MISSION-CRITICAL
INTERCONNECT
SOLUTIONS

Glenair®

Glenair
SIGNATURE SERIES

Commercial Aerospace EWIS Technology

Signature Interconnect Solutions for Commercial Aircraft

NEXT-GENERATION SMALL FORM-FACTOR AEROSPACE-GRADE CONNECTOR

SERIES 806 MIL-AERO

Glenair®

SERIES 806 MIL-AERO ULTRAMINIATURE CIRCULAR

Series 806 Mil-Aero

Next-generation high-density connector for demanding aerospace applications

- Signal/sensor interconnect for both pressurized and non-pressurized airframe applications or suitable applications
- Meets 38999HD performance benchmarks (altitude immersion, vibration and shock, mating durability, temperature and voltage)
- Replaces legacy large form-factor connector series (38999, 5015, 26482)

Series 806 Upgraded Environmental, Electrical, and Mechanical Performance

SERIES 806 MIL-AERO

- Integrated anti-decoupling technology
- High-density 20HD and 22HD
- Durable mechanical insert retention
- Radial seals
- Triple-ripple grommet seals
- 200 C temp rating

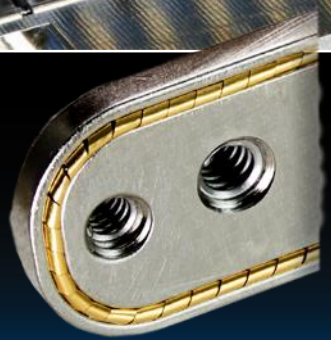
Glenair

Series 791 Ultraminiature Rectangular

SERIES 791 SEVEN NINETY-ONE

The Scoop-Proof High Performance Environmental Connect
Signal, Power, RF, and Datalinks

1. New Dual Lobe Shell
2. Recessed Pins (scoop proof)
3. Larger Screw Sizes
4. Protected Ground Spring
5. Panel O-ring
6. Integral Band Platform



Glenair

Series 791 Ultraminiature Rectangular

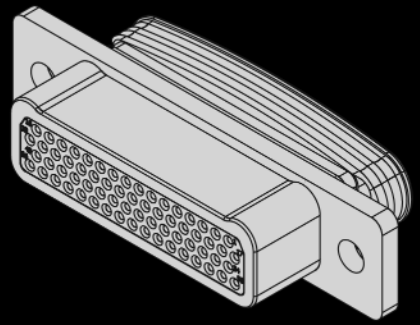
SERIES 791 SEVEN NINETY-ONE

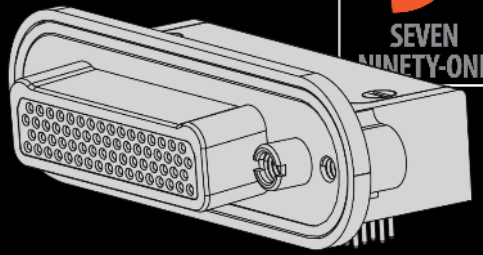
Styles, Options

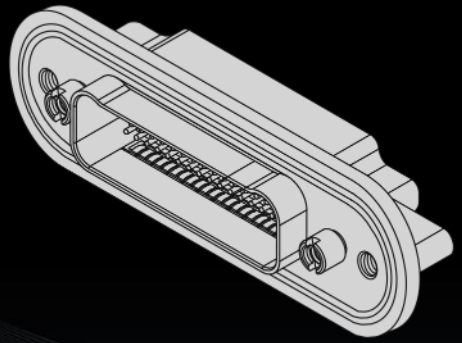
12 shell sizes, 37 arrangements

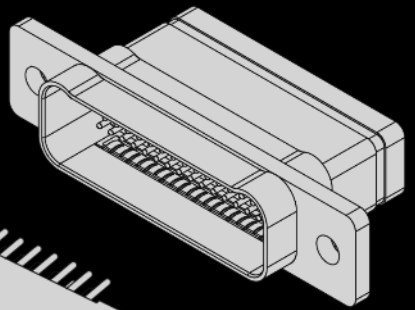
Plugs have socket contacts

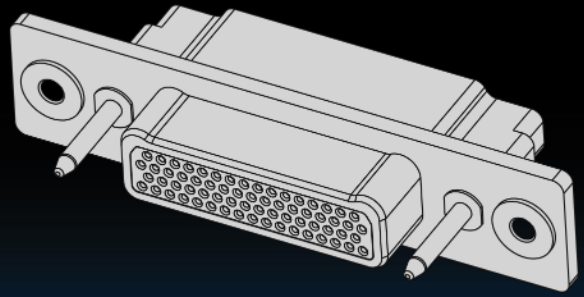
Receptacles have pin contacts

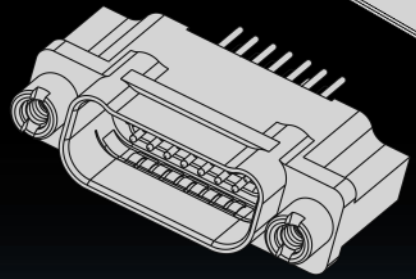












Glenair

El Ochito® Series 792

SERIES 792 SEVEN NINETY-TWO

The next-generation mil-aero rectangular for high-speed datalink applications

- Next-generation rear-release blind-mate rectangular
- Insert arrangements for 1 – 9 El Ochito® contacts, combo inserts accommodate #23 signal and/or power contacts
- Polarization key and ground spring options available
- Dual-lobe, scoop-proof interface

Glenair

HighSpeed datalink group

Series 20 Super-Twin

High Performance • Miniaturized • Modular

- Reduced size AND WEIGHT
- Lightweight composite or aluminum shell
- Integral backshell
- Modular inserts support a wide variety of short, 39029 Series II type contacts
- Polarization – both shell and inserts
- Center jackscrew – self-locking hardware
- Meets the highest performance requirements for rack-and-panel modular systems

Super Twin™

Glenair

Series 20 Super-Twin Plug and Receptacle Shell

Summary

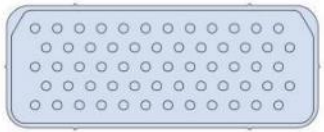
- Lightweight composite or aluminum
- Integrated 45° and 90° strain relief options
- Clamshell design for easy entry
- Tight tolerance tongue and groove for superior EMC
- Industry standard strain-relief and cable shield termination
- Extremely low bonding resistance
- Polarized shell
- Self-locking hardware
- Drop-in replacement for legacy connectors
- Slots sized for fully populated inserts

Glenair®

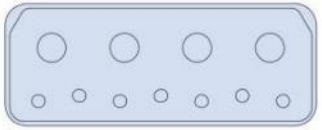
SuperTwin™

Series 20 Super-Twin Insert Arrangements

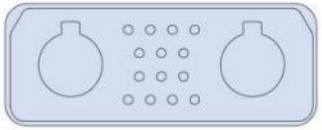
With Size #23, #20HD, #12, #16 and #8 Contact Cavities



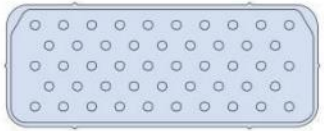
PATTERN 60
60 X Size 23 Contacts
DWV= 750 VAC



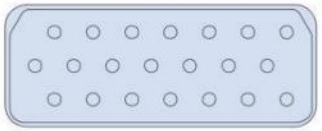
PATTERN 7W4
4 X Size 12 Contacts
7 X Size 20 Contacts
DWV= 1500 VAC



PATTERN 14Q2
2 X Size 8 Contacts
14 X Size 23 Contacts
DWV= 750 VAC



PATTERN 48
48 X Size 23 Contacts
DWV= 1300 VAC
DWV@50 000 ft = 800 VAC



PATTERN 21
21 X Size 20 Contacts
DWV= 1500 VAC

PATTERN 10
10x Size 16 Contacts
DWV= 1500 VAC

Glenair®

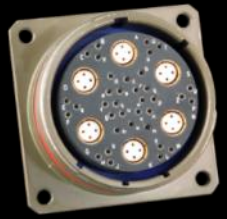
Super Twin™

SuperNine®

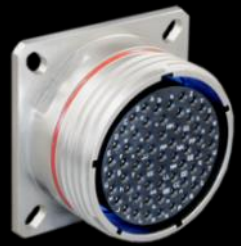
Glenair®

The “Better Than QPL” D38999 Series from Glenair

1500 Mating Cycle Environmental



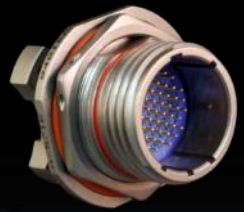
High-Speed Environmental



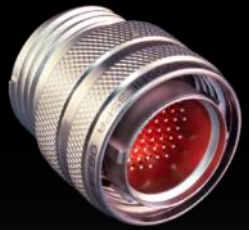
High-Pressure Pin and Socket Hermetic

Ruggedized RJ45 and USB

High-Vibration IAW Bell Helicopter and Boeing



Special PCB Standoff Series



Connector Saver Go-Betweens

Hermetic and Environmental Feed-Thrus

Tight Tolerance Fiber Optic

EMI/RFI Filters and TVS Diode EMP Connectors

SuperNine®

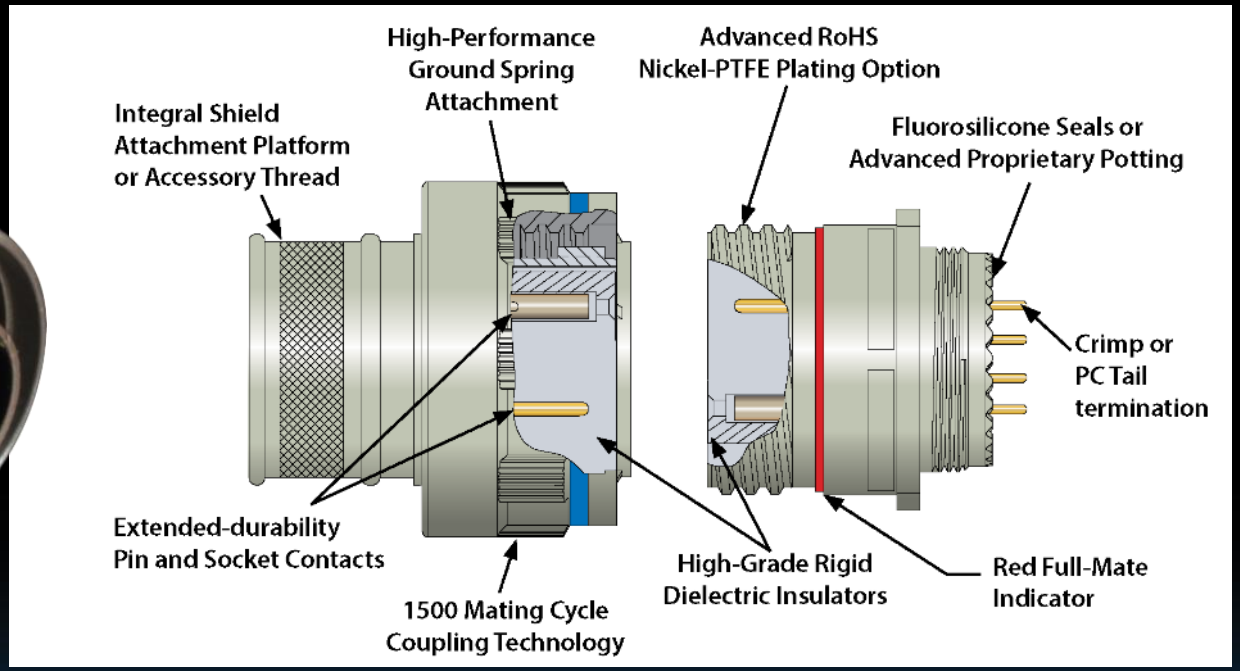
Advanced-performance D38999 environmental connectors

- Extended durability contacts and high-vibration coupling technology: 1500 mating cycles, IAW Boeing wingtip, engine, and landing gear specs
- Qualified high-vibration to Bell 299-100-B29
- Integrated band porch
- Extensive PC tail offerings
- Ground spring equipped plug
- Standard 1560 arrangements plus HD and shielded contact inserts
- IP68 sealing standard

Glenair®

SuperNine®

High-vibration D38999 environmental 233-205 and 6



Glenair®

The Lightweight Hermetic Challenge

Full hermetic sealing (10^{-7}) in a lightweight connector shell package, with low contact resistance AND mission-critical durability

- Glass-to-metal seal furnace temperatures are too high for lightweight aluminum and low-resistance copper contacts
- Conventional epoxy potting lacks sealing strength and mission-critical durability

Glenair

CODE RED Features and Benefits

- Hermetic Seal > $1X10^{-7}$
- Light weight, corrosion resistant materials
- Low-resistance copper alloy contacts
- Extreme temperature tolerance
- Available zero residual magnetism designs
- Meets NASA outgassing
- Turnkey, drop-in replacement for glass-seal hermetics
- Can be used in various product families and shell geometries

