

MISSION-CRITICAL
INTERCONNECT
SOLUTIONS



Glenair
SIGNATURE SERIES

Electric eVTOL Air Taxi Interconnect Solutions

Signature Interconnect Technology for Urban Air Mobility



Electric eVTOL Air Taxi Interconnect Solutions

Signature Interconnect Technology for Urban Air Mobility



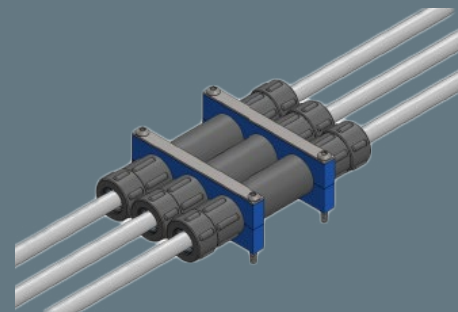
ELECTRICAL POWER PROPULSION SYSTEM CONNECTORS, CABLES, AND ACCESSORIES



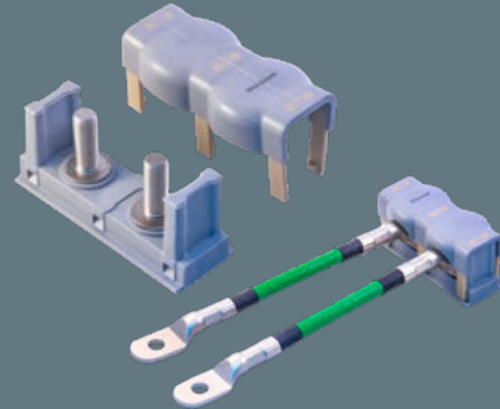
PowerLoad high-current, high-voltage power distribution connectors

PowerTrip high-density power distribution connectors

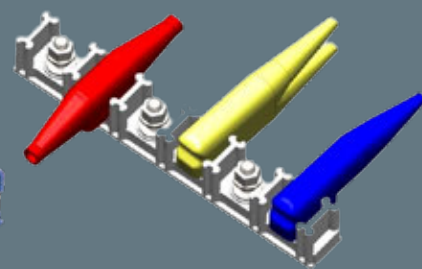
Super ITS and ITS Wing-Lock power connectors



PowerBlock HV High Current Power Feeder System



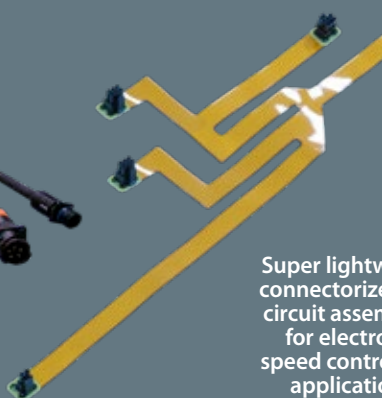
Duraelectric Terminal Block for enhanced safety power line termination and equipment grounding



Duraelectric Terminal Hoods with color coding for multi-phase power



TurboFlex ultra-flexible power cables



Super lightweight connectorized flex circuit assemblies for electronic speed control LRU applications



Autoshrink cold-action tubing and boots

LIGHTWEIGHT AVIONICS, FLIGHT DECK, ACTUATOR, AND SENSOR CONNECTORS



Series 806 micro miniature avionic and sensor connector

SuperNine industry-standard avionic and flight deck connector

Series 791 and 792 Micro-Crimp lightweight, high-density, and high-speed datalink rectangular connectors

WIRE AND CABLE PROTECTION AND MANAGEMENT TECHNOLOGY



Bulkhead cable feed-thrus with wire management grommets

Lightweight composite cable and wire bundle strain reliefs

Solid and slit lightweight color-coded wire protection conduit and fittings

SHIELDING AND GROUNDING SOLUTIONS FOR ELECTROMAGNETIC COMPATIBILITY (EMC)



GroundControl Earth Bond system for composite fuselage equipment grounding

Tubular braiding and MasterWrap wraparound shielding for lightweight shielding applications

Lightweight, flexible ground straps and HSTs



High-voltage, high-current,
and high-frequency
interconnects for eVTOL
distributed power

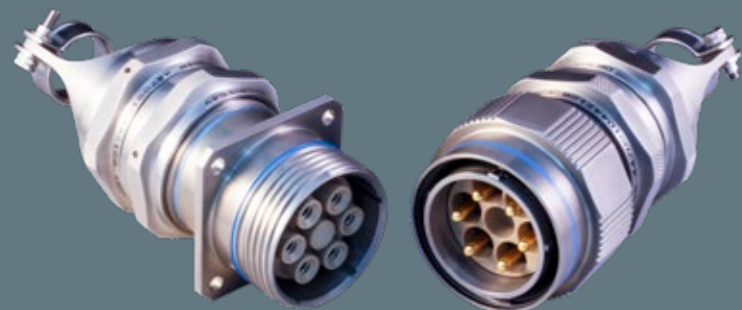
HIGH PERFORMANCE PowerLoad™ Series

eVTOL electric propulsion system interconnect series

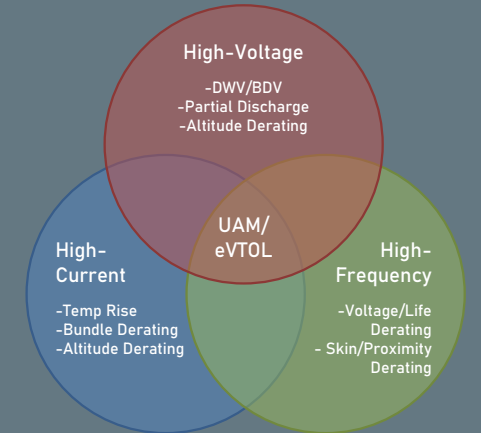


PowerLoad™ is a high-vibration, high-temperature resistant connector series designed for aircraft power distribution in conventional, hybrid, and all-electric aerospace applications. An innovative combination of low-resistance contacts and a one-piece composite thermoplastic insulator—with aggressive contact cavity isolation—results in a reliable high-voltage (HV), high-current (HC), and high-frequency (HF) solution that optimizes wire-to-contact termination and weight reduction in power distribution cables. Designed for use in integrated drive generators, DC-to-AC inverters, electronic speed control applications (such as variable frequency (VFD) drive systems), PowerLoad is available in three- and six-contact layouts for both multiphase and high-frequency power designs. Removable wire-sealing grommet and wire separator allow for easy rear release of contacts and improved sealing of tape-wrapped wire.

- The lightweight PowerLoad 28-6 layout connector is rated at 500 volts up to 50,000 ft. with a current of 45 amps per contact with 3 phase power in parallel at high frequency
- Available configurations include a high-vibration self-locking coupling nut plug, panel-mount receptacle with stub-ACME mating threads, and bulkhead feed-thru for firewall applications
- Aluminum class connectors are rated to 200°C operating temperature; passivated stainless steel designs rated to 230°C

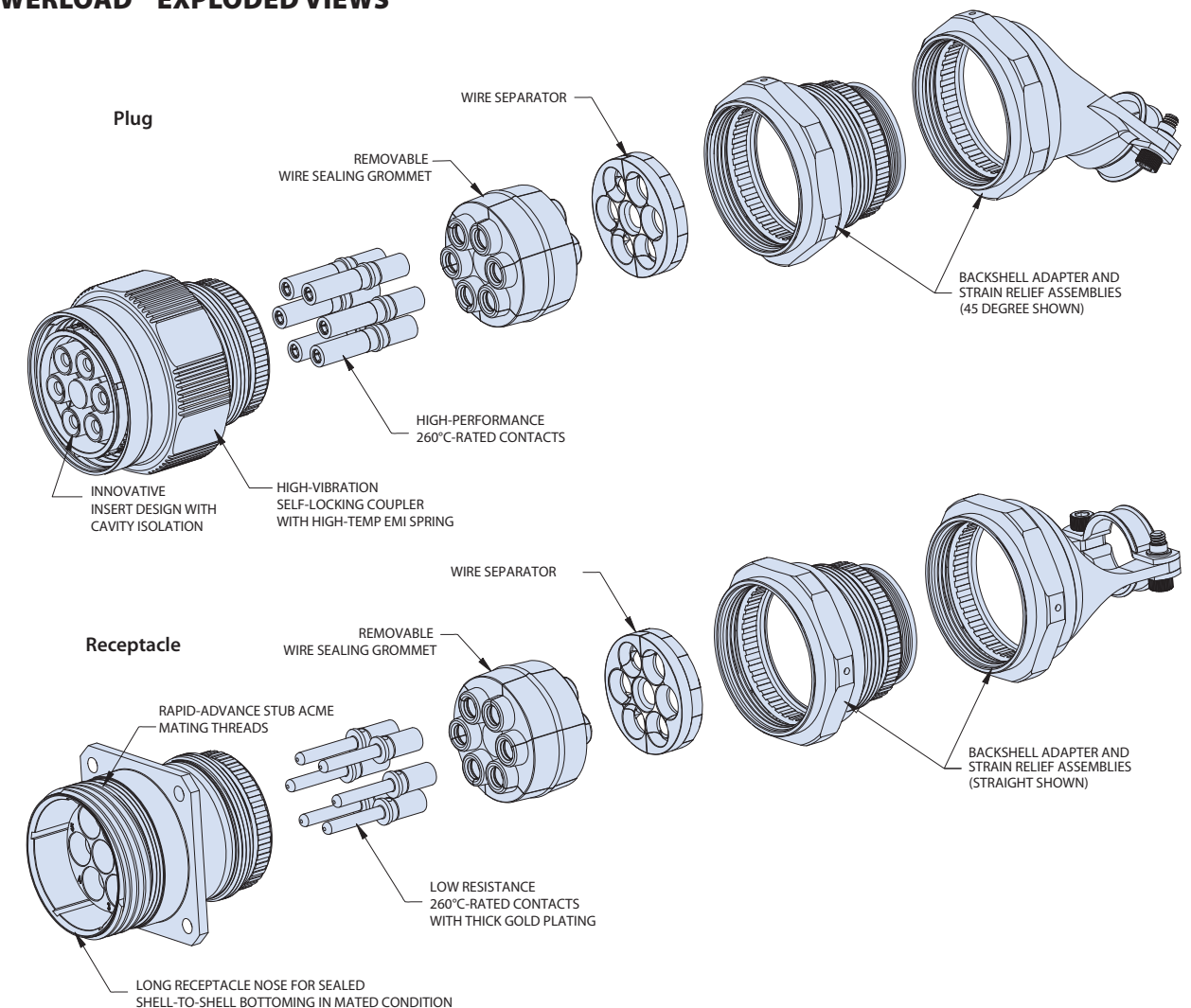


POWERLOAD™ AVAILABLE CONFIGURATIONS



Panel-mount receptacle with integrated wire sealing backshell (left), Cable plug with high-vibration coupler and ground spring (middle), and Bulkhead feed-thru for firewall applications (right). All styles available with a range of contact sizes, size #8, size #2, and size #1/0.

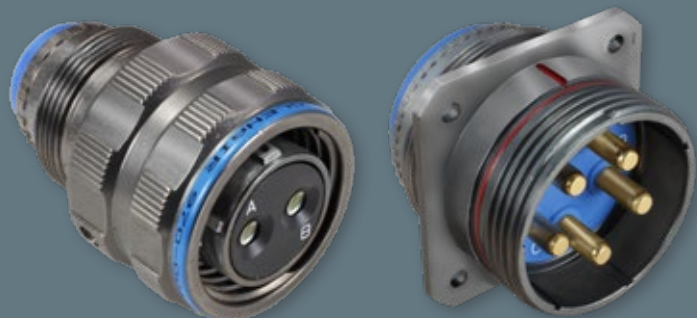
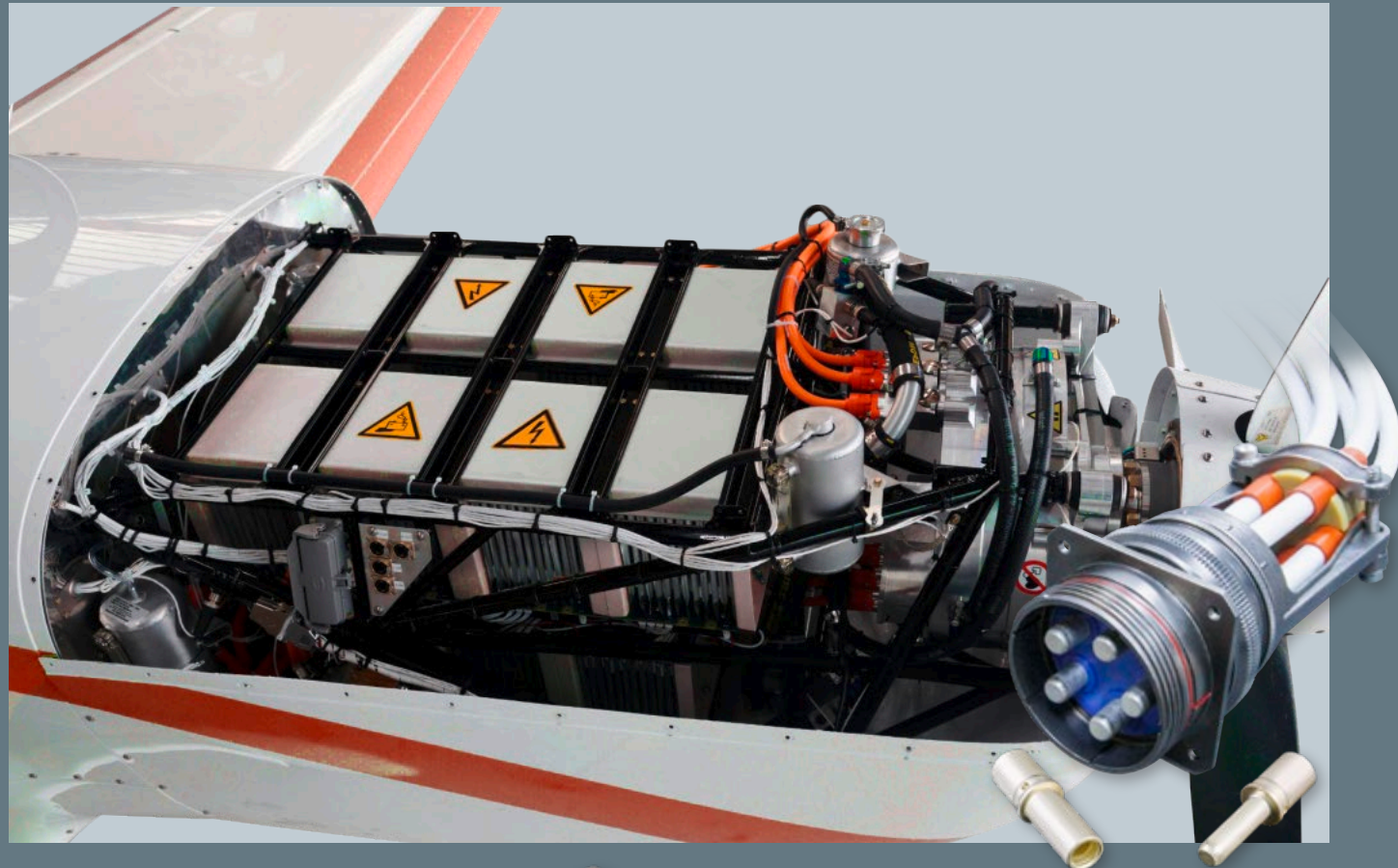
POWERLOAD™ EXPLODED VIEWS



ELECTRICAL POWER
PROPULSION SYSTEM
CONNECTORS,
CABLES, AND
ACCESSORIES

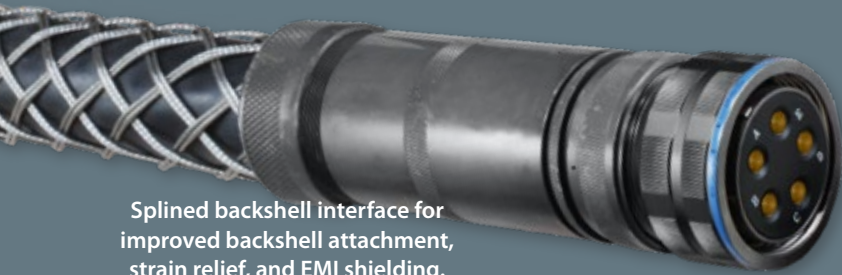


Series 970 PowerTrip high-density reduced size and weight power connectors—ideally suited for multi-phase brushless motor interconnection



Lightweight plug with ratcheting coupling nut and low-resistance LouverBand contacts

Keyed receptacle with superior sealing and EMI shielding



Splined backshell interface for improved backshell attachment, strain relief, and EMI shielding.

