



MISSION-CRITICAL
INTERCONNECT
SOLUTIONS



Glenair
SIGNATURE SERIES



Oil & Gas Connectors and Cable Assemblies

Subsea · Dry-Mate · Wet-Mate · Pipeline · Topside

JANUARY 2025

OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES



API-Compliant High-Pressure
Cables and PBOF Assemblies
Built with Glenair Signature
Wire and Multiconductor Cable



SeaKing
PRESSURE-RATED CABLES

MIL-STAR
HIGH-PERFORMANCE HOOKUP WIRE AND CABLE

FIBER KING
FIBER OPTIC CABLES

SpeedLine
High-Speed Protocol Cables

BLUMARK RF
COAX CABLES

Glenair is laser-focused on supplying our Oil & Gas industry / subsea customers with harsh-environment interconnect assemblies built from Glenair MIL-STAR™, SuperFlex™, SpeedLine™, and FiberKing™ wire and cable.



Supplied in bulk—any length, with no minimum order quantity—or in fully-integrated and connectorized assemblies, Glenair wire and cable brands are optimized for the highest performance in oil & gas industry applications.

**FAST DELIVERY AND
QUALITY SINCE 1956**

- NAVSEA S9320-AM-Pro-020/MLDG REV 3 certification
- SeaKing pressure-rated wire and cable
- Vertically-integrated, all key processes controlled in-house
- Massive inventory of material, component parts, and finished goods
- Glenair worldwide QMS: AS9100D SAE / ISO 9001 certified, and customer-audited

HARSH-ENVIRONMENT WIRE AND CABLE ASSEMBLIES

Built in-house with 100% Glenair wire, cable, contacts, and connectors in NAVSEA S9320-AM-Pro-020/MLDG REV 3 certified facilities



STANDARD SIGNAL, HIGH-SPEED, FIBER OPTIC, AND RF COAXIAL CABLE ASSEMBLIES BUILT 100% WITH GLENAIR WIRE, CABLE, AND INTERCONNECT COMPONENT PARTS



HOT SHOT

FAST-TURN UNDERWATER CABLE ASSEMBLIES

HotShot underwater cables are produced in-house with rigorous quality and qualification standards from in-stock connectors, wiring, and other materials. Guaranteed delivery as fast as 2 weeks.



SeaKing™ PBOF
Wired and connectorized PBOF assemblies, fittings, and accessories



High-pressure subsea 10K PSI SeaKing PEEK overmolded cable assembly



SeaKing™ BCR or FCR to commercial fiber optic pigtail assembly for I/O-to-board module applications



Hybrid SeaKing™ Junior 701 RF and high-speed digital solution in a high-pressure overmolded cable assembly



Glenair signature SpeedMaster 10G Ethernet high-speed overmolded cable (shown here in MIL-C-24231 packaging)



Glenair signature SuperG55 high-pressure cable assemblies with right-angle overmolding (left) and PBOF assembly (right)



Micro-PSI 10K PSI micro-miniature cable assembly for pipeline inspection applications



Turnkey Marine Molded cable configurations include inline and bulkhead assemblies with symmetrical plan forms from 2 to 16 contacts

MIL-STAR™

GS22759 HOOKUP WIRE



MIL-STAR High-Performance Hookup Wire and Cable Glenair has branded its GS22759 high-temperature aerospace-grade wire, and GS27500 multi-conductor cables for aerospace applications, under the MIL-STAR brand. These discrete wires and cables are built in accordance with SAE specifications with a "GS" leadoff in place of both the base specification and the part number for individual slash sheets.

M22759 single-ended hook-up wires are the industry standard for inside-the-box applications and are optimized for size, weight, high-temperature resistance, and low flame propagation. The hundred-plus variants of AS22759 are organized by conductor material and plating, insulation type, wire gage, and single- or dual-wall.

