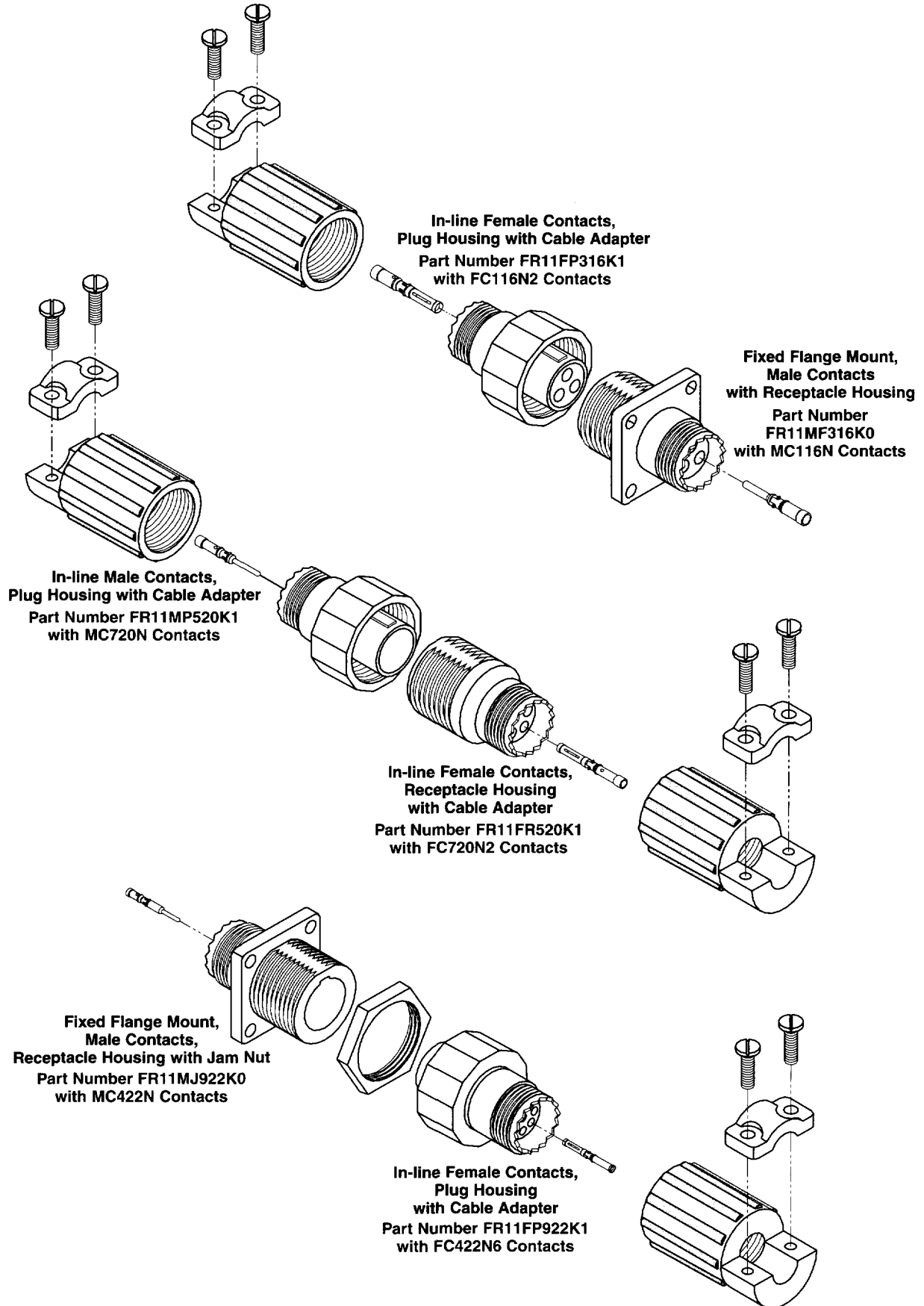


TYPICAL CONNECTOR ASSEMBLIES



CONTACT ARRANGEMENTS FOR SIZE 11 HOUSING

**VOLTAGE RATINGS PER EN60950 * INSULATION RESISTANCE OF 5 G OHMS
CONTACT ARRANGEMENTS ARE SHOWN APPROXIMATELY ACTUAL SIZE
MATING FACE OF MALE OR REAR VIEW OF FEMALE CONNECTOR SHOWN**



Three (3) Size 16 Contacts
0.063 inch (1.6 mm) Minimum Creepage
for Operation at 300V RMS



