

Series Specifications

TF 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

-85° to +347°F (-65° to +175°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 inch³/hr (4.55 x10⁻³ cm³/sec) at 30 psi (2.11 kg/cm²) pressure differential

Salt Spray Rating

See Materials & Finishes, p. X-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 (Classes KS & KT)

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_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

77 standard, custom inserts available

Insert Rotations

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

Endurance Characteristics

Coupling Cycles

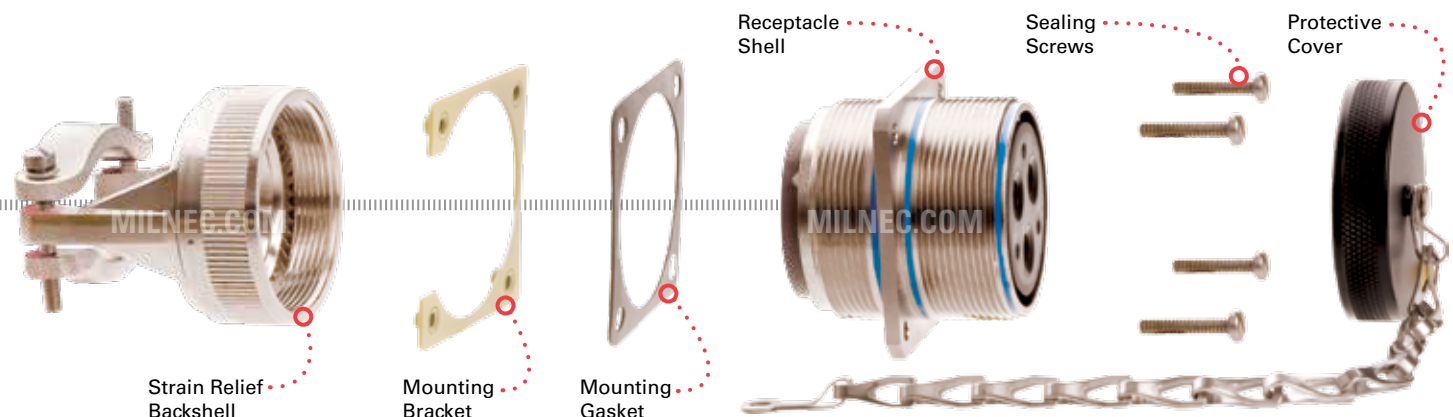
250 coupling cycles (minimum)

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



Rev. 1718

Material Characteristics

Shell

Aluminum, solid, one piece, seamless construction

Shell Plating (Standard Finishes)

D Finish

Electrically conductive cadmium plate finish
(96 hr salt spray rating)

L 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 Ω

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, front-release crimp contacts

Contact Sizes

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

Contacts

Copper alloy

Contact Plating

Silver alloy plate, 100 μ inches (2.54 μ m) minimum

Gold plate, 50 μ inches (1.27 μ 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

