Performance Specifications

Built to meet or exceed MIL-DTL-83723 specifications
Guaranteed fully compatible and interchangeable with respect to physical and performance characteristics with all existing MIL-DTL-83723 Series III military and commercial derivatives

Environmental Characteristics

Temperature Range

-85° to +392°F (-65° to +200°C)
Service life varies with the maximum internal hot spot temperature resulting from any combination of electrical load or ambient temperature:

77°F (25°C): Continuous
221°F (105°C): 45,000 hours
392°F (200°C): 1,000 hours

Water Pressure

IP67 rating (environmental sealing) when used in conjunction with proper sealing accessories
Fully submersible to 3.3 ft (1m) for minimum of 30 min

Air Leakage Rate

Environmental

Air leakage not to exceed 1 $inch^3$/hr (4.55 $x10^{-3}$ cm^3/sec) at 30 psi (2.11 kg/cm^2) pressure differential with all contact cavities filled

Salt Spray Rating

See Materials & Finishes, p.T-10

Humidity

Mated connectors shall maintain an insulation resistance of 100 megohms or greater at 77°F (25°C) with 95% humidity for duration of 20 days

Chemical Resistance to Fluids

20 hour full immersion (unmated) in hydraulic fluid and lubricating oil without damage or material degradation

Physical Characteristics

Coupling

Bayonet

3-point bayonet, stainless steel bayonet pins spaced at 120° on receptacle shells, corresponding ramps on plug coupling ring with locking detent 1/3 turn to couple and uncouple

Threaded

Threaded (A-Threads), single-start, 4 turns to couple

Threaded Coupling Torque

Engagement & Disengagement Force (max / min)
Shell Size 8: 1.00 ft-lb_f (1.36 N-m) / .67 ft-lb_f (0.91 N-m)
Shell Size 10: 1.17 ft-lb_f (1.59 N-m) / .67 ft-lb_f (0.91 N-m)
Shell Size 12: 1.33 ft-lb_f (1.80 N-m) / .83 ft-lb_f (1.13 N-m)
Shell Size 14: 1.67 ft-lb_f (2.26 N-m) / 1.00 ft-lb_f (1.36 N-m)
Shell Size 16: 2.00 ft-lb_f (2.71 N-m) / 1.33 ft-lb_f (1.80 N-m)
Shell Size 18: 2.50 ft-lb_f (3.39 N-m) / 1.83 ft-lb_f (2.48 N-m)
Shell Size 20: 3.33 ft-lb_f (4.51 N-m) / 2.33 ft-lb_f (3.16 N-m)
Shell Size 22: 3.83 ft-lb_f (5.19 N-m) / 2.92 ft-lb_f (3.96 N-m)
Shell Size 24: 4.58 ft-lb_f (6.21 N-m) / 3.33 ft-lb_f (4.51 N-m)

Polarization

Single master key and keyway on top position of shell
Four minor keys and keyways on shell

Insert Arrangements

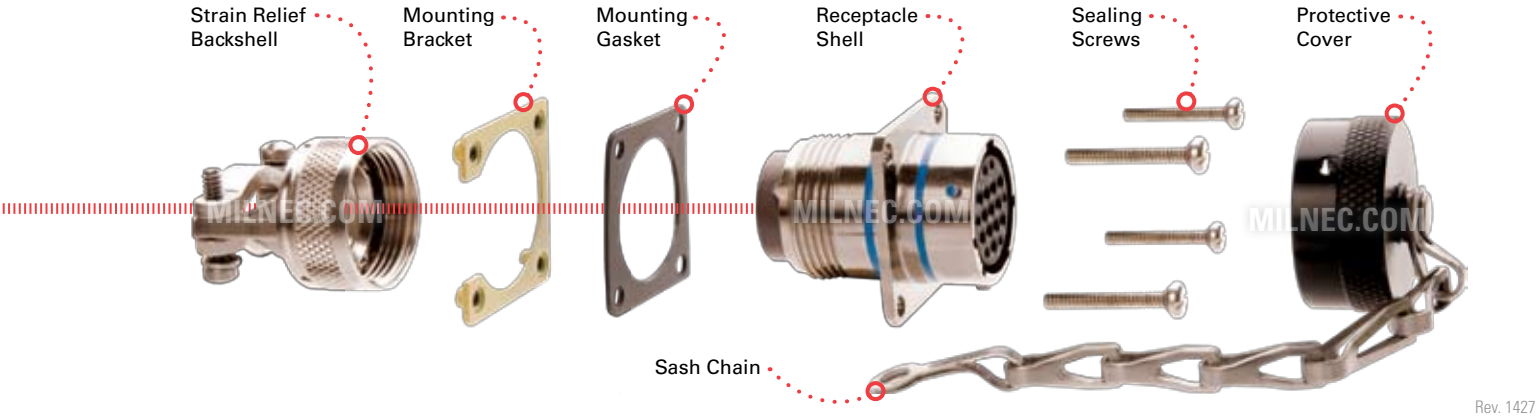
29 standard, custom inserts available

Insert Rotations

Normal polarization (N), plus 5 alternate insert rotational polarizations (1, 2, 3, 4, 5)

