

Series Specifications

PM Series • MIL-DTL-5015 Solder Type Connectors

Performance Specifications

Built to meet or exceed MIL-DTL-5015 specifications
Guaranteed fully compatible and interchangeable with respect to physical and performance characteristics with all existing 5015 style military and commercial derivatives

Environmental Characteristics

Temperature Range

-67° to +257°F (-55° to +125°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): 1,000 hours

257°F (125°C): 250 hours

Water Pressure

IP67 rating (environmental sealing)

Fully submersible to 3.3 ft (1m) for minimum of 30 min

Air Leakage Rate

Environmental connector air leakage rate shall not exceed 1 inch³/hr (4.55 x10⁻³ cm³/sec) at 30 psi (2.11 kg/cm²) pressure differential

Salt Spray Rating

See Materials & Finishes, p. G-8

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

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

Coupling Torque

Engagement & Disengagement Force (max / min)

Shell Size 10: 2.21 ft-lb_f (3.0 N-m) / .11 ft-lb_f (.15 N-m)

Shell Size 12: 2.07 ft-lb_f (2.8 N-m) / .17 ft-lb_f (.23 N-m)

Shell Size 14: 4.35 ft-lb_f (5.9 N-m) / .26 ft-lb_f (.35 N-m)

Shell Size 16: 5.16 ft-lb_f (7.0 N-m) / .34 ft-lb_f (.46 N-m)

Shell Size 18: 5.90 ft-lb_f (8.0 N-m) / .43 ft-lb_f (.58 N-m)

Shell Size 20: 6.64 ft-lb_f (9.0 N-m) / .52 ft-lb_f (.70 N-m)

Shell Size 22: 7.82 ft-lb_f (10.6 N-m) / .59 ft-lb_f (.80 N-m)

Shell Size 24: 9.51 ft-lb_f (12.9 N-m) / .59 ft-lb_f (.80 N-m)

Shell Size 28: 12.32 ft-lb_f (16.7 N-m) / .68 ft-lb_f (.92 N-m)

Shell Size 32: 13.35 ft-lb_f (18.1 N-m) / .75 ft-lb_f (1.02 N-m)

Shell Size 36: 17.63 ft-lb_f (23.9 N-m) / .77 ft-lb_f (1.05 N-m)

Polarization

Single master key and keyway on top position of shell

Insert Arrangements

126 standard, custom inserts available

Insert Rotations

Normal polarization (N), plus 4 alternate insert rotational polarizations (W, X, Y, Z)

Endurance Characteristics

Coupling Cycles

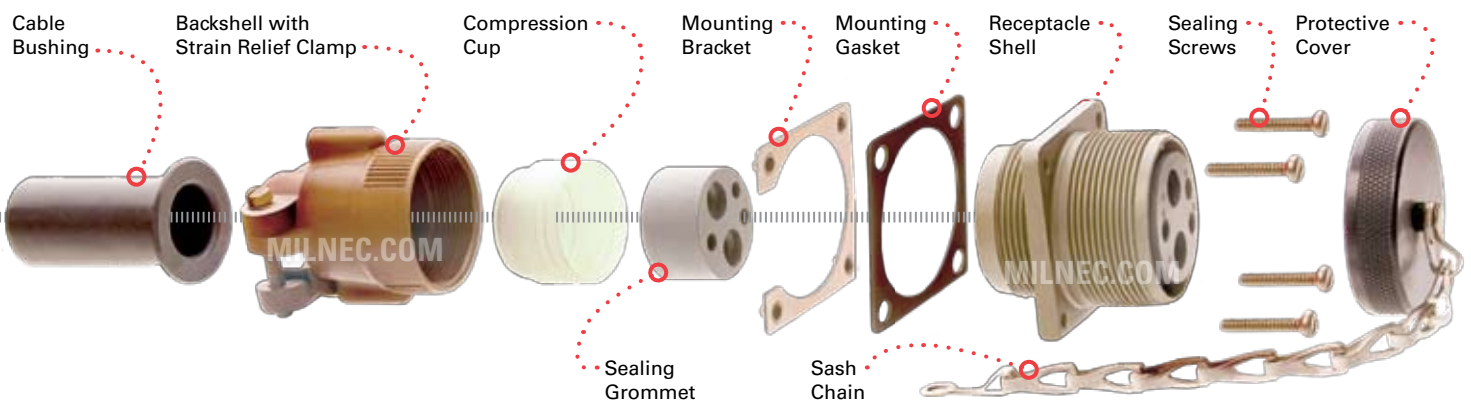
250 coupling cycles (minimum)

Shock

50g's, 11ms duration, three major axes,
10 microseconds maximum discontinuity

Vibration

Random vibration at 10 to 2,000Hz (15g's),
10 microseconds maximum discontinuity



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Material Characteristics

Shell

Aluminum, solid, one piece, seamless construction

Shell Plating

Standard (F) finish is electrically conductive cadmium plate finish with an olive drab chromate after-treat for additional corrosion resistance
(See p. G-8 for all available finishes)

Shell Conductivity

Maximum shell-to-shell conductivity potential drop shall not exceed 200 millivolts across assembly

Insert

Resilient polychlorophrene (neoprene)
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

Compression Cup

Plastic

Sealing Grommet

Neoprene

O-Ring Seal

Neoprene or silicone

Mounting Gasket

Neoprene or silicone

Mounting Bracket

Aluminum alloy with SST locking nuts

Sealing Screws

SST steel with silicone O-rings

Cable Bushing

Neoprene

Contact Characteristics

Contact Design

Solder style, permanently bonded to insert
Pre-tinned solder cups and solder wells standard

Contact Sizes

#0, #4, #8, #12, #16

Contacts

Copper alloy

Contact Plating

Silver alloy plate, 100 µinches (2.54 µm) minimum

Max Number of Contacts

1 to 52 standard, custom inserts available

Max Contact Resistance

6 milliohm maximum resistance

Potential Voltage Drop

<50 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

150 amps (test current) at 68°F (20°C)

Max Operating Voltage

3,000 VAC (RMS) at sea level

Insulation Resistance

>5,000 megohms at 77°F (25°C)

Wire Size

0 to 22 (AWG)

Wire Sealing Range

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

