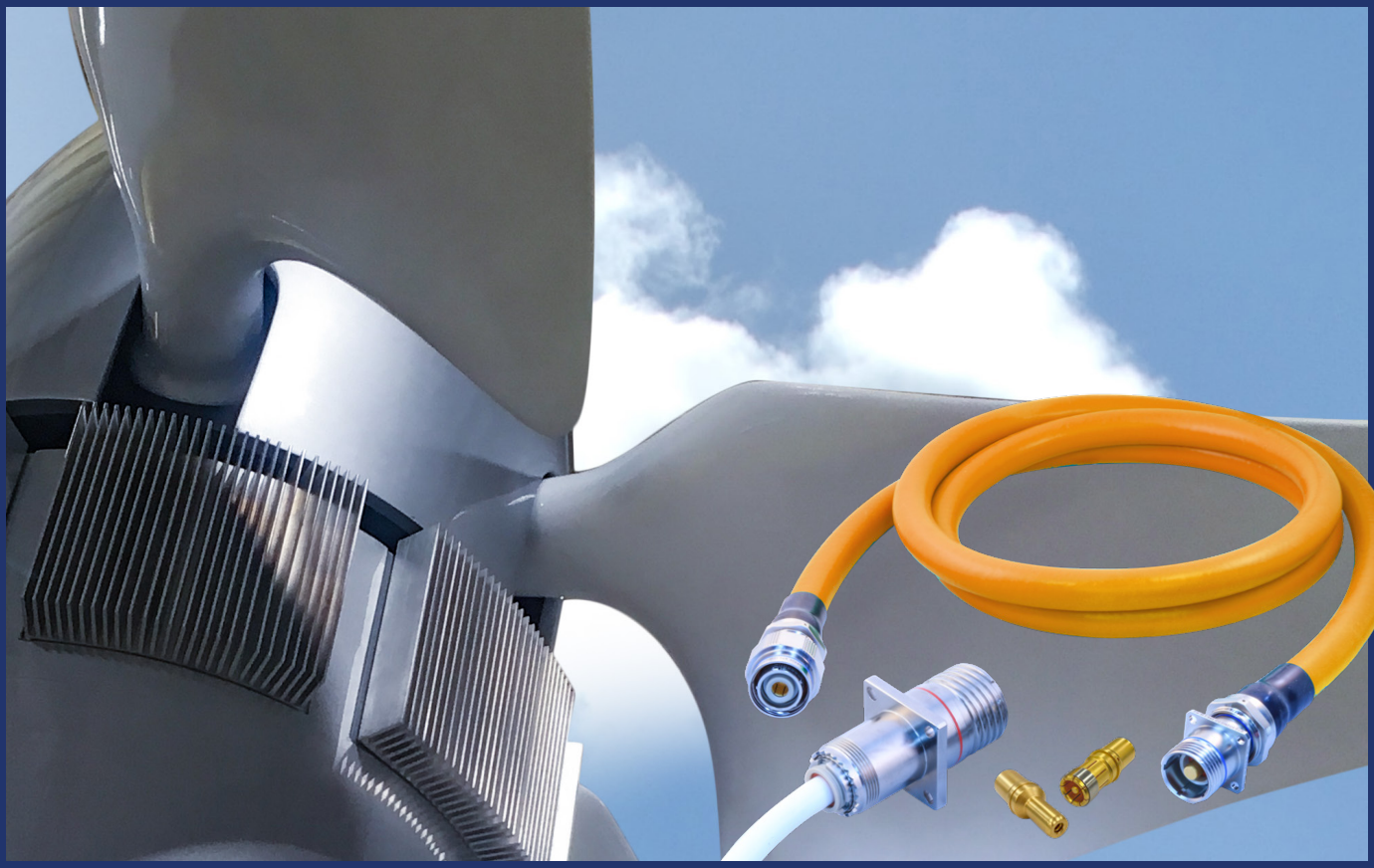
ELECTRICAL POWER PROPULSION SYSTEM

CONNECTORS, CABLES, AND ACCESSORIES

PowerPlay™

SuperNine “Better than QPL” MIL-DTL-38999 high-power connector series



SuperNine PowerPlay is a high-ampacity multi-pole connector series that combines the proven performance of MIL-DTL-38999 Series III connector packaging with contact and dielectric insert technology capable of 2000VAC working voltage. SuperNine PowerPlay utilizes Glenair Crown Ring contact technology, a crimp-removable, low insertion force contact series optimized for higher current carrying capabilities, lower contact resistance, and superior vibration resistance compared to LouverBand, hyperboloid, and other designs.

- **2000 VAC working voltage**
- **High current, low resistance, superior vibration resistance**
- **Safe-touch finger proofing**
- **Integrated band platform shield termination**
- **Compatible with TurboFlex high-flexibility cable**
- **Support for busbar and other wire terminations**
- **Multi-Pin arrangements for size 8 and 4 AWG contacts. Single-Pole arrangements for 2, 1/0, 2/0, and 4/0 contacts. Options for 20 AWG interlock contacts on all sizes**

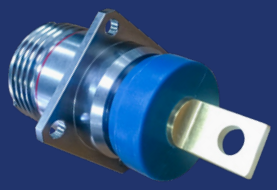
SERIES 973

PowerPlay AAM Propulsion System Power Connectors

BATTERY PLANT-TO-INVERTER-TO-ELECTRIC MOTOR CONNECTORS AND CABLES FOR eVTOL POWER DISTRIBUTION AND PROPULSION APPLICATIONS