MIL-STAR GS22759 and Tyco/Raychem Spec 44/55 are equivalent products. Both wires are built and tested to the SAE AS22759/32 specification. All manufacturing characteristics are equivalent. Users may expect zero negative manufacturing process impact from using Glenair MIL-STAR wire in place of Tyco/Raychem Spec 44 or 55. Comparison test report available.

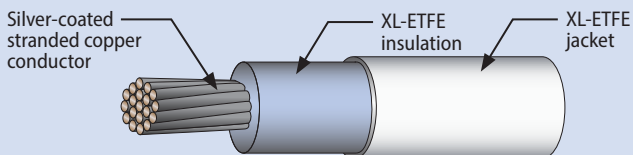
MIL-STAR™ 22759 OPEN WIRE LOOM AND (PROTECTED) HOOKUP WIRES

AS22759 high-temp single-conductor 600V military and aerospace-grade wire, standard and crosslinked, lightweight single-wall and rugged dual-wall configurations.

CROSSLINKED (XL) ETFE SAMPLES

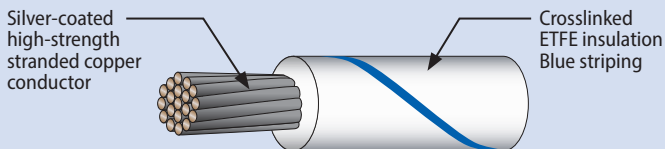
GS22759-43-22-9

- Silver-coated copper core, std. weight dual wall XL-ETFE insulation/jacket. High-temp, radiation- and fire-resistant.



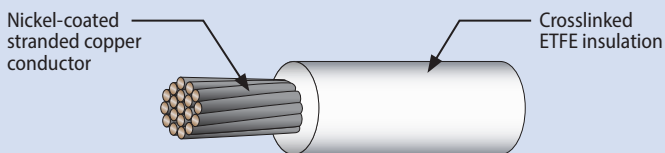
GS22759-33-24-96

- Silver-coated copper core with XL-ETFE insulation (blue striping). High-temp, low flammability.



GS22759-45-12-9 (Light weight)

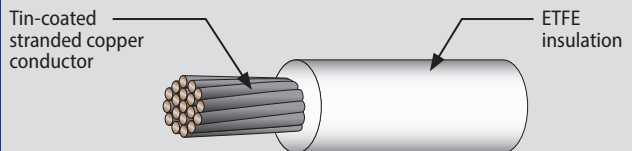
- Nickel coated copper core with XL-ETFE insulation. High-temp (200°C), fire and chemical resistant.



CONVENTIONAL FLUOROPOLYMER SAMPLES

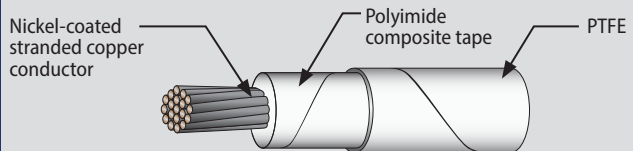
GS22759-16-8-9

- Tin-coated copper core with extruded ETFE insulation. Radiation-resistant and temperature tolerant to 150°C.



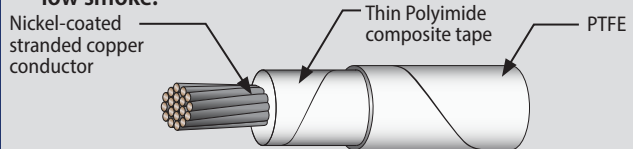
GS22759-87-20-9 (Standard weight)

- Nickel-coated copper, PTFE/Polyimide tape-wrapped. High-temp (260°C), fire and chemical-resistant, low smoke.



GS22759-92-20-9 (Light weight)

- Nickel-coated copper, PTFE/thin-wall Polyimide tape-wrapped. High-temp (260°C), fire and chemical-resistant, low smoke.



