web site**.
- **Value-added solutions** and willingness to **develop custom products** with reasonable price and delivery.

Regional Headquarters

Springfield, MO

Auch, France

Singapore

Products described within this catalog may be protected by one or more of the following US patents:

#4,900,261† #5,255,580 #5,329,697
#6,260,268 #6,835,079 #7,115,002

†Patented in Canada, 1992 Other Patents Pending

Positronic Industries' **FEDERAL SUPPLY CODE** (Cage Code) FOR MANUFACTURERS is **28198**

Unless otherwise specified, dimensional tolerances are:

1) ±0.001 inches [0.03 mm] for male contact mating diameters.
2) ±0.003 inches [0.08 mm] for contact termination diameters.
3) ±0.005 inches [0.13 mm] for all other diameters.
4) ±0.015 inches [0.38 mm] for all other dimensions.

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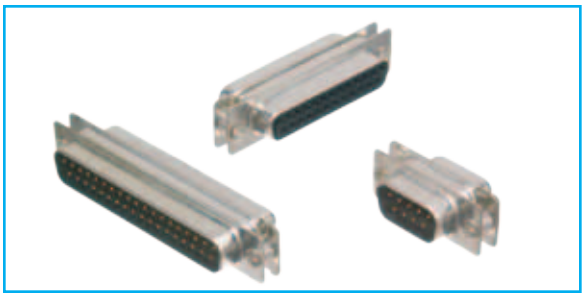
The following trademarks are registered to Positronic Industries, Inc. in the United States and many other countries: Positronic Industries, Inc.®, Positronic®, Connector Excellence®, P+ logo®, PosiBand®, PosiShop®, Positronic Global Connector Solutions®, Global Connector Solutions®. The color blue as it appears on various connectors is a trademark of Positronic Industries, Inc., Registered in U.S. Patent and Trademark Office.

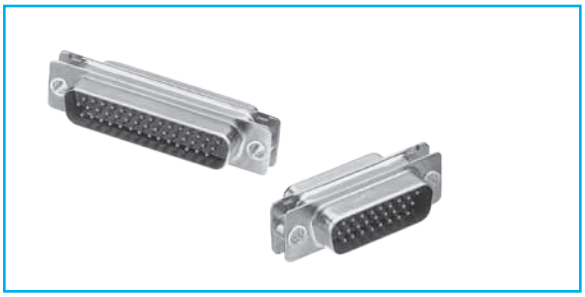
CONNECTOR DESCRIPTIONS

Connector Savers can be mated to a connector which would normally experience high numbers of mating cycles. The connector saver can be easily replaced, "saving" a connector which is not easily replaced.



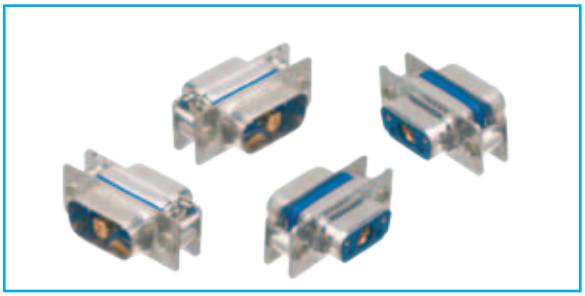
STANDARD DENSITY CONNECTOR SAVER / GENDER CHANGER

AD and HAD Series available in five shell sizes. Standard density connector savers and gender changers. AD series female contacts feature a rugged open entry design for use with professional/industrial quality applications. HAD series female contacts feature the PosiBand® closed entry design for even higher reliability or military quality D-subminiature connectors.



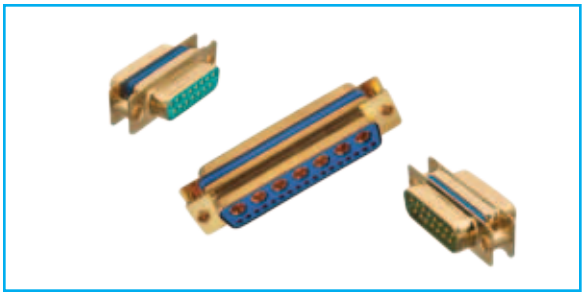
HIGH DENSITY CONNECTOR SAVER / GENDER CHANGER

DAD Series available in six shell sizes. The high density connector savers and gender changers. DAD female contacts can be supplied in either open entry design for use with professional/military quality applications or PosiBand closed entry designs for use in any application requiring high performance characteristics including military.



COMBO-D CONNECTOR SAVERS

ACBDP and ACBMP Series available for all standard Combo-D variants in shell sizes 1 through 6. Combo-D connector savers with size 20 and size 8 contacts. ACBDP series female contacts feature a rugged open entry design for use in professional/industrial quality applications. ACBMP series female contacts feature the PosiBand® closed entry design for even higher reliability including military.



SPACE-D CONNECTOR SAVERS

SAD, SADD and SACBMP Series. Standard density, high density or Combo-D variants available. High reliability, non-outgassing, low magnetism connectors conforming to applicable material, dimensional and performance requirements of GSFC S-311-P4, GSFC S-311-P10 and DSCC specification 85039. All three series' female contacts feature the PosiBand® closed entry design suitable for high performance applications including space flight.

AD Series
Size 20 "Open Entry" Contact Design

HAD Series
Size 20 PosiBand® "Closed Entry" Contact Design

Connector Saver

AD and HAD series connectors are suitable for use in any applications requiring high performance characteristic. The normal density AD and HAD series are available in five standard connector variants of 9, 15, 25, 37 and 50 contacts.

AD and HAD series connectors utilize precision machined contacts for strength and durability. AD series female contact features a rugged open entry design. HAD series female contact features the PosiBand closed entry design for even higher reliability, see page 1 for details.

AD and HAD series connectors can be mated to a connector which would normally experience high numbers of mating cycles. The AD/HAD connector can be easily replaced, "saving" a connector which is not easily replaced.

These connectors can also be used as a "gender changer". Connectors are available in high density versions, see page 75.

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:
AD series: Nylon resin, UL 94V-0, black color.
HAD series: Glass-filled DAP per ASTM-D-5948, UL 94V-0.

Contacts: Precision machined copper alloy.

Contact Plating: Gold flash over nickel plate. Other finishes available upon request.

Shells: Steel with tin plate; zinc plate with chromate seal, stainless steel passivated. Other materials and finishes available upon request.

Low magnetic versions are available, contact Technical Sales.

MECHANICAL CHARACTERISTICS:

Fixed Contacts: Size 20 contacts, male - 0.040 inch [1.02 mm] mating diameter. AD series female contact offers open entry design. HAD series female contact features PosiBand closed entry design, see page 1 for details.

Connector Saver: Male to female or male to male.

Contact Retention: 9 lbs. [40 N].

Shells: Male shells may be dimpled for EMI/ESD ground paths.

Polarization: Trapezoidally shaped shells.

Mechanical Operations:
AD series: 500 operations, minimum, per IEC 60512-5.
HAD series: 1,000 operations, minimum, per IEC 60512-5.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:
Open Entry Contacts: 7.5 amperes nominal
Closed Entry Contacts, tested per UL 1977:
18 amperes, 2 contacts energized.
14 amperes, 6 contacts energized.
11 amperes, 15 contacts energized.
10 amperes, 25 contacts energized.
9 amperes, 50 contacts energized.

See temperature rise curves on page 2 for details.

Initial Contact Resistance: 0.008 ohms, maximum for AD series.
0.004 ohms, maximum for HAD series.

Proof Voltage: 1,000 V r.m.s.

Insulation Resistance: 5 G ohms.

Clearance and Creepage Distance: 0.039 inch [1.0 mm], minimum.

Working Voltage: 300 V r.m.s.

CLIMATIC CHARACTERISTICS:

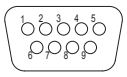
Temperature Range: -55°C to +125°C.

