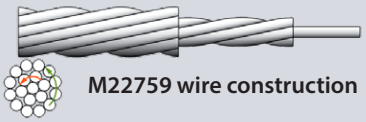
TURNKEY SOLUTIONS FOR
HIGH POWER ELECTRICAL DISTRIBUTION

The TurboFlex® Ecosystem: High-Power/High-Voltage Cables, Contacts, Connectors, and Assemblies

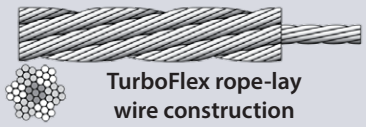
TurboFlex is an ultra-flexible and rugged power cable solution—ideal for high-voltage electrical distribution and propulsion applications such as battery plant-to-inverter-to-electric motor cables for eVTOL aircraft. Constructed from rope-lay configuration copper or aluminum wire and jacketed with Glenair signature Duralectric insulation, TurboFlex cables are optimized for use in an ecosystem of Glenair signature contact and connector technologies. Turnkey connectorized or lugged cable assemblies — fully tested and ready for immediate use — provide reliable high-temperature tolerant performance up to 4500 VAC.

◀ Duralectric™ is the high-performance TurboFlex® jacketing material. Different compounding formulas are optimized for weight savings, radiation resistance, ultra low temperatures, conductivity, and immersion in chemical or caustic fuels. Available in a broad range of colors including safety orange.

STANDARD TURBOFLEX VS. TURBOFLEX M

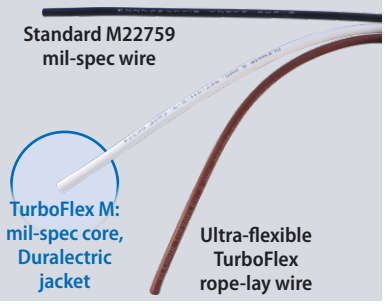


M22759 wire construction



TurboFlex rope-lay wire construction

TurboFlex cables are jacketed with Duralectric insulation, which contributes significantly to the flexibility of the product. Available wire cores include rope-lay (standard) for maximum flexibility, and M22759 wire (TurboFlex M) with the flight-heritage of a mil-spec core and a slightly larger bend radius, but far superior flexibility compared to standard M22759 wire.