Five (5) Size 20 Contacts
0.039 inch (1.0 mm) Minimum Creepage
for Operation at 200V RMS



Eight (8) Size 22 Contacts
0.028 inch (0.7 mm) Minimum Creepage
for Operation at 100V RMS



Four (4) Size 20 Contacts
0.059 inch (1.5 mm) Minimum Creepage
for Operation at 250V RMS



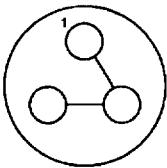
Seven (7) Size 22 Contacts
0.063 inch (1.6 mm) Minimum Creepage
for Operation at 300V RMS



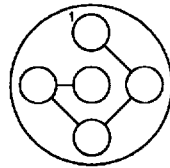
Nine (9) Size 22 Contacts
0.028 inch (0.7 mm) Minimum Creepage
for Operation at 100V RMS

CONTACT ARRANGEMENTS FOR SIZE 19 HOUSING

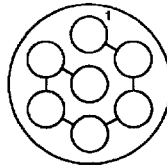
**VOLTAGE RATINGS PER EN60950 * INSULATION RESISTANCE OF 5 G OHMS
CONTACT ARRANGEMENTS ARE SHOWN APPROXIMATELY ACTUAL SIZE
MATING FACE OF MALE OR REAR VIEW OF FEMALE CONNECTOR SHOWN**



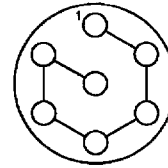
Three (3) Size 12 Contacts
0.197 inch (5.0 mm)
Minimum Creepage for
Operation at 1,000V RMS



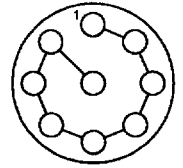
Five (5) Size 12 Contacts
0.091 inch (2.3 mm)
Minimum Creepage for
Operation at 400V RMS



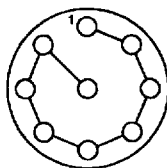
Seven (7) Size 12 Contacts
0.071 inch (1.8 mm)
Minimum Creepage for
Operation at 300V RMS



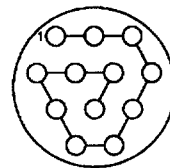
Seven (7) Size 16 Contacts
0.189 inch (4.8 mm)
Minimum Creepage for
Operation at 600V RMS



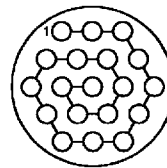
Nine (9) Size 16 Contacts
0.118 inch (3.0 mm)
Minimum Creepage for
Operation at 400V RMS



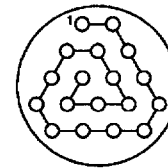
Nine (9) Size 20 Contacts
0.154 inch (3.9 mm)
Minimum Creepage for
Operation at 600V RMS



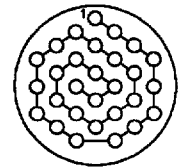
Twelve (12) Size 20 Contacts
0.102 inch (2.6 mm)
Minimum Creepage for
Operation at 400V RMS



Nineteen (19) Size 20 Contacts
0.059 inch (1.5 mm)
Minimum Creepage for
Operation at 250V RMS



Eighteen (18) Size 22 Contacts
0.086 inch (2.2 mm)
Minimum Creepage for
Operation at 400V RMS



**Twenty-nine (29)
Size 22 Contacts**
0.051 inch (1.3 mm)
Minimum Creepage for
Operation at 250V RMS

NOTE: Contact the Factory for availability of other contact arrangements.

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator Inserts: Glass-filled DAP, Type SDG-F, black color, UL 94V-0.

Non-Environmental Connectors:
Housings: Glass-filled polyester, black color, UL 94V-0.
Coupling Nut: Glass-filled polyester, black color, UL 94V-0.
Cable Adapters: Glass-filled polyester, black color, UL 94V-0.

Environmental Connectors:
Interfacial O-Rings: T.P.E.
Cable Adapters: Glass-filled polyester with T.P.E. boot.
Dust Cover: Glass-filled polyester, black color, or low density polyethylene, black color.

EMI/RFI Shielded Connectors:
Housings: Thermoplastic, electroless nickel over copper plated.
Cable Adapters: Thermoplastic, electroless nickel over copper plated.

Contacts: Copper alloy with gold flash over nickel or 0.8 microns (0.000030 inch) gold plate over nickel plate.

Jam Nuts: Aluminum, black anodized.

