Rugged Circular Connectors in Mil-Spec and Derivative Configurations to Meet the Widest Range of Harsh Environments and Applications
Subminiature Circular Connectors Built for Harsh Environments

TE Connectivity (TE) is your one-stop source for MIL-DTL-38999 and 38999-style connectors. We offer mil-qualified Series I, III, and IV connectors in a wide array of configurations, materials and finishes to help meet the needs of ground, aerospace, and marine applications. The subminiature circular connectors are time tested for reliability in harsh environments. Our 38999 connectors include support for:

- Signals
- Power
- RF
- Optical
- Hermetic sealing
- EMI filtering

Beyond Mil Specs

Because of the widespread popularity of 38999 Series III connectors, we have also used this form factor for designs to meet a variety of configurations beyond those of MIL-DTL-38999. This gives you a familiar, reliable connector and access to the full range of backshells and other accessories.

TE Components . . . TE Technology . . . TE Know-how . . .
AMP | Agastat | CII | Hartman | Klovac | Microdot | Nanonics | Polamco | Raychem | Rochester | Deutsch
SEACON Phoenix | L.L. Rowe | Phoenix Optix | SEACON

Get your product to market faster with a smarter, better solution.
Recent 38999 Highlights

RoHS-Compatible Finishes
Our 38999-qualified connectors are available with cadmium-free, environment-resisting plating options offering 500-hour salt spray resistance and a -65°C to +175°C temperature range.

- **Class T**: Nickel-PTFE
- **Class Z**: Black zinc nickel

PC Board-Mount Connectors
TE offers hundreds of different sizes and types of standard and extended-tail contacts. Direct board mounting not only saves weight and space, it enhances system reliability and performance by replacing a separable interface with a more reliable soldered interconnection.

MC801 Connectors
Expanding your options from our already broad fiber-optic portfolio, MC801 connectors combine a 38999 shell with the capability to use industry-standard 801 optical termini. We support a full range of interface styles to help allow you to achieve the full benefits of fiber’s bandwidth, reach, and noise immunity.

CeeLok FAS-X Connectors
Take control of high-speed networking with connectors that support up to four 10G Ethernet channels with excellent signal integrity. Using standard 39029 contacts, the connectors can be field terminated using standard tools.
### MIL-DTL-38999 Connectors

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DEUTSCH 38999 Connectors

MIL-DTL-38999 CONNECTORS

Bayonet coupling ring with constant mating torque
• Quick connect/disconnect: 1/3 turn

Corrosion Resistant
• 500-hour salt spray resistance
• Thermoplastic clips molded directly with insert
• RFI fingers for EMI protection

Typical Applications
• Ground vehicles

Extreme Environments
• -65°C to +200°C operating temperature
• Withstands high vibration and shock
• Corrosion-resistant stainless steel shell
• Fire tested to +1093°C

Typical Applications
• Engines in ground vehicles, aerospace, and UAVs
• High-temperature, high-vibration areas

Weight Saving
• Lightweight composite shell

Rugged
• -65°C to +200°C operating temperature
• Excellent corrosion resistance: withstands 2000-hour salt spray
• Up to 1500-mating-cycle durability

Typical Applications
• Commercial and military aerospace
• UAVs

Triple-start, self-locking threaded coupling
• Disconnect: 360° turn

Capable
• Light weight
• VG 95319 qualified
• EN3645 qualified

Versatile
• More choice in shell sizes, materials, inserts, filtering and EMI protection, and environmental sealing

Typical Applications
• Ground, aerospace, and marine
• Most widely used 38999 style

Breech lock coupling
• Quick connect/disconnect: Quarter turn

High Performance
• Optimized for SWAMP area applications
• Visual, audible and tactile full-mate indicators

Typical Applications
• Missiles
• Aircraft
• Ground vehicles

Instant Disconnection
• Designed for munitions stores
• MIL-DTL-38999/31 qualified

MIL-DTL-1760 Types 1 and 2
• Type 1 available in aluminum and composite versions for drop launch
• Type 2 incorporates a replaceable buffer system for rail launch

Typical Applications
• Ground and air-launched missiles
• Smart bombs

High Density
• Nearly double the contact density of standard M38999 connectors
• Four shell sizes, 11 to 64 contacts
• 3 amps per contact

Lightweight and Space Saving
• Aerospace grade aluminium
• Rear removable crimp and PCB contacts
• -65°C to +175°C / +200°C (plating dependent)

Typical Applications
• Universal soldier
• UAV
• Communications

Reduced Profile
• Based on 38999 Series I coupling interface lengths and Series II diameters
• Meets LN29729 standard
• Meets J 62.017 and DIN 65002 standards
• -55°C to +175°C operating temperature

Typical Applications
• Military aerospace

38999-DERIVED CONNECTORS

DTS Series Connectors MIL-DTL-38999 Series III

DTS-K and –S Series Connectors MIL-DTL-38999 Series III Classes K and S

DIV Series Connectors MIL-DTL-38999 Series IV

Lanyard-Release Plugs MIL-DTL-1760

ACT Series Connectors MIL-DTL-38999 Series III Composite Shells

Wildcat 38999 High-Density Connectors

HDJ Series Connectors 38999 Series 1.5
DEUTSCH 38999 Connectors

38999-DERIVED CONNECTORS

**DESIGNED FOR MARINE APPLICATION**
- Marine bronze shell for marine applications
- Excellent corrosion resistance
- Dry mate sealing down to 4 m immersion
- -65°C to +175°C operating temperature