The Series 970 PowerTrip™ offers improved performance compared to industrial-grade power connectors including higher density, superior resistance to vibration and shock, lower resistance, and more. Designed explicitly for aerospace-grade power interconnect applications.

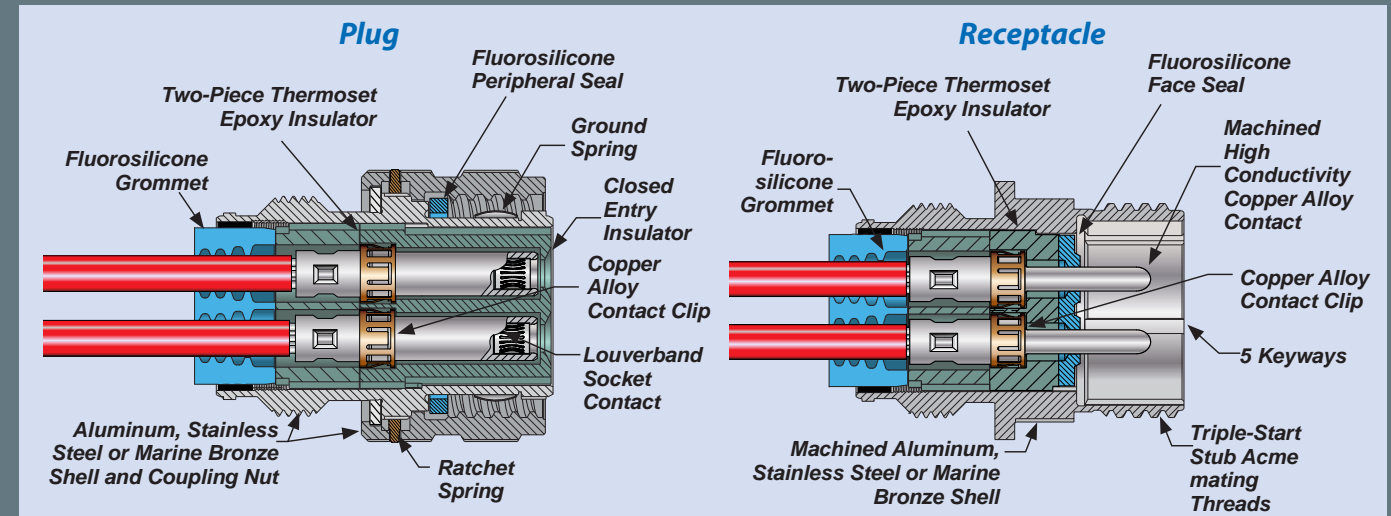
- Fast, easy mating with triple-start ACME thread: 360° turn for full mating
- Reduced size and weight compared to conventional industrial and/or aerospace solutions
- LouverBand sockets for improved current ratings; up to 2000 mating cycles
- Ratcheting coupling nut for secure mating and high vibration resistance
- Operating temperature -65° C to +200° C
- Hermetic and EMI filter options available



SERIES 970
PowerTrip™

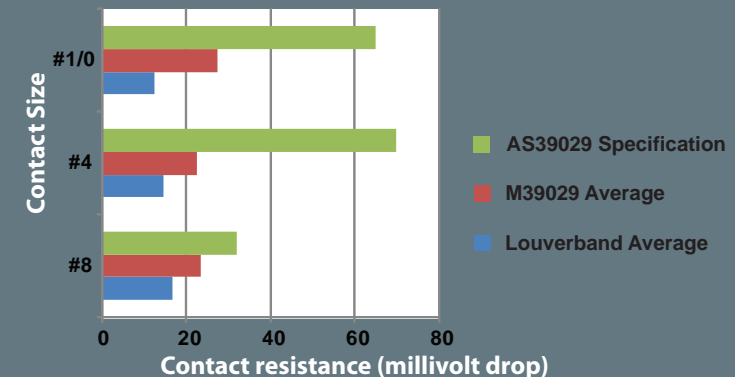
High-density, high-performance power connectors

SERIES 970 POWERTRIP™ CONNECTOR STYLES



Series 970 PowerTrip™ Specifications	
Current Rating	Up to 225 A.
Dielectric Withstanding Voltage	2000 VAC
Insulation Resistance	5000 megohms minimum
Operating Temperature	-65° C. to +200° C.
Shock	300 g.
Vibration	37 g.
Shielding Effectiveness	65 dB minimum from 1GHz to 10GHz.
Durability	2000 mating cycles

CONTACT RESISTANCE AFTER 1000 MATING CYCLES



ABOUT THE POWERTRIP™ CONTACT SYSTEM

Series 970 contacts are precision-machined using high conductivity copper alloy. A stamped and formed spring ("LouverBand") is installed into the socket contact. The spring is made from 6 mil copper alloy. Testing has demonstrated that this contact system outperforms conventional industrial and aerospace-grade contact systems. The LouverBand spring provides many points of electrical contact with the mating pin, as opposed to a few "high spots" on a conventional four-finger contact as shown in the figure below. The size #8 Powertrip socket contact has a total of 18 louvers. The #4 has 27 louvers, and the #1/0 has 42 louvers. The LouverBand design offers lower voltage drop for reduced joule heating. In addition to its electrical advantages, the LouverBand also is mechanically superior to conventional four-finger contacts. The LouverBand spring has consistent, stable normal force, even when subjected to thousands of mating cycles and temperature extremes.



Conventional contact on the left, LouverBand contact on the right

LouverBand socket contact cutaway



High-ampacity Super ITS - 921 high-performance reverse-bayonet for inverter, electronic speed control and other eVTOL aircraft applications



Reverse-bayonet derivatives of M5015 / VG95234 threaded connectors have long been preferred for their rapid mating and rugged resistance to vibration and shock in harsh-environment applications such as military vehicles and missile batteries. Now Glenair introduces an ultra high-performance version of the reverse-bayonet M5015 / VG95234 power connector called the Super ITS - 921. This series is designed for high-ampacity applications where low insertion force LouverBand type contacts, rugged mechanical contact retention, broad temperature tolerance, reduced size, and superior connector and wire sealing are required.

Super ITS - 921 is an extremely durable and environmentally-sealed connector, designed with its own set of high-density contact insert arrangements. Unlike conventional 5015-type connectors designed for industrial and legacy aircraft applications, the Super ITS - 921 offers uncompromised electrical, mechanical, and environmental performance features such as precision-machined aluminum alloy or stainless steel shells with 2000 mating cycle lifespan, rigid thermoplastic two-piece insulators, and machined, highly conductive copper alloy LouverBand contacts. Designed for extreme harsh environments such as are found in military defense applications, the Super ITS - 921 delivers contact and wire support from #16 to 2/0 and 1 mmq – 70 mmq respectively. With ampacity up to 350 amps, and a max working voltage of 2450 VCC / 1750 VCA, the Super ITS - 921 represents the ultimate in mission-critical power interconnection. This power distribution connector is fully tooled and available for immediate application.

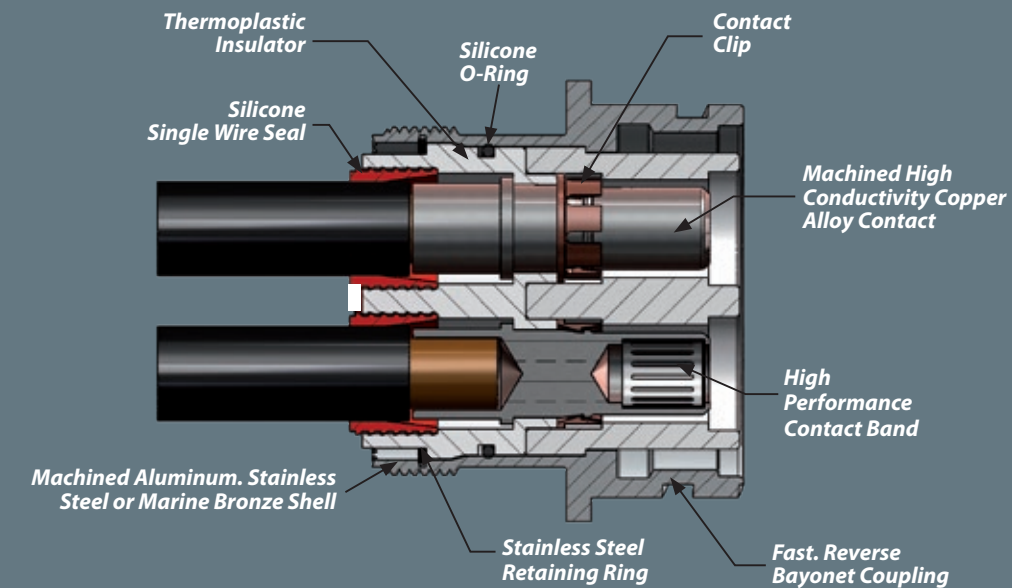
- Super ITS-921 is a high-density reverse-bayonet connector with reduced size compared to standard M5015
- Low insertion force, high-ampacity front-release LouverBand contacts
- Rigid thermoplastic insulator with internal contact retention clips
- Precision-machined aluminum, stainless steel or marine bronze shells with polarization keys
- Interfacial and individual wire sealing for IP67 performance
- Broad operating temperature range: -65° to +180°C
- 2000-cycle reduced insertion-force mating

ADVANCED PERFORMANCE Super ITS-921 Reverse-Bayonet Rigid Insert, High-Ampacity Connectors Features and Benefits



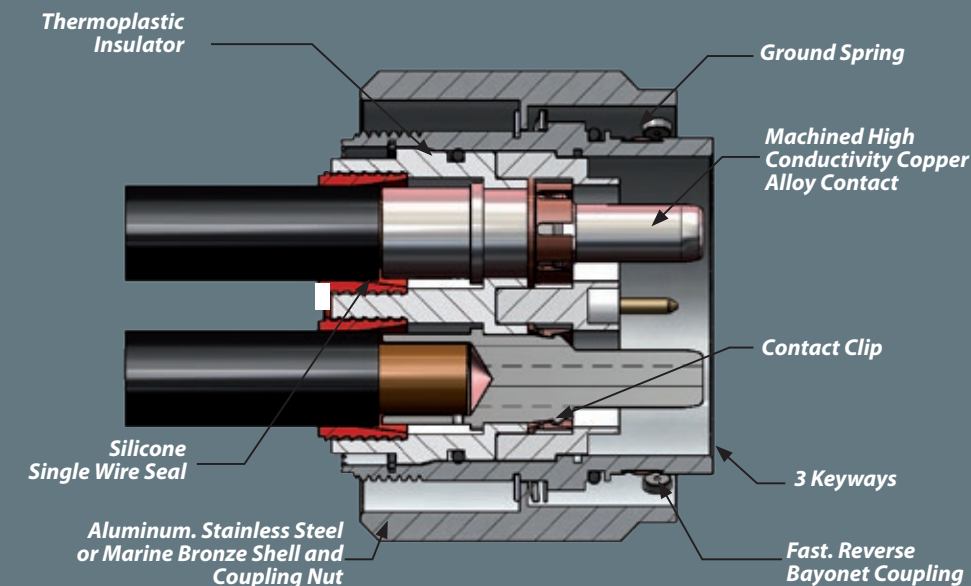
The Super ITS - 921 Connector Series is a high ampacity, harsh environment connector capable of meeting the demanding requirements of power applications utilizing the latest generation of aerospace-grade power cables. Compared to legacy 5015 or other industrial-grade solutions, Super ITS - 921 offers better durability, better wire and connector interface sealing, integrated crimp contact retention clips, thermoplastic insulators, precision-machined shells, and more.

RECEPTACLE



- Fast, easy connector mating with reverse-bayonet coupling
- 3 polarizing keys
- Higher-density insert arrangements for reduced size and weight
- LouverBand Size 0, 4 and 8 socket contacts for high ampacity and longer life
- Crimp, front-release high-conductivity copper contacts
- Individual wire seals
- -65° C to +180° C operating temperature range
- Size 8, 4 and 1/0 power contact sizes
- Size 16 and 12 signal contact size
- Precision-machined plug bodies and receptacle shells

PLUG



PowerBlock HV™ high-current power feeder system and current return network for composite fuselage eVTOL aircraft applications

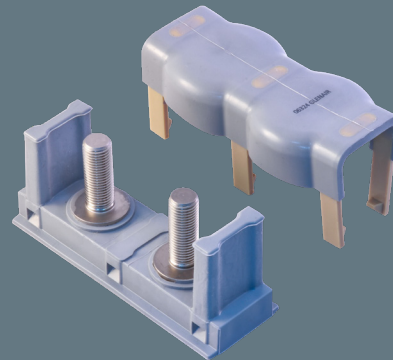
HIGH-CURRENT / HIGH-VOLTAGE
PowerBlock HV Power Feeder System
for aircraft electrical power distribution systems



Unique power feeder system eliminates power line routing and termination issues

For electrical eVTOL motor applications that require discrete routing of 3-phase and DC power lines, Glenair has developed the PowerBlock HV. PowerBlock HV replaces conventional terminal strips and terminal lugs with a solution that eliminates the issues associated with routing large gauge cables. The PowerBlock HV uses a crimp contact system that can accommodate tolerancing variations that routinely occur with large cables. Routing power feeders through the 3-D spatial environment routinely creates installation and terminal lug orientation issues. The PowerBlock eliminates these problems with its unique rotatable pin / socket architecture and unique in-line insulation packaging.

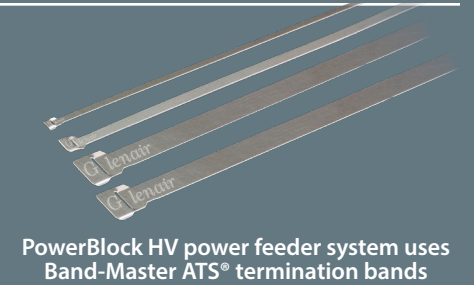
The PowerBlock HV is a complete power feeder and current return network system that includes contacts, cables, holding fixtures, mountable connector packages, as well as high-voltage terminal blocks and lugs for reduction of partial discharge and corona. Lightweight, high-durability Duraelectric terminal blocks, hoods, and cable jackets deliver outstanding environmental and insulation performance.