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

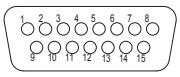
AD AND HAD SERIES SIZE 20 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

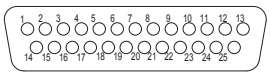
FACE VIEW OF MALE OR USE MIRROR IMAGE FOR FEMALE



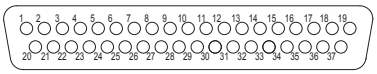
SIZE 9



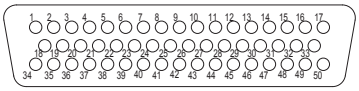
SIZE 15



SIZE 25



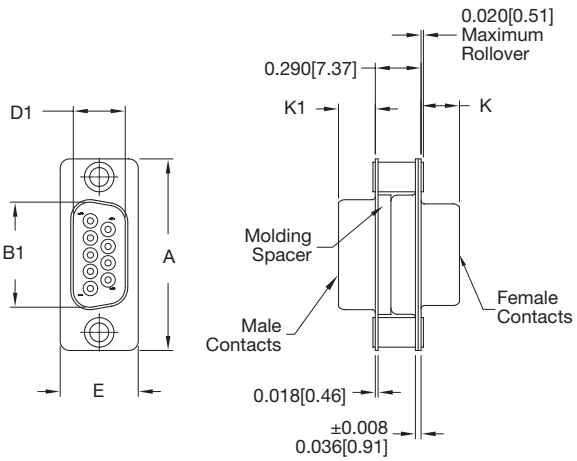
SIZE 37

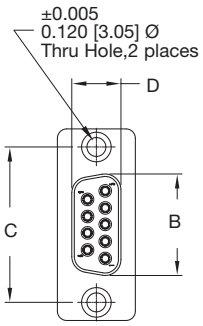


SIZE 50

STANDARD SHELL ASSEMBLY DIMENSIONS

SIZE 20 CONTACTS





Typical Part Number:
AD9F0X9M0X

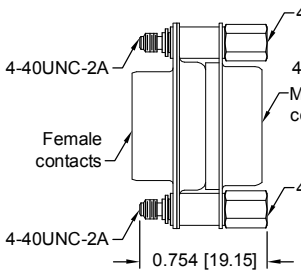
CONNECTOR VARIANT SIZES	A ±0.015 [0.38]	B ±0.005 [0.13]	B1 ±0.005 [0.13]	C ±0.005 [0.13]	D ±0.005 [0.13]	D1 ±0.005 [0.13]	E ±0.015 [0.38]	K ±0.005 [0.13]	K1 ±0.005 [0.13]
9 M	1.213 [30.81]		0.666 [16.92]	0.984 [24.99]		0.329 [8.36]	0.494 [12.55]		0.233 [5.92]
9 F	1.213 [30.81]	0.643 [16.33]		0.984 [24.99]	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 F	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 F	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 F	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]		0.230 [5.84]
50 F	2.635 [66.93]	2.064 [52.43]		2.406 [61.11]	0.423 [10.74]		0.605 [15.37]	0.243 [6.17]	

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

JACKSCREW SYSTEMS
CODE E, E6, T AND T6

ROTATING MALE AND FEMALE JACKSCREWS

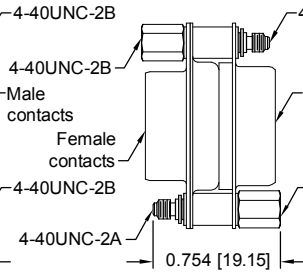
E



Example Part Number:
AD9FEX9M0X

ROTATING MALE AND FEMALE POLARIZED JACKSCREWS

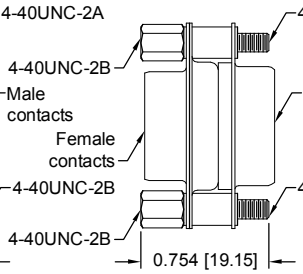
E6



Example Part Number:
AD9FE6X9M0X

FIXED MALE AND FEMALE JACKSCREWS

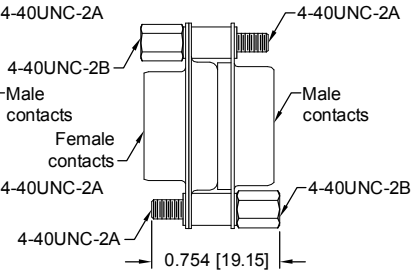
T



Example Part Number:
AD9FTX9M0X

FIXED MALE AND FEMALE POLARIZED JACKSCREWS

T6



Example Part Number:
AD9FT6X9M0X

MATERIAL: Brass or steel with zinc plate and chromate seal or clear zinc plate or tin plate; stainless steel, passivated.

CONNECTOR SAVERS

Connectors Designed To Customer Specifications

Positronic ***D-subminiature*** *connectors can be modified to customer specifications.*

Examples: select loading of contacts for cost savings or to gain creepage and clearance distances; longer printed circuit board terminations; customer specified hardware; sealing for water resistance.

Contact Technical Sales with your particular requirements.

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

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 9

STEP	1	2	3	4	5	6	7	8	9	10		11
EXAMPLE	AD	9	F	S	X	9	M	S	X	/AA	—	-14

STEP 1 - BASIC SERIES

AD series - Open entry female contacts, nylon insulator
HAD series - PosiBand closed entry female contacts, DAP insulator.

Military plating options available.

STEP 2 - CONNECTOR VARIANT

9, 15, 25, 37, 50

STEP 3 - 1ST CONNECTOR GENDER

M - Male
F - Female

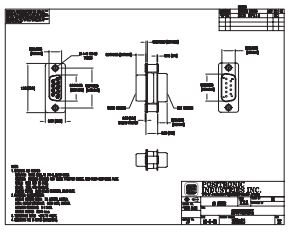
*1 STEP 4 - 1ST CONNECTOR MATING STYLE

0 - Swaged spacer 0.120 [3.05µ] mounting hole
S - Swaged spacer 4-40 UNC-2B threads
*3 E - Rotating male and female jackscrews (Select 0 in Step 8)
*3 E6 - Rotating male and female polarized jackscrew (Select 0 in Step 8)
*3 T - Fixed male and female jackscrews (Select 0 in Step 8)
*3 T6 - Fixed male and female polarized jackscrew (Select 0 in Step 8)

STEP 5 - 1ST CONNECTOR SHELL OPTION

0 - Zinc plated, with chromate seal.
*4 S - Stainless steel, passivated.
X - Tin plated.
Z - Tin plated and dimpled (male connectors only).

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, STEP, or SOLIDWORKS file.



2-D Drawing

3-D Model

*2 STEP 6 - 2ND CONNECTOR VARIANT

9, 15, 25, 37, 50

STEP 7 - 2ND CONNECTOR GENDER

M - Male

*1 STEP 8 - 2ND CONNECTOR MATING STYLE

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

STEP 9 - 2ND CONNECTOR SHELL OPTION

0 - Zinc plated, with chromate seal.
*4 S - Stainless steel, passivated.
X - Tin plated.
Z - Tin plated and dimpled (male connectors only).

STEP 10 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - RoHS Compliant

NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: AD9FSX9MSX

STEP 11 - SPECIAL OPTIONS

-14 - 0.000030 [0.76µ] gold over nickel.
-15 - 0.000050 [1.27µ] gold over nickel.

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

*1 Connector mating style for both connectors must be the same if 0 or S is used. If E, E6, T or T6 is used in either Step 4 or 8 the other step must be 0.
*2 Connector variant for both connectors must be the same.
*3 For hardware information, see page 73.
*4 For stainless steel dimpled male versions contact Technical Sales.

DAD Series
Size 22
"Open Entry" or
PosiBand® "Closed Entry"
Contact Design

Connector Saver

DAD series connectors are suitable for use in any applications requiring high performance characteristic. The high density DAD series is available in six standard connector variants of 15, 26, 44, 62, 78 and 104 contacts.

DAD series connectors utilize precision machined contacts for strength and durability. The female contact features a rugged open entry design. Female PosiBand closed entry contacts can be chosen for even higher reliability, see page 1 for details.

DAD series connectors can be mated to a connector which would normally experience high numbers of mating cycles. The DAD connector can be easily replaced, "saving" a connector which is not easily replaced.

Connectors are available in standard density versions, see page 71.

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator: Polyester glass-filled per ASTM D5927, UL 94V-0.

Contacts: Precision machined copper alloy.

Contact Plating: Gold flash over nickel plate. Other finishes available upon request.

Shells: Steel or brass with tin plate; zinc plate with chromate seal, stainless steel passivated. Other materials and finishes available upon request.

Low magnetic versions are available, contact Technical Sales.

MECHANICAL CHARACTERISTICS:

Fixed Contacts: Size 22 contacts - male 0.030 inch [0.76 mm] mating diameter. Female contact: open entry or PosiBand closed entry design, see page 1 for details.

Connector Saver: Male to female.

