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 inch³/hr (4.55 x10⁻³ cm³/sec) at 30 psi (2.11 kg/cm²) 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 & Disengage force (max / min)
Shell Size 8: 1.00 ft-lb, (1.36 N-m) / .67 ft-lb, (0.91 N-m)
Shell Size 10: 1.17 ft-lb, (1.59 N-m) / .67 ft-lb, (0.91 N-m)
Shell Size 12: 1.33 ft-lb, (1.80 N-m) / .83 ft-lb, (1.13 N-m)
Shell Size 14: 1.67 ft-lb, (2.26 N-m) / 1.00 ft-lb, (1.36 N-m)
Shell Size 16: 2.00 ft-lb, (2.71 N-m) / 1.33 ft-lb, (1.80 N-m)
Shell Size 18: 2.50 ft-lb, (3.39 N-m) / 1.83 ft-lb, (2.48 N-m)
Shell Size 20: 3.33 ft-lb, (4.51 N-m) / 2.33 ft-lb, (3.16 N-m)
Shell Size 22: 3.83 ft-lb, (5.19 N-m) / 2.92 ft-lb, (3.96 N-m)
Shell Size 24: 4.58 ft-lb, (6.21 N-m) / 3.33 ft-lb, (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)
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