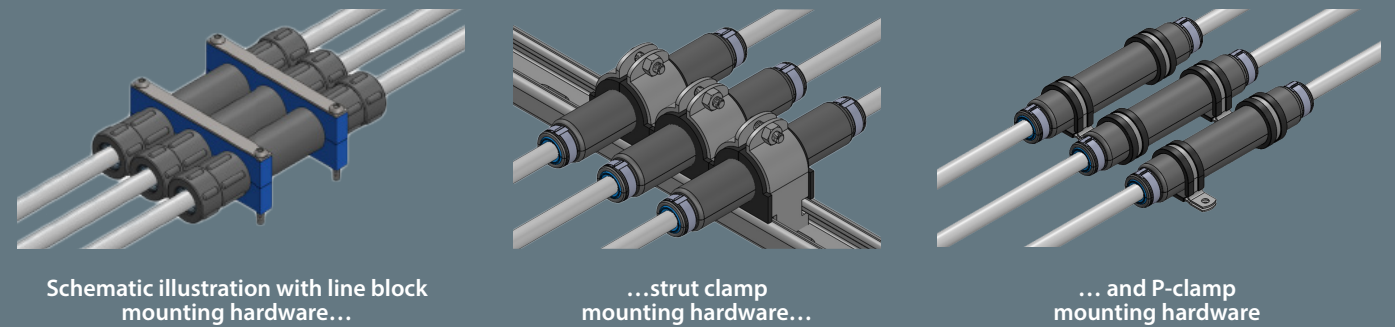
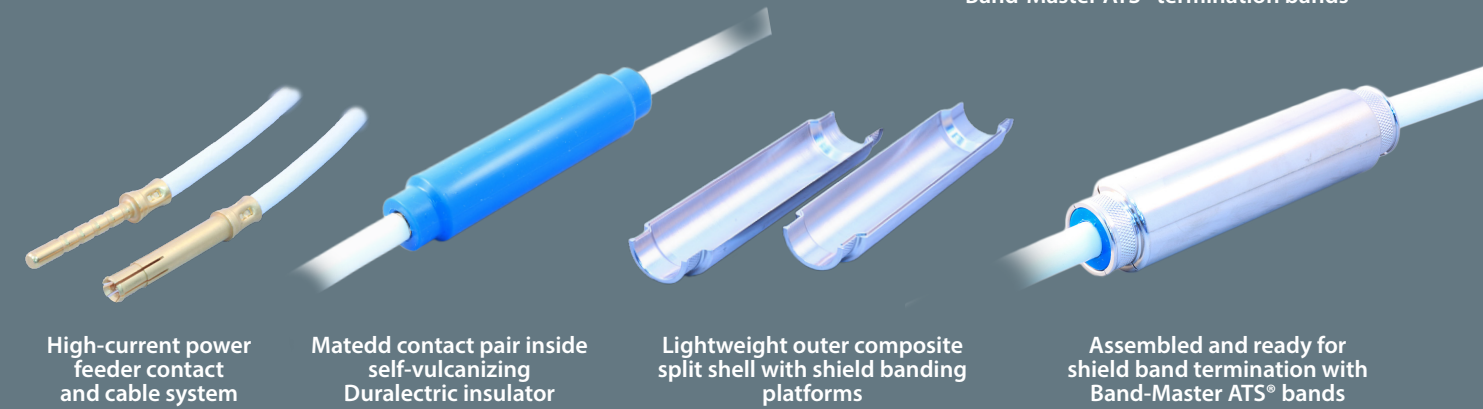
PowerBlock HV: a complete power feeder ecosystem with matched, compatible components

POWERBLOCK HV POWER FEEDER SYSTEM COMPONENTS

- 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



PowerBlock HV power feeder system uses Band-Master ATS® termination bands



Multiple designs of high-voltage terminal blocks with accommodation for PowerBlock HV lugs and/or standard lugs

Conventional and PowerBlock HV terminal lugs

Color-coded terminal lug hoods made from high-performance Duraelectric material

PowerBlock HV™ Current Return Network for protection against electromagnetic interference in aircraft EWIS

HIGH-CURRENT / HIGH-VOLTAGE PowerBlock HV™ Ground (Current) Return Network for aircraft electrical power distribution systems



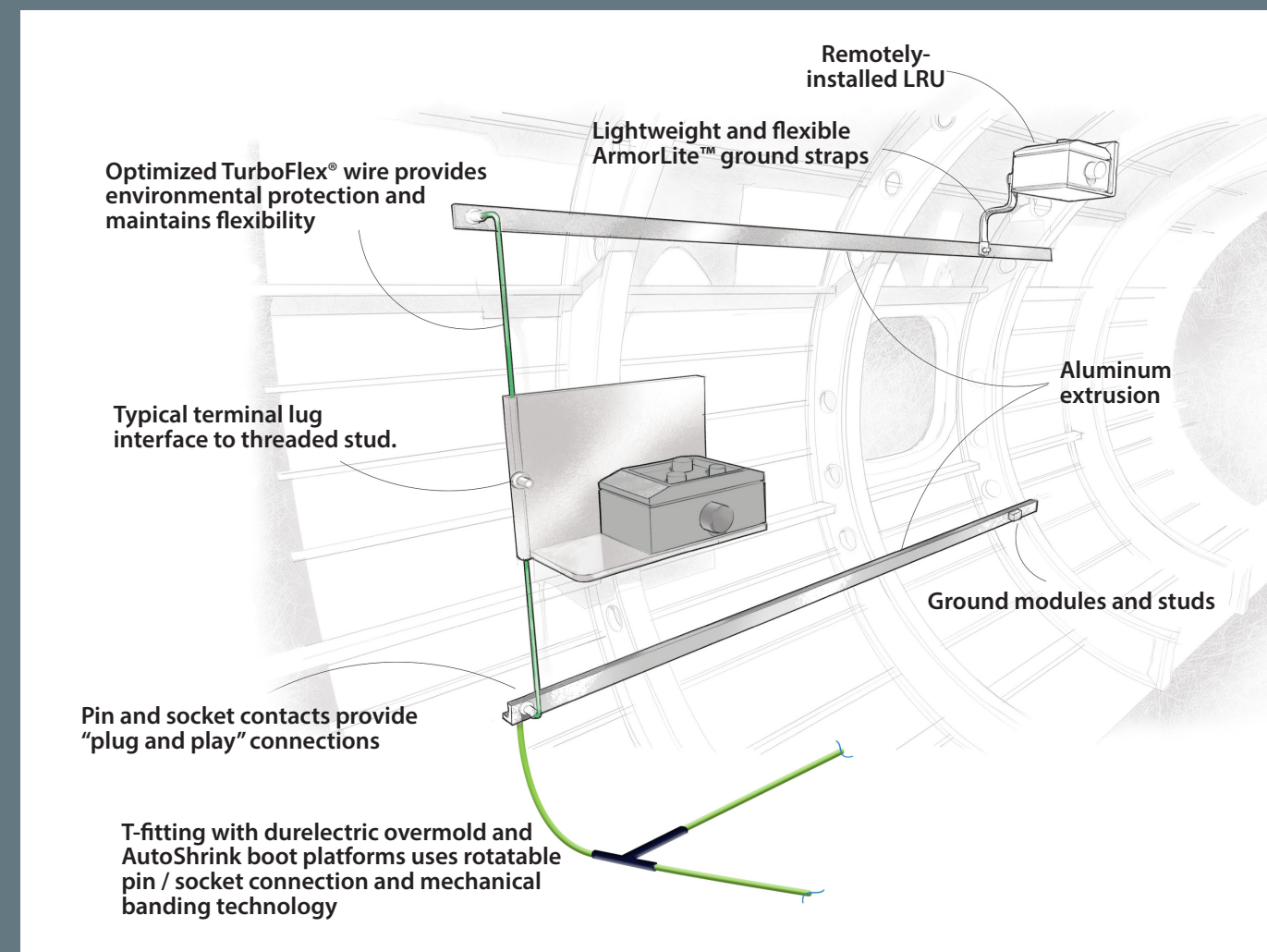
The Glenair Current Return Network revises traditional approaches to grounding systems on commercial aircraft.

The Glenair Current Return Network grounding solution uses a contact system and Band-Master ATS® grounding technology to simplify routing and termination processes and guarantee a stable electrical interface. Power contacts feature a rotatable pin / socket construction to eliminate twisted cable during assembly. The Duralectric™ overmolded T fixture and AutoShrink™ boots, easily installed over the fixture's integral boot platforms, provide a durable environmental seal. The design is scalable for lightning strikes and fault currents.

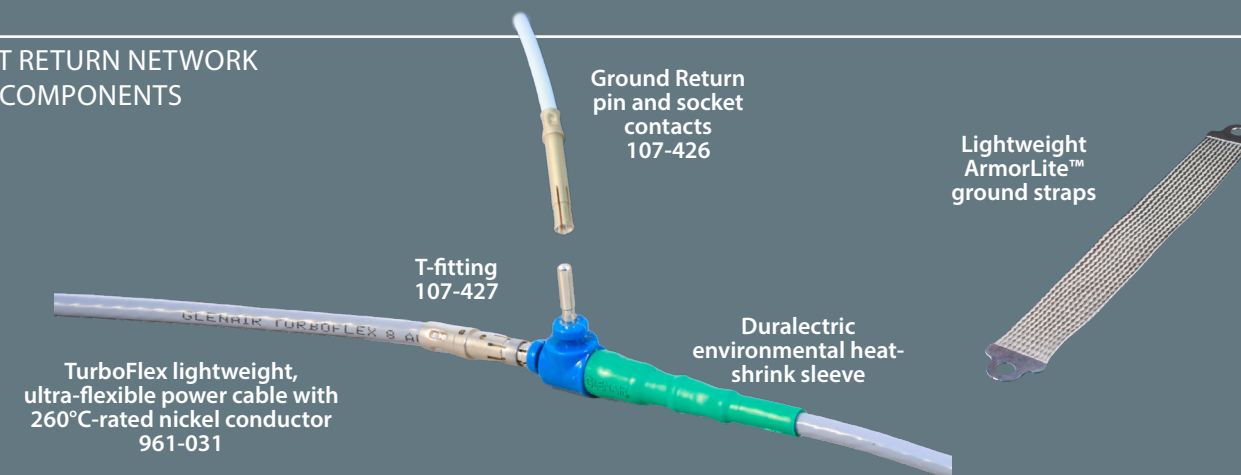
The Current Return Network system employs "plug and play" connections and calibrated banding, eliminating the need for washers and torque wrenches, and waiving inspection requirements. The network's optimized TurboFlex™ wire and 16 mil insulated copper conductor provide both outstanding environmental protection and extreme flexibility.

- Replaces the traditional terminal lug / terminal strip solution
- Resolves cable lug misalignment issues
- Eliminates twisted cable (rotational) problems during assembly
- Integrated / compatible power line feeder system used in combination with PowerLoad power distribution system

CURRENT RETURN NETWORK SYSTEM ILLUSTRATION



CURRENT RETURN NETWORK SYSTEM COMPONENTS



ELECTRICAL POWER
PROPULSION SYSTEM
CONNECTORS,
CABLES, AND
ACCESSORIES



The ultra
flexible and
rugged power
cable solution

SERIES 96
TurboFlex ultra-flexible power distribution cable
Environmental performance · voltage rating data
Duralectric™ jacketing specifications and colors



photo: Matti Blume
courtesy Wikipedia

TURBOFLEX CABLE APPLICATION EXAMPLE



This multibranch TurboFlex power and data interconnect assembly for a ruggedized defense application demonstrates the remarkable flexibility and minimal bend radius of large form-factor (up to 450 MCM) TurboFlex cable. Example shown features UV- and chemical-resistant Duralectric jacketing in FED-STD 595C Safety Orange.



Ultra flexible rope lay construction
TurboFlex bend radius is 3X the
outer diameter

Voltage Ratings			
P/N	Jacket Wall Thickness	AC Voltage Rating, RMS	DC Voltage Rating
961-004	.032"	2000	2800
961-003	.062"	3000	4200
961-002	.093"	3500	4900
961-001	.125"	4500	6300

Standard catalog product is available with either Tin/Copper, Silver/Copper, or Nickel/Copper conductors, with standard Duralectric™ jacketing in four wall thicknesses. Consult factory for special formula Duralectric™ K, F, and C configurations

TurboFlex® power distribution cables are constructed from highly flexible conductors and high-performance insulation to produce cables ideally suited for applications where flexibility, durability, and weight reduction are required. Amazingly durable and flexible—especially in cold weather—the 16 AWG to 450 MCM TurboFlex cable features high strand-count rope-lay inner conductors made with tin-, nickel- and silver-plated copper. TurboFlex is jacketed with Glenair's unique Duralectric™ compound that provides outstanding flexibility and resistance to environmental and chemical exposure. Duralectric is also low smoke, zero halogen. Long life and performance are critical in power distribution applications. TurboFlex, with its flexible conductors and durable jacket delivers both.



Available in a broad
range of gages,
16 AWG to 450 MCM



Many sizes In-stock and available for
immediate, same-day shipment. No
minimums!



◀ Duralectric™ is the high-performance TurboFlex® jacketing material perfectly suited for immersion, chemical or caustic fluid exposure, temperature extremes, UV radiation and more—available in a broad range of colors including safety orange

TURBOFLEX® WITH DURAELECTRIC™ JACKETING:
ENVIRONMENTAL PERFORMANCE

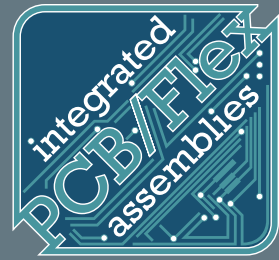
Temperature rating: -60°C to 260°C
Halogen free per IEC 60614-1
Accelerated weathering and simulated solar radiation at ground level per IEC 60068-2-5; 56 Days exposure, suitable for greater than 50 years of service in direct sunlight
Flame resistant per IEC 60614-1
Flame resistant per UL 1685, section 12 (FT4/IEEE120), vertical-tray fire-propagation and smoke release test
Limiting oxygen index of 45 per ISO 4589-2:1999
Low smoke per NES 711, smoke density of 11.75
Smoke density class F1 per NF F 16-101 IAW DIN EN 60695-2-11:2011

Low smoke toxicity per NES 713, tested value of 1.9
Fungus rating of 0 per MIL-STD-810g method 508.5, Does not support fungal growth
ASTM D624, die B tear strength, 150 pounds per inch minimum on jacket material
Low outgassing per ASTM e595 after post curing, TML .06%, CVCM .006%, WVR .02%
Resistant to fluids per MIL-STD-810F, method 504
JP-8 per MIL-DTL-83133 (NATO type 34)
MIL-H-5606 hydraulic fluid
MIL-PRF-23699 lubricating oil
MIL-C-85570 cleaner
TT-I-735 Isopropyl alcohol
AMS 1432 potassium acetate deicing/anti-icing fluid
MIL-C-87252 coolant
Amerex AFF fire extinguishing foam

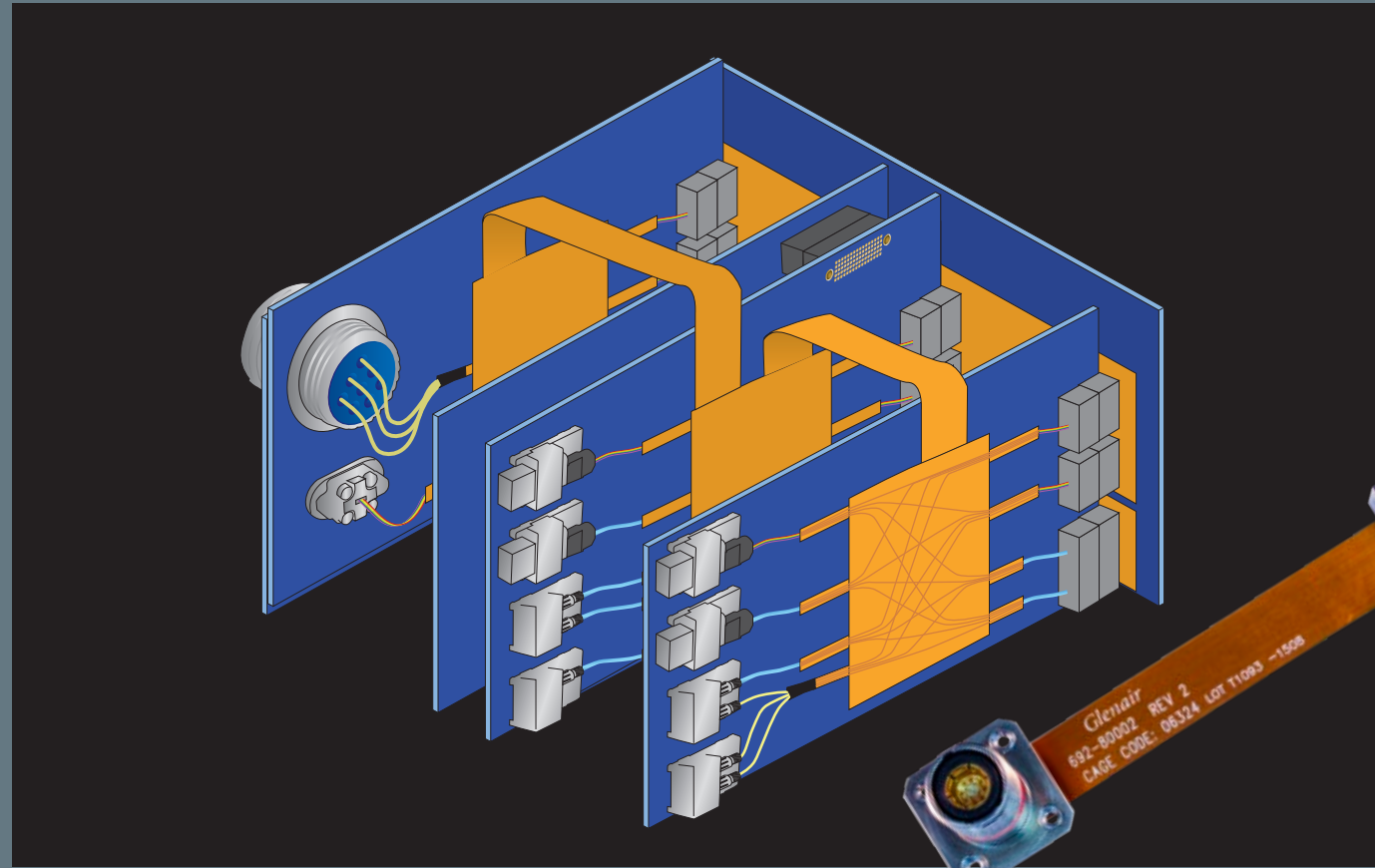
Jacketing Options	
Weatherproof, halogen free, flame resistant, functional to 260°C	
0	Black Fed-Std-595C #17038
1	Desert Tan Fed-Std-595C #33446
2	Red Fed-Std-595C #11120
3	Orange Fed-Std-595C #12300
4	Yellow Fed-Std-595C #13591
5	Green Fed-Std-595C #14193
6	Blue Fed-Std-595C #15125
7	Violet Fed-Std-595C #17142
8	Gray Fed-Std-595C #26270
9	White Fed-Std-595C #17875