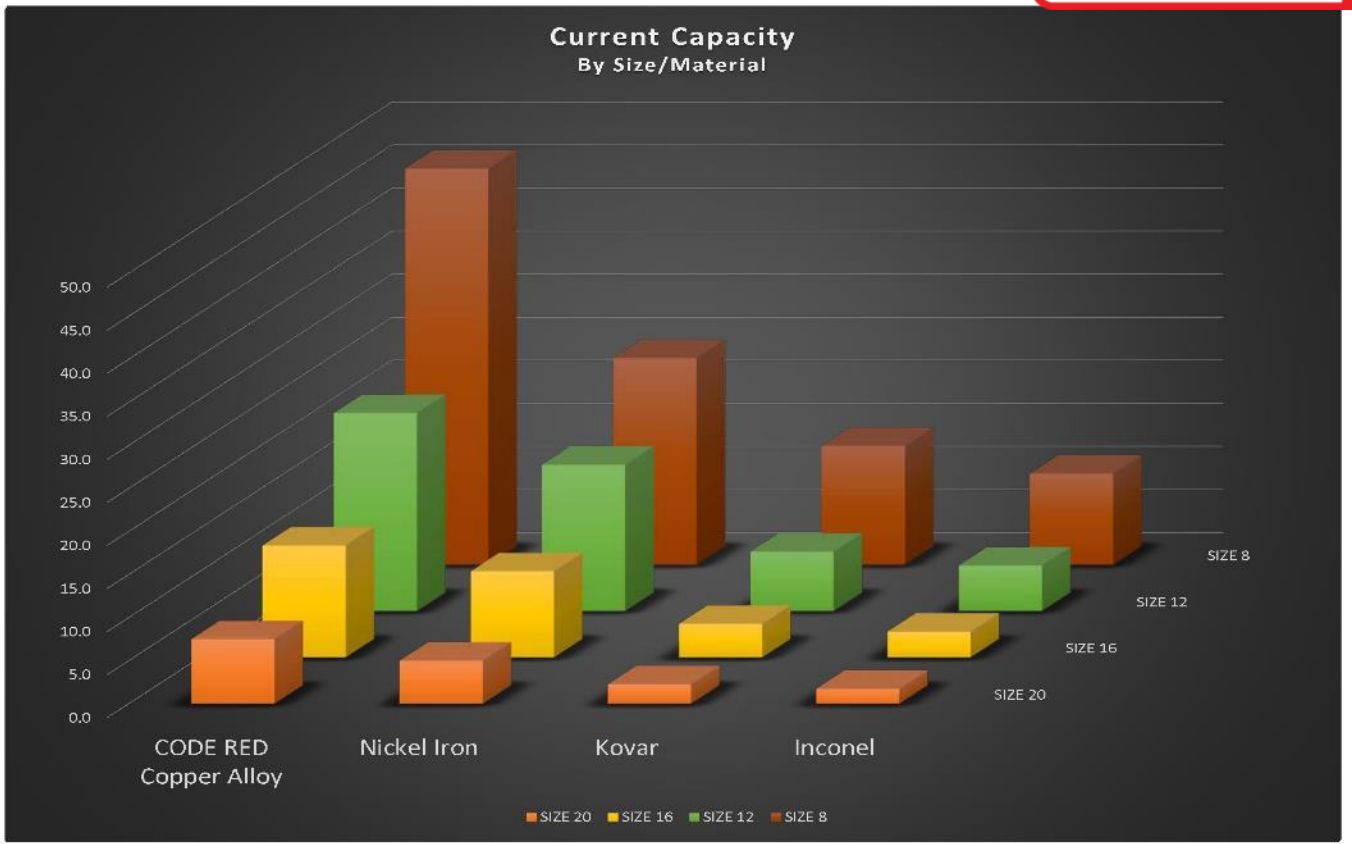
Glenair

CODE RED

CODE RED Weight Savings: MIL-DTL-38999

Shell Size -Config.	Glass Sealed	CODE RED	Weight Δ	% Weight Reduction
	Weight (grams)			
9-35	28.4	13.6	14.8	52%
11-98	35.2	18.6	16.6	47%
13-35	48.2	25.6	22.6	47%
15-97	56.2	32.6	23.6	42%
19-32	81.4	49.2	32.2	40%
21-11	91.4	62.6	28.8	32%
23-21	95.8	69.0	26.8	28%
25-08	153.7*	88.2	65.5	43%

Material	Specific Gravity	Density (lb/in^3)	% Heavier than Composite	% Heavier than Aluminum
Composite	1.27-1.51	0.055	-	-
Aluminum	2.55-2.80	0.098	44%	-
Stainless Steel	7.70-7.73	0.284	81%	65%


Current Capacity
By Size/Material
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
SIZE 8
SIZE 12
SIZE 16
SIZE 20
CODE RED Copper Alloy
Nickel Iron
Kovar
Inconel
SIZE 20
SIZE 16
SIZE 12
SIZE 8

NEW ArmorLite™ CF 103-126

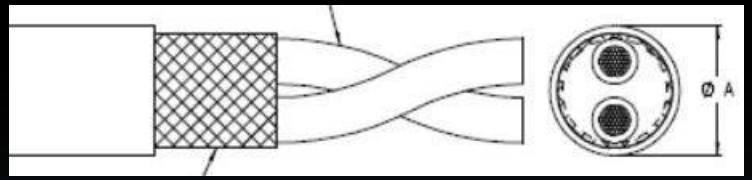
Stainless Steel over Copper Microfilament EMI Shield

- high-temperature -80˚C to 300˚C
- Corrosion / harsh environment resistant
- 1000 hour salt spray testing completed
- 70% reduced weight vs. standard braid
- Superb electrical resistance and shielding performance

300°C ThermaRex Wire

961-047

- 24 to 8 AWG
- Special high-temp copper alloy
- Twisted shielded pairs using ArmorLite CF (960-2371)
- 300°C continuous service – qualification completed
- 10 colors of insulation
- Permanent laser marking



300°C ThermaRex Conduit

Polymer-Core

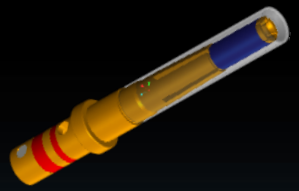
- High-temperature, light weight flexible polymer-core conduit
- All standard colors: Black, clear, orange, blue, yellow
- Qualification complete
- 300°C continuous service
- Available with high-temperature braid shield and/or jacket

ThermaRex™

Glenair®

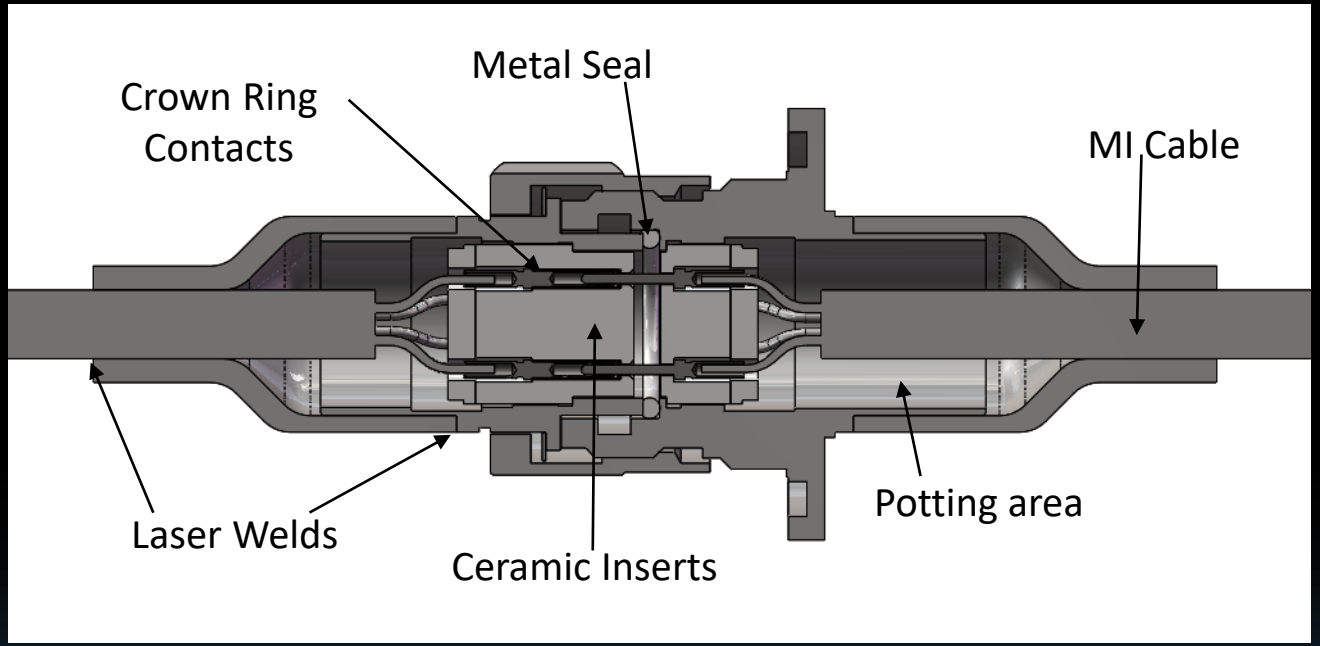
300°C ThermaRex HT Connector

- Continuous service to 300°C
- Built D38999 and EN2997
- 806 and Series 79 soon
- Hermetics up to 350°C
- Testing completed:
  - Vibe at 300°C
  - 1000 hours cycling 260°C to 300°C
- Crown-ring contacts
- PC-tails available



600°C ThermaRex UHT Connector

- Testing completed up to 600°C
- Working on version with flexible wires



EMI/RFI Filter Pressure Transducers

Reduced size and weight for mission-critical applications

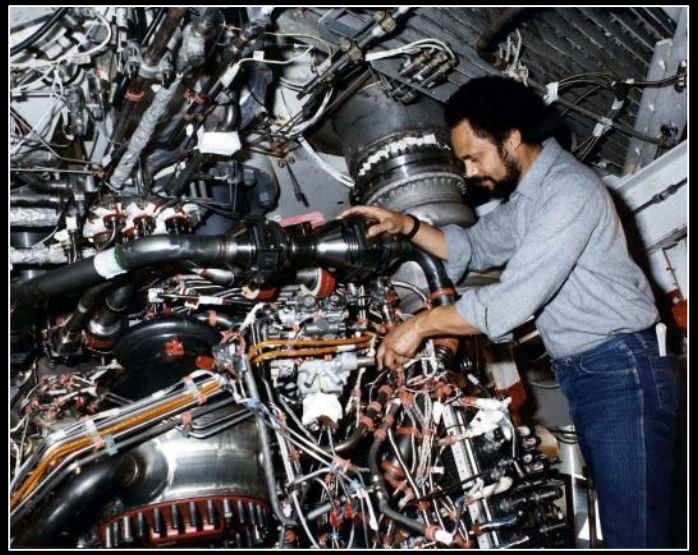
- Sealed, welded construction thin film packaging
- Stainless steel diaphragm suitable for all applications
- Extended operating temperature up to 150°C
- High reliability and accuracy ±1% F.S.
- Integral filter elements for EMI protection
- Ultra small form-factor—up to 20% shorter overall length compared to standard solutions
- Qualification per DO-160 pending

Glenair

Glenair Pressure Sensor

For the Harshest Environments ...

- Stainless steel diaphragm
- suitable for all applications
- Extended operating temperature of +150° C
- High accuracy of ±1.0% F.S.



Glenair

Glenair Pressure Sensor

230 grams

60 grams

32 grams

PowerLoad™ Connectors

Backup and integrated drive generator connectors for both high voltage and high current applications

- High-vibe, high-temp design for the broad range of aircraft power distribution applications
- Low-resistance contact delivers lower temperature rise under load
- Removable wire sealing grommet and wire separator allow for easy rear release of contacts and improved sealing of tape-wrapped wire

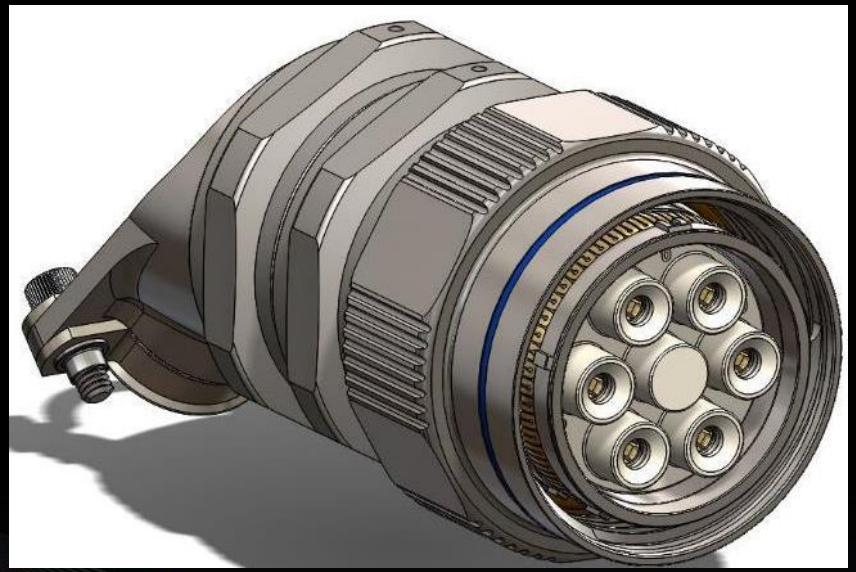
PowerLoad™ Connectors

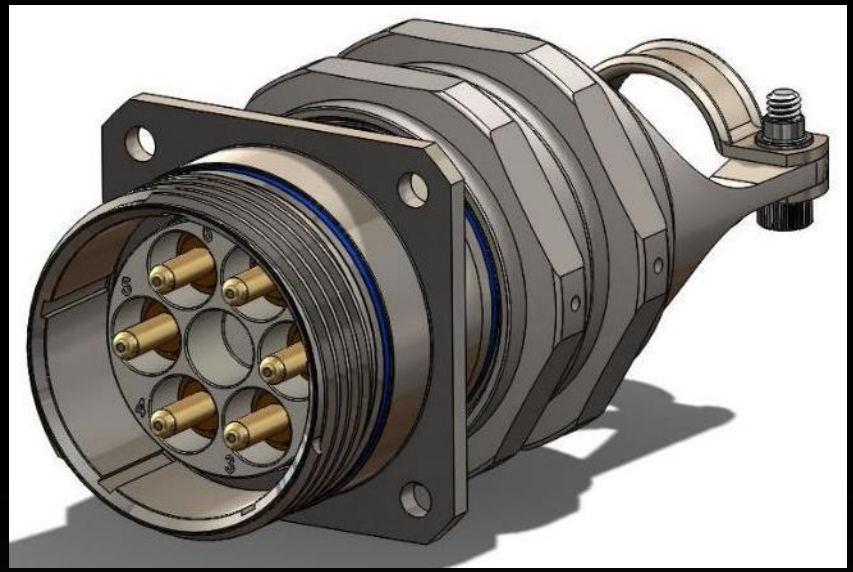
Backup and integrated drive generator connectors for both high voltage and high current applications

