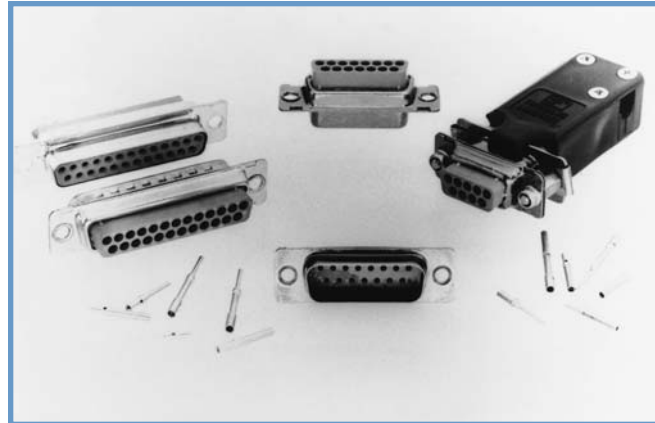




Size 20 Signal and
Thermocouple Contacts,
Removable Crimp

Industrial Quality
Connectors

IEC Publication 807-3
Performance Level Two



ORD Series connectors are low cost, industrial/professional quality D-Subminiature connectors with closed barrel crimp removable contacts. ORD Series connectors are recommended for use in sheltered, mildly corrosive environments having a wide range of temperatures with normal ventilation where high performance is required.

ORD Series connectors utilize precision-machined contacts to provide durability. Female contacts feature the low cost, high performance Robi-D Open Entry design. ORD Series connectors meet the performance requirements of IEC 807-3, Performance Level Two. Closed entry female contacts are available upon request.

Six [6] standard contact variants are offered in arrangements of 9, 15, 25, 29, 37, and 50 contacts. ORD Series connectors are mateable and compatible with all D-Subminiature connectors conforming to MIL-DTL-24308, IEC 807-2, and IEC 807-3.

A wide assortment of cable support hoods and locking systems is available from stock.

ORD Series connectors also conform to EIA RS 232 and RS 449, and CCITX.24 interface connection requirements.



Contact Technical
Sales for details.

ORD SERIES TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulators:	Glass filled DAP per ASTM-D-5948, SDG-F, UL 94V-0, green color.
Contacts:	
Signal:	Male contacts – precision machined brass. Female contacts – precision machined high tensile copper alloy with rugged “Robi-D Open Entry” design.
Contact Plating:	Industrial performance – gold flash over nickel plate. Other finishes available upon request.
Shells:	Steel with tin plate; zinc plate with dichromate seal, or stainless steel, passivated. Other materials and finishes available upon request.
Mounting Spacers:	Brass, zinc plate with dichromate seal, or clear zinc plate.
Vibration Lock Systems:	Slide lock and lock tabs, steel with nickel plate.
Jackscrew Systems:	Steel with zinc plate and dichromate seal, or clear zinc plate.
Hoods:	Thermoplastic UL 94V-0. Composite, brass or steel with zinc plate and dichromate seal.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	7.5 amperes nominal.
Initial Contact Resistance:	0.005 ohms maximum.
Proof Voltage:	1000 V r.m.s.
Insulator Resistance:	5 G ohms.
Clearance and Creepage Distance [minimum]:	0.039 inch [1.0mm].
Working Voltage:	300 V r.m.s.

CLIMACTIC 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 male contact – 0.040 inch [1.02mm] diameter; Size 20 female contacts – Rugged “Robi-D Open Entry” design.
Contact Retention In Insulator:	9 lbs. [40 N].
Contact Terminations:	Closed barrel crimp, wire sizes 18 AWG [1.0mm ²] through 24 AWG [0.25mm ²].
Shells:	Tin-plated male shells may be dimpled for EMV/ESD ground paths.
Polarization:	Trapezoidally shaped shells and polarized jackscrews.
Locking Systems:	Jackscrews and vibration locking systems.
Mechanical Operations:	500 operations minimum per IEC 512-5 for “Robi-D” Open Entry” design.

THERMOCOUPLE CONTACTS:

Size 20 crimp contacts are available. See page 29 for details.

PCB mount contacts are available in HDC series, see page 20 for details.