Hookup Wire for PBOF and Wire Harness Assemblies



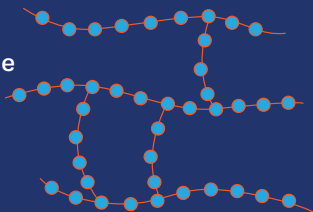
Spec 44 and Spec 55 (TYCO - Raychem) equivalent—same testing and qualification

MIL-STAR™ Order Number	Conductor	Plating	Insulation	Insulation Weight	Available Wire Sizes	Temperature Rating
SAE AS22759/16-19, ETFE						
GS22759-16	Copper	Tin	ETFE	Medium	24, 22, 20, 18, 16, 14, 12, 10, 8	150°C
GS22759-17	High-Strength Copper Alloy	Silver	ETFE	Medium	26, 24, 22, 20	150°C
GS22759-18	Copper	Tin	ETFE	Light	24, 22, 20, 18, 16, 14, 12, 10	150°C
GS22759-19	High-Strength Copper Alloy	Silver	ETFE	Light	26, 24, 22, 20	150°C
SAE AS22759/32-35, XL-ETFE						
GS22759-32	Copper	Tin	XL-ETFE	Light	30, 28, 26, 24, 22, 20, 18, 16, 14, 12	150°C
GS22759-33	High-Strength Copper Alloy	Silver	XL-ETFE	Light	30, 28, 26, 24, 22, 20	200°C
GS22759-34	Copper	Tin	XL-ETFE	Normal (Dual Wall)	24, 22, 20, 18, 16, 14, 12, 10, 8	150°C
GS22759-35	High-Strength Copper Alloy	Silver	XL-ETFE	Normal (Dual Wall)	26, 24, 22, 20	200°C
SAE AS22759/41-46, XL-ETFE						
GS22759-41	Copper	Nickel	XL-ETFE	Normal (Dual Wall)	26, 24, 22, 20, 18, 16, 14, 12, 10, 8	200°C
GS22759-42	High-Strength Copper Alloy	Nickel	XL-ETFE	Normal (Dual Wall)	26, 24, 22, 20	200°C
GS22759-43	Copper	Silver	XL-ETFE	Normal (Dual Wall)	26, 24, 22, 20, 18, 16, 14, 12, 10, 8	200°C
GS22759-44	Copper	Silver	XL-ETFE	Light	28, 26, 24, 22, 20, 18, 16, 14, 12	200°C
GS22759-45	Copper	Nickel	XL-ETFE	Light	28, 26, 24, 22, 20, 18, 16, 14, 12	200°C
GS22759-46	High-Strength Copper Alloy	Nickel	XL-ETFE	Light	28, 26, 24, 22, 20	200°C

CROSS-LINKED ETFE INSULATION

Cross-linked insulation (XL) and standard insulation are two types of dielectric materials used in wire and cable manufacturing. Cross-linking provides the following advantages:

- Improved thermal stability
- Chemical / solvent resistance
- Increased mechanical strength
- Laser-markable
- Longer service life



RED PLAGUE MITIGATION

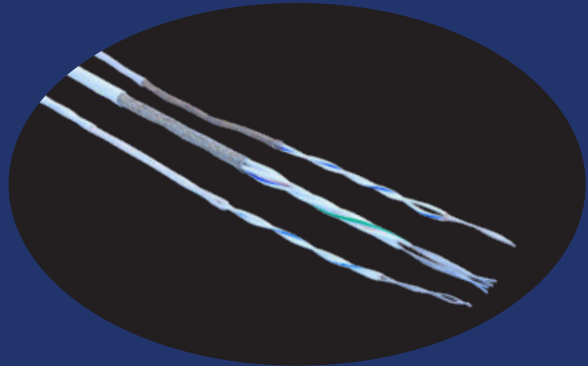
Glenair MIL-STAR™ high-temperature hookup wire and cable may be supplied in special 80 microinch silver-plated copper Mod Code configurations (1304A or 1304B) to combat Red Plague corrosion, a pernicious form of copper oxidation that results in the formation of red cuprous oxide (Cu₂O) and black cupric oxide (CuO). Red Plague corrosion can continue indefinitely, consuming conductor material and causing electrical system failures.