- Three tooled insert arrangements
  - Six size #8 contacts
  - Three size #2 contacts
  - Three size #1/0 contacts
- High contact density cavity isolation insert prevents arcing between contacts
- 200°C operating temperature (aluminum) and 230°C (passivated stainless steel)

PowerLoad™: Contact Mating Interface

- One-piece glass-reinforced PEEK insulator with contact cavity isolation



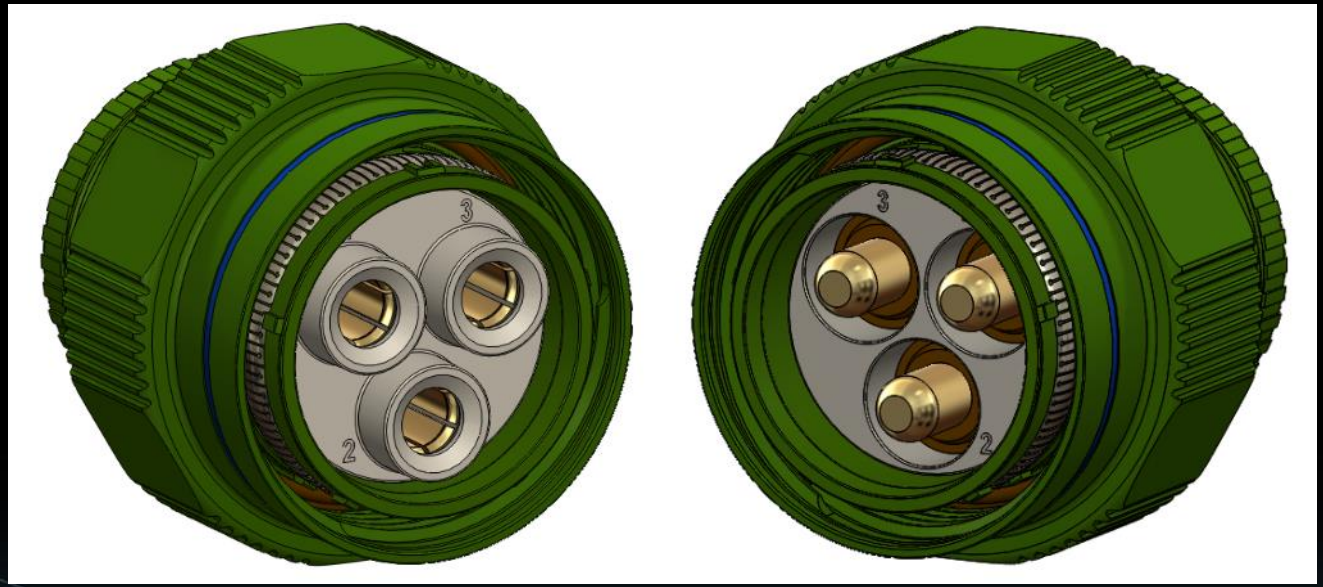


PowerLoad™: Cable Management

- Removable wire sealing grommet and wire organizer for improved tape-wrapped wire sealing and ease of contact removal

PowerLoad™: Size #2 AWG contact system

- Design optimizes contact-to-wire termination step and weight reduction in power distribution cable



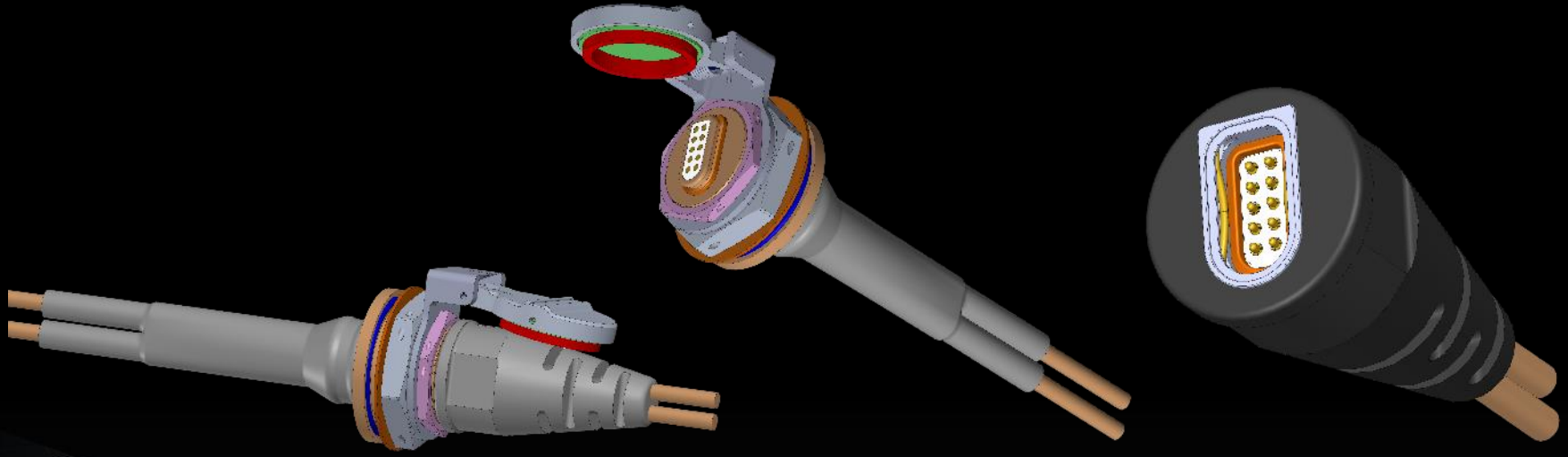
PowerLoad™: Configurations

Cable, panel mount, and bulkhead designs; stainless steel and plated aluminum

GateLink Pro: High-Speed Data Uplink Connector

GateLink Pro™

Proven commercial airframe performance



Environmentally sealed breakaway connector

Glenair

GateLink Pro: High-Speed Data Uplink Connector

GateLink Pro™

Environmentally-sealed breakaway design

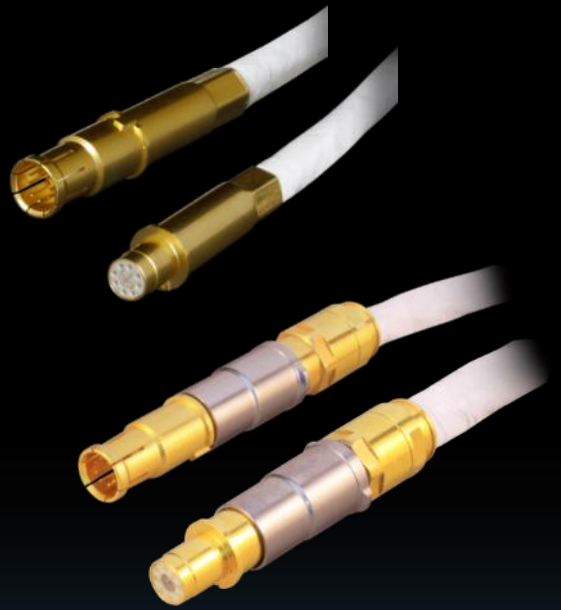
- Durable pogo pin contact system rated to tens of thousands mating cycles
- Sealed receptacle available with ProSeal spring-action protective cover
- Straight or right-angle AutoShrink wire protection boots
- Rugged overmolded plug

Glenair

El Ochito® High-Density 4-Pair Contact

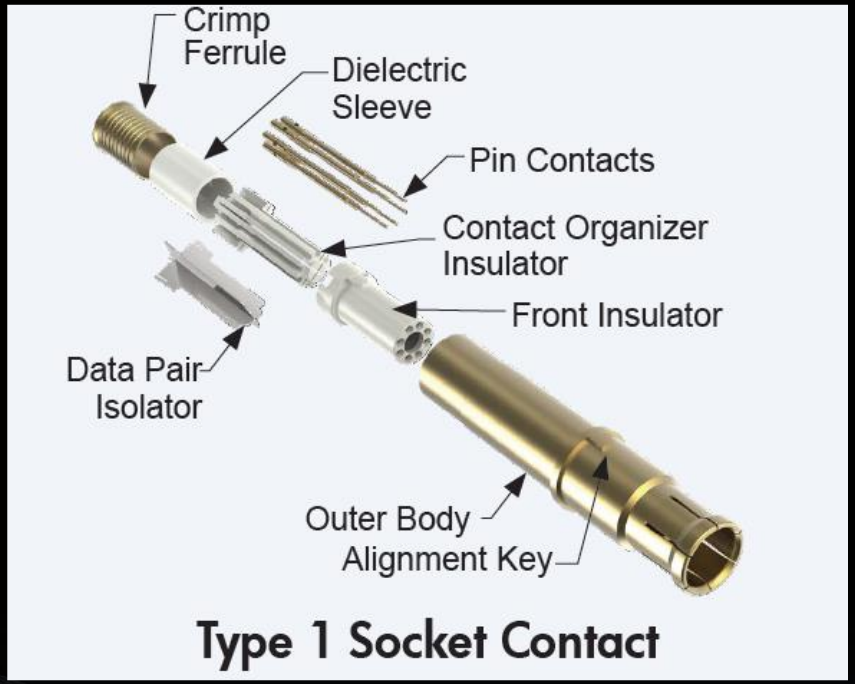
The 10G Ethernet Size 8 contact with patented data pair isolation technology now for both for AWG#26 and AWG#24

- Market leader for Mil-Aero high-speed Ethernet
- 4 differential contact pairs, 90/100Ohm Impedance
- Patented cross-talk isolation technology
- Snap-in, rear release
- Integrated removal tool
- Repairable contact
- Compatible with most current data protocols

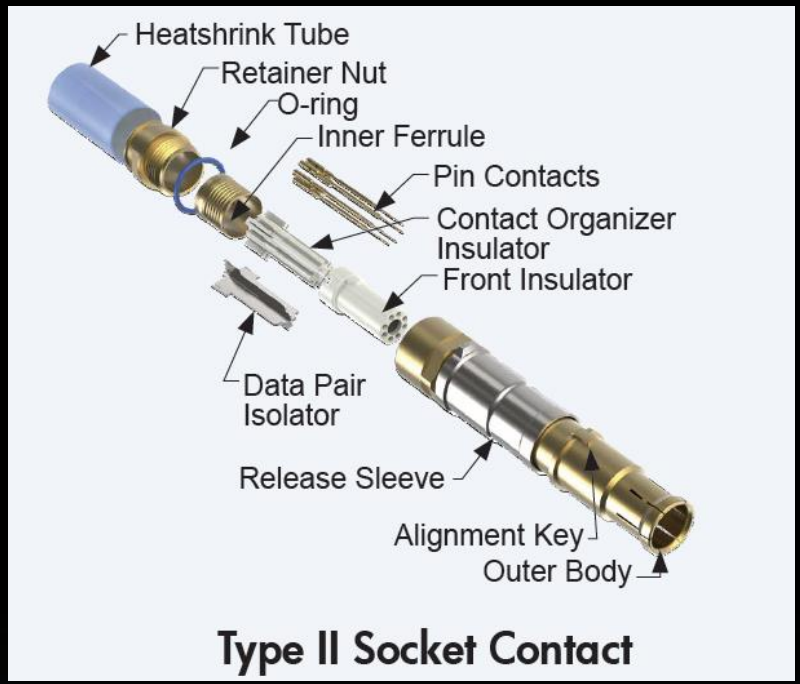


Glenair®

El Ochito® Construction



Type 1 Socket Contact



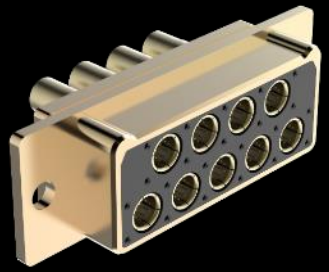
Type II Socket Contact

Glenair®

El Ochito® Rectangular Connector Packages

Sr. 791 MicroCrimp

- Next Generation rear-release rectangular connector
- Up to 4 El Ochito contacts
- Scoop proof interface
- Straight and right-angle PC tails
- Environmentally and EMI sealed
- Guide-pins for blind mate



Sr. 792 MicroCrimp

- Mini Rack-and-Panel
- Rear-release rectangular connector
- Scoop proof interface
- Environmentally and EMI sealed
- Guide-pins for blind mate

Sr. 28 HiPer-D

- Standard M24308 interface dimensions
- Rugged 6061 aluminum shell
- Grounded metal insert
- 2-5 El Ochito contacts
- Straight PC tail
- EMI protected

Glenair®

El Ochito® Circular Connector Packages

Sr. 88 SuperFly

- Ultra-small
- Lightweight
- IP67
- Push-Pull or thread coupling
- Right-angle PCB option

Sr. 801 Mighty Mouse

- Double-Start mating thread
- 10 Insert configurations
- High-performance miniature connector
- Compatible with D38999 contacts

Sr. 805 Mighty Mouse

- Triple-start mating thread
- Compatible with D38999 contacts

Sr. 23 SuperNine

- MIL-DTL-38999 Series III
- High-vibration/ temperature performance
- Compatible with M85049 accessories

Glenair®

El Ochito® Data Protocol Support

Ochito "White"	Ochito "Blue"	Ochito "Red"
		
1000BASE-T, 10GBASE-T	SuperSpeed USB	HDMI, Displayport, SATA

1GbE/10GbE

- Straight upgrade for Quadrax solutions to higher-speed Ethernet applications
- Compliant with ARINC 664

USB 3.1 Gen 1

- Low-dielectric material for 90 Ohm impedance on SuperSpeed USB pairs
- 24AWG wire for power pairs
- Fully compliant with USB 3.1 gen. 1 specification

HDMI/DisplayPort/SATA

- 100 ±15 Ohm Board-to-cable and cable-to-cable (50ps 10/90 rise time).
- Suitable for high-resolution displays and peripheral drives
- May require additional discrete contacts