Abrasion Resistance	Good
Wear Resistance	Good
Flame Resistance	Excellent
Sunlight Resistance	Excellent
Flex Resistance	Excellent

ELECTRICAL POWER
PROPULSION SYSTEM
CONNECTORS,
CABLES, AND
ACCESSORIES

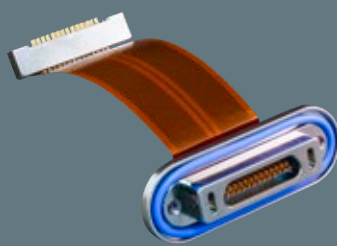


Flex, Rigid Flex, and Rigid PCB assemblies with signature interconnect technology for aircraft LRU applications

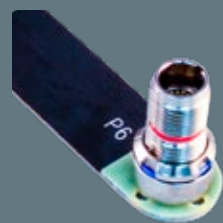


Turnkey connectorized flex, rigid flex, and rigid PCB assemblies incorporating Glenair's broad range of innovative small form-factor circular and rectangular PC-tail connector solutions. All terminations backpotted for compliance with conformal coating processes.

GLENAIR SIGNATURE PC-TAIL CONNECTOR TYPES AVAILABLE IN TURNKEY FLEX ASSEMBLIES



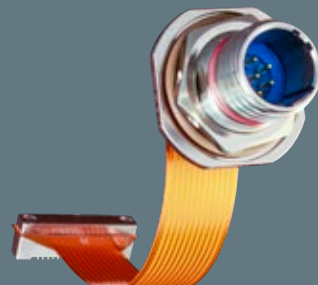
Series MWD Micro-D and innovative pogo-pin AlphaLink



Series 88 SuperFly



Series 79 Micro-Crimp

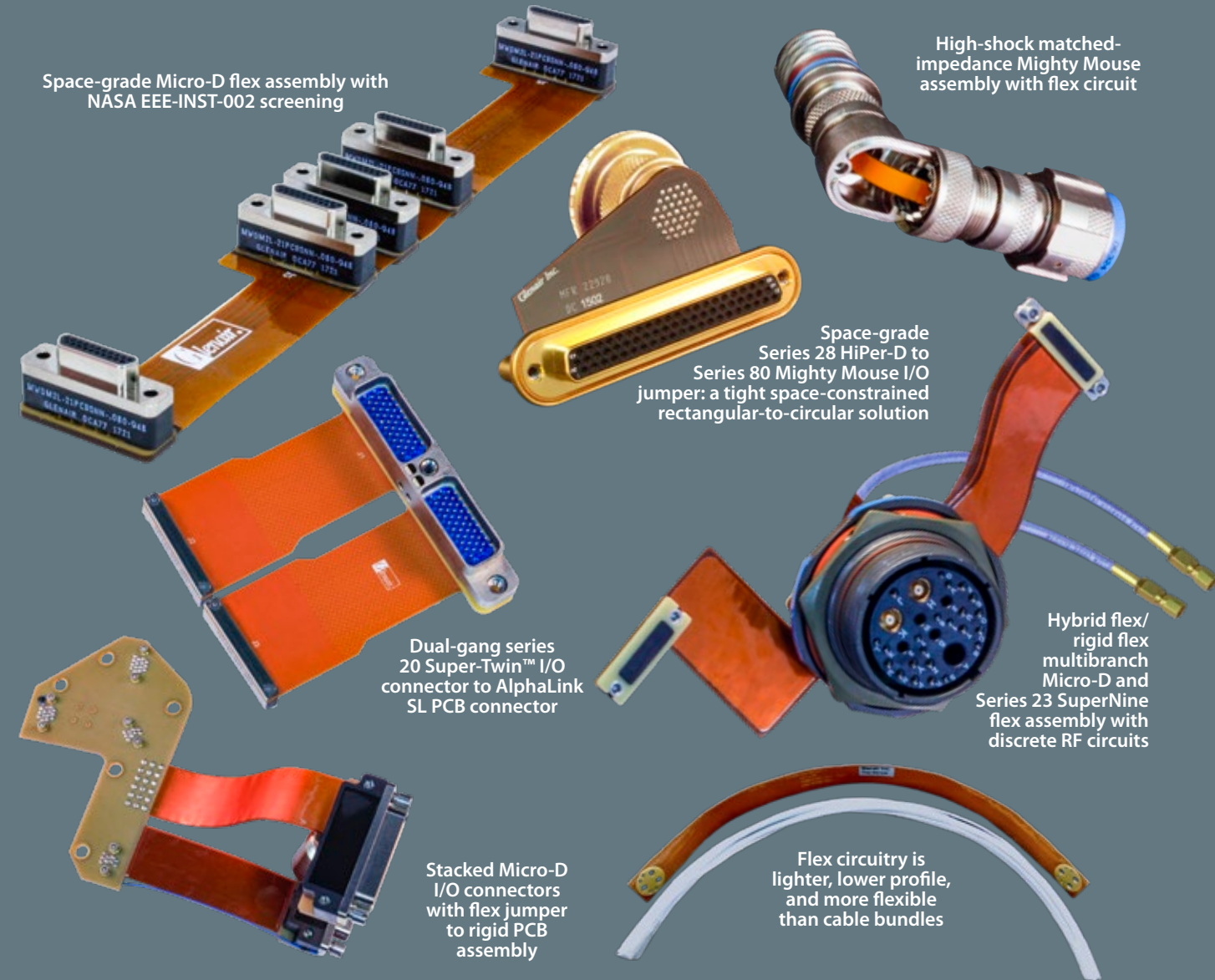


SuperNine MIL-DTL-38999 type flexi with board connector

TURNKEY
Flex, Rigid Flex, and Rigid PCB Assemblies with Glenair signature PC tail connectors



MULTIBRANCH FLEX / PCB ASSEMBLIES WITH GLENAIR SIGNATURE CONNECTORS



Space-grade Micro-D flex assembly with NASA EEE-INST-002 screening

High-shock matched-impedance Mighty Mouse assembly with flex circuit

Space-grade Series 28 HiPer-D to Series 80 Mighty Mouse I/O jumper: a tight space-constrained rectangular-to-circular solution

Dual-gang series 20 Super-Twin™ I/O connector to AlphaLink SL PCB connector

Hybrid flex/rigid flex multibranch Micro-D and Series 23 SuperNine flex assembly with discrete RF circuits

Stacked Micro-D I/O connectors with flex jumper to rigid PCB assembly

Flex circuitry is lighter, lower profile, and more flexible than cable bundles

CONVENIENT PACKAGING AND INTEGRATION

Flex circuit assemblies are ideal for space-constrained electronic packages and enclosures, or for interconnect systems that are required to flex in 3 axes during normal use. Flex circuitry offers complete freedom to design boards and wiring for even the most densely-packed electronic enclosures. In piloted eVTOL applications, the ability to reduce or even eliminate discrete wiring and boards in flight deck avionics in favor of flex circuitry helps designers make the most efficient use of available space, reducing weight in critical weight-sensitive applications.



AUTOSHRINK™

Fast and easy cold-action shrink boot and tubing solutions for wire and cable protection



Designed for rugged weathering, UV and ozone-resistant performance, Glenair Autoshrink is the one-piece easy-action shrink boot and tubing solution. Quickly attach shrink boots, splice insulation, or repair Glenair Duraelectric formula jacketing. Straight, 45° and 90° angle lipped shrink boots lock into boot groove on adapters to keep out environmental debris. Universal-design Autoshrink tubing delivers reliable and durable sealing as well as mechanical protection for cable-end terminations in harsh military and industrial applications. Built from Glenair Duraelectric formula material, Autoshrink is fully hydrophobic and resistant to caustic chemicals and solvents. Easy-action spiral hold-out and large cold shrink ratio makes for fast installation and durable, split-resistant performance.

- Straight, 45° and 90° angle-lipped shrink boots and shrink tubing
- Fast and easy installation
- Four high-performance material types
- Fire-resistance in all material types
- Reliable IP68 sealing
- 3000 VAC rated
- Multiple color options
- Service temperature range: -65°C to 300°C
- Ideal for repair of cables and conduit with Duraelectric jacketing
- Extreme UV / sunlight resistance
- Integrated ground strap versions available



Mil-Aero / Industrial fluid-resistant lipped shrink boots

Fast and easy repair of Duraelectric-jacketed cables

Utilize for termination of lugs on new installations

SERIES 77

Cold-Action Shrink Boots and Tubing



Four material types for high UV plus LSZH, fluid resistance, temperature tolerance, and subsea use

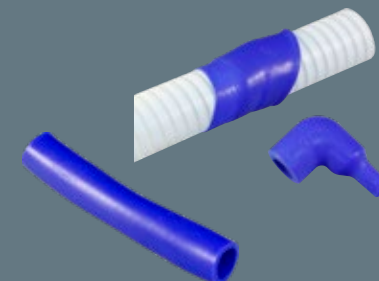
AUTOSHRINK D UV-RESISTANT / LSZH SHRINK BOOTS AND TUBING



Autoshrink D is a high-performance elastomeric material (Glenair Duraelectric™ formula polymer GPS67) cold-action shrink boot and jacket solution for general-purpose use in military and commercial aerospace electrical wire interconnect systems and other harsh wire protection, sealing, and repair applications.

- Service temperature range: -65°C to 225°C
- Fire resistant and Low smoke-zero halogen (LSZH)
- General-purpose resistance to common aerospace, military and industrial fluids
- Tubing available with integrated ArmorLite ground strap

AUTOSHRINK F ADVANCED FLUID RESISTANT SHRINK BOOTS AND TUBING



Autoshrink F is a high-performance elastomeric material (Glenair Duraelectric™F formula polymer GPS125) cold-action shrink boot and jacket solution for application-specific use in military and commercial aerospace electrical wire interconnect systems and other harsh wire protection, sealing, and repair applications. Autoshrink F is highly resistant to aircraft industry jet fuels, oils, solvents, and cleaners.

- Service temperature range: -65°C to 200°C
- Fire resistant and suitable for immersion in jet fuel, diesel, lubricants, and solvents

AUTOSHRINK S SUBSEA SHRINK BOOTS AND TUBING



Autoshrink T is a high-performance rubber material (Glenair ThermaRex formula GPS139) cold-action shrink boot and jacket solution for use in high-temperature applications in military and commercial aerospace electrical wire interconnect systems and other harsh-environment wire protection, sealing, and repair applications.

- Service temperature range: -65°C to 300°C
- Fire resistant and low smoke-zero halogen (LSZH)
- Resistant to common aerospace, military and industrial fluids

AUTOSHRINK T HIGH-TEMPERATURE-TOLERANT SHRINK BOOTS AND TUBING



Autoshrink S is a high-performance polymer material (Glenair Subsea formula GPS153) cold-action shrink boot and jacket solution for use in high-pressure applications such as underwater oil & gas industry electrical wire interconnect systems and other subsea harsh-environment wire protection, sealing, and repair applications.

- Service temperature range: -40°C to 100°C
- Low smoke-zero halogen (LSZH)
- Resistant to common industrial and environmental fluids

LIGHTWEIGHT
AVIONICS,
FLIGHT DECK,
ACTUATOR AND
SENSOR CONNECTORS

**SERIES
806
MIL-AERO**

Advanced performance,
reduced size and weight
connector series IAW
MIL-DTL-38999



Series 806 offers significant size and weight savings while meeting key performance benchmarks for a broad range of eVTOL / UAM applications including sensors, flight navigation avionics in piloted vehicles, electronic speed controllers, and more. Designed for broad use in harsh vibration, shock, and environmental aircraft zones—as well as high-altitude, unpressurized zones with aggressive voltage ratings and altitude immersion standards—the Series 806 Mil-Aero features numerous design innovations including durable mechanical insert retention, radial and triple-ripple grommet seals. Its reduced thread pitch and re-engineered ratchet prevent decoupling problems, particularly in small shell sizes, solving one of the major problems of shell size 9 and 11 MIL-DTL-38999 Series III connectors.

SAVE SIZE AND WEIGHT WITH SERIES 806 CONNECTORS



- Next-generation small form factor aerospace-grade circular connector
- Designed for harsh application environments including air taxi sensors, flight navigation electronics, and flight deck avionics
- Integrated anti-decoupling technology
- High density 20HD, 22HD, RF, and high-speed contact arrangements
- Hermetic and filter versions
- +200°C temperature rating

**Series 806 Mil-Aero
Micro Miniature Circular Connectors**
for rugged aerospace / UAM applications



SERIES 806 MIL-AERO: FEATURES / SPECIFICATIONS

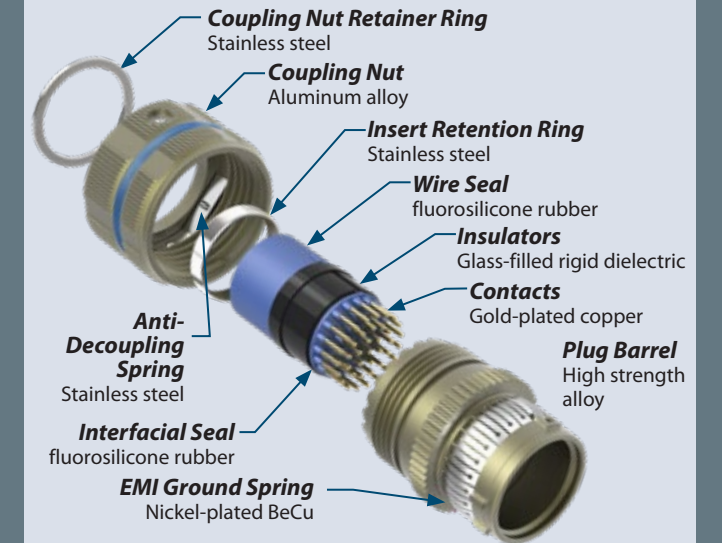
- High-density #20HD and #22HD arrangements for reduced size and weight
- Supported wire sizes:
#20HD contacts 20–24 AWG
#22HD contacts 22–28AWG
- Dielectric withstanding voltage
#20HD layouts: 1800 Vac
#22HD layouts: 1300 Vac
- Reduced pitch triple-start modified anti-decoupling stub ACME mating threads
- +200°C operating temperature
- “Triple ripple” wire sealing grommet (75,000 ft. rated)
- Snap in, rear release crimp contacts
- Metal contact retention clips
- Integral Nano-Band shield termination platform
- EMI shielding effectiveness per D38999M para. 4.5.28 (65 dB min. leakage attenuation @ 10GHz)
- 10,000 amp indirect lightning strike
- MIL-S-901 Grade A high impact shock

**AVAILABLE LIGHTWEIGHT ALUMINUM
“CODE RED” HERMETICS**

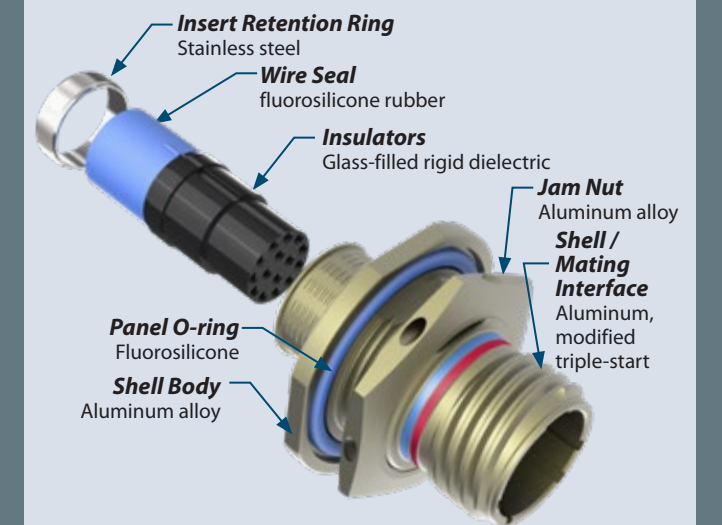
CODE RED is a lightweight encapsulant sealing and application process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ESA) provides durable hermetic sealing with better than 1×10^{-7} leak rate performance. Gold-plated copper contacts deliver outstanding low-resistance current carrying capacity.