Contact Retention: 9 lbs. [40 N].

Shells: Male shells may be dimpled for EMI/ESD ground paths.

Polarization: Trapezoidally shaped shells.

Mechanical Operations: 500 operations, minimum, per IEC 60512-5 for open entry.
1000 operations, minimum, per IEC 60512-5 for closed entry.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:

Open Entry Contacts: 5 amperes nominal

Closed Entry Contacts, tested per UL 1977:

12 amperes, 2 contacts energized.
10 amperes, 6 contacts energized.
7.5 amperes, 26 contacts energized.
6.5 amperes, 62 contacts energized.
5.0 amperes, 104 contacts energized.

See temperature rise curves on page 2 for details.

Initial Contact Resistance: 0.010 ohms, maximum for open entry
0.005 ohms, maximum for closed entry

Proof Voltage: 1,000 V r.m.s.

Insulation Resistance: 5 G ohms.

Clearance and Creepage Distance: 0.042 inch [1.06 mm], minimum.

Working Voltage: 300 V r.m.s.

CLIMATIC CHARACTERISTICS:

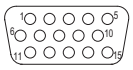
Temperature Range: -55°C to +125°C.

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

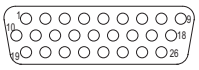
DAD SERIES SIZE 22 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

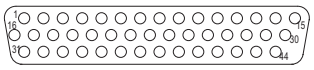
FACE VIEW OF MALE OR USE MIRROR IMAGE FOR FEMALE



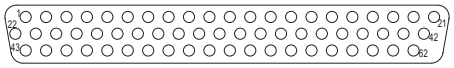
DAD 15



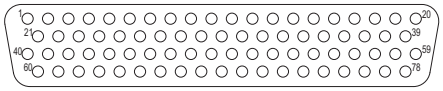
DAD 26



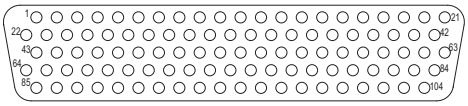
DAD 44



DAD 62



DAD 78

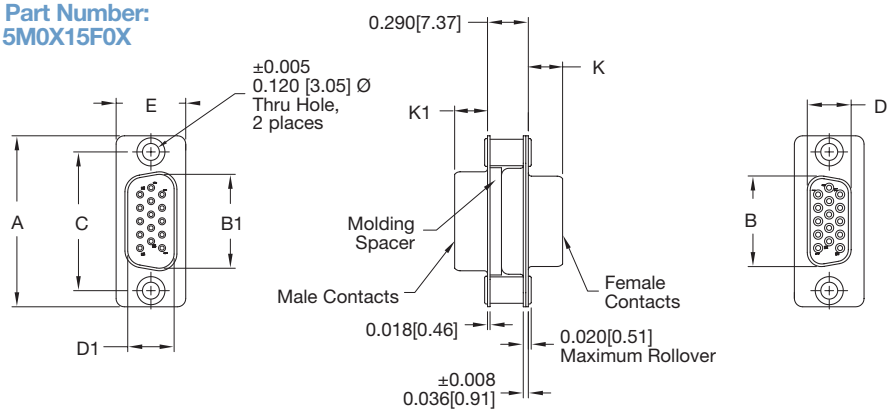


DAD 104

STANDARD SHELL ASSEMBLY DIMENSIONS

SIZE 22 CONTACTS

Typical Part Number:
DAD15M0X15F0X



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]
15 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]
15 F 15 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]	
26 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]
26 F 26 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]	
44 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]
44 F 44 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]	
62 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]
62 F 62 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]	
78 M	2.635 [66.93]		2.079 [52.81]	2.406 [61.11]		0.441 [11.20]	0.605 [15.37]		0.230 [5.84]
78 F 78 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]	
104 M	2.729 [69.32]		2.212 [56.18]	2.500 [63.50]		0.503 [12.78]	0.668 [16.97]		0.230 [5.84]
104 F 104 S	2.729 [69.32]	2.189 [55.60]		2.500 [63.50]	0.485 [12.32]		0.668 [16.97]	0.243 [6.17]	

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 9

STEP	1	2	3	4	5	6	7	8	9	10		11
EXAMPLE	DAD	15	M	S	X	15	F	S	X	/AA	—	-14

STEP 1 - BASIC SERIES

DAD series

STEP 2 - CONNECTOR VARIANT

15, 26, 44, 62, 78, 104

STEP 3 - 1ST CONNECTOR GENDER

M - Male

*2 STEP 4 - 1ST CONNECTOR MATING STYLE

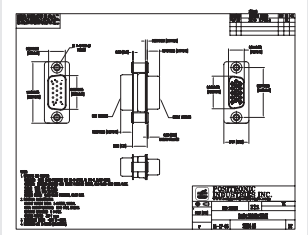
0 - Swaged spacer 0.120 [3.05µ] mounting hole
S - Swaged spacer 4-40 UNC-2B threads
*3 E - Rotating male and female jackscrews (Select 0 in Step 8)
*3 E6 - Rotating male and female polarized jackscrew (Select 0 in Step 8)
*3 T - Fixed male and female jackscrews (Select 0 in Step 8)
*3 T6 - Fixed male and female polarized jackscrew (Select 0 in Step 8)

STEP 5 - 1ST CONNECTOR SHELL OPTION

0 - Zinc plated, with chromate seal.
*5 S - Stainless steel, passivated.
X - Tin plated.
Z - Tin plated and dimpled (male connectors only).

*1 Male option available only on connector variant 78.
*2 Connector mating style for both connectors must be the same if 0 or S is used. If E, E6, T or T6 is used in either Step 4 or 8 the other step must be 0.
*3 For hardware information, see page 73.
*4 Connector variant for both connectors must be the same as in Step 2.
*5 For stainless steel dimpled male versions contact Technical Sales.

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, STEP, or SOLIDWORKS file.



2-D Drawing

3-D Model

*4 STEP 6 - 2ND CONNECTOR VARIANT

15, 26, 44, 62, 78, 104

STEP 7 - 2ND CONNECTOR GENDER

*1 M - Male
F - Female - Professional Level - open entry contacts
S - Female - Industrial Level - PosiBand closed entry contacts

Military plating options available.

**STEP 8 - 2ND CONNECTOR MATING STYLE

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

STEP 9 - 2ND CONNECTOR SHELL OPTION

0 - Zinc plated, with chromate seal.
*5 S - Stainless steel, passivated.
X - Tin plated.
Z - Tin plated and dimpled (male connectors only).

STEP 10 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - RoHS Compliant

NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: DAD15MSX15FSX

STEP 11 - SPECIAL OPTIONS

-14 - 0.000030 [0.76µ] gold over nickel.
-15 - 0.000050 [1.27µ] gold over nickel.

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

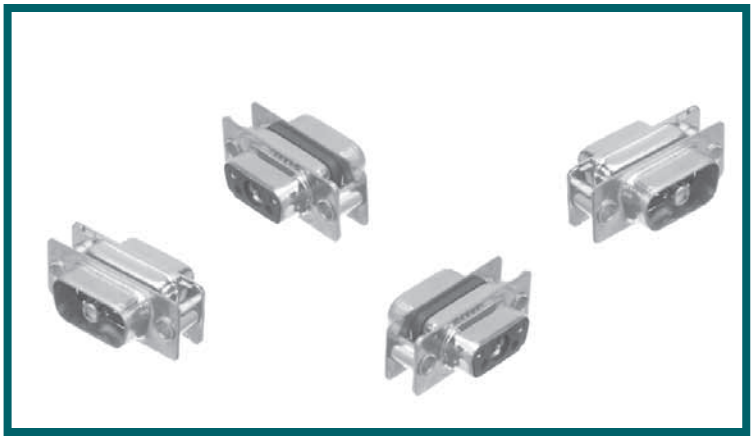
CONNECTOR SAVERS

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

Professional Quality Connectors
ACBDP Series
Size 20 "Open Entry" or
PosiBand® "Closed Entry"
Contact Design

Industrial /Military Quality Connectors
- ACBMP Series
Size 20 PosiBand®
"Closed Entry" Contact Design

Connector Saver



ACBDP and ACBMP series connectors are suitable for use in any applications requiring high performance characteristic. The normal density ACBDP and ACBMP series are available in standard Combo-D connector variants.

