



Positronic
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PROFESSIONAL QUALITY REMOVABLE CONTACT STANDARD DENSITY D-SUBMINIATURE

D-Sub

**Size 20 Contacts,
Removable**

**IEC Publication 60807-3
Performance Level Two**

UL Recognized
File #E49351

CSA Recognized
File #LR54219

Telecommunication
UL File #E140980



Soli-D series connectors are professional quality connectors recommended for use in sheltered, non-corrosive indoor or outdoor environments having normal ventilation, but without temperature or humidity controls. This crimp removable contact connector will meet the Performance Level Two requirements of IEC 60807-3.

Soli-D series connectors utilize precision machined contacts with closed barrel, crimp terminations. The female contact features a rugged open entry design. Other contact terminations

such as solder cup and printed board terminations are also available. The removable contact feature provides for rapid assembly and permits contact repairs or wiring changes.

Five standard contact variants are offered in arrangements of 9, 15, 25, 37 and 50 contacts. Soli-D series connectors are mateable and compatible with all D-subminiature connectors conforming to IEC 60807-2, IEC 60807-3 and MIL-DTL-24308. A wide assortment of cable support hoods and locking systems is available from stock.

SOLI-D SERIES TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:	Glass filled PBT polyester, UL 94V-0, black color.
Contacts:	Precision machined copper alloy.
Contact Plating:	Professional performance - gold flash over nickel plate. Other finishes available upon request.
Interfacial Seal:	Thermoplastic Elastomer (TPE), Santoprene™ or equivalent
Shells:	Steel with tin plate; zinc plate, stainless steel passivated. Other materials and finishes available upon request.
Mounting Spacers:	Nylon; copper alloy or steel with zinc plate or tin plate; phosphor bronze with tin plate; stainless steel, passivated.
Push-On Fasteners:	Phosphor bronze with tin plate.
Jackscrew Systems:	Brass or steel with zinc plate or clear zinc plate or tin plate; stainless steel, passivated.
Vibration Lock Systems:	Slide lock and lock tabs, steel with nickel plate.
Hoods:	Composite and plastic, UL 94V-0; brass or steel with zinc plate. Aluminum; aluminum with electroless nickel plate. For aluminum hoods, zinc content is 1% maximum. Die cast zinc.

Low magnetic versions are available, contact Technical Sales.

CLIMATIC CHARACTERISTICS:

Temperature Range:	-55°C to +125°C.
Damp Heat, Steady State:	10 days.

MECHANICAL CHARACTERISTICS:

Removable Contacts:	Insert contact to rear face of insulator and release from rear face of insulator. Size 20 contacts, male - 0.040 inch [1.02mm] mating diameter. Female - rugged open entry design.
Contact Retention In Insulator:	6 lbs. [27 N].
Contact Terminations:	Closed barrel crimp, wire sizes 18 AWG [1.0mm ²] through 32 AWG [0.03mm ²]. Straight printed board mount terminations.
Shells:	Male shells may be dimpled for EMI/ESD ground paths.
Polarization:	Trapezoidally shaped shells and polarized jackscrews.
Printed Board Mount:	Rapid installation push-on fasteners.
Locking Systems:	Jackscrews and vibration locking systems.
Mechanical Operations:	500 operations minimum per IEC 60512-5.

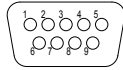
ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	7.5 amperes nominal.
Initial Contact Resistance:	0.008 ohms maximum.
Proof Voltage:	1000 V r.m.s.
Insulation Resistance:	5 G ohms.
Clearance and Creepage Distance [minimum]:	0.039 inch [1.0mm].
Working Voltage:	300 V r.m.s.