SERIES 806 MIL-AERO PLUG



SERIES 806 MIL-AERO RECEPTACLE



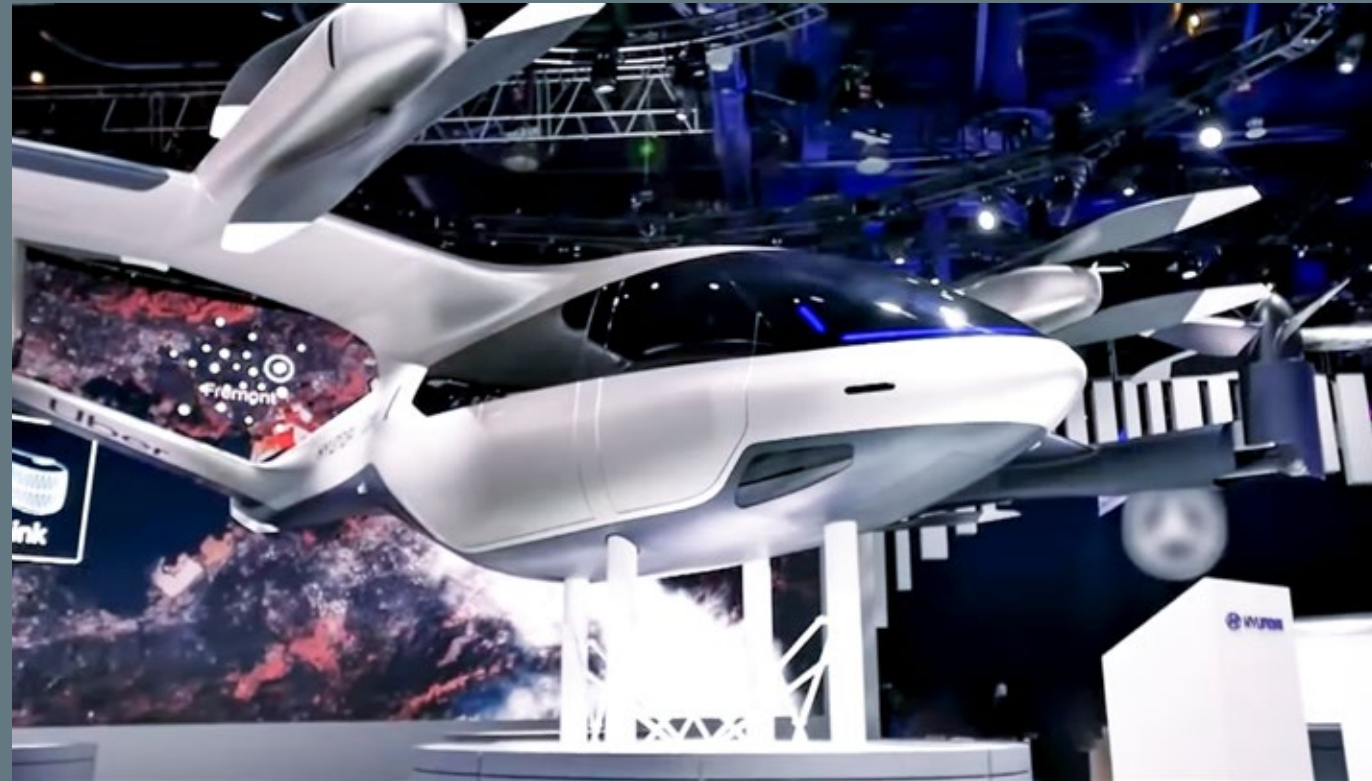
SMALLER AND LIGHTER WITH EQUAL D38999 PERFORMANCE?

<p>High-Density Layouts Twice as many contacts in a smaller package</p> 	<p>“Top Hat” Insulator High voltage rating, foolproof alignment</p> 	<p>Triple Ripple Wire Seal Reliable 75,000 ft. altitude immersion</p> 
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LIGHTWEIGHT
AVIONICS,
FLIGHT DECK,
ACTUATOR AND
SENSOR CONNECTORS



The advanced-performance “fly-by-wire”
connector series



SuperNine® is the aerospace industry’s most mature and complete power, signal, high speed, and high-frequency RF interconnect. Ideally suited for a broad range of eVTOL applications, from an I/O interface role on electronic controllers, processors, and actuators, to targeted use on sensors and avionics gear, the SuperNine provides a level of reliability and safety not found on industrial-grade connectors. SuperNine® offers outstanding durability, sealing, ease of shield termination, a broad range of PC tail configurations, environmental and hermetic bulkhead feed-throughs, connector savers, as well as off-the-shelf EMI/EMP filter connectors and more—all supported with Glenair’s well-established reputation for service, support, and fast turnaround.



Glenair SuperNine connectors in action, shown here in a harsh-environment overmolded cable assembly for a military jet application. Glenair supplies both discrete connectors as well as turnkey interconnect assemblies for all our high-performance connector series.

Designed for use in rugged vibration and shock applications, Glenair SuperNine is the only D38999-type series connector to pass the Bell Helicopter 299-100-B29 vibration testing



SERIES 23

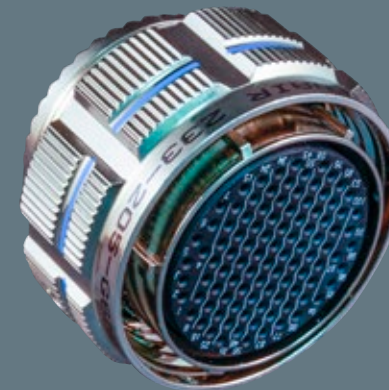


MIL-DTL-38999 Series III Type

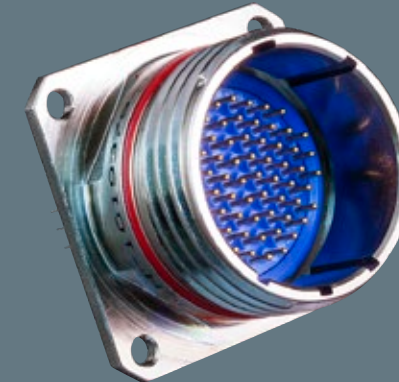
Lighter, faster, stronger interconnects for Urban Air Mobility



RUGGED, HIGH VIBRATION AND SHOCK COUPLING AND MATING TECHNOLOGY



Anti-decoupling, high vibration ratcheting coupling nut for ultimate safety and reliability



Triple-start stub ACME mating thread profile for fast mate and demate during maintenance cycles

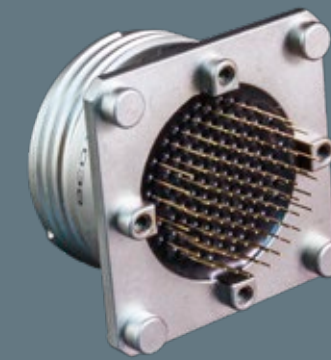


Special cable and receptacle connector go-betweens (Sav-Con's) for critical connector protection

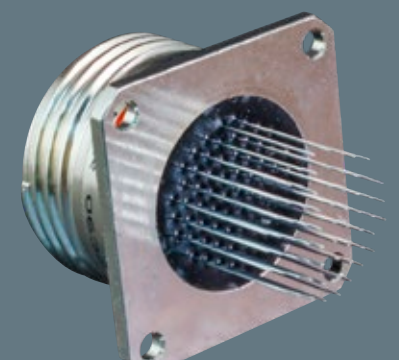
BROAD RANGE OF PC TAIL STANDOFF DESIGNS FOR I/O-TO-BOARD APPLICATIONS



Dual standoff design for superior resistance to vibration and shock

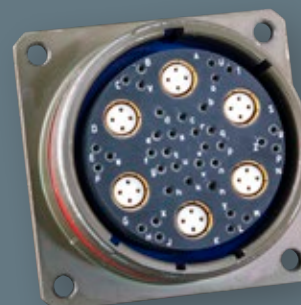


Threaded standoff design for easy attachment to boards



Ultra low-profile flat configuration for reduced package size applications

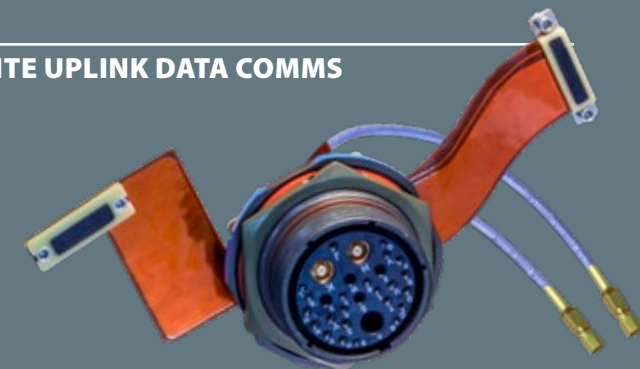
HIGH-SPEED AND RF DESIGNS FOR SENSORS AND SATELLITE UPLINK DATA COMMS



Industry-standard Quadrax-equipped layouts for signal and high-speed data



Ultra-light weight Octaxial contacts for 10Gb data transfer per contact



High-frequency RF designs for satcom communications

LIGHTWEIGHT
AVIONICS,
FLIGHT DECK,
ACTUATOR AND
SENSOR CONNECTORS



High-reliability rack-and-panel rectangular connectors for aircraft electronic systems



Series 791: the high-performance signal, power, and RF rack-and-panel rectangular connector

High-density rectangular connectors may see considerable use in lightweight vertical-takeoff air taxis as they facilitate the overall miniaturization of electronic equipment, including avionics gear and flight deck displays. Given the need for shielded / grounded interconnects that can meet EMC and lightning strike requirements, air taxis will find higher-performance solutions, such as the Series 791 Micro-Crimp, will provide a surer path to certification than automotive-grade rectangulars such as the ubiquitous D-sub. The Micro-Crimp family of rectangular connectors features two designs that are ideally suited for signal, high-speed data, and RF applications. The Series 791

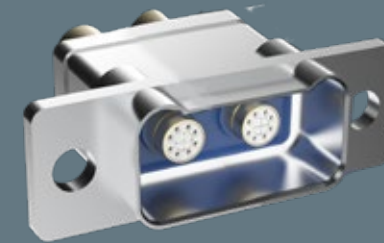
incorporates dual-lobe polarization, scoop-proof shells, integrated EMI grounding fingers, and is qualified for a wide range of aerospace applications. This precision-machined rectangular connector is designed for

higher levels of reliability and safety than may be achieved with commercial-grade solutions.

- Next-generation small form factor aerospace-grade rectangular connector
- Scoop-proof recessed pin contacts
- 37 arrangements, 12 shell sizes for the ultimate in versatility
- Rugged aluminum alloy dual-lobe shell
- Environmental
- EMI shielded
- Blind mating



The next-generation *high-speed* miniature rectangular for demanding avionic and flight control applications



The Series 792 connector brings high-speed datalink capability to the Glenair Series 79 rectangular connector family. Size 8 cavities accept standard Quadrax and El Ochito datalink contacts. The 792's small size and blind-mate capability makes it a perfect choice for radar sensors, communications gear, avionics, and instrumentation. Board mount versions feature straight and right-angle terminals for easy I/O-to-board termination.

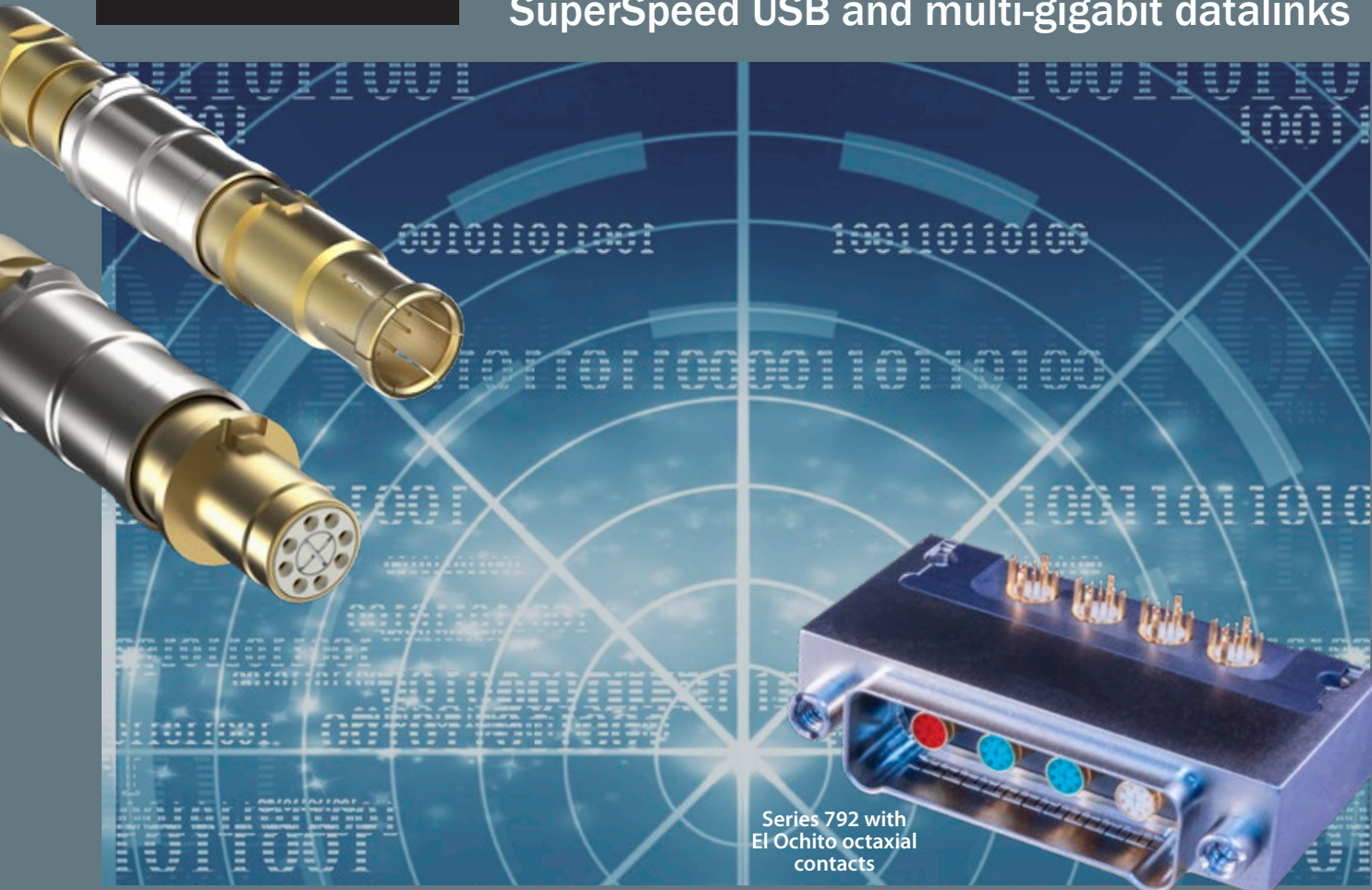
The Series 792 is an aerospace-grade miniature rectangular connector for high-speed datalinks including 10Gb Ethernet, USB 3.0, and HDMI. The Series 792 features precision-machined (not stamped!) aluminum alloy shells with dual lobes for robust polarization. The 100% scoop-proof interface protects contacts from damage. An integrated ground spring reduces susceptibility to electromagnetic interference. Hybrid layouts with discrete size #23 signal or power contacts add additional versatility.