ACBDP and ACBMP series connectors utilize precision machined contacts for strength and durability. The ACBDP female contact features a rugged "Open Entry" design or PosiBand "Closed Entry" design for even higher reliability. ACBMP connectors features PosiBand "Closed Entry" contacts and military contact plating.

ACBDP and ACBMP series connectors can be mated to a connector which would normally experience high numbers of mating cycles. The ACBDP/ACBMP connector can be easily replaced, "Saving" a connector which is not easily replaced.

These connectors can also be used as a "gender changer". Connector Savers are also available in standard and high density D-subminiature versions, please consult our Professional, Industrial and Military Performance D-subminiature Connectors catalog for more information.

For high density 8W2, 19W1 and 45W2 adapter variants contact Technical Sales.

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator: Glass filled polyester per ASTM D 5927 UL 94V-0, blue color.

SIGNAL CONTACTS:
- **ACBDP Series:** Precision machined high tensile copper alloy open entry design.
- **ACBMP Series:** Precision machined copper alloy PosiBand closed entry design.

POWER CONTACTS: Precision machined copper alloy closed entry design.

Contact Plating:
- **ACBDP Series:** Gold flash over nickel plate.
- **ACBMP Series:** 0.000050 [1.27µ] gold over nickel plate.

Shells: Steel with tin plate; zinc plate with chromate seal; stainless steel passivated. Other materials and finishes available upon request.

Jackscrew Systems: Brass or steel with zinc plate and chromate seal or clear zinc plate or tin plate; stainless steel, passivated.

Non-magnetic versions are available, contact Technical Sales.

MECHANICAL CHARACTERISTICS:

FIXED CONTACTS:

SIGNAL CONTACTS: Size 20 contacts, male - 0.040 inch [1.02 mm] diameter. ACBDP series has female open entry contact or PosiBand closed entry contacts optional, see page 69 for details. ACBMP series offer female PosiBand closed entry contacts.

POWER CONTACTS: Size 8 contacts, male - 0.142 inch [3.61 mm] diameter. Female contact features Large Surface Area (L.S.A.) closed entry contact design utilizing BeCu mechanical retention member.

continued on next page. . . .

TECHNICAL CHARACTERISTICS, continued

continued from previous page. . . .

MECHANICAL CHARACTERISTICS, continued:

Connector Saver: Male to female or male to male.

Contact Retention:

Signal: 9 lbs. [40 N].
Power: 22 lbs. [98 N].

Shells: Male shells may be dimpled for EMI/ESD ground paths.

Polarization: Trapezoidally shaped shells.

Mechanical Operations:

ACBDP Series: 500 operations, minimum, per IEC 60512-5.

ACBMP Series: 1,000 operations, minimum, per IEC 60512-5.

ELECTRICAL CHARACTERISTICS:

SIZE 20 CONTACTS

Contact Current Rating: 7.5 amperes, nominal.
Initial Contact Resistance: 0.008 ohms, maximum.
Proof Voltage: 1,000 V r.m.s.

SIZE 8 CONTACTS

POWER CONTACTS

Contact Current Rating: 70 amperes, per UL 1977.
See Temperature Rise Curves on pages 1-2.
Initial Contact Resistance: 0.0005 ohms, maximum
Proof Voltage: 1,000 V r.m.s.

CONNECTOR

Insulation Resistance: 5 G ohms.
Clearance and Creepage Distance: 0.039 inch [1.0 mm], minimum.
Working Voltage: 300 V r.m.s.

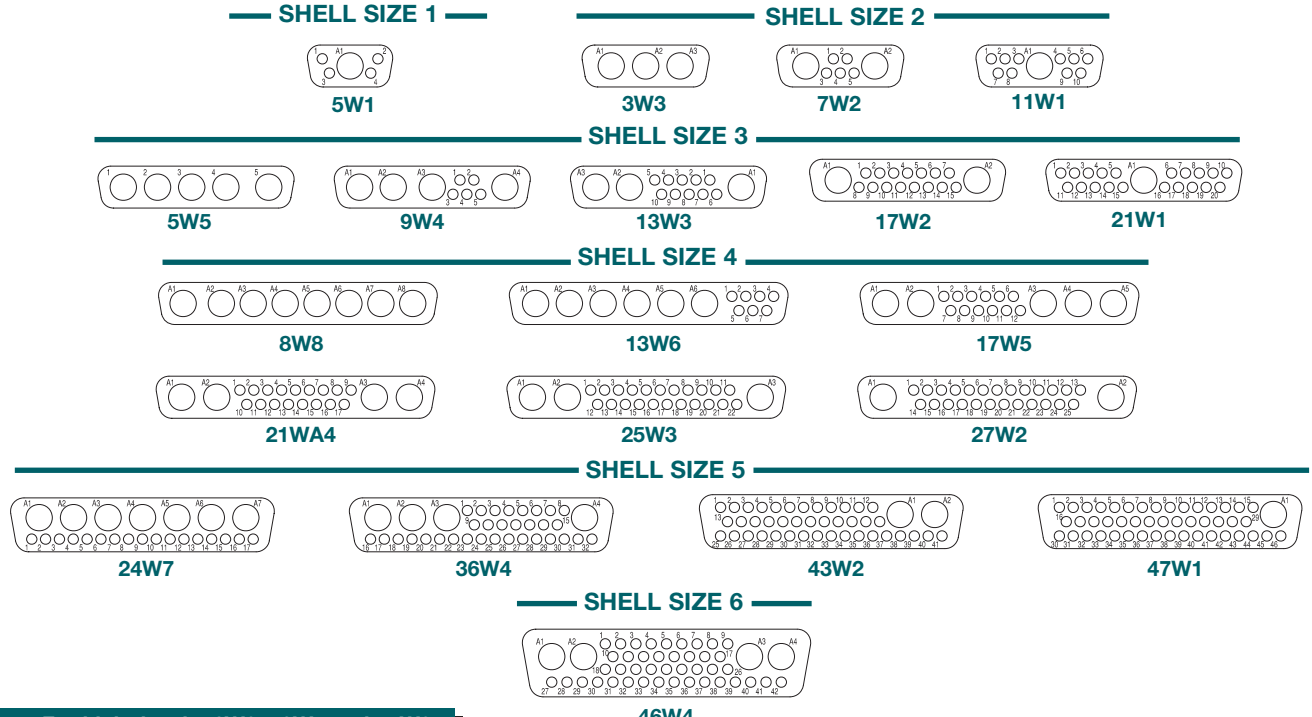
CLIMATIC CHARACTERISTICS:

Temperature Range: -55°C to +125°C.

ACBDP/ACBMP SERIES SIZE 20 AND SIZE 8 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

FACE VIEW OF MALE OR REAR VIEW OF FEMALE

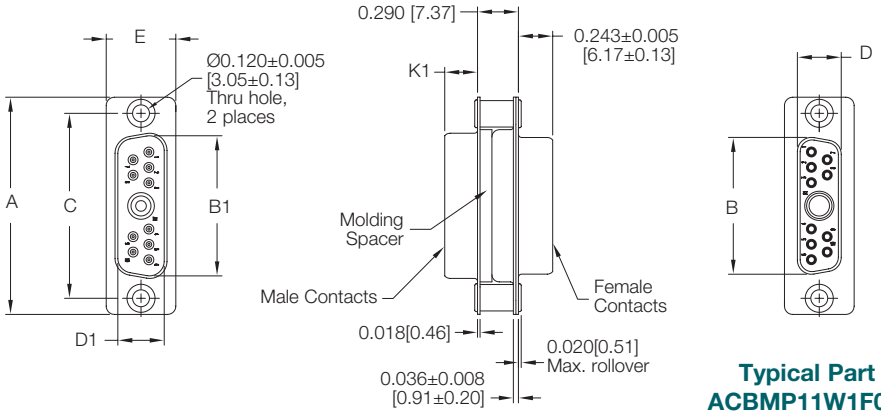


Note: For high density 8W2, 19W1 and 45W2 variants contact Technical Sales for availability.

STANDARD SHELL ASSEMBLY DIMENSIONS

SIZE 20 AND SIZE 8 CONTACTS
CODE 0 AND S

NOTE:
Code S = Swaged spacer with 4-40 UNC-2B threads.