Mod Code 1304B
RED PLAGUE MITIGATION

MIL • STAR™

GS27500 MULTI-CONDUCTOR CABLE

Glenair MIL-STAR multi-conductor 27500 type cables are built from in-house manufactured GS22759 hookup wire (tested, one-to-one equivalents to Tyco-Raychem spec 44 and 55 wires). GS27500 constructions for shielded and unshielded cable are:



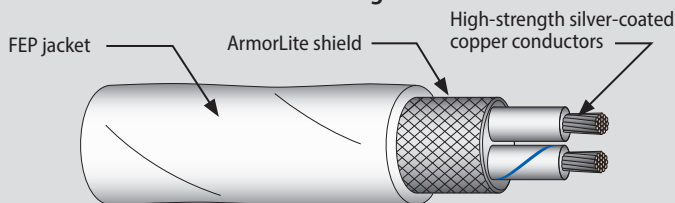
Made and tested IAW ANSI/NEMA WC 27500
1-15 22759 primary hook-up wires
Insulation types including crosslinked ETFE
Industry-standard and Glenair signature shielding materials
Standard and signature jacket compounds

MIL-STAR™ 27500 MULTI-CONDUCTOR CABLES

ANSI/NEMA WC 27500 and Glenair signature multi-conductor cables. Each series supports M22759-16 thru -46 wire types with wire count, gauge, shield, and jacket options as allowed.

968-001-24SC2AR09

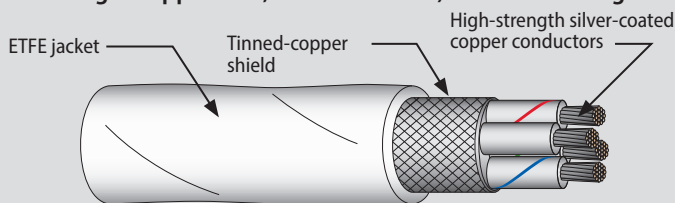
- 27500 type with ArmorLite or AmberStrand lightweight microfilament braided shielding



MIL-STAR GS27500 cables may be specified with signature braided shielding including ArmorLite, ArmorLite CF, and AmberStrand. The ability to supply 27500 type cable in accordance with the ANSI/NEMA standard but optimized for SWaP with lighter weight ArmorLite and AmberStrand shielding is a unique Glenair-only capability.

GS27500-22TF4T14

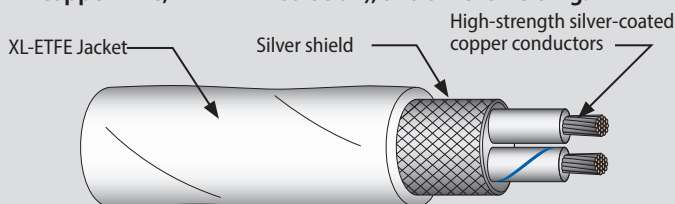
- 27500 type with GS22759-17 wire (silver-plated high-strength copper wire, ETFE insulation) and TC shielding.



This configuration of multi-conductor GS27500 cable is built with GS22759 dash 17 inner wires: silver-plated high-strength copper wire with ETFE insulation. The cable is equipped with an overall tinned-copper EMI/RFI shield and standard fluoropolymer ETFE outer jacket. The superior mechanical properties of high-strength conductors contribute to the overall safety, reliability, and mechanical strength of the cable.