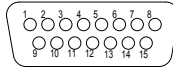
SD SERIES



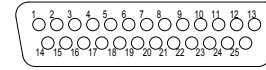
CONTACT VARIANTS
FACE VIEW OF MALE OR REAR VIEW OF FEMALE



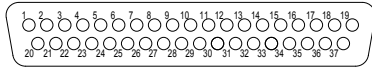
SD 9



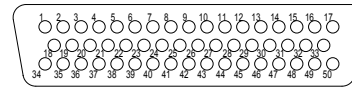
SD 15



SD 25

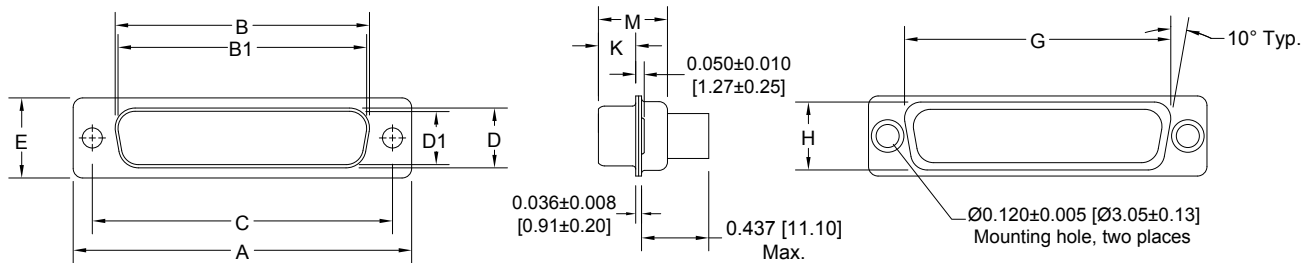


SD 37

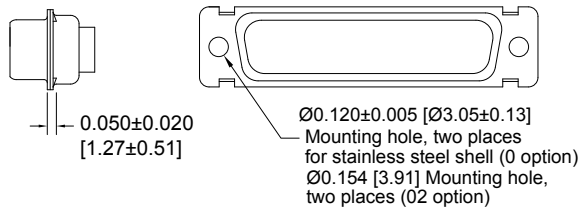


SD 50

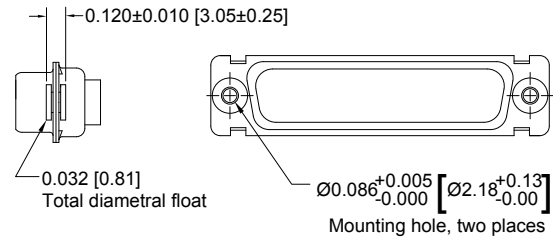
STANDARD SHELL ASSEMBLY



OPTIONAL SHELL ASSEMBLY (0, 02)



OPTIONAL SHELL ASSEMBLY WITH UNIVERSAL FLOAT MOUNTS (F)



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]	G ±0.010 [0.25]	H ±0.010 [0.25]	K ±0.005 [0.13]	M ±0.010 [0.25]
SD 9 M	1.213 [30.81]		0.666 [16.92]	0.984 [24.99]		0.329 [8.36]	0.494 [12.55]	0.759 [19.28]	0.422 [10.72]	0.233 [5.92]	0.422 [10.72]
SD 9 F	1.213 [30.81]	0.643 [16.33]		0.984 [24.99]	0.311 [7.90]		0.494 [12.55]	0.759 [19.28]	0.422 [10.72]	0.243 [6.17]	0.429 [10.90]
SD 15 M	1.541 [39.14]		0.994 [25.25]	1.312 [33.32]		0.329 [8.36]	0.494 [12.55]	1.083 [27.51]	0.422 [10.72]	0.233 [5.92]	0.422 [10.72]
SD 15 F	1.541 [39.14]	0.971 [24.66]		1.312 [33.32]	0.311 [7.90]		0.494 [12.55]	1.083 [27.51]	0.422 [10.72]	0.243 [6.17]	0.429 [10.90]
SD 25 M	2.088 [53.04]		1.534 [38.96]	1.852 [47.04]		0.329 [8.36]	0.494 [12.55]	1.625 [41.28]	0.422 [10.72]	0.230 [5.84]	0.426 [10.82]
SD 25 F	2.088 [53.04]	1.511 [38.38]		1.852 [47.04]	0.311 [7.90]		0.494 [12.55]	1.625 [41.28]	0.422 [10.72]	0.243 [6.17]	0.429 [10.90]
SD 37 M	2.729 [69.32]		2.182 [55.42]	2.500 [63.50]		0.329 [8.36]	0.494 [12.55]	2.272 [57.71]	0.422 [10.72]	0.230 [5.84]	0.426 [10.82]
SD 37 F	2.729 [69.32]	2.159 [54.84]		2.500 [63.50]	0.311 [7.90]		0.494 [12.55]	2.272 [57.71]	0.422 [10.72]	0.243 [6.17]	0.429 [10.90]
SD 50 M	2.635 [66.93]		2.079 [52.81]	2.406 [61.11]		0.441 [11.20]	0.605 [15.37]	2.178 [55.32]	0.534 [13.56]	0.230 [5.84]	0.426 [10.82]
SD 50 F	2.635 [66.93]	2.064 [52.43]		2.406 [61.11]	0.423 [10.74]		0.605 [15.37]	2.178 [55.32]	0.534 [13.56]	0.243 [6.17]	0.429 [10.90]