Glenair®

SuperFly Datalink

SUPERFLY DATALINK

The ultraminiature 10GbE and SuperSpeed USB connector for harsh environments

- Ultra-small size
- Shielded octaxial contacts—up to 5 Gbps
- 10Gb Ethernet and SuperSpeed USB
- Environmentally sealed
- Aerospace-grade performance

Glenair

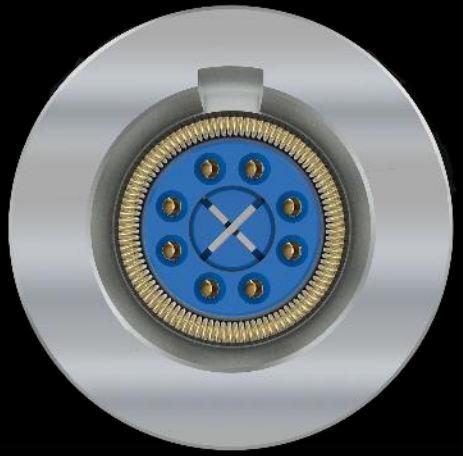
SuperFly Datalink

The ultraminiature 10GbE and SuperSpeed USB connector for harsh environments

Connector configurations

- Quick disconnect
- Threaded coupling
- Straight PC tails
- Right-angle PC tails

SuperFly
Datalink White
10G Ethernet

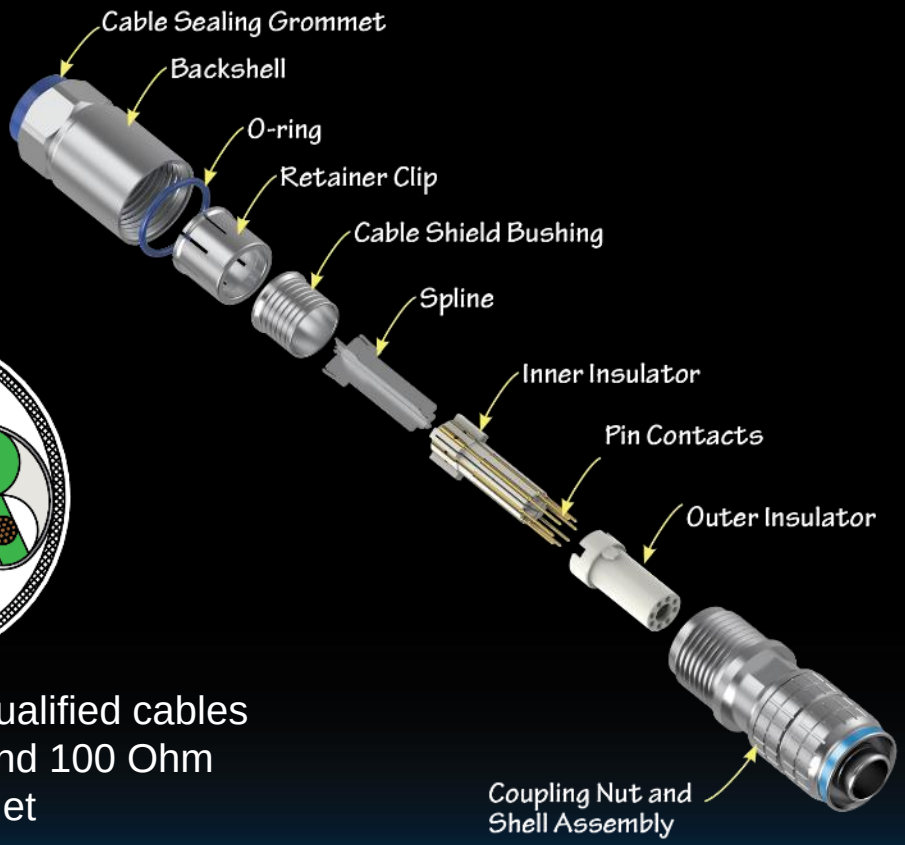


SuperFly
Datalink Blue
SuperSpeed USB

SuperFly Datalink: Exploded View

SUPERFLY DATALINK

The ultraminiature 10GbE and SuperSpeed USB connector for harsh environments

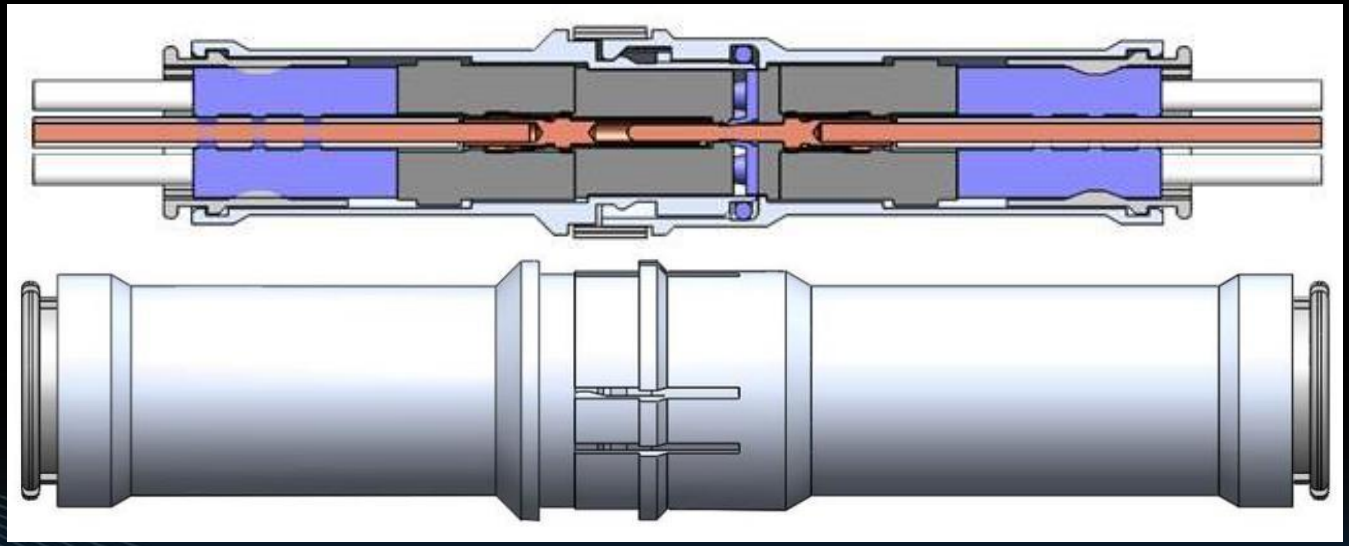


Available SAE-AS6070 qualified cables for SuperSpeed USB and 100 Ohm Cat6A Ethernet

Glenair

SpliceSaver: for Faster, Lower-Cost EWIS Wire Splicing

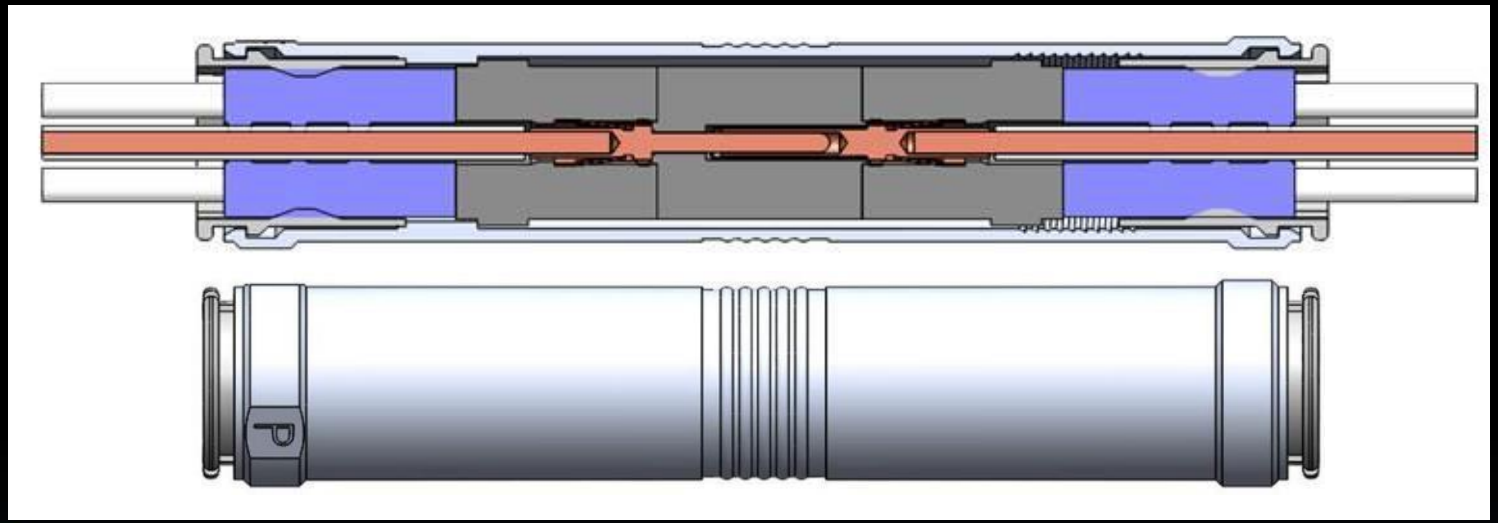
Two-piece quick snap version



Glenair

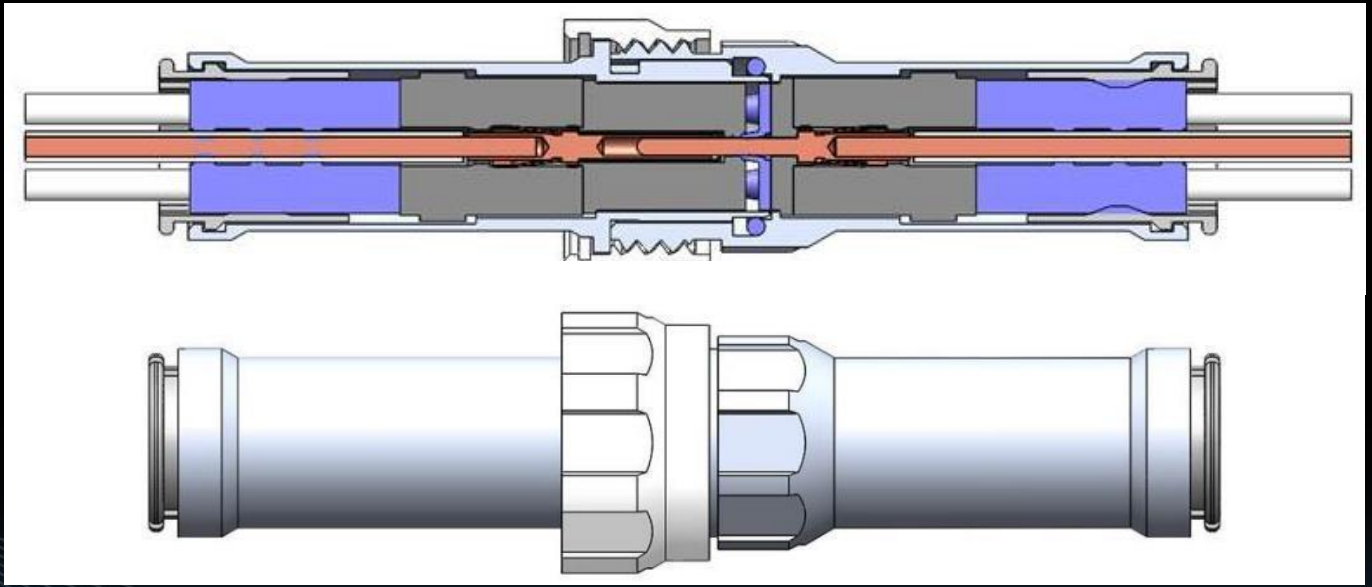
SpliceSaver: for Faster, Lower-Cost EWIS Wire Splicing

Single-piece version



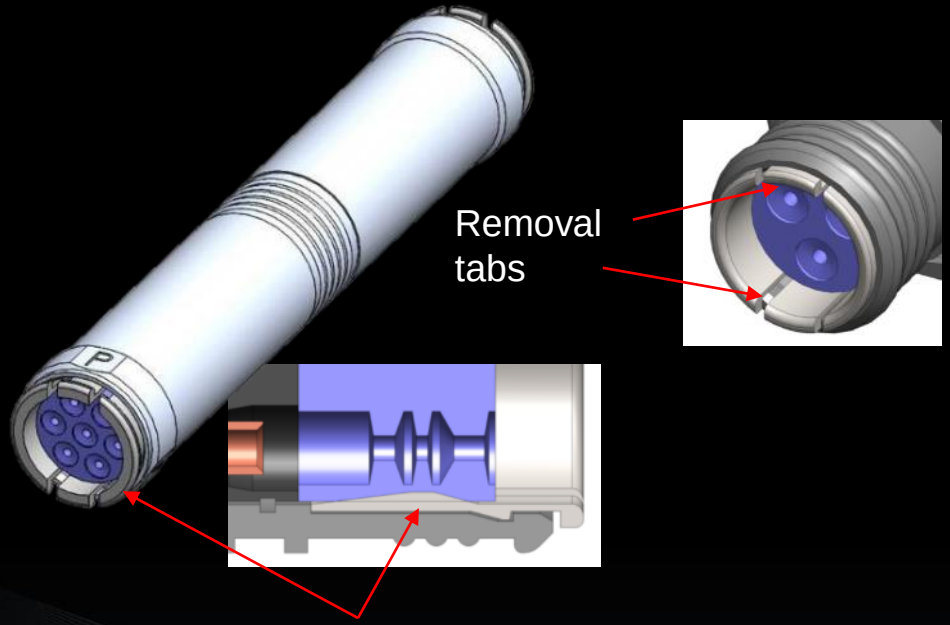
SpliceSaver: for Faster, Lower-Cost EWIS Wire Splicing