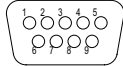
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PROFESSIONAL QUALITY, CRIMP REMOVABLE CONTACT SUBMINIATURE-D CONNECTORS

D-Sub

FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

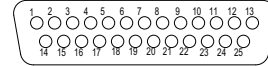
CONTACT VARIANTS FACE VIEW OF MALE OR REAR VIEW OF FEMALE



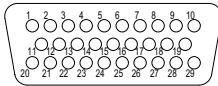
ORD 9



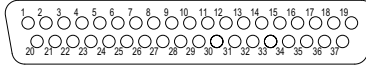
ORD 15



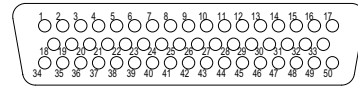
ORD 25



ORD 29

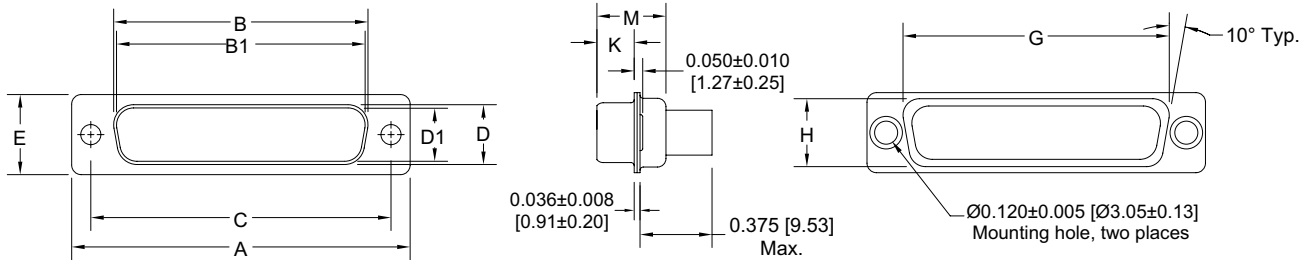


ORD 37

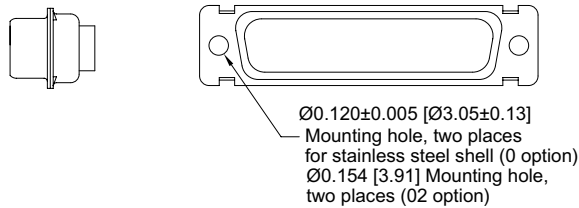


ORD 50

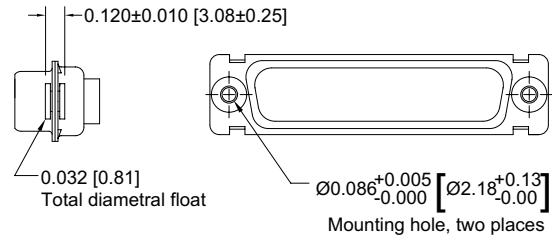
STANDARD SHELL ASSEMBLY



OPTIONAL SHELL ASSEMBLY [0, 02]



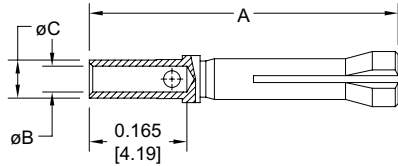
OPTIONAL SHELL ASSEMBLY WITH UNIVERSAL FLOAT MOUNTS [F]



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]
ORD 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]
ORD 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]
ORD 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]
ORD 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]
ORD 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]
ORD 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]
ORD 29 M	1.770 [44.96]		1.274 [32.36]	1.534 [38.96]		0.450 [11.43]	0.605 [15.37]	1.322 [33.58]	0.539 [13.69]	0.217 [5.51]	0.426 [10.82]
ORD 29 F	1.770 [44.96]	1.251 [31.78]		1.534 [38.96]	0.431 [10.95]		0.605 [15.37]	1.322 [33.58]	0.539 [13.69]	0.237 [6.02]	0.429 [10.90]
ORD 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]
ORD 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]
ORD 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]
ORD 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]

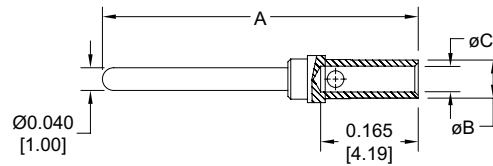
**CRIMP CONTACTS
CLOSED CRIMP BARREL**

**FEMALE CONTACT
RUGGED 'ROBI-D' OPEN ENTRY DESIGN**



Material – Phosphor bronze.
Plating – Gold flash over nickel.

MALE CONTACT



Material – Brass.
Plating – Gold flash over nickel.

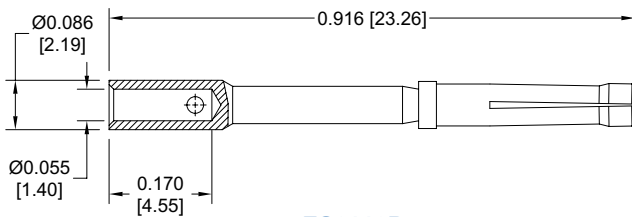
Thermocouple contacts are available, see page 29.
Closed entry contacts are available, see page 28.