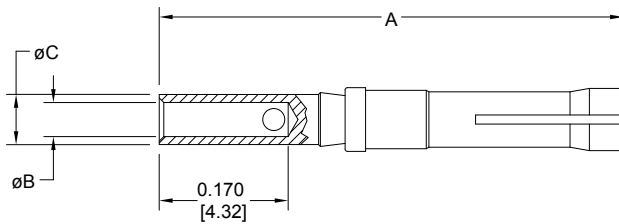


Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

REMOVABLE CRIMP CONTACTS
CODE 1 AND 12

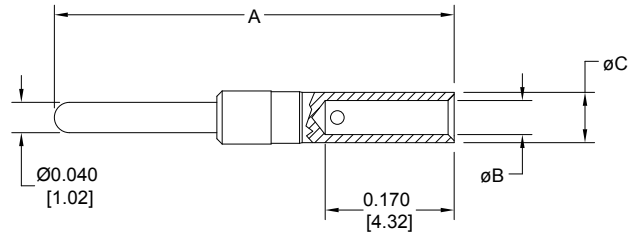
CONTACTS MAY BE SUPPLIED WITH CONNECTOR OR ORDERED SEPARATELY.

FEMALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm ²]	A	ØB	ØC
FC7520D	20 / 22 / 24 [0.5/0.3/0.25]	0.612 [15.54]	0.045 [1.14]	0.066 [1.68]
FC7526D	26 / 28 / 30 [0.12/0.08/0.05]	0.612 [15.54]	0.026 [0.66]	0.066 [1.68]

MALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm ²]	A	ØB	ØC
MC7520D	20 / 22 / 24 [0.5/0.3/0.25]	0.618 [15.70]	0.045 [1.14]	0.066 [1.68]
MC7526D	26 / 28 / 30 [0.12/0.08/0.05]	0.618 [15.70]	0.026 [0.66]	0.066 [1.68]

Note: *C75**D contacts can not be used in the RD series.

PLATING:

STANDARD FINISH: Gold flash over nickel plate.

OPTIONAL FINISHES: 0.000030 [0.76 µ] gold over nickel by adding "-14" suffix onto part number. Example: FC7520D-14
0.000050 inch [1.27µ] gold over nickel by adding "-15" suffix onto part number. Example: MC7526D-15

The crimp area of this contact is not protected when fully seated in the connector molding. These contacts require shrink tubing after installation. Wire cannot be removed from molding after insertion. Not suitable for fully loaded connector.

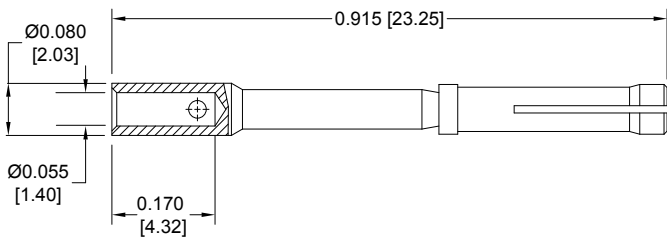
Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

REMOVABLE CRIMP CONTACTS
18 AWG CRIMP CONTACTS

18 AWG [1.0mm²]

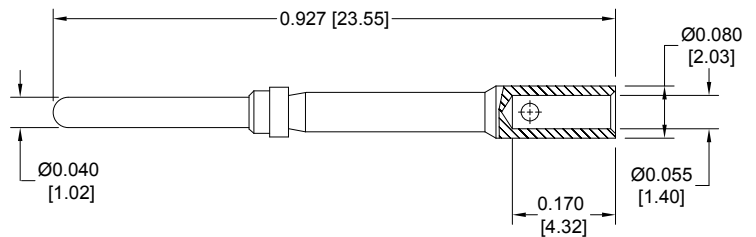
CONTACTS MAY BE SUPPLIED WITH CONNECTOR OR ORDERED SEPARATELY.

FEMALE CONTACT



FC7518D

MALE CONTACT



MC7518D

PLATING:

STANDARD FINISH: Gold flash over nickel plate.