Spiralock threaded version



SpliceSaver: Mechanical Features

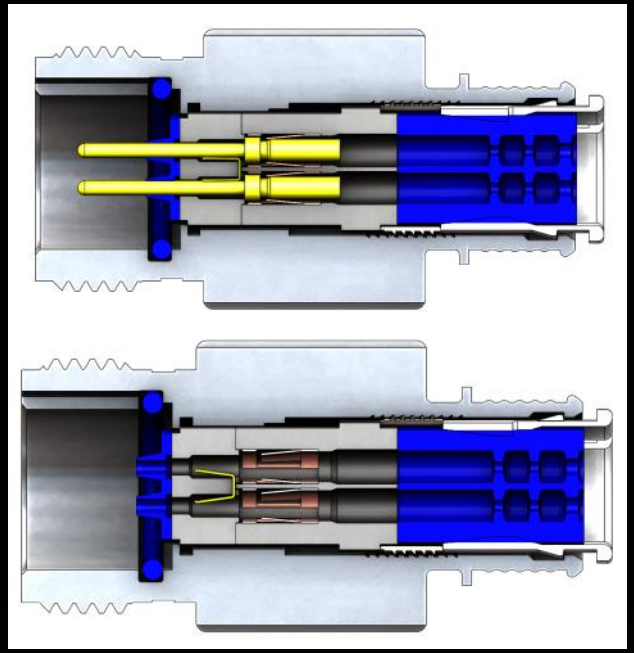
Saves significant time and labor over manual DO150 type splicing

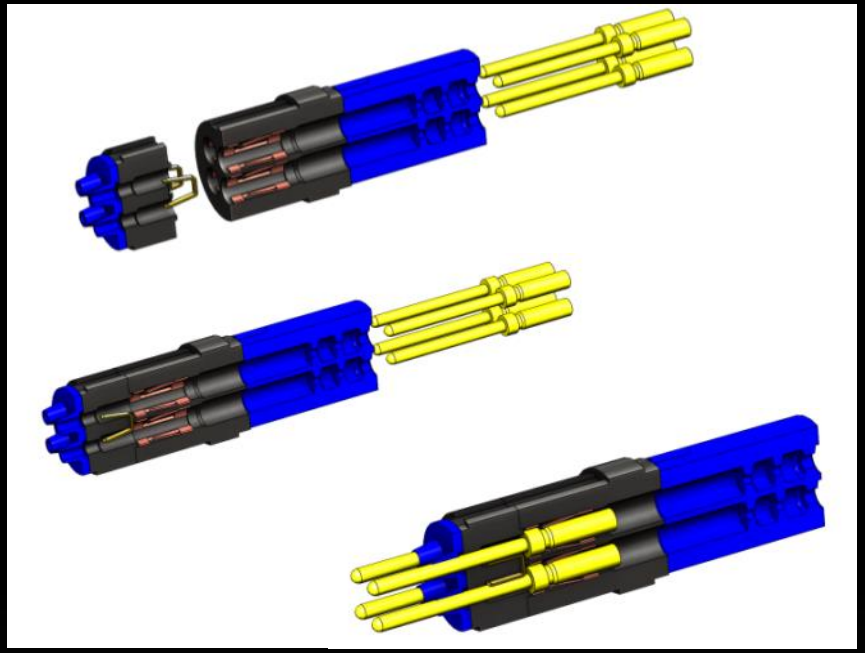


- Key and keyway engage before contacts as well as allowing for alternate keying options
- Threaded version utilizes Spiralock threads and composite coupling nut
- Snap together can be positively locked with central banding groove and Nano band, also allowing both shields to be terminated in one operation.
- All three versions feature CompAction grommet and ferrule to better seal tape wrapped wire (Altitude Immersion beyond 50K feet)
- Banding area for shield termination on all versions.
- Materials: OD Cad over aluminum (NF), Nickel plated brass (BM). Others available upon request.
- The size 8 splice offers insert arrangements of 3x20, 4x22 or 7x22
- Bussing and other arrangements to follow (1x16)

Glenair

SpliceSaver: Special bussed version (tuning fork)

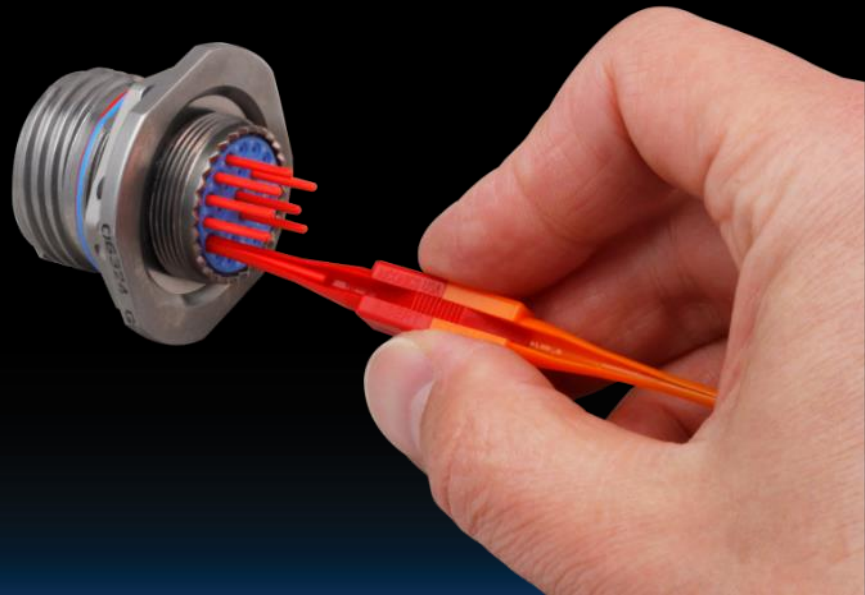




Glenair

Dummy Contact Sealing Plugs (DCSP)

For reliable sealing of unused contact cavities — without the use of electrical contacts



Glenair

Dummy Contact Sealing Plugs (DCSP)

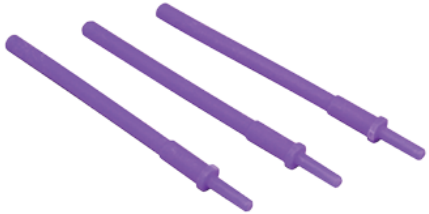
Significant weight and cost savings

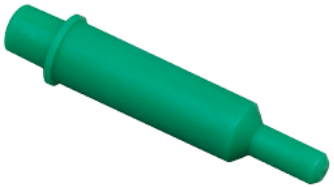
- Powerful tool in Electrical Wire Interconnect System weight reduction
- Eliminates use of expensive electrical contacts for sealing-only applications
- Leverages connector contact clip for secure retention of the sealing plug—no possibility of FOD
- Easy-to-install single piece design
- Visible quality control / confirmation of cavity fill from back of connector
- EWIS compliant test report available, ref. GT 15-106

Glenair

Dummy Contact Sealing Plug (DCSP) ordering

Connector Series / Size / Color Code / Part Number Selection							
		Crimp Removable Contact Cavity Size					
Connector Series	23	22	20	16	12	8	8 w/ Boot
D38999 Series I, III, IV	680-116-23	680-116-22	680-116-20	680-116-16	680-116-12	680-116-8	680-116-8B
D38999 Series II							
EN4165							
Series 800–805 Mighty Mouse							
EPX		680-116-22	680-117-20			680-117-8	680-117-8B
ARINC 600							
Series 806 Mighty Mouse Mil-Aero		680-120-22HD	680-120-20HD				

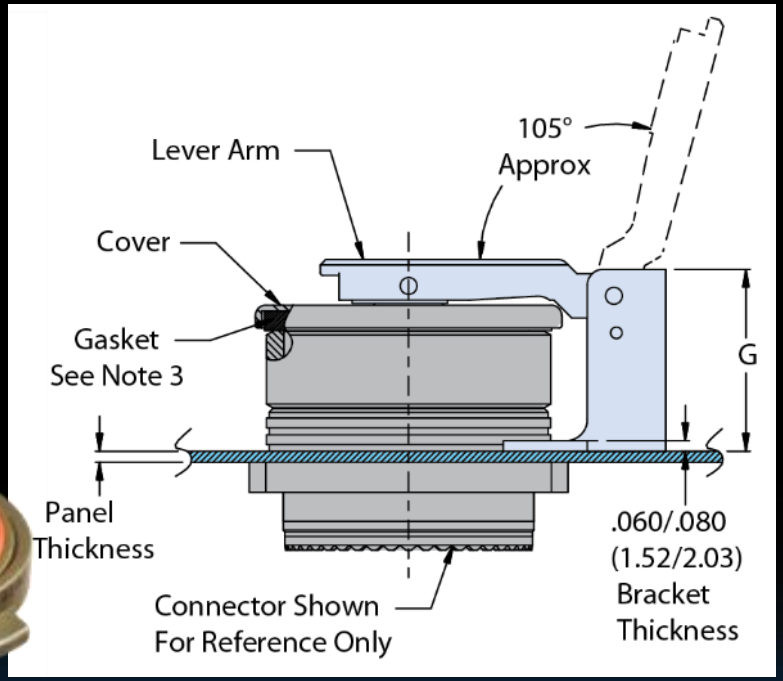




ProSeal Spring-Action Protective Covers

LEONARDO'S PROSEAL spring-action protective covers

Circular, with self-aligning pressure seal, dust and water jet resistant

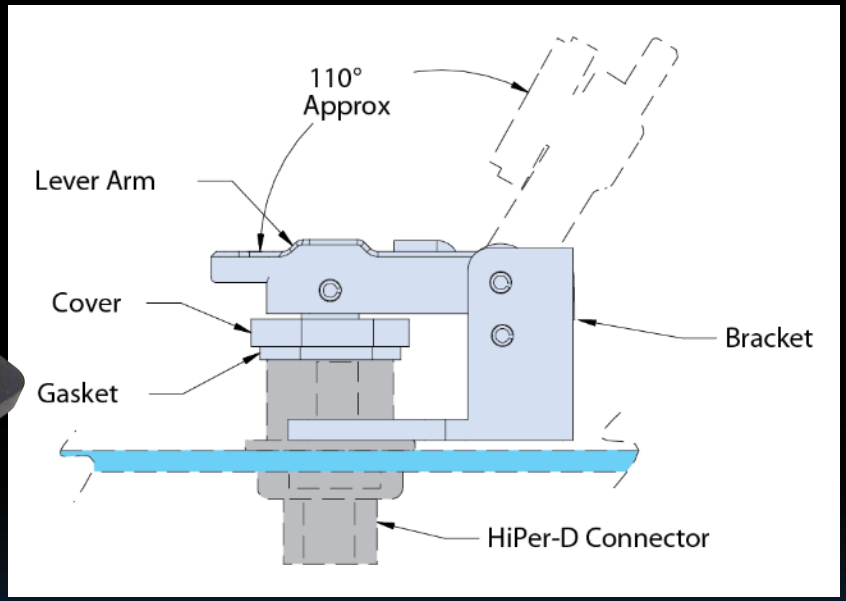


Glenair

ProSeal Spring-Action Protective Covers

LEONARDO'S PROSEAL spring-action protective covers

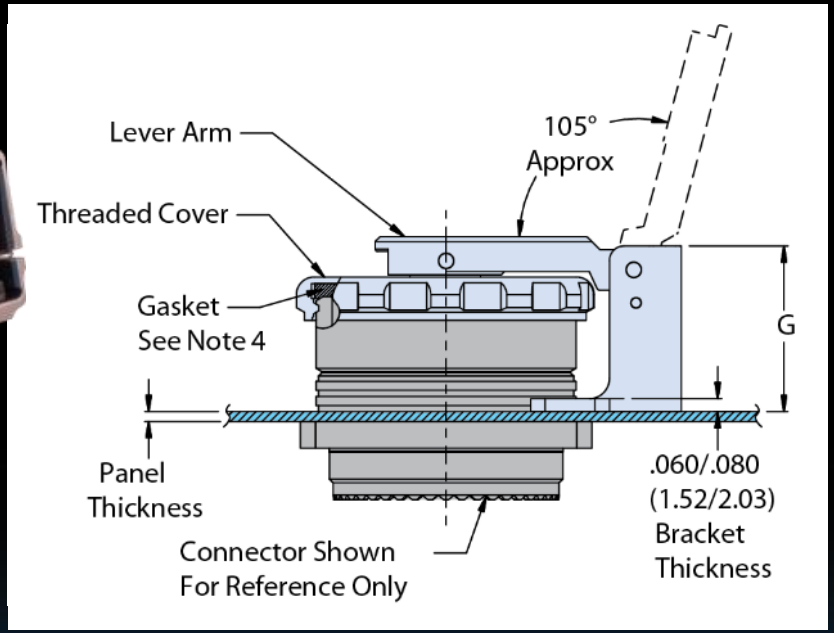
Rectangular, with self-aligning pressure seal, dust and water jet resistant



Glenair

ProSeal Spring-Action Protective Covers

Threaded-closure seal, full environmental



ProSeal Spring-Action Protective Covers

LEONARDO'S PROSEAL spring-action protective covers

Supported connector series

- MIL-DTL-38999 Series I, II, III
- MIL-DTL-26482, IPT
- Mighty Mouse Series 801, 804, and 805
- MIL-DTL-5015 (Glenair Series ITS)
- Industry-standard rectangulars: M24308, Micro-D
- Glenair high-performance series rectangulars: HiPer-D and Series 790
- SuperSeal field RJ45/USB and other specials