- High-speed Ethernet, USB 3.0, HDMI
- Printed circuit board and cable connectors
- Scoop-proof interface
- 12 arrangements, 6 shell sizes for the ultimate in versatility
- Rugged aluminum alloy dual-lobe polarized shells
- Environmentally sealed
- Integrated EMI shielding and grounding
- Blind mating

LIGHTWEIGHT
AVIONICS,
FLIGHT DECK,
ACTUATOR AND
SENSOR CONNECTORS

El Ochito®

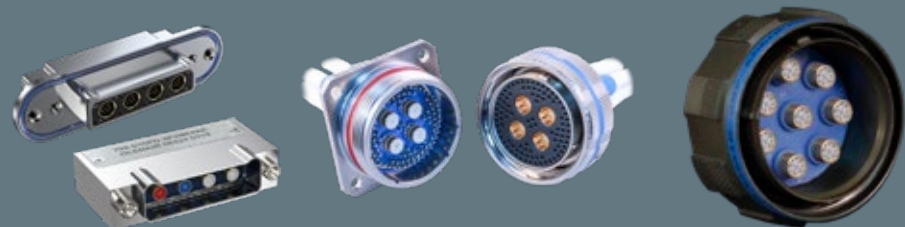
High-speed octaxial contacts for Ethernet, SuperSpeed USB and multi-gigabit datalinks



Series 792 with El Ochito octaxial contacts

High speed, harsh environment El Ochito® octaxial contacts save size and weight in aircraft avionics, weapons systems, satellites, radars, and communications equipment.

AVAILABLE SIGNATURE CONNECTOR PACKAGING INCLUDES



Series 792 miniature rectangular

806 Mil-Aero Micro miniature

SuperNine advanced performance "fly-by-wire"

- 10GbE, SuperSpeed USB, and multi-gigabit shielded pairs
- Universal drop-in for keyed size #8 connector cavities
- Data-pair isolation for optimal signal integrity
- Crimp or threaded shield termination contact types
- Snap-in, rear release
- Environmentally sealed
- Aerospace-grade cable assemblies
- 50% cable / contact reduction compared to Quadrax

HIGH-SPEED OCTAXIAL El Ochito® Contacts



Protocols, exploded views of Type I and Type II contacts

El Ochito® White	El Ochito® Blue	El Ochito® Red
1000BASE-T, 10GBASE-T	SuperSpeed USB	HDMI, DisplayPort, SATA
El Ochito® White octaxial contacts provide 10GbE in a single size #8 contact cavity (compared to two Quadrax) for 100BASE-T solutions.	Low-dielectric material. 90 ohms. El Ochito® Blue octaxial contacts provide an aerospace-grade solution for SuperSpeed USB 3.0	Low-dielectric material. Up to 5 Gbps. 100 ohms. El Ochito® Red octaxial contacts provide an aerospace-grade solution for multi-gigabit data rates.

El Ochito® Type I Contacts, Non-Serviceable

26 AWG, Crimp Wire Shield Termination

Type I Pin Contact

Type I Socket Contact

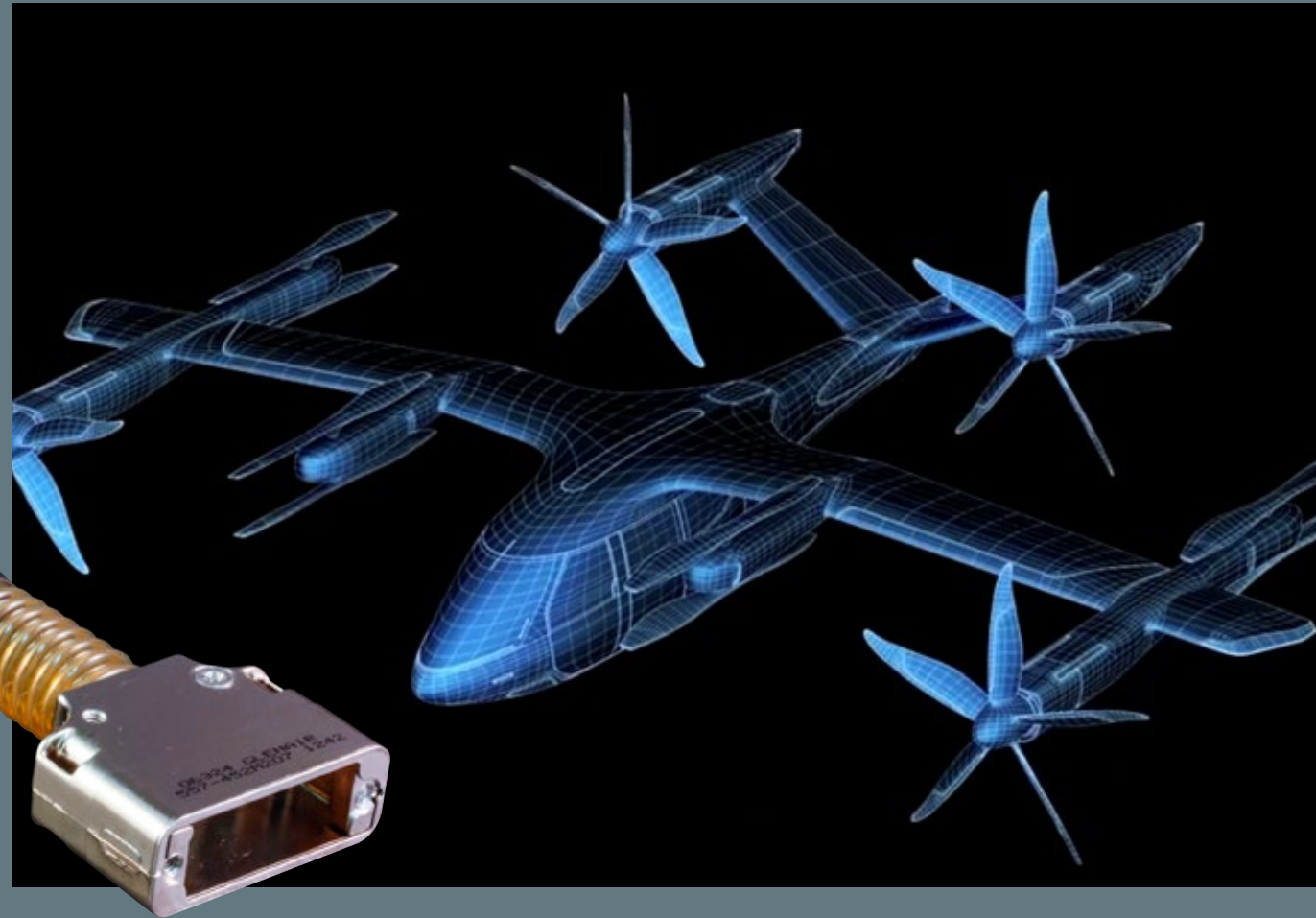
El Ochito® Type II Contacts, Serviceable

24-26 AWG, Threaded Wire Shield Termination, Integral Contact Release Sleeve

Type II Pin Contact

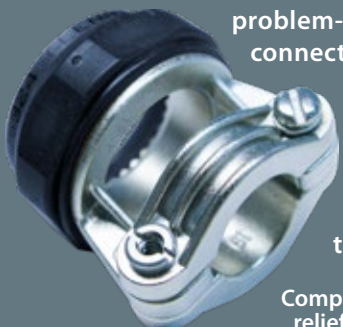
Type II Socket Contact

Aerospace backshell and accessory designs for weight reduction, life-of-aircraft durability, and optimal reliability



Innovative solutions to EWIS environmental sealing, wire management, strain relief, and EMC shield termination

Glenair is the go-to design partner for innovative solutions to electrical wire interconnect system (EWIS) problems in airframe applications. Our backshell and connector accessory design engineers are responsible for more problem-solving innovation in our industry than every other connector accessory supplier combined. Take our extensive composite thermoplastic connector accessory series, for example. Glenair can supply the lightest weight solution for all EWIS cable routing, shield termination, environmental sealing, and cable strain relief applications—all in conductively-plated engineering thermoplastic.



Composite thermoplastic backshells and strain reliefs reduce weight and improve durability

GLENAIR: MASTERS OF THE BACKSHELL UNIVERSE

- High-performance circular connector accessories for every environmental, mechanical and electromagnetic shielding requirements
- Tens of thousands of innovative part numbers in inventory ready for same-day shipment
- Fast turnaround on made-to-order accessories, typically only two to three weeks
- Constant, relentless backshell innovation

NEW INNOVATIONS IN Connector Backshells and Accessories

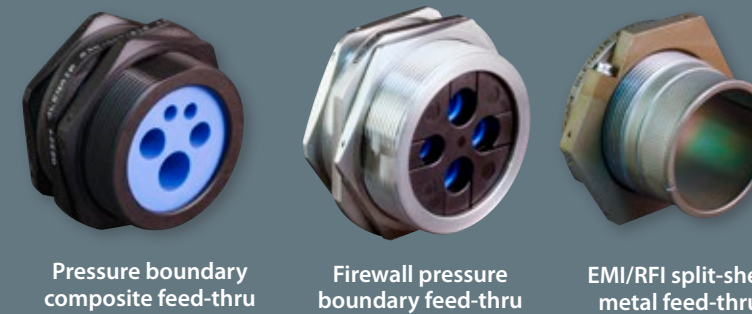


Unique, problem-solving backshells and connector accessories for aerospace applications

HIGH-TEMP, LIGHTWEIGHT COMPOSITE THERMOPLASTIC ACCESSORIES

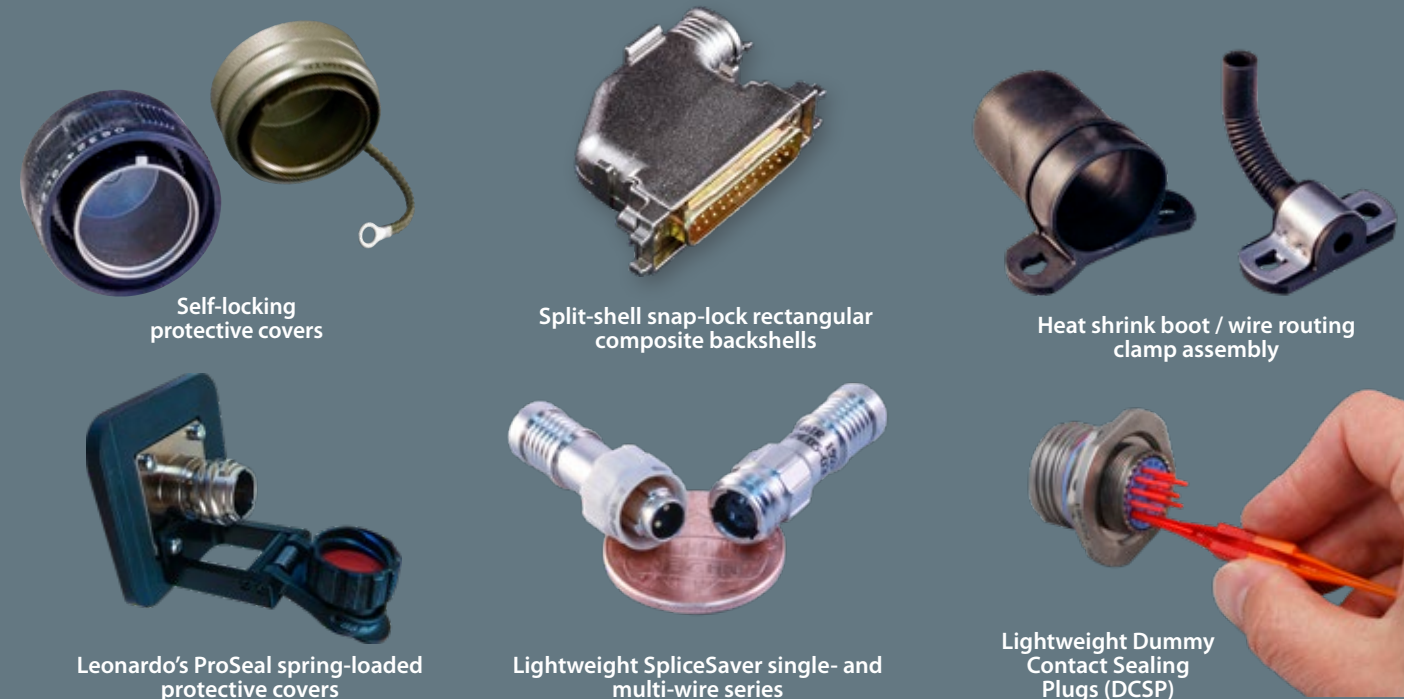


PRESSURE BOUNDARY, FIREWALL, AND SPLIT-SHELL FEED-THRUS



- High-grade engineering thermoplastic or machined metal
- Six pressure-boundary feed-thru layouts with accommodation for 1 – 6 cables
- Split-shell jam nut versions with EMI/RFI shield termination porch
- O-ring sealed panel and box mounting interface

INNOVATIVE NEW EWIS TECHNOLOGIES



SWING ARM®

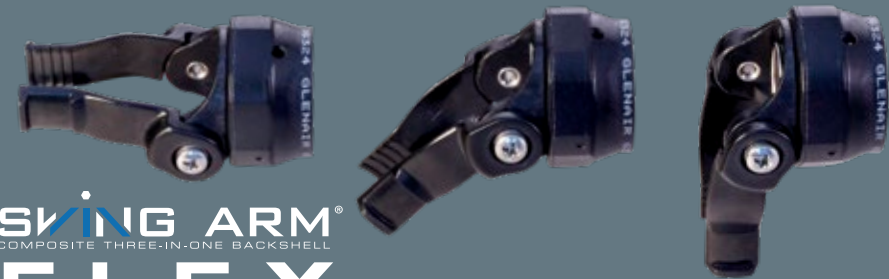
3-in-1 lightweight composite backshell with optional drop-in braid termination follower



Glenair's composite Swing-Arm® strain relief backshell is a lightweight and corrosion-free cable clamp with cable shield termination options for a wide range of EWIS applications. This innovative backshell has become the standard shield termination device for weight reduction in both military and commercial airframe applications. Made from temperature-tolerant composite thermoplastic, rugged Swing-Arm® backshells offer easy installation, long-term performance, and outstanding weight and SKU reduction. Performance tested to stringent AS85049 mechanical and electrical standards and available for all commonly-specified mil-standard and commercial cylindrical connectors including MIL-DTL-38999, SuperNine, and Series 806 Mil-Aero.