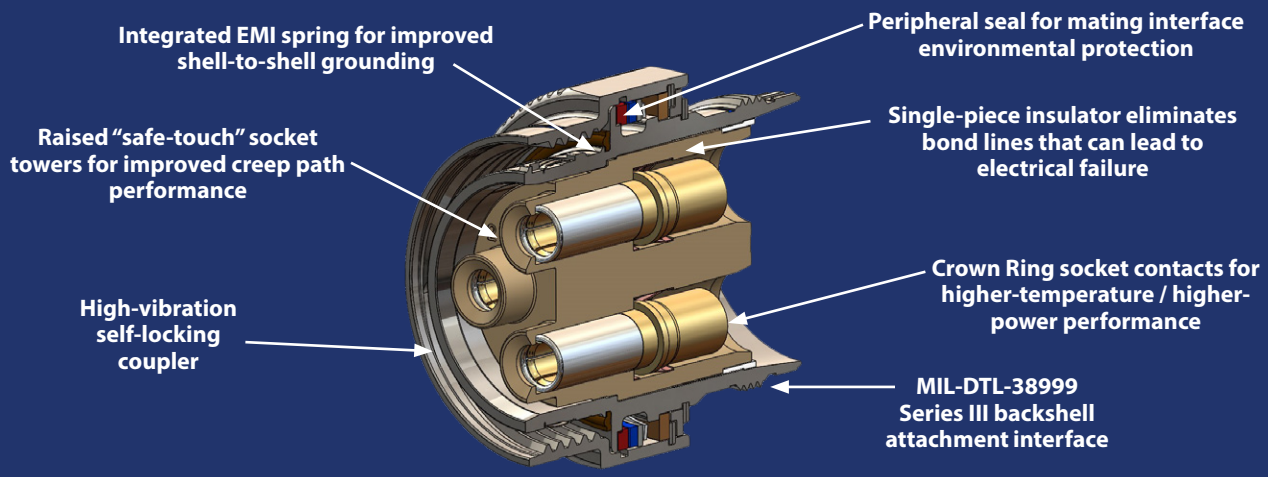
Range of insert arrangements for size 20, 8, 4, 2, 1/0, 2/0, and 4/0 AWG contacts with full support for Glenair TurboFlex cabling

Connector shell configurations IAW MIL-DTL-38999 Series III with safe-touch contact finger proofing



Range of wire termination options including crimp contact, threaded contact, bus bar, and factory-terminated cables and jumpers

PowerPlay™: KEY CONNECTOR AND CONTACT DESIGN FEATURES, PLUG CUTAWAY VIEW



HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS

Glenair Signature Crown Ring contact series

provides reduced contact resistance, superior conductivity, and higher temperature- tolerance than conventional AS39029 contacts and specialized high-power contacts from other manufacturers

- 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
- Crimp versions use standard industry tooling, including crimp die/locator and insertion/extraction tools (2AWG Crown Ring contacts require custom tooling)

PowerPlay AAM Propulsion System Power Connectors

Contact Instructions

HOW TO TERMINATE, INSTALL AND REMOVE CROWN RING CONTACTS

1 ***Set Up Crimp Tool.*** Install proper die assembly and locator into the pneumatic crimper. See 979-013 for proper tools needed for each contact size.

2 ***Strip Wire.*** Remove wire insulation, taking care to avoid nicking or cutting wire strands. Strip wire to length shown on table.

3 ***Insert Wire*** into contact. The wire should be visible in the inspection hole.

4 ***Insert contact into crimp tool.*** Make sure the contact is fully inserted into the locator.

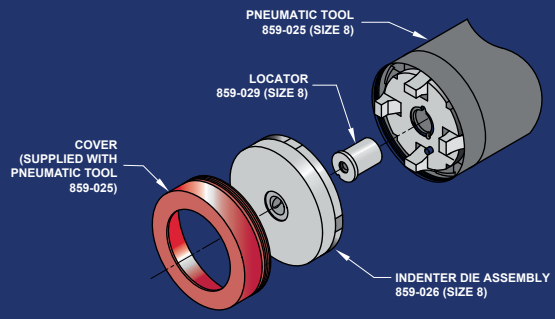
5 ***Crimp contact.*** While keeping contact seated, press the actuation button and hold the crimp die closed for a minimum of 8 seconds, to allow adequate dwell time for wire strand deformation.

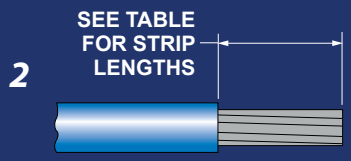
6 ***Inspect crimped contact.*** Wire should be fully inserted and visible through the inspection hole. The crimp should be uniform in appearance.

7 ***Install contact into connector.*** Brush Isopropyl Alcohol (IPA) onto the contact and approximately 1" of the wire. Before IPA dries, push the contact through the rear grommet until the contact locks into place. This can be done by hand without the need for a tool. **USE CARE TO AVOID DAMAGING THE CONNECTOR/ GROMMET.**

8 ***Contact Extraction.*** Use the correct extraction tools per 979-013. Install the tool over the wire, for the contact to be removed. Brush a generous amount of Isopropyl Alcohol (IPA) onto the grommet, where the wire is exiting. Before IPA dries, slide the tip of the tool into the connector/ grommet. Push the tool into the connector cavity until the tip bottoms in the connector. Avoid wiggling or rocking the tip. This may damage the cavity. A straight push is best. Holding both the wire and the tool, pull the tool and contact out of the connector. **Ensure the wire insulation is within the acceptable limits listed on the connector datasheet.**

PNEUMATIC CRIMP TOOL





Wire Size (AWG)	Strip Length in. (mm)
10	.495-.545 (12.57-13.84)
8	
6	
4	
2	.550-.600 (13.97-15.24)
1/0	.575-.625 (14.60-15.88)