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Ecosystem Overview

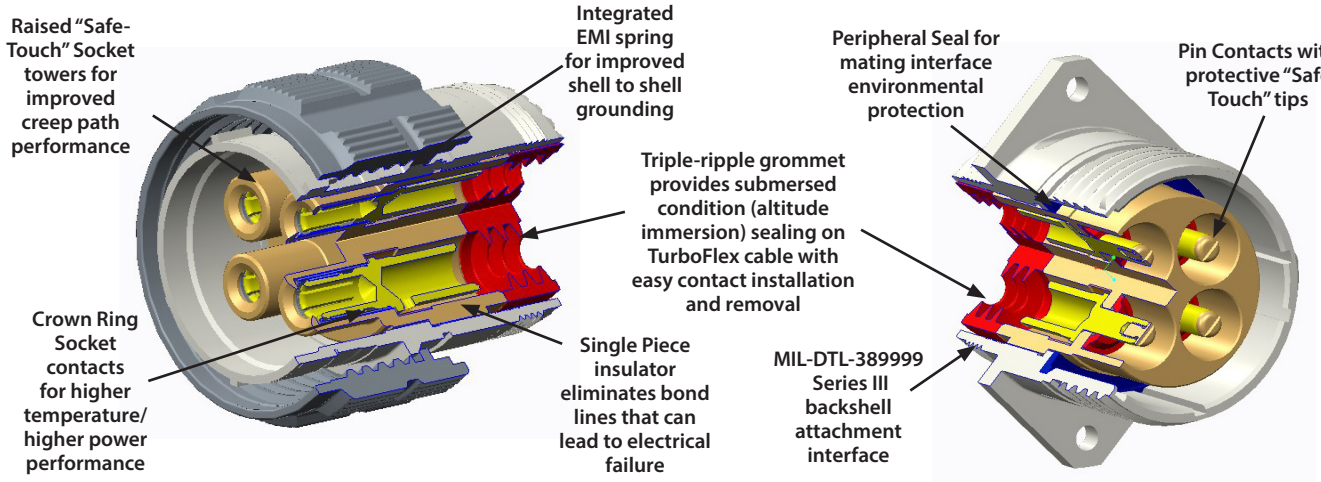
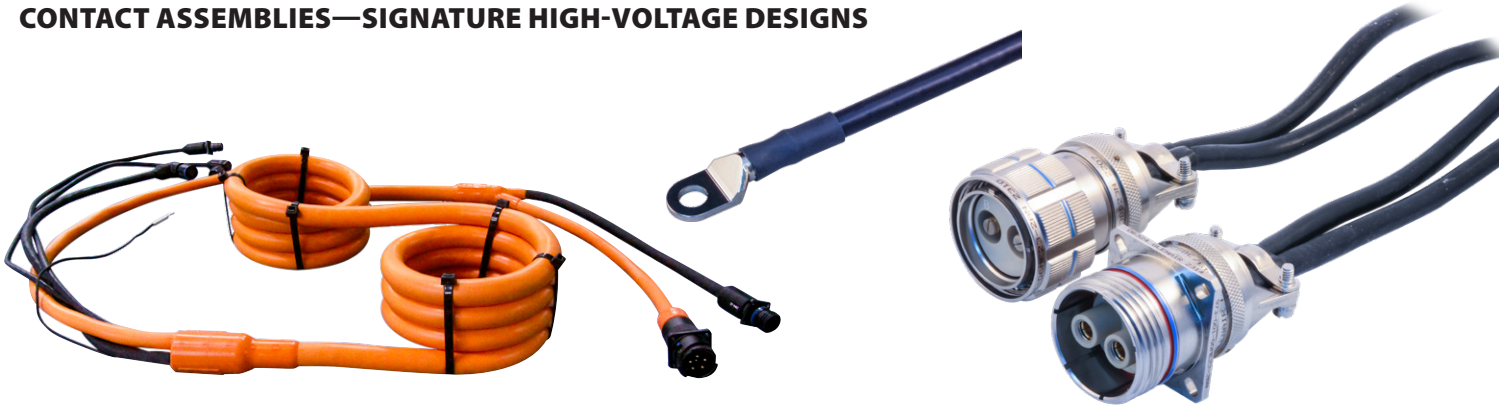
THE TURBOFLEX ECOSYSTEM: HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS

Glenair Signature Crown Ring high temperature tolerant contacts

provide reduced contact resistance, superior conductivity, and higher temperature tolerance than conventional AS39029 contacts or specialized high-power contacts from other manufacturers. Safe-touch configurations available.

- Maximum operating temperature 200°C
- Superior conductivity performance compared to beryllium copper contacts, across full temperature range
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)
- Contact bodies made from high conductivity copper alloy (approximately 95% IACS)
- Stainless steel Crown Ring
  - Provides socket forces without stress relaxation at high temperatures
  - Moves socket spring function from socket body to ring, allowing use of high-conductivity copper
- Gold over nickel plating
  - Thicker plating than industry standards for reduced contact fretting and higher temperature endurance
  - Gold over nickel is "gold standard" for high-reliability aerospace contacts
- Crimp versions use standard industry tooling, including crimp die/locator and insertion/extraction tools (2AWG Crown Ring contacts require custom tooling)

THE TURBOFLEX ECOSYSTEM: COMPATIBLE CONNECTOR DESIGNS WITH OPTIMIZED ELECTRICAL AND ENVIRONMENTAL PERFORMANCE



THE TURBOFLEX ECOSYSTEM: TURNKEY POWER DISTRIBUTION CONNECTOR, LUG, CABLE, AND CONTACT ASSEMBLIES—SIGNATURE HIGH-VOLTAGE DESIGNS