Keying Positions

Normal keying (N), plus 5 alternate keying positions (Y, 6, 7, 8, 9)



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Endurance Characteristics

Coupling Cycles
500 coupling cycles (minimum) for bayonet connectors
250 coupling cycles (minimum) for threaded connectors

Shock
One shock in each of the three major axes, having a 100g peak for a six ms duration (half-sine pulse)

Vibration
Random vibration at 10 to 2,000Hz (15g's) with a .06 inch double amplitude and a 20g peak

Material Characteristics

Shell

Environmental
Aluminum, solid, one piece, seamless construction

Shell Plating (Standard Finishes)

W Finish
Electrically conductive cadmium plate finish with an olive drab chromate after-treat for additional corrosion resistance (500 hr salt spray rating)

N Finish
Electrically conductive electroless nickel plating (48 hr salt spray rating)

RFI Grounding Fingers
Corrosion resistant copper alloy

Shell Conductivity
Maximum shell-to-shell conductivity potential drop shall not exceed the following:

With RFI Grounding Fingers
5 millivolts across assembly (N or W finish)

Without RFI Grounding Fingers
200 millivolts across assembly (N or W finish)

Insert
Neoprene elastomer
Non-removable and mechanically bonded to shell

Protective Cover Chain
Passivated stainless steel, sash chain able to withstand a 25 lb (11.3 kg) tensile force without damage

Contact Characteristics

Contact Design
Removable, rear-release crimp contacts

Contact Sizes
#12, #16, #20

Contacts
Copper alloy

Contact Plating
Gold plate, 50 µinches (1.27 µm) minimum

Max Number of Contacts
3 to 61 standard, custom inserts available

Max Contact Resistance
9 milliohm maximum resistance

Max Voltage Drop
<55 millivolt maximum drop (initial)

Contact Retention
Pin and socket contacts are designed to resist severe vibration and repeated connection and disconnection

Electrical Characteristics

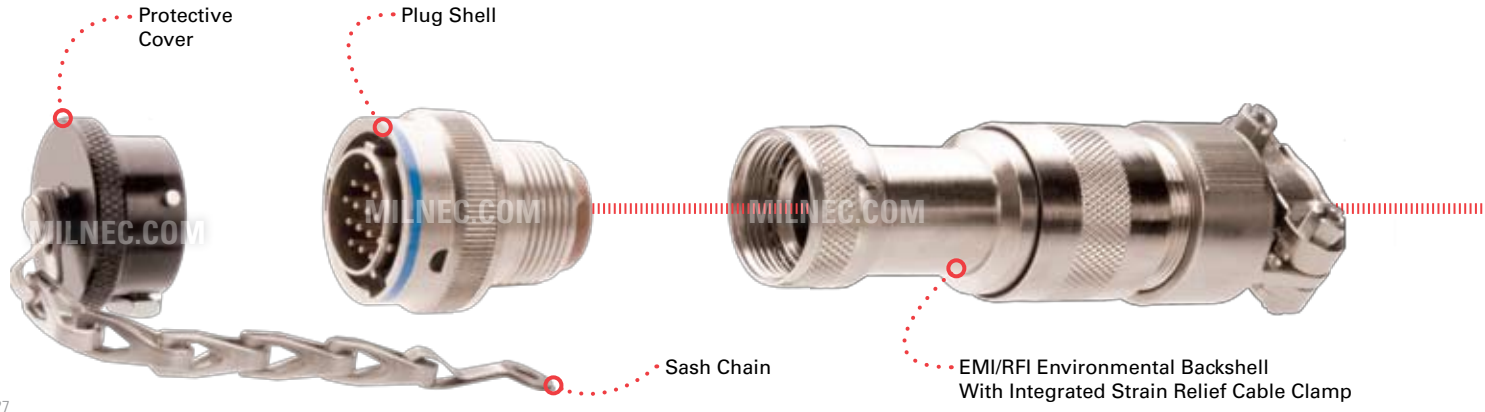
Current Rating
23 amps (test current) at 68°F (20°C)

Max Operating Voltage
600 VAC (RMS) at sea level

Insulation Resistance
>5,000 megohms at 77°F (25°C)

Wire Size
12 to 24 (AWG)

Wire Sealing Range
Designed for individual wire sealing
Sealing is only guaranteed if wires meet MIL-W-5086 or within permitted ranges



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