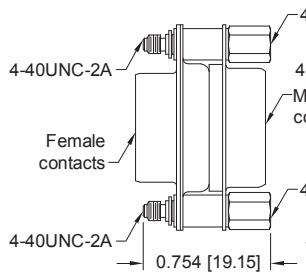
Typical Part Number:
ACBMP11W1F0011W1M00

CONNECTOR SIZE	A ±0.015	B ±0.005	B1 ±0.005	C ±0.005	D ±0.005	D1 ±0.005	E ±0.015	K1 ±0.005
SHELL SIZE 1	1.213 [30.81]	0.643 [16.33]	0.666 [16.92]	0.984 [24.99]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.233 [5.92]
SHELL SIZE 2	1.541 [39.14]	0.971 [24.66]	0.994 [25.25]	1.312 [33.32]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.233 [5.92]
SHELL SIZE 3			1.534 [38.96]	1.852 [47.04]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.230 [5.84]
SHELL SIZE 4	2.729 [69.32]	2.159 [54.84]	2.182 [55.42]	2.500 [63.50]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.230 [5.84]
SHELL SIZE 5	2.635 [66.93]	2.064 [52.43]	2.079 [52.81]	2.406 [61.11]	0.423 [10.74]	0.441 [11.20]	0.605 [15.37]	0.230 [5.84]
SHELL SIZE 6	2.729 [69.32]	2.189 [55.60]	2.212 [56.18]	2.500 [63.50]	0.485 [12.32]	0.503 [12.78]	0.668 [16.97]	0.230 [5.84]

JACKSCREW SYSTEMS

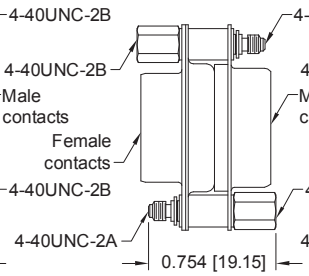
CODE E, E6, T AND T6

ROTATING MALE AND FEMALE JACKSCREWS — E



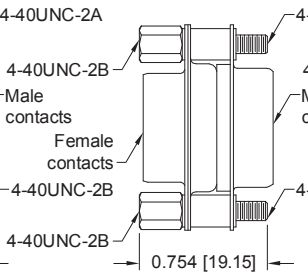
Example Part Number:
ACBDP5W1FEX5W1M0X

ROTATING MALE AND FEMALE POLARIZED JACKSCREWS — E6



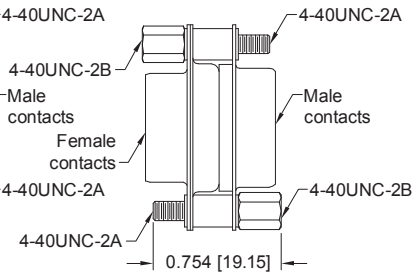
Example Part Number:
ACBDP5W1FE6X5W1M0X

FIXED MALE AND FEMALE JACKSCREWS — T



Example Part Number:
ACBDP5W1FTX5W1M0X

FIXED MALE AND FEMALE POLARIZED JACKSCREWS — T6



Example Part Number:
ACBDP5W1FT6X5W1M0X

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

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 9

STEP	1	2	3	4	5	6	7	8	9	10		11
EXAMPLE	ACBDP	11W1	F	S	X	11W1	M	S	X	/AA	—	-14

STEP 1 - BASIC SERIES

ACBDP – Professional / Industrial Quality, see Step 3.

ACBMP – Military conformance with "closed entry" female signal contacts plated 0.000050 [1.27µ] gold over nickel plate. Choose "S" or "M" in Step 3.

STEP 2 - CONNECTOR VARIANT

Shell Size 1
5W1

Shell Size 2
3W3, 7W2, 11W1

Shell Size 3
5W5, 9W4, 13W3, 17W2, 21W1

Shell Size 4
8W8, 13W6, 17W5, 21WA4, 25W3, 27W2

Shell Size 5
24W7, 36W4, 43W2, 47W1

Shell Size 6
46W4

Note: For high density 8W2, 19W1 and 45W2 variants contact Technical Sales for availability.

STEP 3 - 1ST CONNECTOR GENDER

F - Female - Professional Level - Open Entry Signal Contacts
*1 M - Male
S - Female - Industrial / Military Level - PosiBand Closed Entry Signal Contacts. Military gold plating is optional.

*2 STEP 4 - 1ST CONNECTOR MATING STYLE

0 - Swaged spacer 0.120 [3.05µ] mounting hole
S - Swaged spacer 4-40 UNC-2B threads
*3 E - Rotating male and female jackscrews (Select 0 in Step 8)
*3 E6 - Rotating male and female polarized jackscrew (Select 0 in Step 8)
*3 T - Fixed male and female jackscrews (Select 0 in Step 8)
*3 T6 - Fixed male and female polarized jackscrew (Select 0 in Step 8)

STEP 5 - 1ST CONNECTOR SHELL OPTION

0 – Zinc Plated, with Chromate Seal.
*4 S – Stainless Steel, passivated.
X – Tin Plated.
Z – Tin Plated and Dimpled (male connectors only).

*5 STEP 6 - 2ND CONNECTOR VARIANT

Select same variant as chosen in STEP 2.

STEP 7 - 2ND CONNECTOR GENDER

M - Male

*2 STEP 8 - 2ND CONNECTOR MATING STYLE

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

STEP 9 - 2ND CONNECTOR SHELL OPTION

0 – Zinc Plated, with Chromate Seal.
*4 S – Stainless Steel, passivated.
X – Tin Plated.
Z – Tin Plated and Dimpled (male connectors only).

STEP 10 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - RoHS Compliant

NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: ACBDP11W1FSX11W1MSX

STEP 11 - SPECIAL OPTIONS

FOR SPECIAL OPTIONS, SEE SPECIAL OPTIONS APPENDIX ON PAGE 81.

NOTES

*1 Male option in Step 3 available only on connector variants 5W1, 3W3, 7W2, 11W1,17W2, 21W1, 21WA4, 27W2, 24W7, 46W4.
*2 Connector mating style for both connectors must be the same if 0 or S is used. If E, E6, T or T6 is used in either Step 4 or 8 the other step must be 0.
*3 For hardware information, see page 59.
*4 For stainless steel dimpled male versions, contact Technical Sales.
*5 Connector variant for both connectors must be the same.

SAD SERIES
MILITARY / SPACE FLIGHT QUALITY
STANDARD DENSITY CONNECTOR SAVER

- 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:

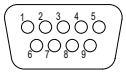
Temperature Range: -55˚C to +125˚C.

Visit our website for the latest catalog updates and supplements at
http://www.connectpositronic.com/products/62/HighPerformanceD-subminiature/catalogs/

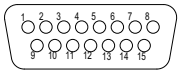
SAD SERIES SIZE 20 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

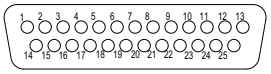
FACE VIEW OF MALE OR REAR VIEW OF FEMALE



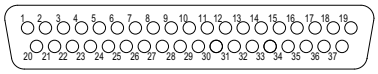
SAD 9



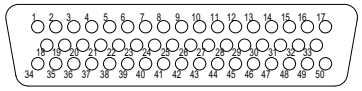
SAD 15



SAD 25



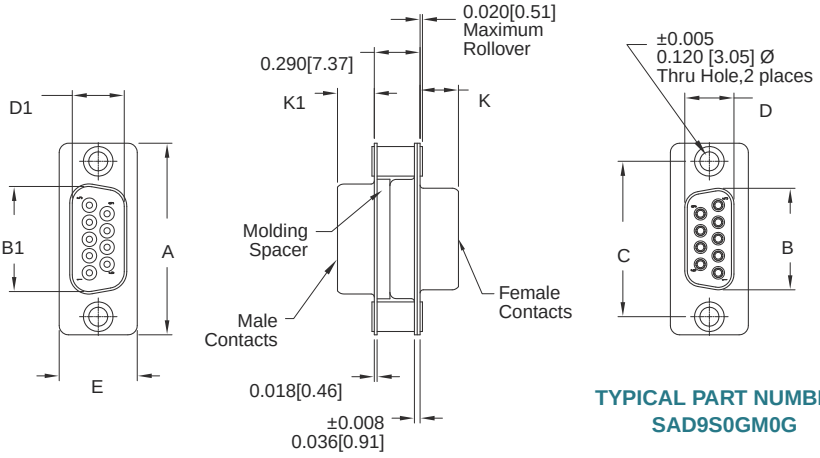
SAD 37



SAD 50

STANDARD CONNECTOR HOUSING (SHELLS) ASSEMBLY DIMENSIONS

SIZE 20 CONTACTS



TYPICAL PART NUMBER:
SAD9S0GM0G

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]	