Glenair

ProSeal Spring-Action Protective Covers

Circular, self-aligning seal style in action

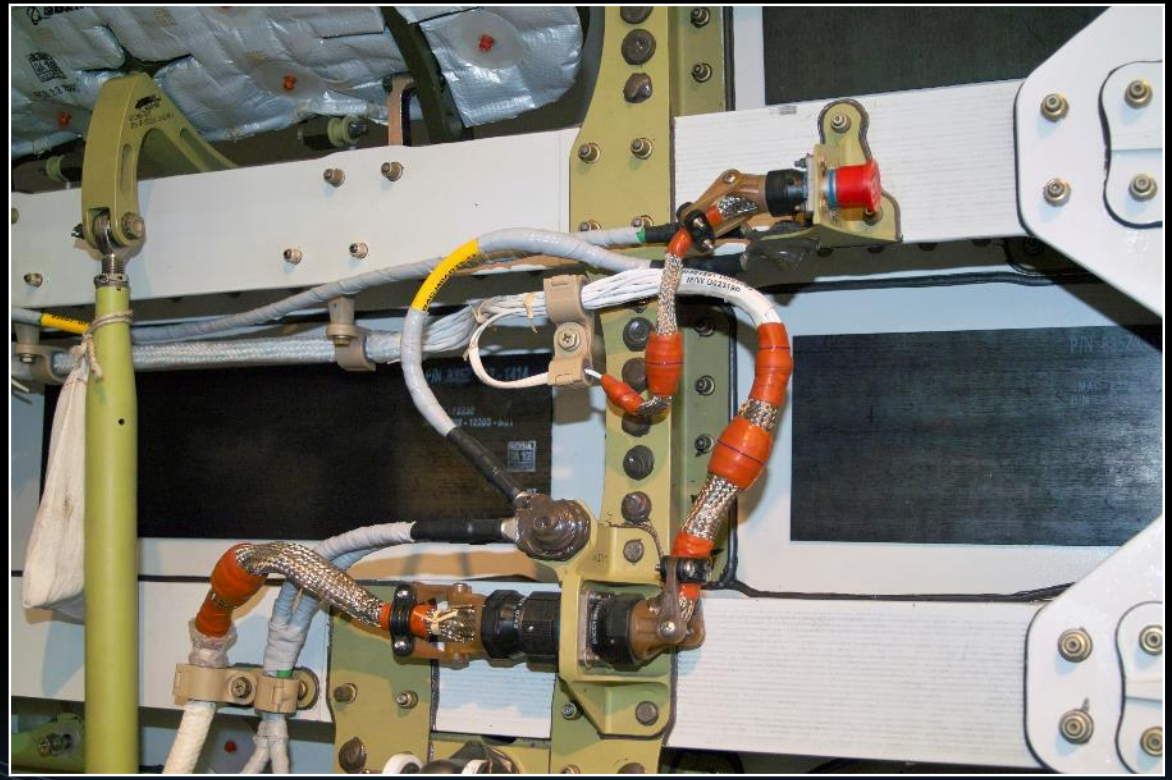
ProSeal Spring-Action Protective Covers

Rectangular, self-aligning seal style in action

Swing-Arm: Lightweight Composite Strain Relief

Three-in-one straight, 45° and 90° design for SKU reduction

Lightweight EMI/RFI Swing-Arm in Action

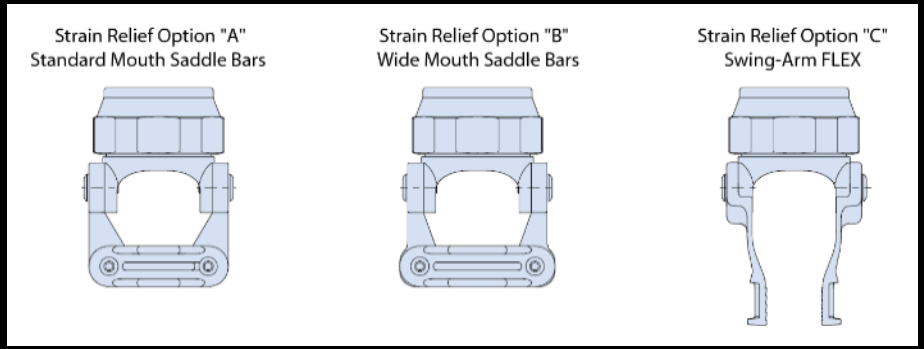


Glenair

Swing-Arm Series 620-084

Drop-in follower-equipped Swing-Arm strain reliefs

- Option A – Standard mouth, saddle bar strain relief
- Option B – Wide mouth (for larger cable diameters), saddle bar strain relief
- Option C – Swing-Arm FLEX



SWING ARM
COMPOSITE THREE-IN-ONE BACKSHELL

Glenair

Swing-Arm FLEX “Option C”

SWING ARM®
COMPOSITE THREE-IN-ONE BACKSHELL
FLEX

Swing-Arm with slotted drop-in follower and flex arms

- Straight, 45°, and 90° configurable backshell: 3 part numbers in one!
- Fast, easy termination of both individual and overall EMI/RFI shields
- Further weight reduction with no saddle bars or hardware
- No excessive tape use on bundle
- Rapid assembly
- Band, lacing cord or tie wrap may be used
- Accommodates wide range of cable bundle diameters

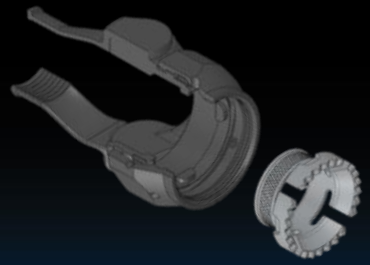
Glenair®

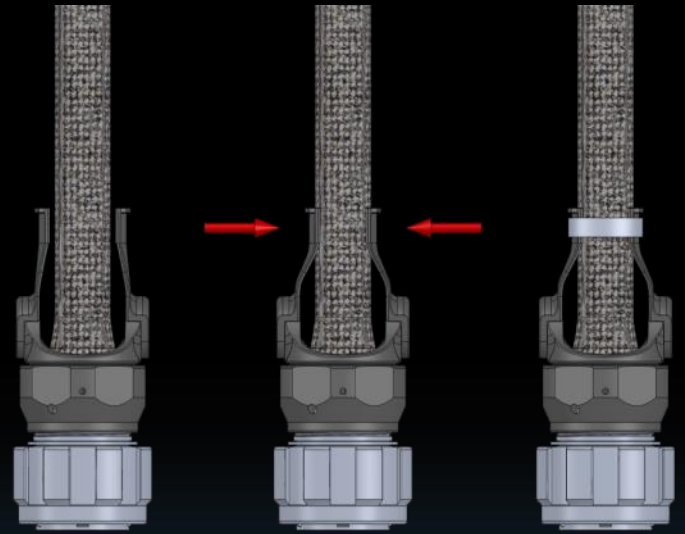
Swing-Arm FLEX “Option C”

SWING ARM®
COMPOSITE THREE-IN-ONE BACKSHELL
FLEX

The Smaller, lighter, faster Swing-Arm option for customer termination of EMI/RFI shielding

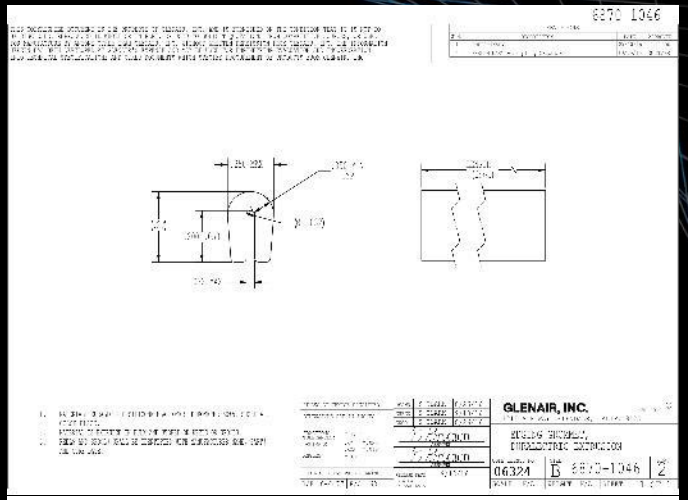
- Slotted drop-in band follower allows for fast and easy staging and termination of individual wire shields
- Band termination of strain relief arms relies on proven Band-Master technology

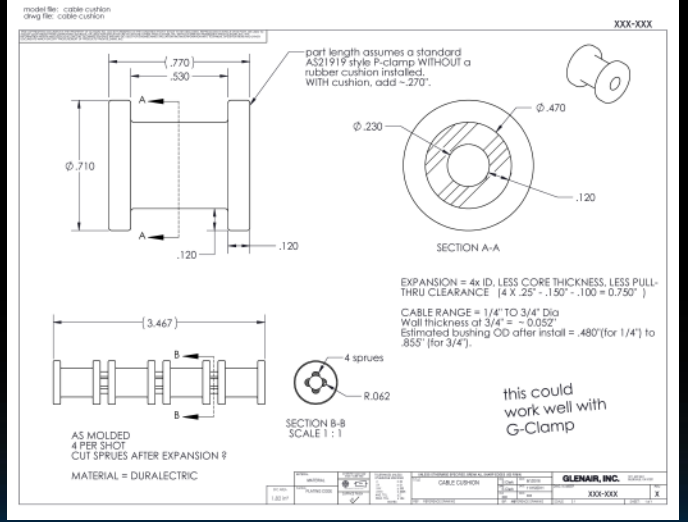




Glenair®

AUTOSHRINK™


GLENAIR, INC.


XXX-XXX
part length assumes a standard AS21919 style P-clamp WITHOUT a rubber cushion installed. WITH cushion, add ~.270".
.770
.530
Ø.710
Ø.230
Ø.470
.120
SECTION A-A
EXPANSION = 4x ID, LESS CORE THICKNESS, LESS PULL-THRU CLEARANCE (4 X .25" - .150" - .100 = 0.750")
CABLE RANGE = 1/4" TO 3/4" Dia
Wall thickness at 3/4" = ~ 0.052"
Estimated bushing OD after install = .480"(for 1/4") to .855" (for 3/4").
3.467
4 sprues
R.062
SECTION B-B
SCALE 1 : 1
this could work well with G-Clamp
AS MOLDED
4 PER SHOT
CUT SPRUES AFTER EXPANSION ?
MATERIAL = DURALECTRIC
GLENAIR, INC.

Autoshrink: How It Works

Memory-action material stretched over a removable core

- Position Autoshrink over termination or repair
- Remove collapsible support core

Autoshrink™ Applications

- Duralectric™ cable and conduit jacket repair
- Wire organization
- Insulation of splices or lugs
- Mechanical protection on clamp locations

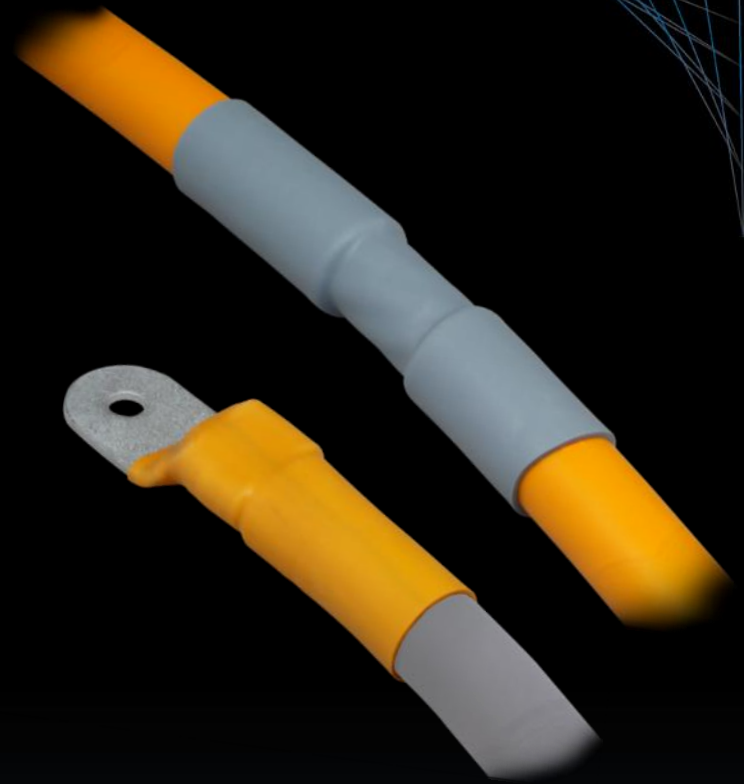
Four Autoshrink Material Types

All with durable split-resistant performance and sealing

Autoshrink™ D General-Purpose, High UV-Resistance, LSZH	• 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
Autoshrink™ F Advanced Fluid / Solvent Resistance	• Service temperature range: -65°C to 200°C • Fire resistant and suitable for immersion in jet fuel, diesel, lubricants, and solvents
Autoshrink™ T Extreme Temperature Tolerance, LSZH	• Service temperature range: -65°C to 300°C • Fire resistant and low smoke-zero halogen (LSZH) • Resistant to common aeospace, military and industrial fluids
Autoshrink™ S Underwater Sealing, LSZH	• Service temperature range: -40°C to 100°C • Low smoke-zero halogen (LSZH) • Resistant to common industrial and environmental fluids

Autoshrink Advantages vs. Heat Shrink

- Better UV performance in outdoor applications
- Reliable, IP68 sealing
- Flexible and crack resistant compared to rigid heat shrink materials
- Fast installation – No heat gun!
- Sealing with or without adhesive
- -65°C to 225°C (300°C for Autoshrink T)
- All the performance of Duralectric™



Autoshrink vs 3M and TE

- Autoshrink™ already qualified and installed
- Autoshrink™ adhesive (779-005) available for additional sealing
- 3000 VAC rating
- Multiple colors for easy identification
- Mil-Aero molded boot shapes

Table II - AutoShrink Color Option		
Code	Color	Reference
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	Purple	FED-STD-595C; #17142
8	Gray	FED-STD-595C; #26270
9	White	FED-STD-595C; #17875

Autoshrink™ D Availability

- Tubes, 3" to 12" lengths (777-004)
  - Use on .35 to 3.85 OD inch cables/conduits
- Duralectric™ adhesive (779-005)
- Straight, 45°, and 90° molded boots (777-005)
- Transitions and other shapes
- (Almost) any shape we have tooled for Heat Shrink Boots