ELECTRICAL CHARACTERISTICS:

Nominal Contact Current Rating:
 Size 12: 25 amperes.
 Size 16: 13 amperes.
 Size 20: 7.5 amperes.
 Size 22: 5 amperes.

Initial Contact Resistance, Maximum:
 Size 12: 0.003 ohms per IEC 512-2, Test 2b.
 Size 16: 0.003 ohms per IEC 512-2, Test 2b.
 Size 20: 0.007 ohms per IEC 512-2, Test 2b.
 Size 22: 0.012 ohms per IEC 512-2, Test 2b.

Size 16 Micro-Coaxial Contacts: See page 18 for technical information.

Insulator Resistance: 5 G ohms per IEC 512-2, Test 3a, Method A.

Creepage and Clearance Distance: See values given with the specific contact arrangements on page 3.

Working Voltage: See values given with the specific contact arrangements on page 3.

Hot Pluggable (50 couplings per U.L. 1977, paragraph 15):
 Size 12 Contacts: 250 VAC at 25 amperes.
 Size 16 Contacts: 120 VAC at 4.5 amperes.

MECHANICAL CHARACTERISTICS:

Polarization: Plug and receptacle housings are molded with integral polarization system.

Removable Contacts: Rear insertion/Front release removal. Female contact features "Closed Entry Design" for highest reliability.

Contact Retention in Insulator:
 Size 22: 6 lbs. (27 N) per IEC 512-8, Test 15a.
 Size 20: 10 lbs. (44 N) per IEC 512-8, Test 15a.
 Size 16: 20 lbs. (89 N) per IEC 512-8, Test 15a.
 Size 12: 20 lbs. (89 N) per IEC 512-8, Test 15a.

Sequential Contact Mating Systems: One and two level systems. Consult the Factory for ordering information.

Coupling System:
 Size 11 Housing: M19 coupling nut.
 Size 19 Housing: M32 coupling nut.

Printed Board Contact Terminations: Straight and 90° solder terminations. Consult the Factory for ordering information.

Mechanical Operations: 500 couplings.

CLIMATIC CHARACTERISTICS:

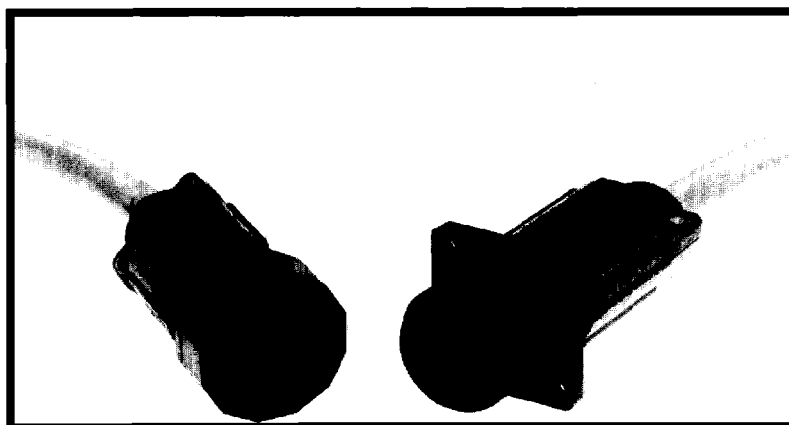
Working Temperature: -55°C to +125°C.

Dust and Water Ingress: Per IEC IP67 (1 meter immersion for 30 minutes).

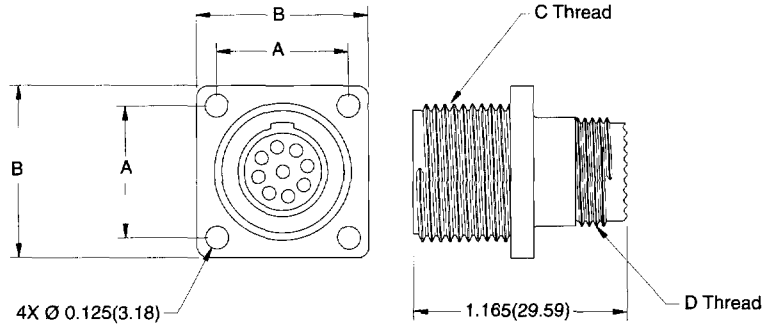
EMI/RFI SHIELDING CHARACTERISTICS:

Surface Conductivity: < 0.1 ohm.

Attenuation: 70-80 dB at most frequencies.