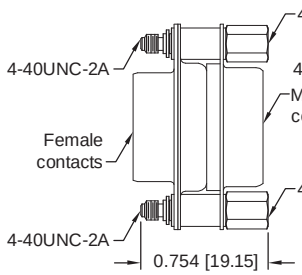
DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

JACKSCREW SYSTEMS

CODE E, E6, T AND T6

ROTATING MALE AND FEMALE JACKSCREWS

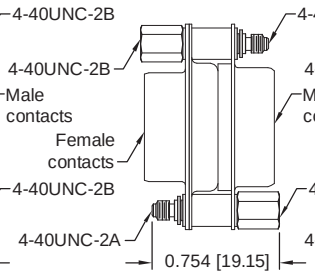
E



EXAMPLE PART NUMBER:
SAD9SEGM0G

ROTATING MALE AND FEMALE POLARIZED JACKSCREWS

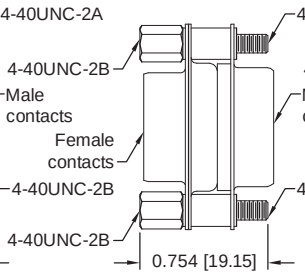
E6



EXAMPLE PART NUMBER:
SAD9SE6GM0G

FIXED MALE AND FEMALE JACKSCREWS

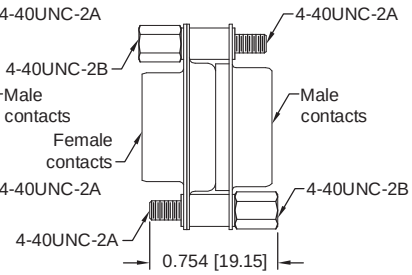
T



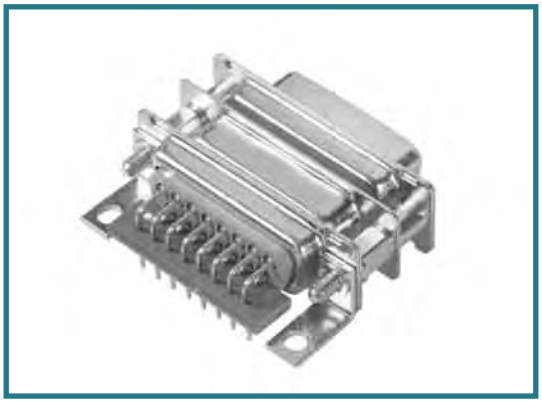
EXAMPLE PART NUMBER:
SAD9STGM0G

FIXED MALE AND FEMALE POLARIZED JACKSCREWS

T6



EXAMPLE PART NUMBER:
SAD9ST6GM0G



SAD15S0GM0G connector saver mated to
SND15S5R70T2G connector.

NEW!

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 6 - 2ND CONNECTOR GENDER

M - Male

*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 8 - 2ND 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.

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.

Do you need 2-D drawings or 3-D models?
See page 18 for more information!

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

SADD SERIES

MILITARY / SPACE FLIGHT QUALITY
HIGH DENSITY CONNECTOR SAVER



- High performance for use in harsh environments, including space flight.
- Size 22 **fixed** contacts.
- Female closed entry contacts utilize the "PosiBand®" system. *See page 1 for details.*
- Five connector variants include 15, 26, 44, 62, 78, and 104 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
- MIL-DTL-24308 Class M

Conforming To Outgassing Requirements:

- ASTM E-595 & NASA-RP-1124

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Connector Insulator: Polyester glass-filled per ASTM-D-5927, 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.

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.

MECHANICAL CHARACTERISTICS:

Size 20 Fixed: Male contact - 0.030 inch [0.76 mm] mating diameter. Female contact - PosiBand closed entry design; *see page 1 for details.*

Connector Saver: Male to female (or male to male, Size 78 only).

Contact Retention: 9 lbs. [40 N].

ELECTRICAL CHARACTERISTICS:

Contact Current Rating: 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.

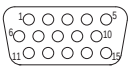
Visit our website for the latest catalog updates and supplements at
http://www.connectpositronic.com/products/62/HighPerformanceD-subminiature/catalogs/

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

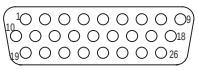
SADD SERIES SIZE 22 CONTACT CONNECTOR SAVER

CONTACT VARIANTS

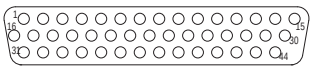
FACE VIEW OF MALE OR USE MIRROR IMAGE FOR FEMALE



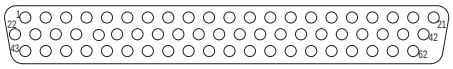
SADD 15



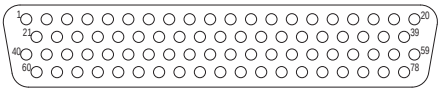
SADD 26



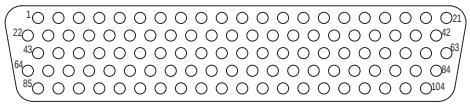
SADD 44



SADD 62



SADD 78

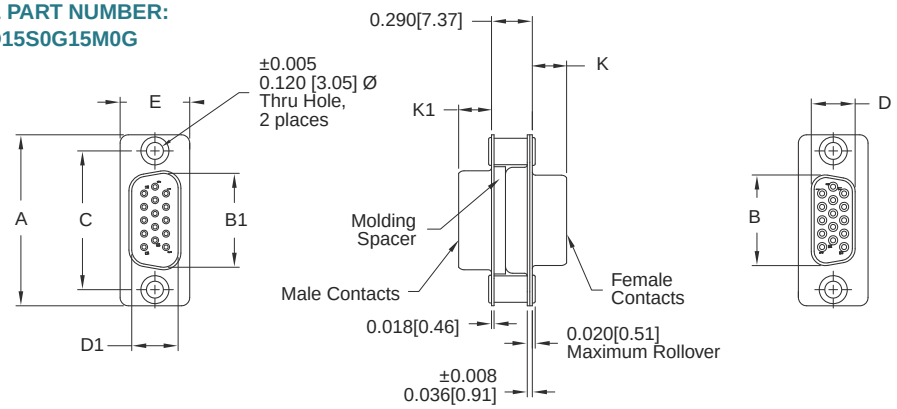


SADD 104

STANDARD CONNECTOR HOUSING (SHELLS) ASSEMBLY DIMENSIONS

SIZE 22 CONTACTS

TYPICAL PART NUMBER:
SADD15S0G15M0G



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]
15 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]
15 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]	
26 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]
26 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]	
44 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]
44 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]	
62 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]
62 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]	
78 M	2.635 [66.93]		2.079 [52.81]	2.406 [61.11]		0.441 [11.20]	0.605 [15.37]		
78 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]	
104 M	2.729 [69.32]		2.212 [56.18]	2.500 [63.50]		0.503 [12.78]	0.668 [16.97]		0.230 [5.84]
104 S	2.729 [69.32]	2.189 [55.60]		2.500 [63.50]	0.485 [12.32]		0.668 [16.97]	0.243 [6.17]	

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

NEW!

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	SADD	15	S	S	G	M	S	D	—	

STEP 1 - BASIC SERIES

SADD series

STEP 2 - CONNECTOR VARIANT

15, 26, 44, 62, 78, 104

STEP 3 - 1ST CONNECTOR GENDER

*3 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 6 - 2ND CONNECTOR GENDER

M - Male

*1 STEP 8 - 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 8 - 2ND 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.

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.
*3 Male option available only on connector variant 78.

Do you need 2-D drawings or 3-D models?
See page 18 for more information!

SACBMP SERIES
MILITARY / SPACE FLIGHT QUALITY
STANDARD DENSITY COMBO-D CONNECTOR SAVER

High
Performance
D-sub



- High performance for use in harsh environments, including space flight.
- Size 20 and Size 8 **fixed** contacts.
- All female closed entry signal contacts utilize the "PosiBand®" system. *See page 1 for details.*
- Twenty-two connector variants with a mixture of signal, power, shielded and high voltage contacts.
- Suitable for use as connector saver or gender changer.
- Current ratings: signal level to 7.5 amperes. *See temperature rise curves on page 2 for details.*
- 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
- DSCC Specification 85039

Conforming To Outgassing Requirements:
- ASTM E-595 & NASA-RP-1124

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Connector Insulator: Glass-filled polyester per ASTM-D-5927, UL 94-V0, ASTM E-595, NASA-RP-1124, blue color.

