

HIGH-VOLTAGE · HIGH-CURRENT · HIGH-FREQUENCY

Distributed Electric Propulsion (DEP) Connectors and Cables

Distributed Electric Propulsion (DEP) is a key element of all eVTOL aircraft. A basic description of a DEP design is a power transmission system whose electrical energy sources are interconnected, via EWIS cabling, to multiple electric-motor-driven propellors or rotors. The native power sources in a DEP can be as simple as a single battery or as complex as a hybrid system made up of gas combustion engines, electric generators, fuel cells, and energy storage devices. The DEP is designed to feed aircraft "propulsors," or thrust producing devices including propellers and fans, with adequate power for vertical takeoff, landing, and cruise operations.

Electrical power propulsion system connectors, cables, and accessories are designed and manufactured by Glenair leveraging 60+ years of commercial aircraft EWIS design experience. Resulting in interconnect systems that readily meet type certification requirements and deliver safe and reliable performance in passenger aircraft.



MARKET REQUIREMENTS

- Safe and reliable performance in high-voltage, high-current, and high-frequency systems
- DWV, partial discharge, and temperature rise management
- Low-resistance contact systems
- Robust resistance to vibration and shock
- Galvanic corrosion and dissimilar metal design standards
- Lightning strike and grounding return path performance IAW RTCA-DO 160
- Lightweight and small form-factor packaging
- Flexible, easy-to-route power lines

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Electric Propulsion System

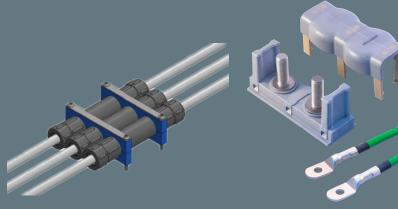


Connectors, Cables, and Power Feeder Systems

High-Voltage -DWV/BDV -Partial Discharge -Altitude Derating High-Current -Temp Rise -Bundle Derating -Skin/Proximity Derating -Skin/Proximity Derating -Skin/Proximity Derating

HIGH-CURRENT POWER FEEDER SYSTEMS, TERMINAL BLOCKS, AND CABLES

- Resolves cable lug misalignment issues
- Eliminates twisted cable (rotational) problems during assembly
- Integrated / compatible power line feeder system used in combination with PowerLoad and other power distribution system connectors



For electrical eVTOL motor applications that require discrete routing of 3-phase and DC power lines, The PowerBlock HV is a complete power feeder and current return network system that includes contacts, cables, holding fixtures, mountable connector packages, as well as high-voltage terminal blocks and lugs for reduction of partial discharge and corona.

ULTRA FLEXIBLE AND RUGGED POWER LINE CABLING





Duralectric™ is the high-performance TurboFlex® jacketing material perfectly suited for immersion, chemical or caustic fluid exposure, temperature extremes, UV radiation and more

TurboFlex® power distribution cables are constructed from highly flexible conductors and high-performance insulation to produce cables ideally suited for eVTOL power distribution applications where flexibility, durability, and weight reduction are required.