

# Series Specifications

TM Series • MIL-DTL-5015 Crimp 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 MIL-DTL-5015 military and commercial derivatives

## Environmental Characteristics

### Temperature Range

-67° to +392°F (-55° 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): 35,000 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 connector air leakage rate shall not exceed 1 inch<sup>3</sup>/hr (4.55 x10<sup>-3</sup> cm<sup>3</sup>/sec) at 30 psi (2.11 kg/cm<sup>2</sup>) pressure differential

### Salt Spray Rating

See Materials & Finishes, p. K-9

### 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

### Firewall (Class K)

Mated connectors shall prevent passing of a 2,000°F (1,093°C) flame through the connector for a minimum of 20 minutes in accordance with MIL-STD-1344, Method 1009

## 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<sub>f</sub> (3.0 N-m) / .11 ft-lb<sub>f</sub> (.15 N-m)

Shell Size 12: 2.07 ft-lb<sub>f</sub> (2.8 N-m) / .17 ft-lb<sub>f</sub> (.23 N-m)

Shell Size 14: 4.35 ft-lb<sub>f</sub> (5.9 N-m) / .26 ft-lb<sub>f</sub> (.35 N-m)

Shell Size 16: 5.16 ft-lb<sub>f</sub> (7.0 N-m) / .34 ft-lb<sub>f</sub> (.46 N-m)

Shell Size 18: 5.90 ft-lb<sub>f</sub> (8.0 N-m) / .43 ft-lb<sub>f</sub> (.58 N-m)

Shell Size 20: 6.64 ft-lb<sub>f</sub> (9.0 N-m) / .52 ft-lb<sub>f</sub> (.70 N-m)

Shell Size 22: 7.82 ft-lb<sub>f</sub> (10.6 N-m) / .59 ft-lb<sub>f</sub> (.80 N-m)

Shell Size 24: 9.51 ft-lb<sub>f</sub> (12.9 N-m) / .59 ft-lb<sub>f</sub> (.80 N-m)

Shell Size 28: 12.32 ft-lb<sub>f</sub> (16.7 N-m) / .68 ft-lb<sub>f</sub> (.92 N-m)

Shell Size 32: 13.35 ft-lb<sub>f</sub> (18.1 N-m) / .75 ft-lb<sub>f</sub> (1.02 N-m)

Shell Size 36: 17.63 ft-lb<sub>f</sub> (23.9 N-m) / .77 ft-lb<sub>f</sub> (1.05 N-m)

### Polarization

Single master key and keyway on top position of shell

### Insert Arrangements

77 standard, custom inserts available

### Insert Rotations

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

## Endurance Characteristics

### Coupling Cycles

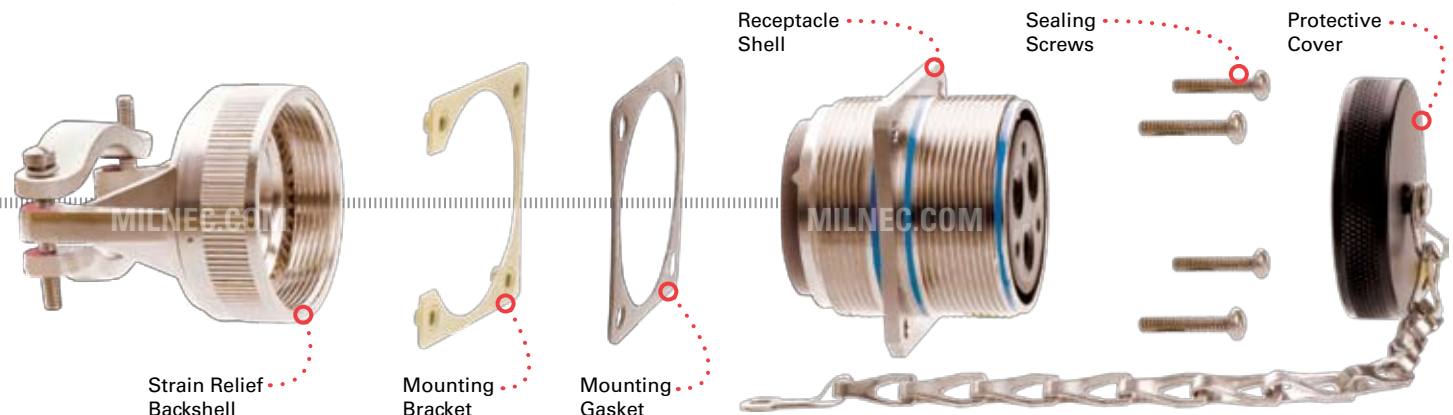
250 coupling cycles (minimum)

### 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 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)

(See p. K-9 for all available finishes)

### Shell Conductivity

Maximum shell-to-shell conductivity potential drop shall not exceed 200 millivolts across assembly with overall DC resistance not greater than 0.05  $\Omega$

### 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

### 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

## Contact Characteristics

### Contact Design

Removable, rear-release crimp contacts

### Contact Sizes

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

### Contacts

Copper alloy

### Contact Plating

Silver alloy plate, 100  $\mu$ inches (2.54  $\mu$ m) minimum

Gold plate, 50  $\mu$ inches (1.27  $\mu$ m) minimum (#16 only)

### Max Number of Contacts

1 to 52 standard, custom inserts available

### Max Contact Resistance

6 milliohm maximum resistance

### Max 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

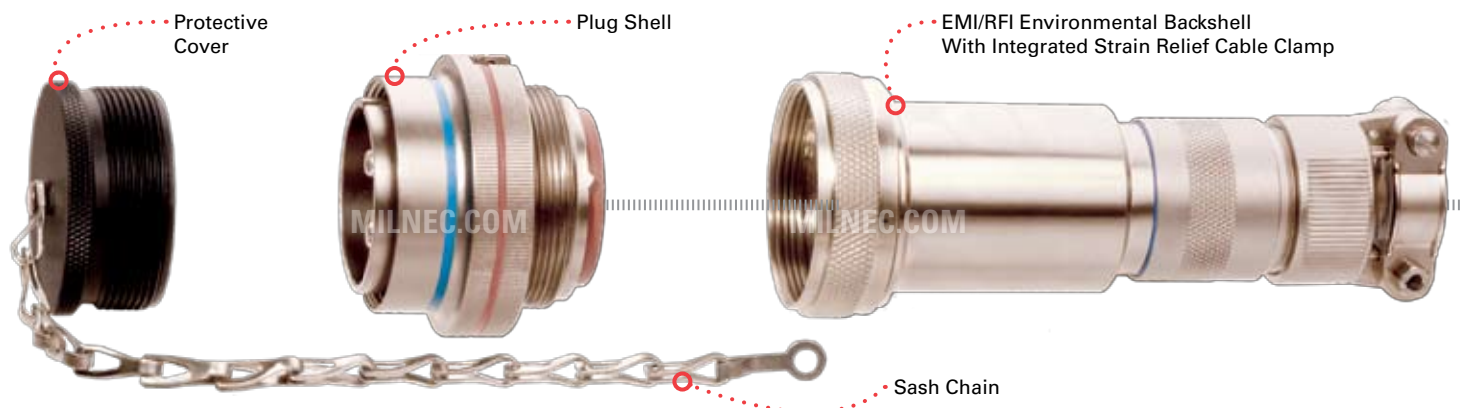
0 to 20 (AWG)

### 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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