Contacts:

Size 20: Precision machined copper alloy. 0.000050 inch [1.27 microns] gold over copper plate. Other finishes are available; see page 95.

Size 8: Precision machined high conductivity 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.*

Size 8 Fixed: Male - 0.142 inch [3.61mm] mating diameter. Female contact features Large Surface Area (L.S.A.) closed entry contact design utilizing BeCu mechanical retention member. Closed crimp barrel.

Connector Saver: Male to female, male to male see page 72 for available variants.

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.

. . . continued on next page

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

TECHNICAL CHARACTERISTICS, *continued*

continued from previous page. . . .

ELECTRICAL CHARACTERISTICS:

SIZE 20 CONTACTS

Contact Current Rating:	7.5 amperes, nominal
Initial Contact Resistance:	0.008 ohms maximum.
Proof Voltage:	1000 V r.m.s.

SIZE 8 CONTACTS

Contact Current Rating:	40 amperes, nominal
Initial Contact Resistance:	0.008 ohms maximum.
Proof Voltage:	1000 V r.m.s.

CONNECTOR

Insulation 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.

Visit our website for the latest catalog updates and supplements at http://www.connectpositronic.com/products/62/HighPerformanceD-subminiature/catalogs/

SACBMP SERIES SIZE 20 AND SIZE 8 CONTACT CONNECTOR SAVER

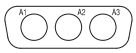
CONTACT VARIANTS

FACE VIEW OF MALE OR REAR VIEW OF FEMALE

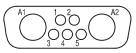
SHELL SIZE 1

5W1

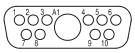
SHELL SIZE 2



3W3



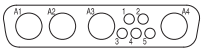
7W2



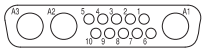
11W1

SHELL SIZE 3

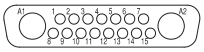
5W5



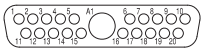
9W4



13W3

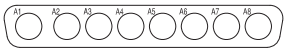


17W2

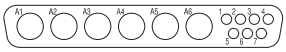


21W1

SHELL SIZE 4

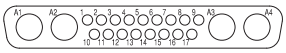


8W8

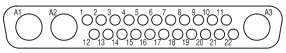


13W6

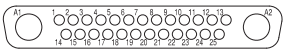
17W5



21WA4

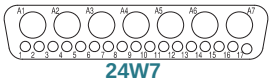


25W3

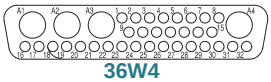


27W2

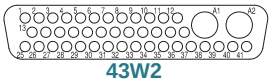
SHELL SIZE 5



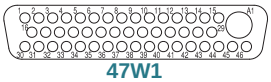
24W7



36W4

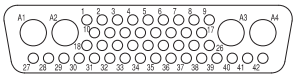


43W2



47W1

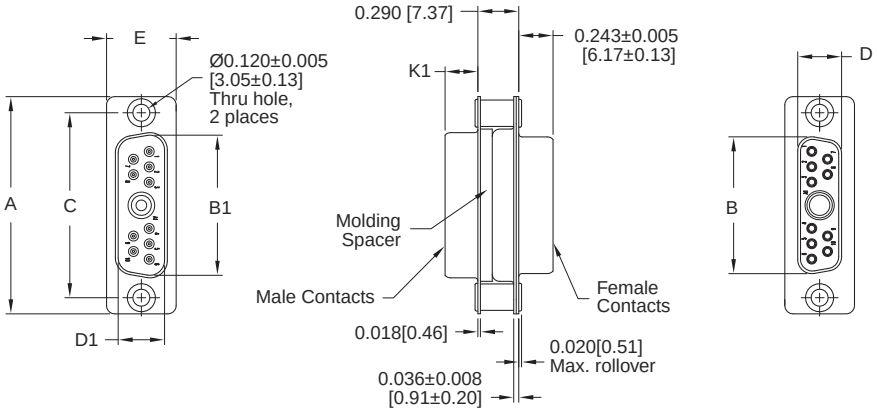
SHELL SIZE 6



46W4

Note: For high density 8W2, 19W1, 15W4 and 45W2 variants contact Technical Sales for availability.

STANDARD CONNECTOR HOUSING (SHELLS) ASSEMBLY DIMENSIONS
SIZE 20 AND SIZE 8 CONTACTS



NOTE:
Code S = Swaged spacer with 4-40 UNC-2B threads.

TYPICAL PART NUMBER:
SACBMP11W1S0GM0G

SHELL SIZES	CONNECTOR VARIANT	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]	K1 ±0.005 [0.13]
1	5W1	1.213 [30.81]	0.643 [16.33]	0.666 [16.92]	0.984 [24.99]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.233 [5.92]
2	3W3, 7W2, 11W1	1.541 [39.14]	0.971 [24.66]	0.994 [25.25]	1.312 [33.32]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.233 [5.92]
3	5W5, 9W4, 13W3, 17W2, 21W1	2.088 [53.04]	1.511 [38.38]	1.534 [38.96]	1.852 [47.04]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.230 [5.84]
4	8W8, 13W6, 17W5, 21WA4, 25W3, 27W2	2.729 [69.32]	2.159 [54.84]	2.182 [55.42]	2.500 [63.50]	0.311 [7.90]	0.329 [8.36]	0.494 [12.55]	0.230 [5.84]
5	24W7, 36W4, 43W2, 47W1	2.635 [66.93]	2.064 [52.43]	2.079 [52.81]	2.406 [61.11]	0.423 [10.74]	0.441 [11.20]	0.605 [15.37]	0.230 [5.84]
6	46W4	2.729 [69.32]	2.189 [55.60]	2.212 [56.18]	2.500 [63.50]	0.485 [12.32]	0.503 [12.78]	0.668 [16.97]	0.230 [5.84]

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

NEW!

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	SACBMP	11W1	S	S	G	M	S	D	—	

STEP 1 - BASIC SERIES

SACBMP series

STEP 2 - CONNECTOR VARIANT

Shell Size 1
5W1
Shell Size 2
3W3, 7W2, 11W1
Shell Size 3
5W5, 9W4, 13W3, 17W2, 21W1
Shell Size 4
8W8, 13W6, 17W5, 21WA4, 25W3, 27W2
Shell Size 5
24W7, 36W4, 43W2, 47W1
Shell Size 6
46W4

Note: For high density 8W2, 19W1, 15W4 and 45W2 variants contact Technical Sales for availability.

STEP 3 - 1ST CONNECTOR GENDER

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

*2 STEP 4 - 1ST CONNECTOR MATING STYLE

0 - Swaged spacer 0.120 [3.05µ] mounting hole
S - Swaged spacer 4-40 UNC-2B threads
*3 E - Rotating male and female jackscrews
(Select 0 in Step 7)
*3 E6 - Rotating male and female polarized jackscrew
(Select 0 in Step 7)
*3 T - Fixed male and female jackscrews
(Select 0 in Step 7)
*3 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 6 - 2ND CONNECTOR GENDER

M - Male

STEP 8 - 2ND CONNECTOR HOUSING (SHELLS) OPTION

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

*2 STEP 8 - 2ND CONNECTOR MATING STYLE

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

STEP 9 - SPECIAL OPTIONS

SEE APPENDIX ON PAGE 95.

NOTES

*1 Male option in Step 3 available only on connector variants 5W1, 3W3, 7W2, 11W1,17W2, 21W1, 21WA4, 27W2, 24W7, 46W4.

*2 Connector mating style for both connectors must be the same if 0 or S is used. If E, E6, T or T6 is used in either Step 4 or 8 the other step must be 0.

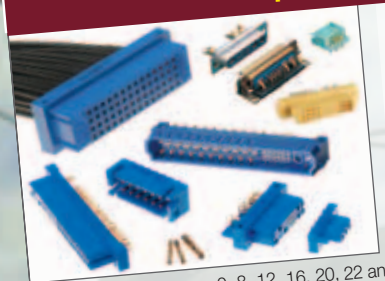
*3 For hardware information, see page 64.

Do you need 2-D drawings or 3-D models?
See page 18 for more information!