OPTIONAL FINISHES: 0.000030 [0.76 µ] gold over nickel by adding "-14" suffix onto part number. Example: FC7518D-14
0.000050 inch [1.27µ] gold over nickel by adding "-15" suffix onto part number. Example: MC7518D-15

For information regarding crimp tools & crimping tool techniques, see page 69.

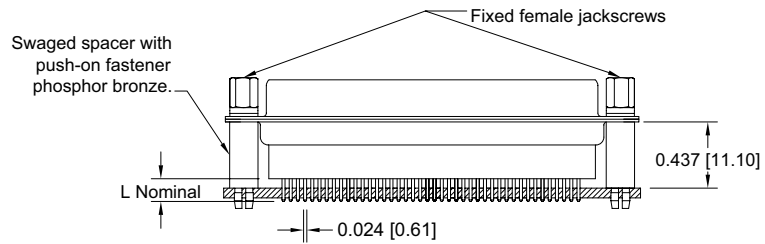


STRAIGHT PRINTED BOARD MOUNT TERMINATION

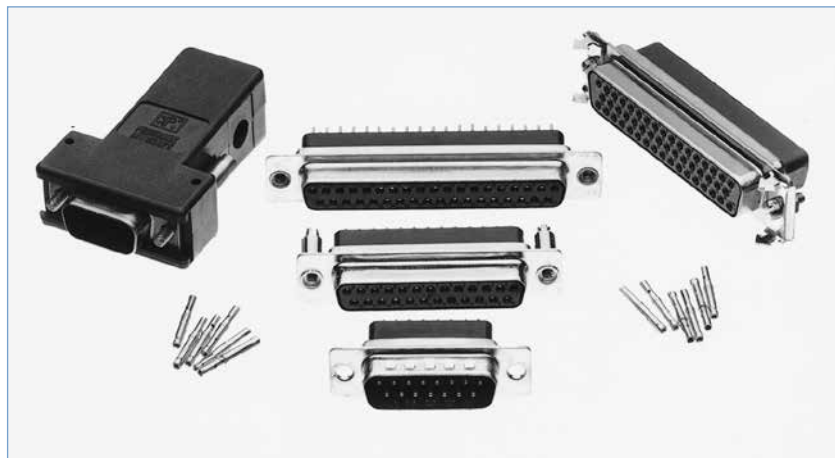
CODE 3 AND 32

CODE NUMBER	L
3	0.125 [3.18]
32	0.188 [4.78]

For straight printed board mount contacts specify code number in Step 4 of ordering information.



Typical Part Number:
SD37F3S60T2X



Connectors Designed To Customer Specifications

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

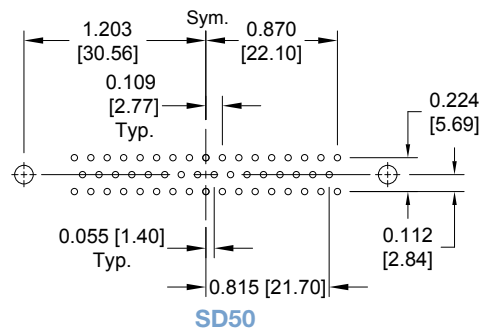
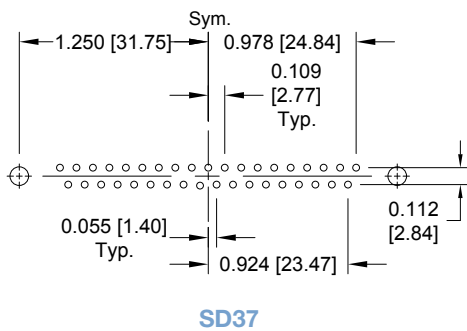
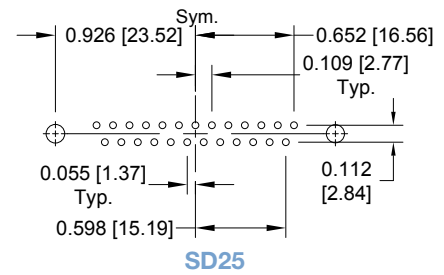
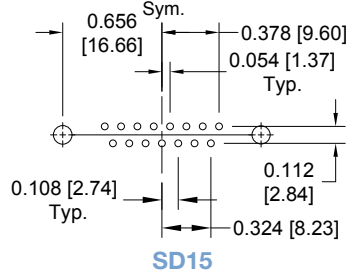
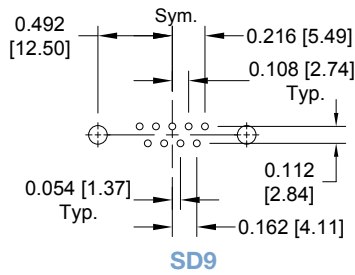
Examples: select loading of contacts for cost savings or to gain creepage and clearance distances; longer printed circuit board terminations; customer specified hardware; sealing for water resistance.