FIXED FLANGE-MOUNT HOUSING
RECEPTACLE HOUSING, MALE OR FEMALE CONTACTS

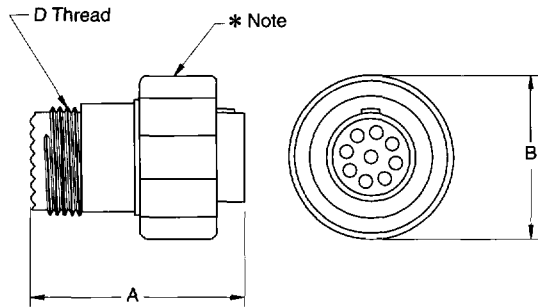


Dimension	Size 11 Housing	Size 19 Housing
A	0.719(18.26)	1.062(26.97)
B	0.938(23.83)	1.438(36.53)
C Thread	M19	M32
D Thread	M15	M28

MATERIALS:
Insert: Glass-filled DAP.
Housing: Glass-filled polyester.

FREE IN-LINE HOUSINGS

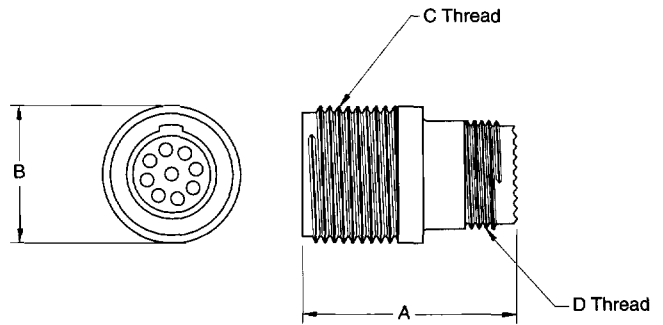
**Plug Housing,
Male or Female Contacts**



Dimension	Size 11 Housing	Size 19 Housing
A	1.165(29.59)	1.165(29.59)
B	0.895(22.73)	1.435(36.45)
D Thread	M15	M28

*** NOTE:**
This connector may be ordered without the coupling nut.

**Receptacle Housing,
Male or Female Contacts**



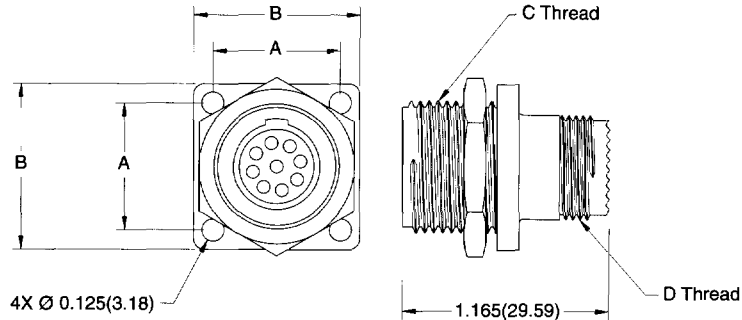
Dimension	Size 11 Housing	Size 19 Housing
A	1.165(29.59)	1.165(29.59)
B	Ø 0.750(19.05)	Ø 1.260(32.00)
C Thread	M19	M32
D Thread	M15	M28

MATERIALS:
Insert: Glass-filled DAP.
Housing & Coupling Nut: Glass-filled polyester.

DIMENSIONS ARE IN INCHES (MILLIMETERS).
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

HOUSING DIMENSIONS

FIXED JAM NUT MOUNTING RECEPTACLE HOUSING, MALE OR FEMALE CONTACTS

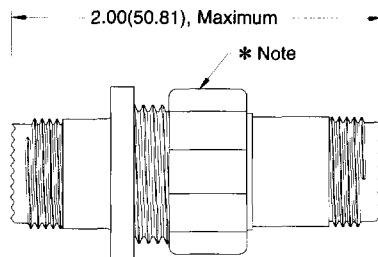


Dimension	Size 11 Housing	Size 19 Housing
A	0.719(18.26)	1.062(26.97)
B	0.938(23.83)	1.438(36.53)
C Thread	M19	M32
D Thread	M15	M28

MATERIALS AND FINISHES:

Insert: Glass-filled DAP.
Housing: Glass-filled polyester.
Jam Nut: Aluminum, black anodize.

IN-LINE TO IN-LINE MOUNTING LENGTH OF MATED PAIR



MATERIALS:

Insert: Glass-filled DAP.
Housing & Coupling Nut: Glass-filled polyester.

*** NOTE:**
This connector may be ordered without the coupling nut.