Connector Excellence®

Positronic HIGH RELIABILITY Products

POWER



FEATURES:

- High current density • Energy saving - low contact resistance • Hot swap capability
- AC/DC operation in a single connector
- Signal contacts for hardware management
- Blind mating • Sequential mating
- Large surface area contact mating system
- Wide variety of accessories
- Customer-specified contact arrangements
- Modular tooling which produces a single piece connector insert

Contact Sizes: 0, 8, 12, 16, 20, 22 and 24
Current Ratings: To 200 amperes per contact
Terminations: Crimp and fixed cable connector, straight solder, right angle (90°) solder, straight compliant press-in and right angle (90°) compliant press-in
Configurations: Multiple variants in a variety of package sizes
Compliance: PICMG 2.11, PICMG 3.0, VITA 41, DSCC, GSFC S-311-P-4, GSFC S-311-P-10

D-SUBMINIATURE

FEATURES:

- Four performance levels available for best cost/performance ratio: professional, industrial, military and space-flight quality
- Options include high voltage, coax, thermocouple and air coupling contacts; environmentally sealed and dual port connector packages including mixed density
- Broad selection of accessories
- Size 20 and 22 contacts suitable for use in carrying power
- IP65, IP67

Contact Sizes: 8, 16, 20 and 22
Current Ratings: To 100 amperes
Terminations: Crimp, wire solder, straight solder, right angle (90°) solder, straight compliant press-in and right angle (90°) compliant press-in
Configurations: Multiple variants in both standard and high densities, seven connector housing sizes
Qualifications: MIL-DTL-24308, GSFC S-311-P-4, GSFC S-311-P-10, AS39029, DSCC

RECTANGULAR

FEATURES:

- Two performance levels available: industrial quality and military quality
- A wide variety of accessories
- Broad selection of contact arrangement and package sizes
- Connector coding device (keying) options

Contact Sizes: 16, 20 and 22
Current Ratings: To 13 amperes nominal
Terminations: Crimp, wire solder, straight solder, right angle (90°) solder, and straight compliant press-in
Configurations: Multiple variants in both standard and high densities, thirty package sizes
Qualifications: MIL-DTL-28748, AS39029, CCITT V.35

CIRCULAR

FEATURES:

- Non-corrodible / lightweight composite construction
- EMI/RFI shielded versions
- Thermocouple contacts
- Environmentally sealed versions
- Rear insertion/ front release of removable contacts
- Two level sequential mating
- Overmolding available on full assemblies

Contact Sizes: 12, 16, 20 and 22
Current Ratings: To 25 amperes nominal
Terminations: Crimp, wire solder, straight solder, and right angle (90°) solder
Configurations: Multiple variants in four package sizes
Qualifications: Environmental protection to IP67

CABLE

FEATURES:

- Shorten the supply chain and reduce additional costs and delays by "cablizing" your Positronic connector selection
- Overmolding available
- Shielded and environmentally sealed versions available
- Power cables and access boxes which meet the SAE J2496 specification

- ✔ Design assemblies in accordance with customer specifications.
- ✔ Prepare wire harness connector configuration and performance specifications.
- ✔ Design each system in accordance with applicable customer, domestic, and international standards.
- ✔ Define and conduct performance and verification testing.

HERMETIC

FEATURES:

- Intended for use as an electrical feedthrough in high vacuum applications
- Helium leakage rate at ambient temperature: $< 5x10^{-9}$ mbar.l/s under a vacuum $1.5x10^{-2}$ mbar
- Signal, power, coax and high voltage versions available
- Connectors can be mounted on flange assembly per customer specification

Contact Sizes: 8, 12, 16, 20 and 22
Current Ratings: To 40 amperes nominal
Terminations: Feedthrough is standard; flying leads and board mount available upon request
Configurations: See D-subminiature and circular configurations above
Compliance: Space-D32

For more information, **visit www.connectpositronic.com** or call your nearest Positronic sales office listed on the back of this catalog.

LOCATIONS

For most current sales office information, please visit www.connectpositronic.com/locations

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SAD25STGM0D SAD9S0GM0G SADD44SEGM0G SADD15S0GM0D SAD9STGM0D SADD104S0GMEG SADD78M/F SAD50S0GM0G/AA SADD44M/F SAD25SEGM0G SADD104SEGM0G SAD25STGM0G SADD26S0GM0G SADD78SEGM0G SAD37MEGM0G SAD9M0GM0G SADD44S0GM0G/AA AD15F0S15M0S SADD15S0GMEG AD15F0X15MEZ/AA SAD9STGM0G SADD104S0GMTG SADD78S0GM0D SAD25S0GMEG SAD50M/F SAD25S0GM0G/AA SAD50MEGM0G SADD26SSGMSD SADD62S0GMEG SAD50S0GMEG SADD62S0GM0D SAD9S0GMEG SADD44S0GM0D SADD104S0GM0D SAD25MEGM0G SADD62SEGM0G SAD25S0GMTG SAD9ST6GM0G SAD25SSGMSG SADD26S0GM0G/AA SADD26SEGM0G SAD37S0GM0D SAD9SEGM0G SADD62SSGMSG SAD9S0GM0G/AA SAD37S0GMEG SAD50S0GM0D SAD50SEGM0G SADD104SSGMSG SADD62M/F SAD37S0GM0G/AA SADD15SSGMSD SAD37SEGM0G SADD62SEGM0D SAD50M0GM0G SADD15S0GM0G/AA SAD50STGM0D/AA SADD104S0GM0G SADD44STGM0D SAD37S0GM0G SADD104SEGM0D SADD15SEGM0G SADD62S0GM0G SADD78S0GM0G SAD25S0GM0D SADD62SSGMSD SAD25S0GM0G SADD15S0GM0G SAD9M/F SADD104S0GM0G/AA SADD44STGM0G SADD78S0GMEG AD15F0S15M0S/AA SAD9S0GM0D SADD15S0GMEG/AA SADD44SE6GM0G AD15FSX15MSX SADD104M/F SADD15SSGMSG SADD44SSGMSD SADD78S0GME6G SAD9MEGM0G SADD44S0GM0G SADD44S0GMEG SAD50S0GM0G SADD26S0GMEG SAD37M/F SADD26M/F SAD9SE6GM0G SAD9SEGM0D SADD15M/F AD15FES15M0S SAD50STGM0D SAD37M0GM0G SADD15STGM0G SADD44SSGMSG SADD78SSGMSG

Other:

AD37F0037M00 AD9F0X9MEZ/AA DAD104M0Z104FEX/AA AD15FSX15MSZ/AA SAD15M/F SAD15S0GM0G AD25FSX25MSX DAD15M0S15F0S AD50FS050MS0/AA SADD62STGM0G DAD78MSZ78FSX/AA DAD104M00104F00 AD25FES25M0S AD9F0S9M0S/AA AD50FSX50MSZ/AA SAD37STGM0G AD50FT050M00 AD25FTS25M0S/AA AD50F0S50M0S/AA AD50FES50M0S DAD44MSZ44FSX/AA AD50F0S50M0S DAD78MSS78FSS/AA DAD26MSZ26FSX/AA SAD15SEGM0G AD25FSX25MSZ AD37FSX37MSX AD50F0050M00 DAD78MSX78FSX/AA AD9FEX9M0X DAD26M0Z26FEX/AA SAD15SSGMSG SAD25M/F AD25FSX25MSZ/AA AD37FT037M00/AA AD50FS050MS0 SAD25M0GM0G SAD15M0GM0G SAD15STGM0G AD9FEX9M0Z/AA DAD104MSZ104FSX/AA AD9F0S9MES/AA AD9F0X9M0Z/AA SAD15S0GM0D DAD104MEZ104F0X/AA AD25FES25M0S/AA AD9FES9M0S DAD104M0X104F0X AD25F0S25M0S AD50FEX50M0Z/AA AD9F0S9M0S AD9FSX9MSX DAD26M0S26F0S AD37FE037M00/AA AD37FES37M0S AD25F0S25M0S/AA SAD15S0GMEG DAD26MTS26F0S SAD50SSGMSG AD50F0X50MTZ DAD78M0X78F0X AD50F0X50M0X AD9FS09MS0/AA

DAD62MSZ62FSX/AA DAD44MSS44FSS/AA SAD15S0GM0G/AA DAD62M0S62F0S AD37F0X37MEX AD37FS037MS0 AD9FSX9MSZ/AA DAD44M0S44F0S