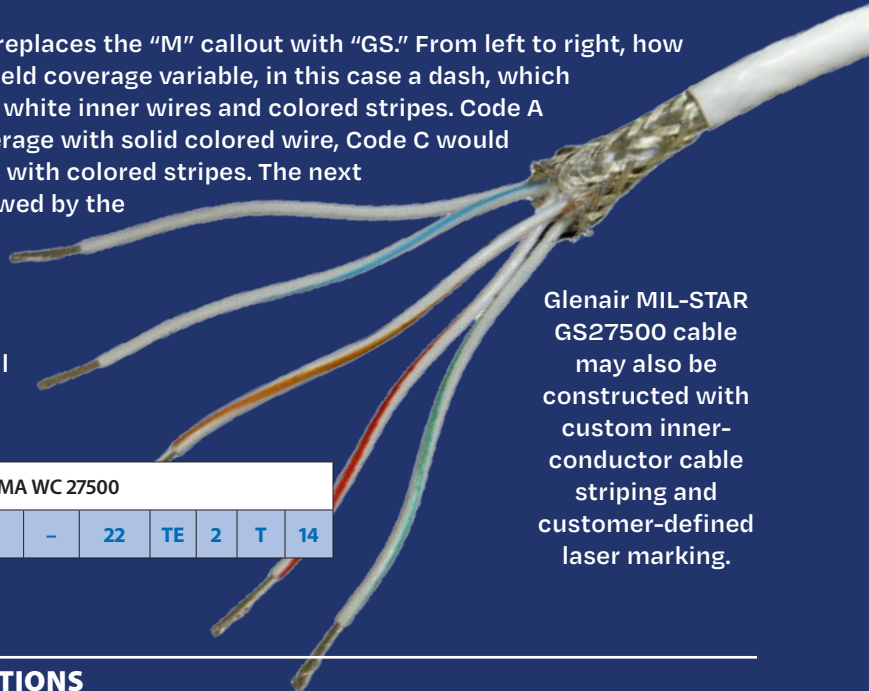
GS27500-24SC2S23

- 27500 type with GS22759-33 wire (silver-plated high-strength copper wire, XL-ETFE insulation), and silver shielding.



This cross-linked configuration of multi-conductor GS27500 cable is built with GS22759 type dash 33 inner wires: silver-plated high-strength copper wire with cross-linked XL-ETFE insulation. Cable is equipped with an overall silver-plated EMI/RFI shield and cross-linked XL-ETFE outer jacket. This multi-conductor 27500 type cable delivers far superior thermal stability, enhanced chemical resistance, mechanical strength, and electrical properties compared to non-crosslinked versions.

MIL-STAR GS27500 cable part numbering replaces the “M” callout with “GS.” From left to right, how to order variables begin with the color code and shield coverage variable, in this case a dash, which indicates default 85% overall shield coverage, with white inner wires and colored stripes. Code A used in this position would denote 85% shield coverage with solid colored wire, Code C would denote 90% shield coverage with white inner wires with colored stripes. The next variable, 22 in our example, is conductor size, followed by the base wire specification (TE) indicating GS22759-16 wire is to be used in this cable buildup. Final variables include the number of inner wire conductors (2), type of overall shielding (T, for Tinned Copper), and finally jacketing material (14, indicating extruded ETFE in white).



Glenair MIL-STAR GS27500 cable may also be constructed with custom inner-conductor cable striping and customer-defined laser marking.

Multi-conductor M27500 type IAW ANSI/NEMA WC 27500							
MIL-STAR Cable Sample Part Number	GS27500	-	22	TE	2	T	14

BETTER-THAN-QPL MIL-STAR SHIELDING OPTIONS

Glenair signature braided cable shield solutions include single and double layers of metal-clad composite microfilament AmberStrand®, microfilament nickel-clad stainless steel ArmorLite™, and ArmorLite™ CF corrosion-resistant.