Contact Technical Sales with your particular requirements.



STRAIGHT PRINTED BOARD CONTACT HOLE PATTERN

Contact Technical Sales for hole dimensions using lead-free solder.



SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest 0.045 [1.14] Ø hole for contact termination positions.
Suggest 0.123 ±0.003 [3.12 ±0.08] Ø hole for mounting connector with push-on fasteners.



SD37M3S600Z



SD25F3S600X



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	10
EXAMPLE	SD	15	F	0	0	0	0	X	/AA	-14

STEP 1 - BASIC SERIES

SD series.

STEP 2 - CONNECTOR VARIANTS

9, 15, 25, 37, 50

STEP 3 - CONNECTOR GENDER

M - Male
P - Male with interfacial seal
F - Female

STEP 4 - CONTACT TERMINATION TYPE

- 0 - Contacts ordered separately, see page 18.
- 1 - Crimp, 20 AWG-24 AWG [0.5mm²-0.25mm²].
- 12 - Crimp, 26 AWG-30 AWG [0.12mm²-0.05mm²].
- 3 - Solder, straight printed board mount with 0.125 [3.18] tail length.
- 32 - Solder, straight printed board mount with 0.188 [4.78] tail length.

*1 STEP 5 - MOUNTING STYLE

- 0 - Mounting hole, 0.120 [3.05] Ø.
- 02 - Mounting hole, 0.154 [3.91] Ø.
- F - Float mounts, universal.
- P - Threaded post, brass, 0.437 [11.10] length.
- P2 - Threaded post, nylon, 0.437 [11.10] length.
- S - Swaged spacer, 4-40 threads, 0.437 [11.10] length.
- S2 - Swaged spacer, 4-40 threads, 0.125 [3.18] length.
- S5 - Swaged locknut, 4-40 threads.
- S6 - Swaged spacer with push-on fastener, 4-40 threads, 0.437 [11.10] length.

*1 STEP 6 - HOODS

- 0 - None.
- J - Hood, top opening, plastic.
- L - Hood, side opening, plastic.
- Y - Hood, top opening, plastic with rotating male jackscrews. Available in size 50 only.
- Y6 - Hood, top opening, plastic with rotating male and female polarized jackscrews. Available in size 50 only.
- Z - Hood, top or side opening, robust and extended height, composite and plastic with rotating male jackscrews.
- H - Hood, top opening, metal. Available in size 15, 25, 37, and 50 only.
- G - Hood, EMI/RFI, die cast zinc.
- AN - Lightweight aluminum hood, nickel finish.
- AL - Lightweight aluminum hood, nickel finish, low-profile.
- W - Hood, top or side opening, plastic. Available in size 9,15, and 25 only.

*1 For additional information on accessories listed in steps 5, 6 and 7, see Accessory Catalog.

*2 VL, V3 and V5 locking systems are not available for connector variants 37 and 50. Jackscrews are highly recommended to minimize damage to contacts on variants with high mating forces.

STEP 10 - SPECIAL OPTIONS

-14 - 0.000030 [0.76µ] gold over nickel.

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

STEP 9 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - RoHS Compliant

NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: SD15F0000X

STEP 8 - Shell Options

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

*1 STEP 7 - LOCKING AND POLARIZING SYSTEMS

- 0 - None.
- *2 V3- Lock tab, connector front panel mounted.
- *2 V5- Lock tab, connector rear panel mounted.
- *2 VL - Lock lever, used with hoods only.
 - T - Fixed female jackscrews.
 - T2 - Fixed female jackscrews.
 - T6 - Fixed male and female polarized jackscrews.
 - E - Rotating male jackscrews.
 - E2 - Rotating male screw locks.
 - E3 - Rotating male with internal hex for 3/32 hex drives
 - E6 - Rotating male and female polarized jackscrews.

For information regarding crimp tools & crimping tool techniques, see page 69.