Introducing Swing-Arm FLEX®, Glenair Next-Generation Composite Swing-Arm® Strain Relief

- Significant weight reduction: no saddle bars or hardware
- Rapid assembly: cable self-centers on bundle, little or no wrapping tape required
- Braid sock and drop-in band termination follower versions for EMI/RFI applications
- Internal conductive ground path



SWING ARM®
COMPOSITE THREE-IN-ONE BACKSHELL
FLEX

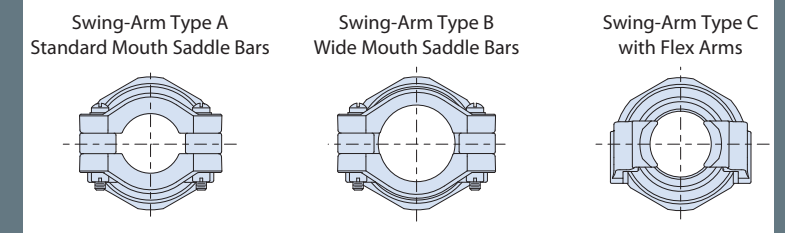
User-configurable straight, 45°, and 90° cable routing

Swing-Arm 3-in-1 lightweight composite thermoplastic strain-relief and EMI/RFI shield termination backshell

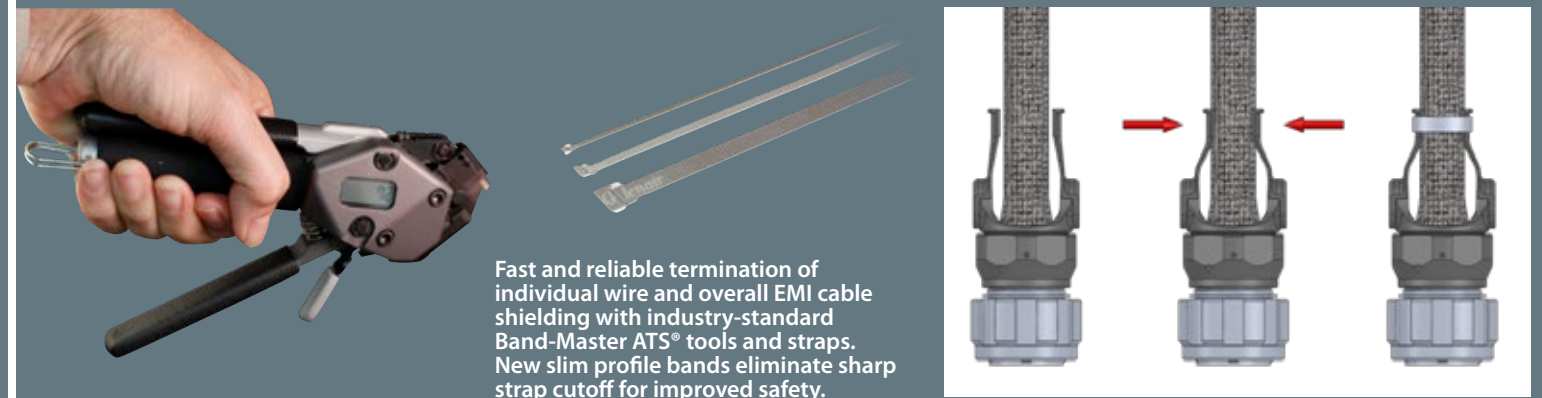


THREE STYLES OF SWING-ARM STRAIN RELIEF CLAMPS

- Style A - standard mouth, rigid saddle bars
- Style B - wide mouth (for larger cable diameters), rigid saddle bars
- Style C Swing-Arm FLEX - no saddle bars, self-centering round cable strain relief



SWING-ARM VERSATILITY: FROM SIMPLE CABLE STRAIN RELIEF TO EMI/RFI SHIELD TERMINATION



Fast and reliable termination of individual wire and overall EMI cable shielding with industry-standard Band-Master ATS® tools and straps. New slim profile bands eliminate sharp strap cutoff for improved safety.

DROP-IN FOLLOWER FOR DIRECT TERMINATION OF OVERALL OR INDIVIDUAL WIRE SHIELDING



Two drop-in-follower designs, solid and slotted are available for all Swing-Arm styles (A, B, and C).

SWING-ARM AND SWING-ARM FLEX WITH OPTIONAL INTEGRATED SHIELD SOCK



For fast and reliable EMI/RFI shield termination of individual wire and overall cable shielding

SWING-ARM SHIELD SOCK TERMINATION OPTIONS, STANDARD SPLIT RING OR STARSHIELD STAR



Termination of shield sock to cable shield with split support ring

Termination of shield sock to individual wire shields with auxiliary "flex shield" HST and StarShield™ Star



Conduit wire protection for air taxi
electrical and hybrid applications



Turnkey connectorized
factory conduit assembly for
power charging application

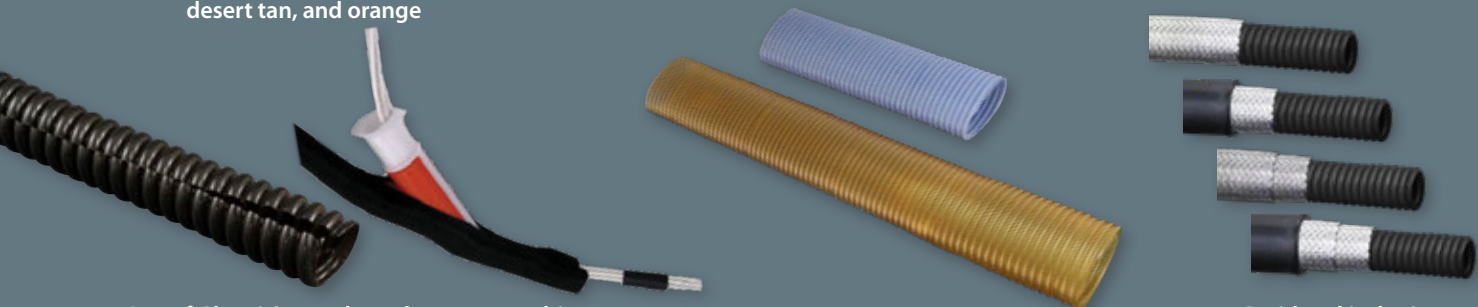
SERIES 72 ANNULAR CONVOLUTED BULK TUBING



Conduit colors include standard
black, natural, blue, yellow, red,
desert tan, and orange

Conduit Tubing Material Choices	
Kynar®	Flexible, thermally stabilized, resistant to harsh chemicals and radiation. UV resistant, self-extinguishing, nontoxic and resistant to low-temperatures. 166° C temp. rating.
PVDF	Flexible and chemical/radiation resistant. Available in 4 colors plus standard black and natural. 150° C temperature rating.
G-FLEX Siltem	Lightweight, halogen-free, low toxicity, low smoke. 175° temperature rating. Ideal for harsh environment applications. Exceptional flexibility and crush resistance.

- Lightweight, flexible polymer-core materials and easy to install fittings, transitions and adapters
- A wide range of colors including safety orange and desert tan
- Internal and external braided shielding provides outstanding EMI/RFI, environmental, chemical and rodent protection
- User-installable or turnkey, factory-terminated assemblies



Any of Glenair's annular polymer-core tubings can be provided slit, for on-site installation or addition of wires in open wire loom applications. Use the Wire Loom Tool for easy wire insertion

In-house manufacturing allows Glenair to design and fabricate non-standard shapes such as oval profile for specialized wire routing applications

Braid and jacketing options for EMI, chemical, environmental and rodent protection

**Polymer-core and metal-core
wire protection conduit systems**

user-installable and factory-terminated



GUARDIAN SERIES LIGHTWEIGHT COMPOSITE EASY-TO-INSTALL CONDUIT SYSTEM



- Economical and easy to install. *It's a snap!*
- General duty, all-purpose wire protection
- O-ring equipped environmental sealing (splash-proof)
- Self-locking coupling nuts
- Band and shrink-boot ready
- Metal and composite thermoplastic materials



composite thermoplastic
feed-thru fitting



metal conduit-to-
connector adapter



composite thermoplastic
conduit-to-connector
adapter
Easy installation:

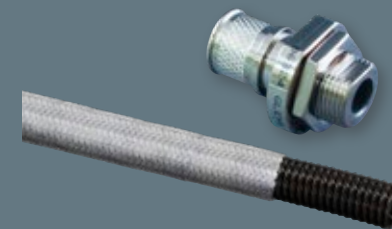


Direct-attach multibranch
transitions



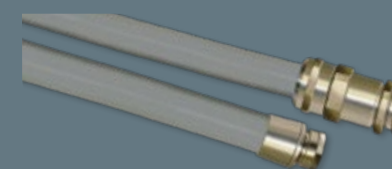
1. Install pair of provided O-rings on the two forwardmost tubing convolutes
2. Insert tubing into fitting
3. Run provided retaining clip into slot, aligned with the third convolution of conduit, behind the 2 O-rings.

SERIES 74 HELICAL CONVOLUTED POLYMER-CORE TUBING AND FITTINGS



- Lightweight, flexible helical polymer-core materials and easy to install fittings, transitions and adapters
- Choice of five materials: ETFE, FEP, PFA, PTFE, and low-smoke, halogen-free PEEK
- Factory-terminated assemblies or user-installable configurations
- All popular part numbers in stock and ready for same-day shipment

SERIES 75 METAL-CORE CONDUIT AND FITTINGS



- Choice of three materials: Brass, Stainless Steel, and Nickel Iron Alloy
- Turnkey, factory-terminated assemblies for harsh environments
- All materials deliver superior EMC performance as well as crush resistance and environmental sealing

TURNKEY FACTORY-TERMINATED POINT-TO-POINT AND MULTIBRANCH CONDUIT ASSEMBLIES



GroundControl earth bond ground stud and electrical return network solution for conventional and composite aircraft



Various sizes and types of ground studs for attachment to different wall thicknesses and material types

Designed for explicit use in ground path return networks in airframe and fuselage structures

The GroundControl Earth Bond system is designed for easy attachment of ground studs to electrical return path networks in composite airframes. The complete system includes hydraulic hand tools, a range of available ground stud sizes designed for use with Glenair lightweight microfilament ground straps, and fastening hardware. Easy one-hand-operation setting tools are available for in-situ installation on the aircraft. Studs are a conductive bilaminar (copper core) design with extremely low electrical resistance. The system supports blind hole installation. No surface preparation is required. Both UNC and metric thread studs are available, as well as special thin-wall versions with integrated sealing.

- Fast installation equals cost savings
- Universal application: may be applied to any suitable location
- Bond installed from one side
- No surface preparation of bonding area required
- Minimal operator training needed
- Professional appearance and aesthetic

GroundControl Earth Bond / Ground Stud Installation System



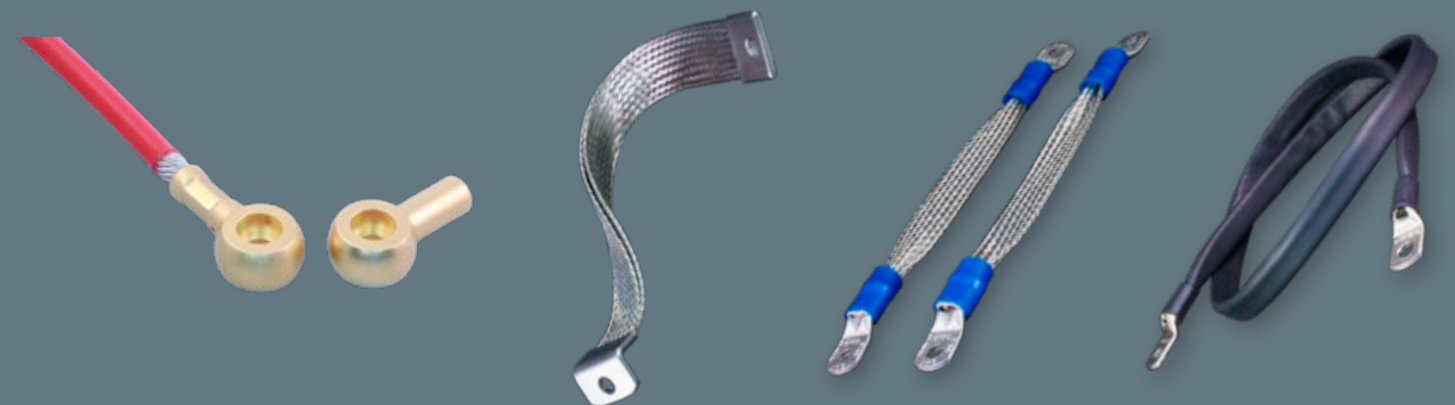
Qualified for use in commercial airframe applications

HYDRAULIC SETTING TOOLS



Hydraulic Setting Tool				
Part Number	Pulling Force	Weight	Length	Optional Test Gauge
PMT6	10KN	1.28 kg	185mm	80928
PMTC6	10KN	1.28 kg	185mm	80928
PMT8	18KN	1.28 kg	185mm	80928
PMT10	25KN	1.28 kg	185mm	80928

ACCESSORY GROUND STRAPS AND ATTACHMENT HARDWARE



PowerBlock system high-voltage terminal lugs

2-ply microfilament-cladded composite thermoplastic ground strap

Round cross-section braided ground strap

Harsh environment and chemical-resistant ground strap jacketing

SHIELDING
AND GROUNDING
SOLUTIONS FOR
ELECTROMAGNETIC
COMPATIBILITY

ARMORLITE™

Microfilament nickel-clad expandable
stainless steel EMI/RFI braided shielding



Save weight and ensure safe and reliable performance on every flight. All-Up-Weight (AUW) has met its match: ArmorLite™ microfilament stainless steel braid saves significant weight compared to standard plated copper shielding. By way of comparison, 100 feet of 5/8 inch ArmorLite™ is more than four pounds lighter than standard plated copper shielding used in EMI/RFI and lightning strike protection.

ArmorLite™ is an expandable, flexible, high-strength, conductive stainless steel microfilament braid material designed for use as EMI/RFI shielding in high-performance wire interconnect systems. ArmorLite™ is packaged in a wide range of formats including bulk expandable shielding, mesh tape, turnkey backshell shield sock assemblies, factory overbraiding, ground straps, HSTs, and more. ArmorLite™ offers superior temperature tolerance compared to other lightweight tubular braided shielding including microfilament composite technologies. New ArmorLite™ CF offers advanced

corrosion protection compared to all other shielding types with comparable electrical performance due to its innovative combination of conductive copper microfilament and stainless steel cladding.

