turboflex®

THE ULTRA FLEXIBLE RUGGED POWER CABLE

TurboFlex is an ultra flexible and rugged power cable solution ideal for high-power 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 R VS. TURBOFLEX M

TurboFlex M with M22759 cable construction

TurboFlex R with rope-lay cable construction

All TurboFlex cables are jacketed with Duralectric insulation, which contributes significantly to the flexibility of the product. Available wire cores include rope-lay cable (TurboFlex R) and M22759 cable (TurboFlex M). TurboFlex R provides maxiumum flexibility. TurboFlex M has a slightly larger bend radius but far superior flexibility compared to standard M22759 cable.

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

THE TURBOFLEX ECOSYSTEM: CABLES, CONTACTS, CONNECTORS, AND ACCESSORIES

A broad range of TurboFlex cable constructions are available for different application requirements. At the most basic level, we offer two major categories, copper core and aluminum core, both of which have similar electrical performance with significant weight reduction with the aluminum core product. The use of single and dual-wall insulation (Duralectric or Duralectric Light) plus available shielding optimizes cable construction for different voltage, power, and environmental requirements. Standard constructions are available for 2-pole DC power, added abrasion protection, 3-phase power plus ground, and VFD 3-phase power requirements for contact gauges #8, #4, #2, #0, #00, and #0000.

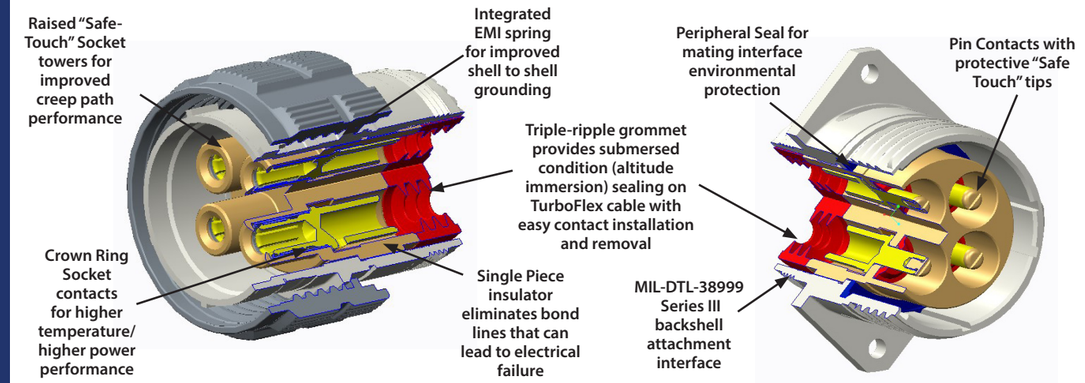
TURBOFLEX-COMPATIBLE HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS

Glenair Signature Crown Ring high temperature tolerant contacts

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

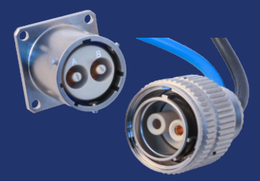
- Maximum operating temperature 260°C
- Superior conductivity performance compared to beryllium copper contacts, across full temperature range
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)
- Contact bodies made from high conductivity copper alloy (approximately 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

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



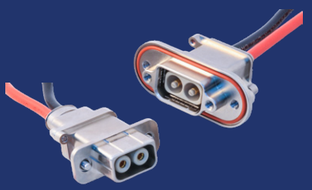
TURBOFLEX-COMPATIBLE POWERPLAY SIGNATURE HIGH-POWER CONNECTOR FAMILY

SuperNine Series III PowerPlay Triple-Start



SuperNine Series I PowerPlay Bayonet

Series 806 Mil-Aero PowerPlay High Density



Micro-Crimp PowerPlay Rectangular

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324