TurboFlex™ Ultra-Flexible High Power Cable

- Extremely flexible
- Jacketed with Glenair Duralectric™
- 16 AWG to 450 MCM
- -60° to +260° C
- Abrasion resistant
- Standard and custom colors available

TurboFlex™
Ultra flexible rope-lay construction

- Many small, flexible strands
- M22759/11-8 = 133 x 29 AWG
- TurboFlex 8 AWG = 665 x 36 AWG
- Special twisting
- Silicone-based Duralectric™ jacket

ARMORLITE Microfilament EMI/RFI Shielding

Average 70+% lighter than standard metal EMI/RFI braid

- Expandable, flexible, high-strength, lightweight, conductive, microfilament material
- Provides abrasion resistance and EMI shielding at a fraction of the weight of standard metallic braid
- Maintains metallic core conductivity in event of plating damage during assembly or maintenance

Glenair

ARMORLITE Microfilament EMI/RFI Shielding

Performance advantages

- Shields from 80dB to 40dB in 100Khz @ 1Ghz
- Excellent optical braid coverage – min. 85-90%
- Excellent tensile strength @ -80˚C to +200˚C
- High flexure strength / flexibility
- Available with nickel or silver plating
- Meets limits of 1.0% max outgas test IAW ASTM-595-90 and 0.10% max. CVCM
- Meets lightning strike ANSVEIA-364-75 specification at 3Kva, 6Kva & 10Kva thru 25Kva wave form 5B
- Excellent abrasion and FAR burn resistance

Glenair

Long runs of shielded, overbraided EWIS harnesses require periodic grounding of entire assembly

ArmorLite large form-factor grounding HSTs

Long runs of shielded, overbraided EWIS harnesses require periodic grounding of entire assembly

Lightweight ArmorLite ground straps

Glenair

Surface plating provides an inadequate ground when mounting connectors to composite panels

Ground plane adapter plate

MasterWrap™

Lightweight, side-entry cable wrap with ARMORLITE technology

- Lightweight, side entry, conductive EMI/RFI cable wrap for use in harness applications – from long runs, to spot coverage and repairs
- The faster, easier-to-apply cable covering for EMI/RFI shielding and abrasion protection applications

MasterWrap™

Glenair

MasterWrap™ ArmorLite

Technology Advantages

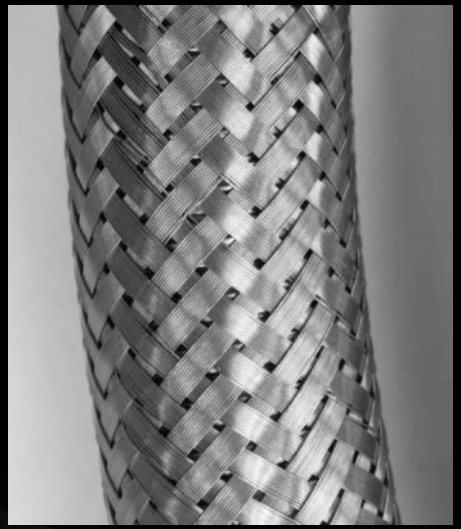
- **Saves weight:** 70% material weight reduction compared QQ-B-575 / A-A-59569 nickel copper
- **Simplifies Installation:** Replaces harder-to-install tubular EMI/RFI sleeving
- **Saves Time:** Fast and easy side-entry installation and removal
- **Improves EMI/RFI shielding:** Reduces windowing and coverage gaps
- **Improves Performance:** Delivers superior flexibility, durability and reparability

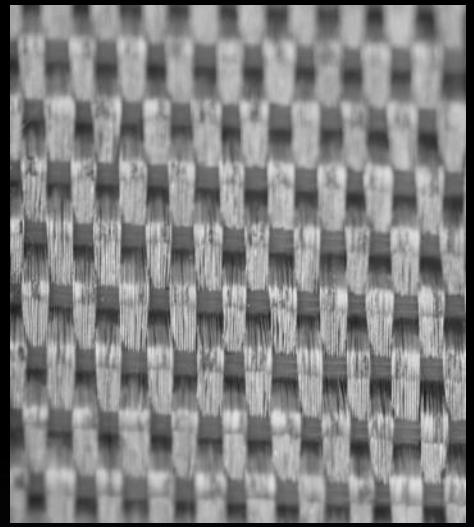
MasterWrap™

Glenair

MasterWrap™ ArmorLite

Technical Overview

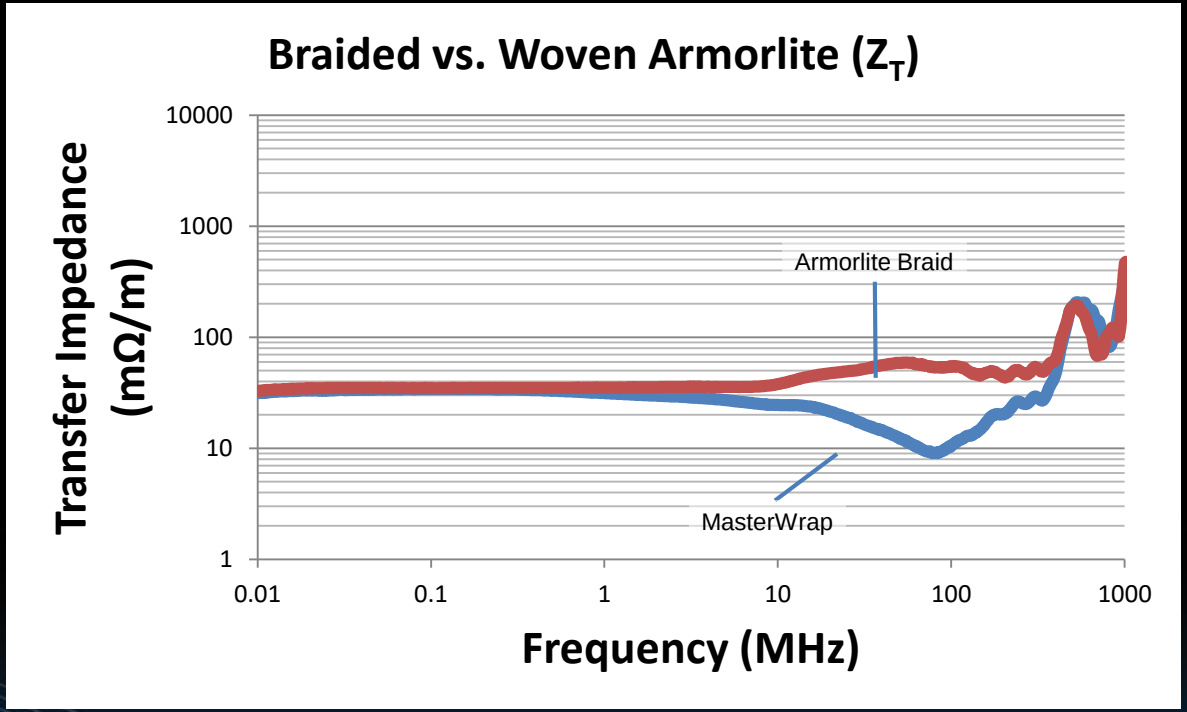




- Microfilament ARMORLITE stainless steel core, conductive nickel plating
- Interwoven PEEK spring members
- Woven mesh with built-in twist action

MasterWrap™ EMI Performance

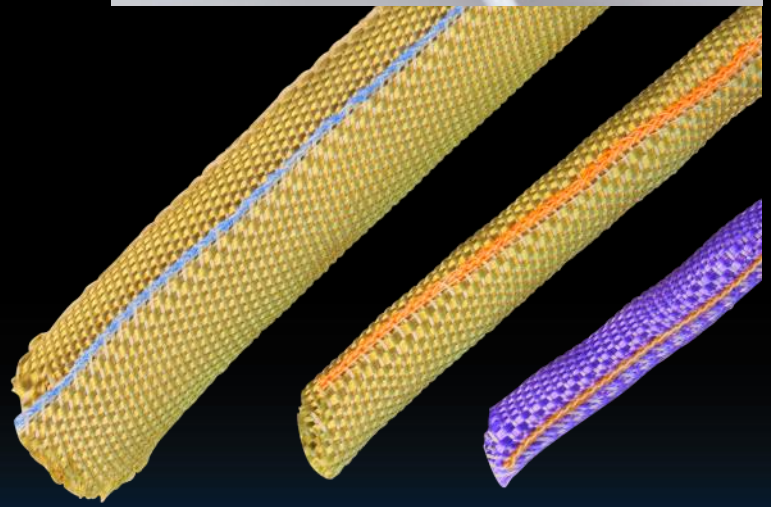
No compromise compared to tubular braided product



New MasterWrap Nomex

For spot mechanical coverage and repair of wire harnesses

- Abrasion protection
- Thermal protection
- Easy installation
- Color options for identification and labeling



Glenair

Saving Assembly Time and Labor:

Split-Shells for Easy Access

Piggyback Boot Connector Adapters

The no-guess-work, faster, smarter shrink boot

- Partially-recovered shrink boot, pre-attached to composite or metal shell connector adapter
- Reliable, first-time-every-time performance
- Up to 50% reduction in hand-labor and time

Glenair

Piggyback Boot Installation

As easy as 1, 2, 3

1. Stage piggyback boot adapter on wires for later use and terminate wires to connector
2. Attach piggyback boot adapter to connector
3. Complete final recovery of shrink boot around wires

Glenair

Piggyback Boot Connector Adapters

Environmental plus EMI/RFI shielding

Piggyback Boot with drop-in banding porch

Piggyback Boot with integrated shield sock

Band-in-a-Can Piggyback Boot

Glenair

Banding Backshell with Drop-In Shield Termination Follower

For overall and individual wire shield termination

- Composite thermoplastic construction
- Non-conductive, non-plated coupling nut (ground path through interlocking teeth from follower to body)
- Straight, 45°, and 90° configurations with Micro and Nano band shield termination

Glenair

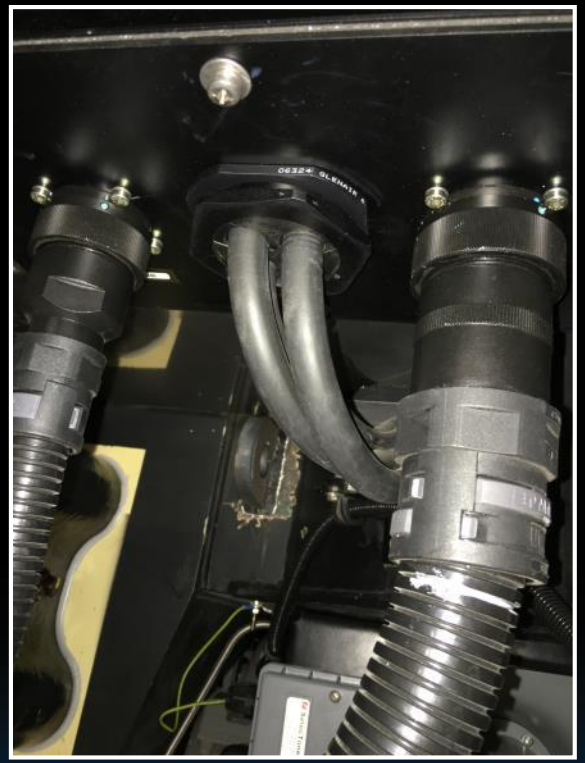
Firewall and Pressure Boundary Feed-Thrus

- High-grade engineering thermoplastic or machined metal
- Six pressure-boundary feed-thru layouts with accommodation for 1 – 6 cables
- O-ring sealed panel and box mounting interface
- Conductive and non-conductive finish options

Firewall and Pressure Boundary Feed-Thrus In Action: Qualification Testing

Glenair

Firewall and Pressure Boundary Feed-Thrus In Action



Special-Purpose Connector Devices for Commercial Aerospace Applications

Shorting connectors and grounding connectors

Glenair

Self-Locking and Other Special-Purpose Protective Covers

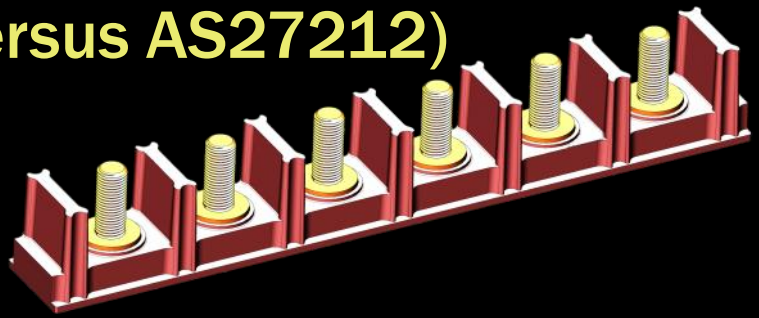
Self-Locking

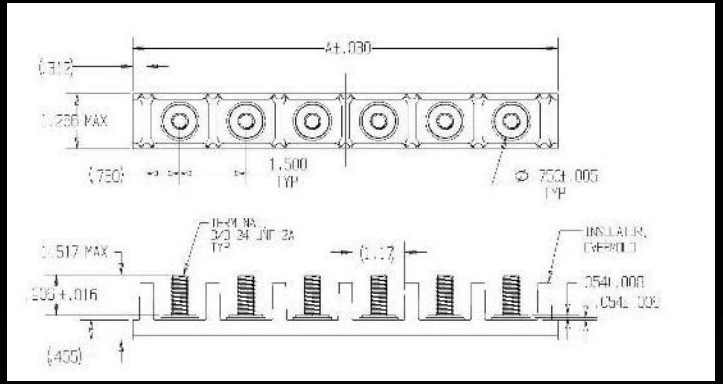
USB

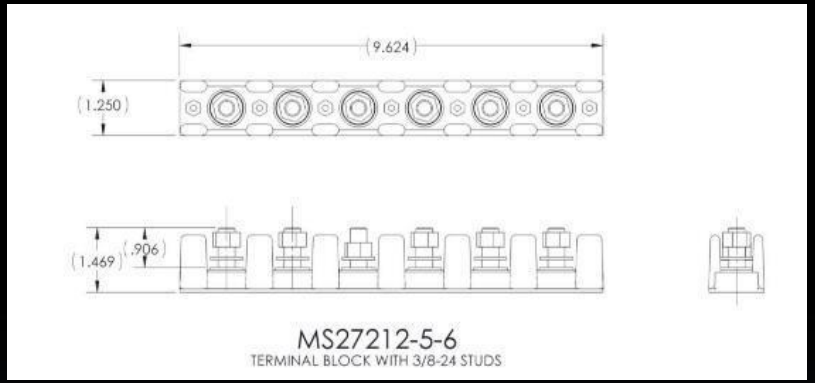
High-Pressure

Glenair Advanced “Dogbone” Terminal Blocks

(versus AS27212)