**COMPATIBLE**
- STD CECC 75201-002
- RoHS compliant

**TYPICAL APPLICATIONS**
- Shipboard
- Ground vehicles

**MC3**
- 5, 8, or 12 fibers (shell size 19, 23, or 25)
- Aluminum shell
- 2.5 mm termini

**MC4**
- 2 fibers (shell size 9)
- Aluminum shell
- 2.5 mm termini

**MC5**
- 1, 2, 4, 6, 8, 10, 18, 30 fibers (shell sizes 11 through 25)
- Composite shell
- 1.25 mm termini

**MC6**
- 12 or 24 fibers
- Composite shell
- MT ferrules

**MC6 SHOWN**
- 12 or 24 fibers
- Composite shell
- MT ferrules

**MC801 OPTICAL CONNECTORS**
- Uses industry-standard ARINC 801 termini
- 1.25 mm ferrules for high contact density
- Multimode and single mode
- PC and APC finishes

**LIGHTWEIGHT**
- Aluminum shell

**CONVENIENT**
- Compatible with LC termination processes and tooling

**HIGH PERFORMANCE**
- Multimode and single mode
- PC and APC finishes

**VERSATILE**
- Expanded beam for size 11 and 15 shells
- 1, 2, 4, or 8 fibers

**DURABLE**
- No wear on fiber optic interface
- Vibration resistant
- Highly resistant to dirt and debris

**REPEATABLE LOW-LOSS PERFORMANCE**
- Low sensitivity to thermal fluctuations and interface contamination
- Stable operation over life of system

**EASY TO USE**
- Drop-in replacement for M29504/4 and /5 physical contact termini

**CONVENIENT**
- Expanded beam termini for 38999 Series III size 16 cavities

**DURABLE**
- No wear on fiber optic interface
- Very vibration resistant
- Highly resistant to dirt and debris

**HIGH CURRENT CAPACITY**
- Up to 1000 A in a size 25 shell
- Single and multicontact configurations

**SPACE SAVING**
- Hybrid configurations with signal and power contacts
- Variety of shell sizes

**RUGGED**
- Rear removable crimp contacts
- Dedicated sealed backfitting and cable support grommet
- Excellent contact retention under severe vibration
DEUTSCH 38999 Connectors

38999-DERIVED CONNECTORS

Simple, Reliable Wire Bussing
- Internal pc board connects contacts for grounding distribution, power distribution, and similar needs
- Range of standard and custom bussing configurations

Weight and Space Saving
- Composite and aluminum shells
- Eliminates external bussing components
- Shell sizes 9 through 25

Versatile
- RJ45, with Cat 5e, 6, or 6A performance
- USB 2.1, up to 480 Mb/s
- USB 3.0, up to 5 Gb/s
- SIM card receptacle
- Micro SD card receptacle
- LC, for multimode and single-mode fiber

Rugged
- Shell options include aluminum, bronze, stainless steel, titanium, and composite
- Sealed up to IP68 for fluid and dust-laden environments

High Performance
- Glass-to-metal sealing
- Airtight under high pressures, vibration, and temperatures

EMI Protection
- Pi, LC, CL, C configurations
- Mixed capacitance, grounded or feedthrough lines
- Filter values from 100 pF to 1 μF, subject to specific requirements

EMP Protection
- Transient voltage suppression
- Resists EMP, NEMP, lightning strike, or ESD
- Fast transient clamping

Hermetic Connectors

Ruggedized Commercial Connectors

Filter Connectors

CBC Series Bussed Connectors

High Speed, High Density
- Up to 8 Quadrax contacts in a size 25 shell
- One Quadrax contact in a size 9 shell
- Integral ground plane

High Speed
- Supports 10G Ethernet and beyond
- One 10G Ethernet channel in size 11 shell
- Four channels in size 25 shell

Compatible
- AS39029 contacts
- Fast field termination and repair, using standard tools
- Available with aluminum or composite shells with a variety of finishes

Typical Applications
- High-speed networking

CeeLok FAS-X Connectors

Quadrax Connectors

Typical Applications
- Pressurized systems
- Fuel tanks and other hazardous materials
- Harsh environments

CeeLok FAS-X Connectors

Typical Applications
- High-speed networking

Rugged
- High-strength aluminum alloy shell
- Nickel, zinc cobalt, or olive drab cadmium plating
- 360° shielding
- -65°C to +175°C

Typical Applications
- High-speed networking

Feedthrough Connectors

Convenient
- Suited to bulkhead pass-through and connector-saver applications
- Wide range of gender matching, materials, and sizes

Wide Backshell Range
- AS85049-compliant band straps and adapters
- Available in all materials and finishes
- Straight, 45°, or 90°
- Options on low profile, extended length and alternative angles

Shielded or Unshielded
- Shielded for individual or overall 360° screening options

Compatible
- Compatible with Mil-Spec dimensions and performance

Backshells and Accessories

Versatile
- RJ45, with Cat 5e, 6, or 6A performance
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Backshells and Accessories
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