PART NUMBER	WIRE SIZE	A	ϕB ± 0.005 [0.13]	ϕC ± 0.005 [0.13]
FC6120D	20 / 22 / 24 [0.5/0.3/0.25]	0.538 [13.67]	0.045 [1.14]	0.066 [1.68]
MC6020D	20 / 22 / 24 [0.5/0.3/0.25]	0.550 [13.97]	0.045 [1.14]	0.066 [1.68]

Additional plating options available by adding suffix to part number
add -14 for 0.000030 [0.76 microns] gold over nickel
Example: FC6120D-14
add -50 for 0.000050 [1.27 microns] gold over copper
Example: MC6018D-50

**CRIMP CONTACTS
18 AWG [1.0mm²]**

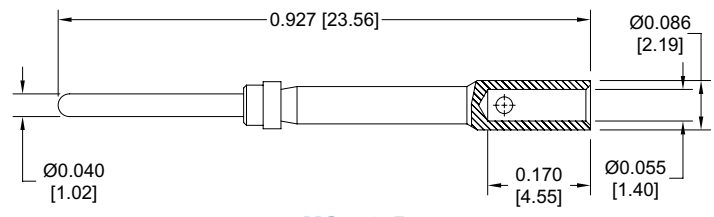
**FEMALE CONTACT
RUGGED 'ROBI-D' OPEN ENTRY DESIGN**



FC6118D

Material – Phosphor bronze.
Plating – Gold flash over nickel.

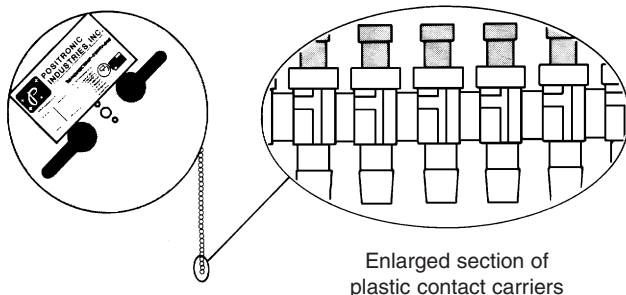
MALE CONTACT



MC6018D

Material – Brass.
Plating – Gold flash over nickel.

REELS FOR AUTOMATIC PNEUMATIC CRIMP TOOLS



Enlarged section of plastic contact carriers

Contacts may be supplied in plastic carriers, packaged in reels holding 2,000 contacts for use with the automatic pneumatic crimp tools, catalog part number 9550-1. The same type carrier is used for both male and female contacts.

All male and female crimp contacts can be ordered in reels by adding letter "R" after the contact part number, such as MC6020DR for a male contact and FC6120DR for a female contact.



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PROFESSIONAL QUALITY, CRIMP REMOVABLE CONTACT SUBMINIATURE-D CONNECTORS

FOR SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

D-Sub

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	ORD	15	M	1	0	H	0	0	—

STEP 1 - BASIC SERIES

ORD Series

STEP 2 - CONNECTOR VARIANTS

9, 15, 25, 29, 37, 50

STEP 3 - CONNECTOR GENDER

M - Male
F - Female

STEP 4 - CONTACT TERMINATION TYPE

0 - Ordered Without Contacts.
1 - Crimp, 20 AWG–24 AWG [0.5mm²–0.25mm²].

*STEP 5 - MOUNTING STYLE

0 - Mounting Hole, 0.120 [3.05] Ø.
02 - Mounting Hole, 0.154 [3.91] Ø.
F - Float Mounts, Universal.
S2 - Swaged Spacer, 4-40 Threads, 0.125 [3.18] Length.
S5 - Swaged Locknut, 4-40 Threads.

STEP 9 - SPECIAL OPTIONS

CONTACT TECHNICAL SALES
FOR SPECIAL OPTIONS

STEP 8 - SHELL OPTIONS

0 - Zinc Plated with Dichromate Seal.
S - Stainless Steel.
X - Tin Plated.
Z - Tin Plated and Dimpled (male connectors only).
C - Cadmium plated with Dichromate Seal.

*STEP 7 - LOCKING AND POLARIZING SYSTEMS

0 - None.
V3 - Lock Tab, connector front panel mounted.
V5 - Lock Tab, connector rear panel mounted.
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.

*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 Extended Height, Composite and Plastic with Rotating Male Jackscrews. Available in size 9, 15, 25, 37, and 50 only.
H - Hood, Top Opening, Metal. Available in size 15, 25, 37, and 50 only.
G - Hood, EMI/RFI, Metal. Available in size 9, 15, 25, 37, and 50 only.
W - Hood, Top or Side Opening, Plastic. Available in size 9, 15, and 25 only.



Contact Technical
Sales for details.

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

For ORD crimping information, see SD Series, page 16 and 17.
For ORD crimp tools, see RD Series, page 30.