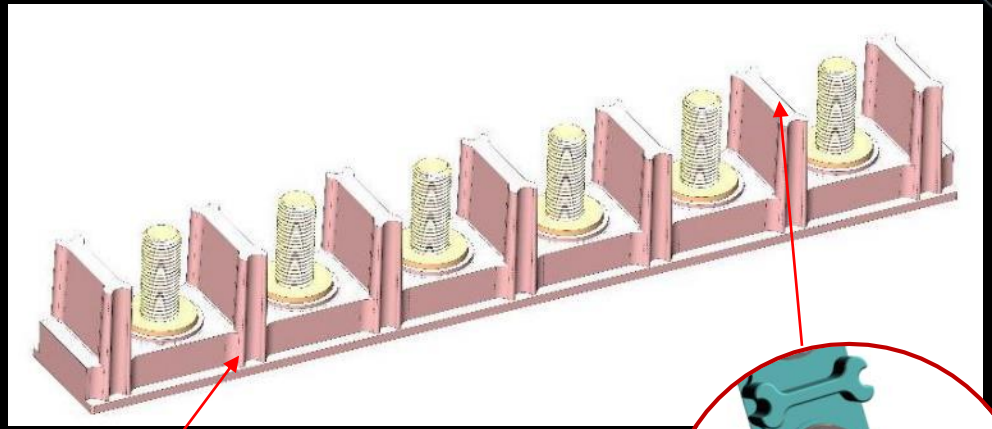


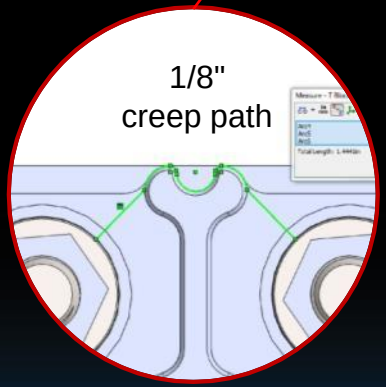


Glenair

“Dogbone” Terminal Block: Advanced Concept

- Protective barrier between energized circuits for enhanced safety during installation/repair
- “Dogbone” feature provides longer creep path across surface (over 1/8") – enhancing performance in contaminated environments.
- Uniform wall thickness eliminates sinks and voids
- PPS body with Duralectric covers



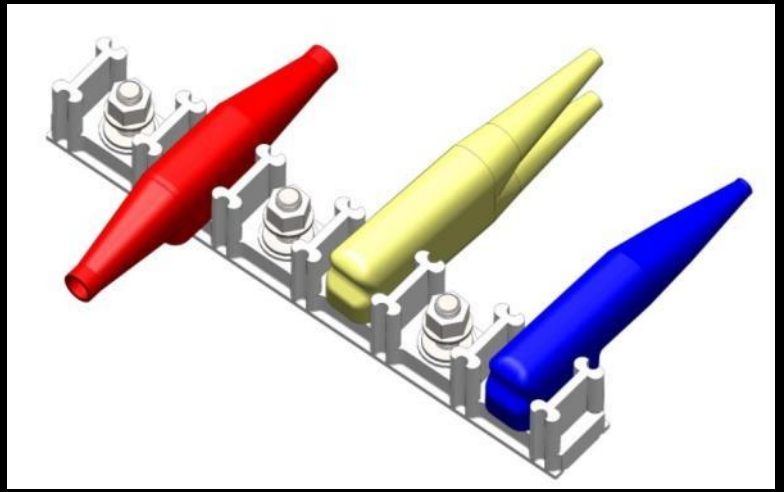


Full protective barrier between circuits

Innovative “Dogbone” Terminal Hoods

Duralectric elastomer

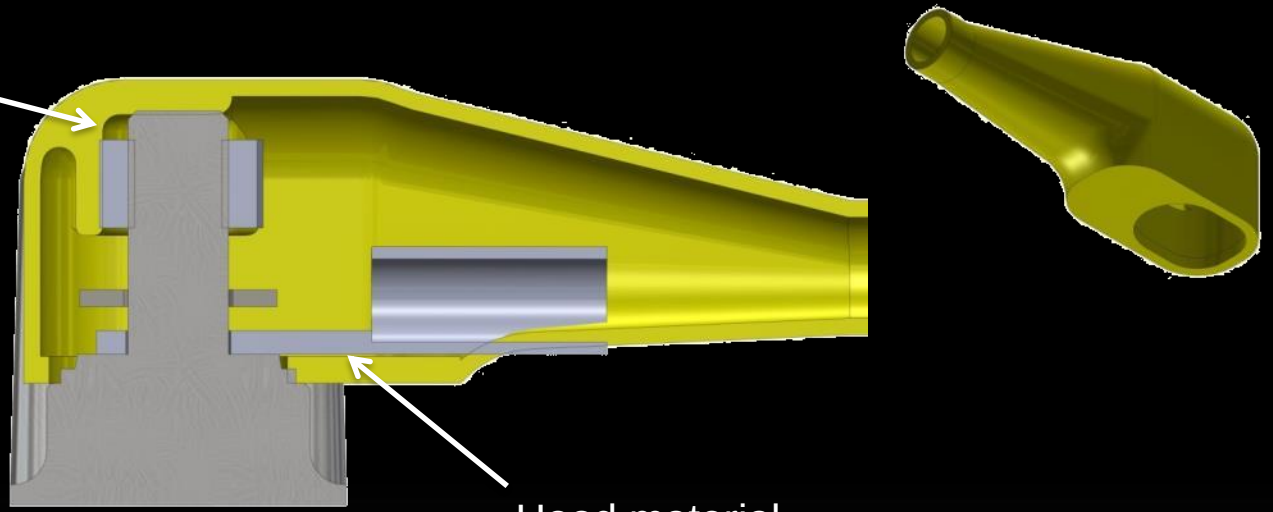
- Hoods can be removed one-by-one to prevent accidental shorting
- Duralectric silicone elastomer provides superior dielectric strength, mechanical properties and chemical resistance
- Color options for multi-phase power
- Multiple routing options and sizes



Innovative Terminal Hoods

Cross-section

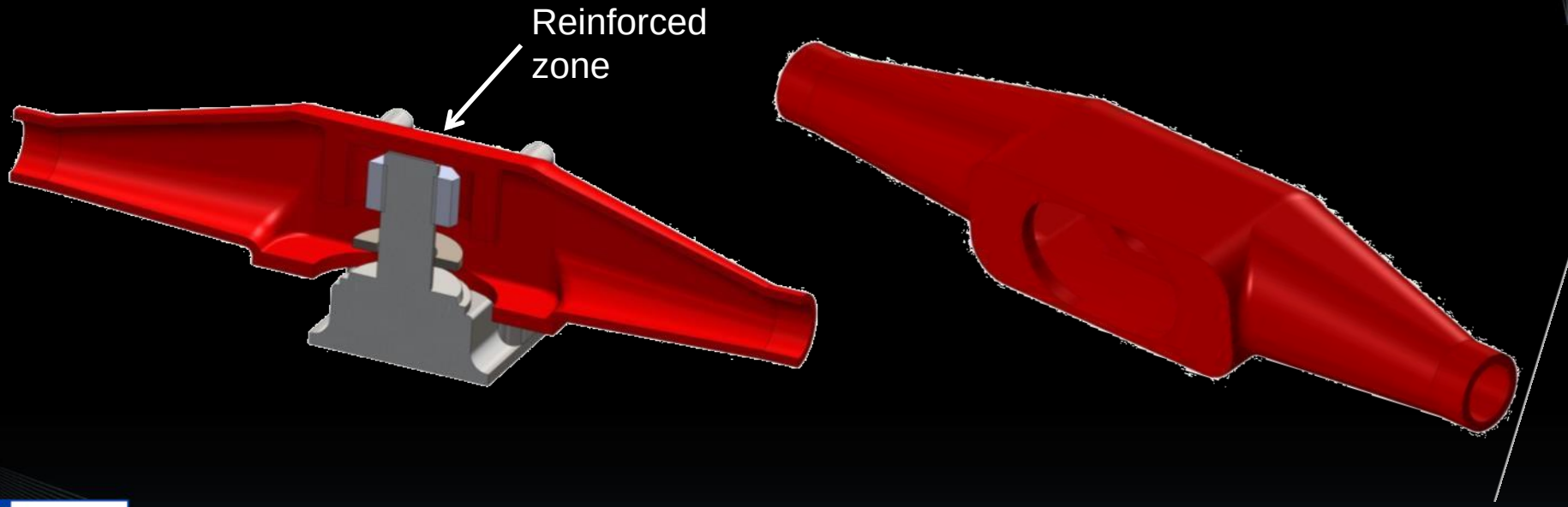
Thick x-section interferes with nut and stud. Tension on elastomer retains hood. Reinforced area prevent punctures.



Hood material hooks under terminal surface

Double Entry Terminal Hood

Cross-section

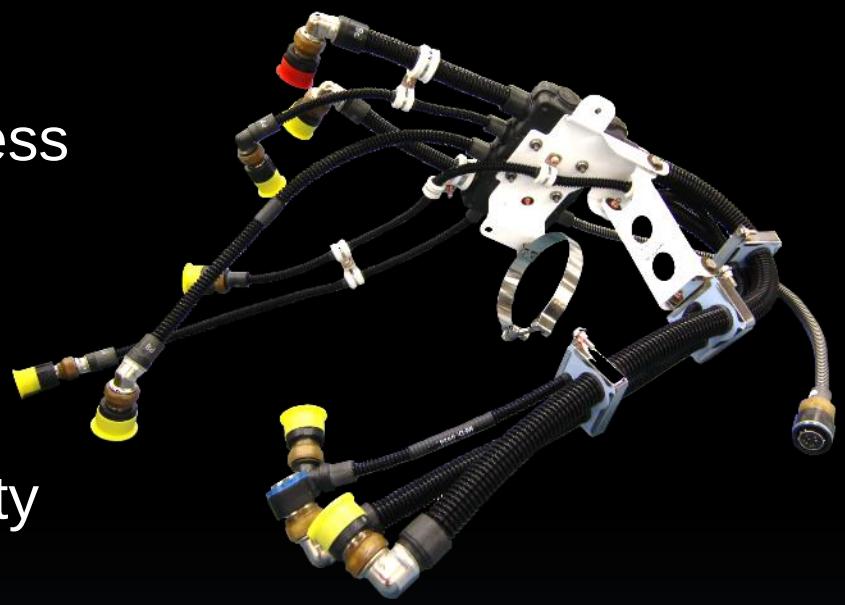


Why Conduit Wire Protection Technology?

CONDUIT SYSTEMS

An alternative to jacketed cable assemblies with unique application advantages

- Superior EMI shielding effectiveness
- Superior crush resistance
- Superior strike resistance
- Superior flexural modulus
- On-site installation / repair flexibility



Glenair

Best Application Environments for Wire Protection Conduit: Mil/Commercial Aerospace

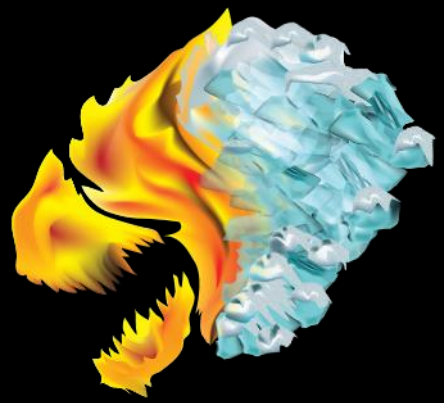
CONDUIT SYSTEMS

- Strike resistant for use in braking systems
- High flexibility for use in landing gear
- High temperature tolerant for adjacency to engines and propulsion exhaust

Glenair

ThermaRex Convoluted Conduit

- Glenair formulated fluoroplastic compound
- Helical Form – compatible with Hat Trick user Installable Adapters
- Mechanical properties improve with heat aging
- 300°C continuous operating temperature



ThermaRex™

Glenair®

ThermaRex High-temperature-Tolerant Flexible Polymer-Core Conduit

ThermaRex™ HT

- Qualification Testing Complete (GT-17-261 available)
- Dimensions and bend radius per SAE-AS81914/9
- Low temp flex at -54°C, 1,000 cycles
- 300°C aging for 500 Hours
- 300°C heat shock
- 12 kV DWV minimum
- Vertical Burn FAR 25.853 Compliant
- All standard colors: Black, clear, orange, blue, yellow
- Available with high-temperature braid shield and/or jacket

Glenair®

ThermaRex High-temperature-Tolerant Flexible Polymer-Core Conduit

ThermaRex™ HT

- Samples available on our 120-100, 121-101 and 121-102 drawings
  - Material Code ‘R’
- High Temperature shielding overbraid
  - Nickel 200
  - Stainless Steel
- High Temperature Jacket
  - PTFE impregnated Fiberglass
  - Duralectric (225°C)

Glenair

MISSION-CRITICAL
INTERCONNECT
SOLUTIONS

Glenair®

Glenair
SIGNATURE SERIES

Commercial Aerospace EWIS Technology

Signature Interconnect Solutions for Commercial Aircraft