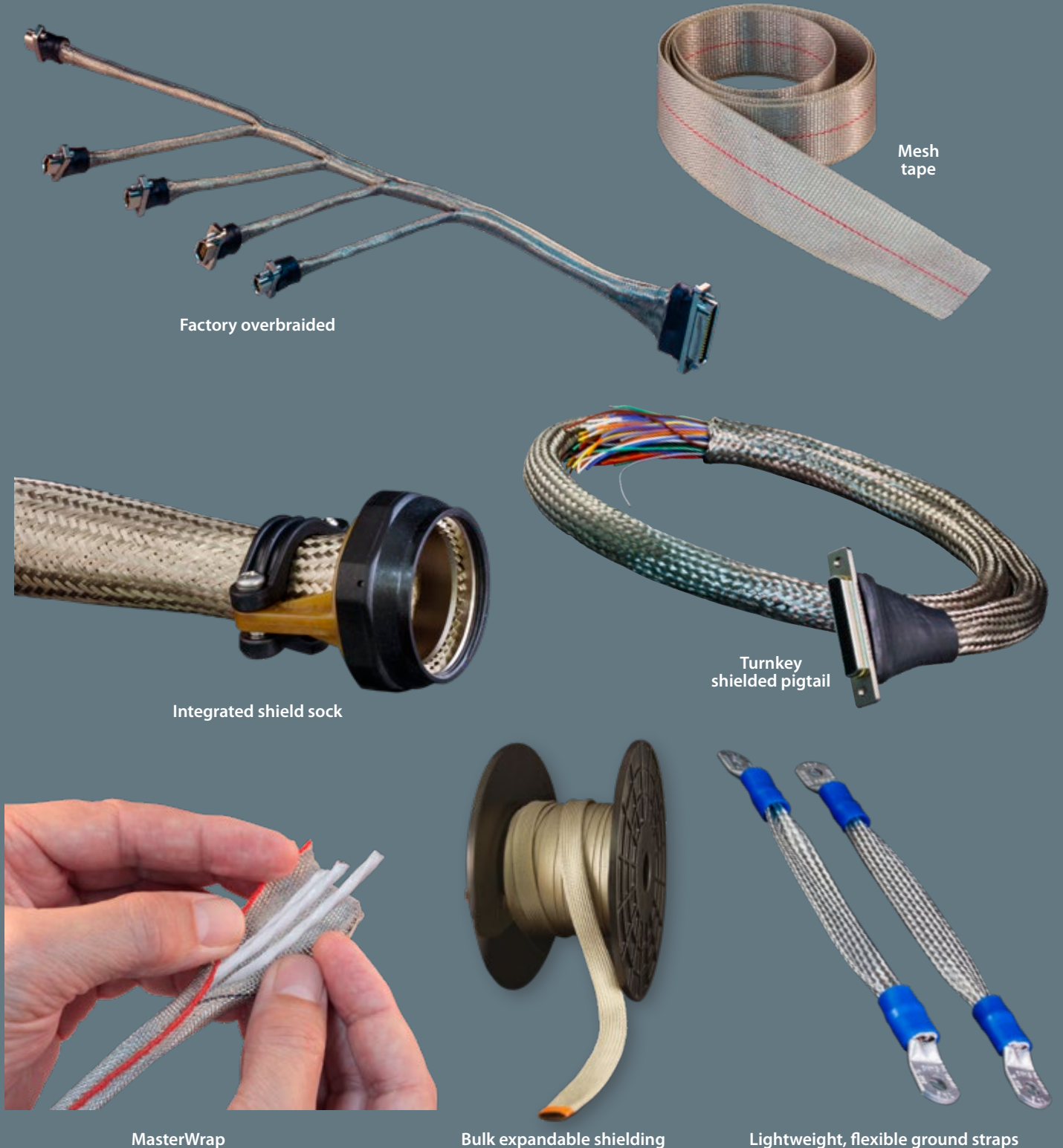
- Ultra-lightweight EMI/RFI braided sleeving for EMC and lightning strike applications
- Best performing metallic braid during lightning tests (IAW ANSI/EIA-364-75-1997 Waveform 5B)
- Microfilament stainless steel: 70% lighter than NiCu A-A-59569/QQB575
- Outstanding EMI/RFI shielding and conductivity
- ArmorLite™ CF with enhanced corrosion protection
- Superior flexibility and “windowing” resistance: 90 to 95% optical coverage
- 70,000 psi (min.) tensile strength



LIGHTWEIGHT, FLEXIBLE
ArmorLite™ Microfilament Braid
for EMI/RFI Shielding Applications



ARMORLITE™ SHIELDING SOLUTIONS AND PACKAGING



Mesh tape

Factory overbraided

Integrated shield sock

Turnkey shielded pigtail

MasterWrap

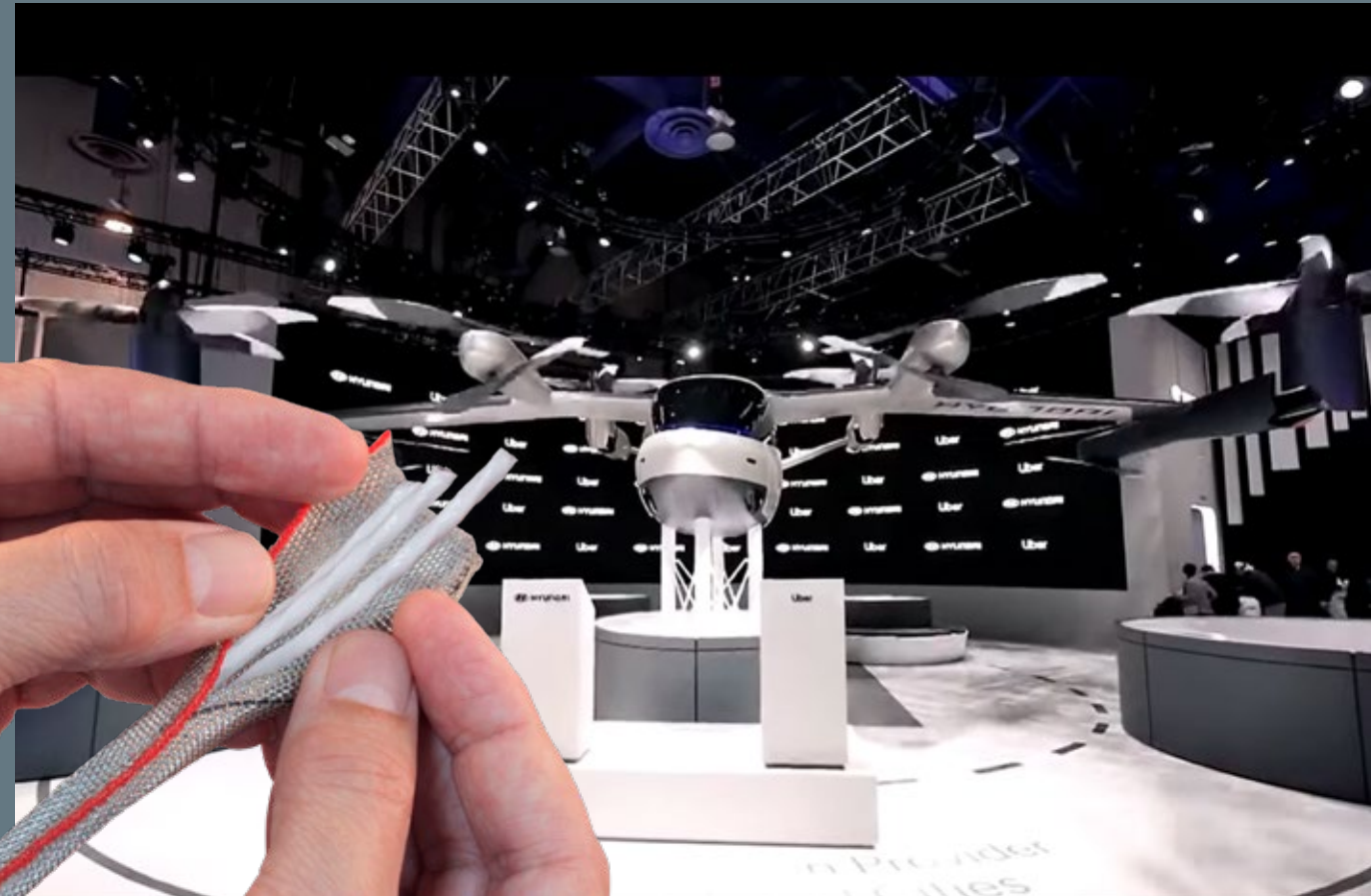
Bulk expandable shielding

Lightweight, flexible ground straps

SHIELDING
AND GROUNDING
SOLUTIONS FOR
ELECTROMAGNETIC
COMPATIBILITY



Flexible, lightweight wraparound
EMI/RFI wire shielding and
abrasion protection material



Tubular braided sleeving meets the broad range of EMC shielding and mechanical protection requirements of aircraft harness assemblies. But the need to apply shielding materials over already-installed aircraft wire and cable bundles requires new technology. Legacy self-wrapping cable braid has long been available for EMI/RFI applications and abrasion protection, albeit with poor performance due to its heavy weight, inflexibility, and "windowing," which results in poor shielding performance.

MasterWrap™, a lightweight, easy-to-install, side-entry, self-wrapping shielding solution—available in conductive ArmorLite™ and now in abrasion-resistant Nomex®—solves these problems and more. MasterWrap™ is ideally suited for both long-run wire harness protection as well as spot coverage and maintenance of EWIS cable applications—all with outstanding weight reduction and ease-of-assembly. MasterWrap™ ArmorLite™ and MasterWrap™ Nomex® are qualified for use at major aircraft manufacturers for long cable runs, spot coverage, and repairs.

Material design provides uniform surface with limited interference to structures and clamps. Reduces kinking and windowing compared to full metal braid solutions for excellent shielding performance



Interwoven with high-temperature PEEK composite thermoplastic spring members ensure up to 95% optical / mechanical coverage

MASTERWRAP ARMORLITE

- Up to 70% weight reduction
- 500 hour salt spray corrosion resistance
- 50,000 cycle 90°–120° bend flex tested
- Temperature tolerant from -65°C to 200°C

MASTERWRAP NOMEX®

- Soft, abrasion resistant unbonded Nomex® yarn
- -60° to +240°C temperature range
- 90,000 PSI yield tensile strength
- Excellent chemical resistance; will not melt

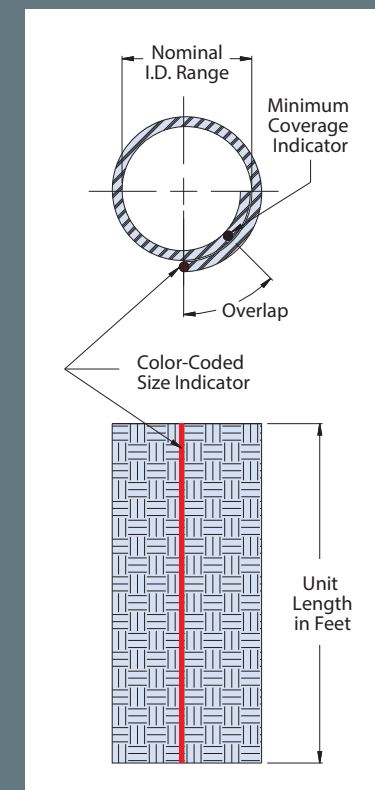
NEW MASTERWRAP™ WITH NOMEX®

MasterWrap™ Nomex® flexible, lightweight wraparound abrasion / thermal protection

for spot mechanical coverage and repair of wire harnesses



MASTERWRAP (NOMEX®): DIMENSIONAL INFORMATION • HOW TO ORDER



How To Order			
Sample Part Number	103-095	-024	GY
Basic No.	MasterWrap™ (Nomex®) material		
Dash No.	See Table I		
Color option	W = White R = Red GN = Green GY = Gray TN = Desert Tan OR = Orange Omit = for standard Black		

Table I								
Dash No	Nominal I.D. (Ref.)		Ref. Wire Bundle Range Nominal		Approx. Weight Grams/Ft.	Min. Pull Strength (lbs)	Size Indicator color code	Quantity feet/spool
	In.	mm	In.	mm				
004	.125	3.2	.093 .170	2.4 4.3	1.8	39	Black	50–500
008	.250	6.4	.170 .300	4.3 7.6	2.3	75	Brown	50–400
012	.375	9.5	.300 .406	7.6 10.3	3.2	94	Red	50–300
016	.500	12.7	.406 .520	10.3 13.2	3.7	116	Orange	50–250
020	.625	15.9	.520 .675	13.2 17.2	5.0	158	Yellow	50–200
024	.750	19.1	.675 .825	17.2 21.0	6.0	193	Green	50–100
032	1.000	25.4	.825 1.100	21.0 27.9	7.3	237	Blue	50–100
040	1.250	31.8	.938 1.312	23.8 38.3	10.0	TBD	Violet	50–75
048	1.500	38.1	1.187 1.590	30.1 40.4	11.0	TBD	Gray	50
064	2.000	50.8	1.812 2.090	33.0 53.1	12.2	TBD	White	50



MasterWrap™ (Nomex®) is the ideal solution for mechanical abrasion protection of wire bundle harnessing in aircraft applications. Available color selections allow for easy identification and labeling of wire circuitry.

NOTES

Product ordered in 1 foot increments, packaged in boxed spools. See Table I. Lengths of 1–49 feet will be packaged in individual polybags.

Materials:

Woven mesh - high temperature DuPont™ Nomex®; Monofilament - PEEK; Overlap tracer - high temperature DuPont™ Nomex® thread
DuPont™ and Nomex® are trademarks or registered trademarks of E.I. duPont de Nemours and Company.

Ground Straps for electrostatic discharge, lightning strike and power equipment grounding



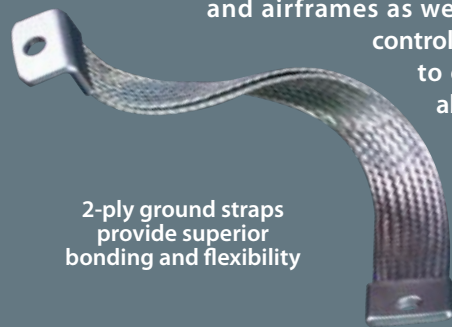
Lightweight microfilament ground strap with ArmorLite™ technology reduces aircraft all-up-weight

A single lightning strike can hit an aircraft with as much as 1,000,000 volts. Static electricity can charge an aircraft, particularly in cold and wet air, with enough electrical potential to result in a discharge that can fry avionics gear and disrupt electric motor operation. Power generation systems (batteries, motors, inverters, etc.) can also produce transient electrical current that can damage adjacent electronic systems such as electronic controllers and fly-by-wire systems.

Damage from these events is minimized and managed in aircraft through the use of electrical bonding. Flexible bonding straps are attached between equipment and airframes as well as between structural elements and flight control surfaces to conduct destructive electrical surges to ground or to bus bar components capable of absorbing significant amounts of transient voltage

Glenair has designed and supplies a broad range of braided and solid material ground straps to both commercial and military aerospace customers. Our ground straps are exactly designed with appropriate conductive and dissipative materials for each application.

- Ultra-lightweight ground straps with highly conductive or dissipative performance
- Metal-clad microfilament braided solutions
- Significant contribution to weight reduction initiatives in commercial and military aircraft
- Heavy-duty variants for electrical potential grounding from engines, starters, and power units
- Fast turnaround on requests for unusual and build-to-print requirements



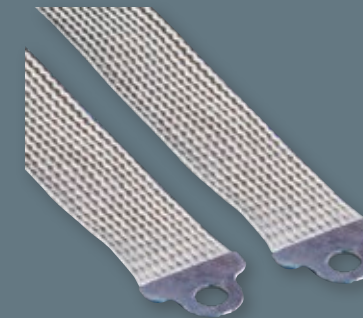
2-ply ground straps provide superior bonding and flexibility

High-Performance Ground Straps

Lightweight, general, and heavy-duty

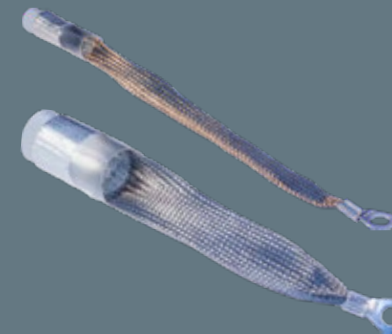


LIGHTWEIGHT ARMORLITE™ MICROFILAMENT GROUND STRAPS



- Ultra lightweight metal-clad stainless steel braid material
- Low-profile lug design and assembly
- Available in seven widths and any length
- Low electrical resistance and high temperature tolerance
- High conductivity-to-weight / material-cross-section ratio
- Corrosion resistant materials for life-of-system durability
- Bend cycle durability up to 250,000 cycles per EN4199-001

LARGE-DIAMETER, LIGHTWEIGHT ARMORLITE™ EWIS GROUNDING HSTs



- Oversized heat shrink termination sleeves for grounding of long-run overbraided EWIS harnesses
- Manufactured in-house by Glenair (made in America)
- Fabricated from lightweight, highly flexible ArmorLite™ microfilament EMI/RFI braid material
- Weight reduction up to 70% lighter compared to legacy NiCu A-A-59569 / QQB575 materials

GROUND PLANE ADAPTER PLATE FOR USE WITH COMPOSITE THERMOPLASTIC PANELS



- Resolves connector-to-panel grounding issues in composite fuselage aircraft
- Fabricated from highly conductive tinned beryllium copper IAW AMS 4530 or ASTM B194 and ASTM B545
- Available for all popular aerospace connectors with straight and 90° ground attachments

FAST TURNAROUND ON UNUSUAL/BUILD-TO-PRINT REQUESTS



Hybrid braid materials and customizable lug material options

Specialized lug configurations including integrated bonding hardware and angled lugs

Heavy-duty braid and lug configurations

Round cross-section braid

Harsh environment and chemical-resistant ground strap jacketing



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