MIL-STAR GS27500 SHIELDING OPTIONS		
Single Shield Code	Double Shield Code	Shield Description
AM	AS	AmberStrand®, Round
AR	AL	ArmorLite™, Round
AC	AF	ArmorLite™ CF, Round
U	U	Unshielded



SpeedLine™

High-Speed Protocol Cables

Glenair supplies a wide range of high-speed shielded twisted pair cabling for use with El Ochito®, VersaLink™, SpeedMaster™, and other of our shielded high-speed connector and contact technologies. High flexibility and high-density reduced-weight cable designs are a specialty. Glenair offers turnkey Cat 8 Ethernet, SuperSpeed USB 3.0, HDMI, SATA, and other solutions for rugged application environments including high-pressure subsea.

Glenair SpeedLine cables are optimized for signal integrity, weight savings, flexibility, and durability. In addition, these harsh-environment cables have been optimized for ease of termination and across-the-board compatibility with our broad range of high-speed contact modules and connectors.



Glenair signature SpeedMaster 10G Ethernet high-speed overmolded cable solution for a 10K PSI subsea application

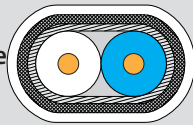
- Cat 8 Ethernet, SuperSpeed USB 3.0, HDMI, SATA, and other solutions for mission-critical applications
- Individual foil shielding around each data pair for reduced crosstalk and attenuation
- Up to 200°C high-temperature-rated cable
- RoHS compliant versions
- Ethernet versions meet ANSI/TIA 568-C.2 Category 6A requirement up to 262 feet/80 meters
- Low-skew SuperSpeed USB data pairs have individual braided shields
- Water- and pressure-resistant jacketing and overmolding materials



SpeedLine™ high-speed protocol cables: shielded differential data-pair cables for high-datarate Ethernet, USB, SATA, PCIe, DisplayPort, and HDMI protocols

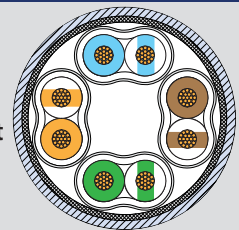
963-069-26

- 100 Ohm #26 AWG flat pair shielded cable for use with VersaLink™ connectors
- Performance up to 18 GHz
- -65 to +200 °C rated operating temperature
- FEP jacket, FEP insulation
- Dual shields: Aluminized Kapton tape and #44 AWG silver-plated copper

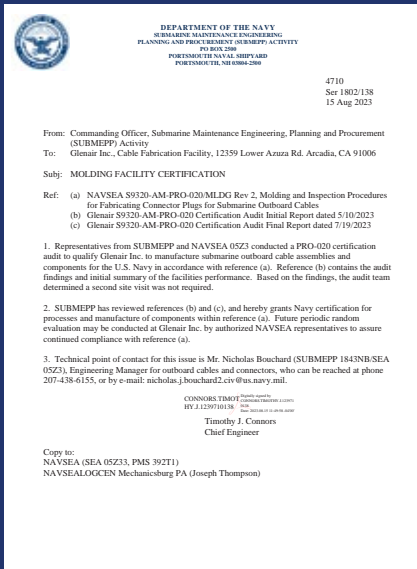


963-066-24

- 100 Ohm #24 AWG 4-pair shielded cable for use with El Ochito contacts
- Performance up to 10 Gigabit Ethernet
- -65 to +200 °C rated operating temperature
- FEP jacket, FEP insulation with PTFE tape wrap
- Outer shield: #40 AWG silver-plated copper



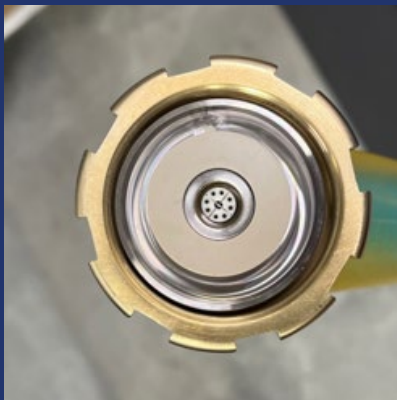
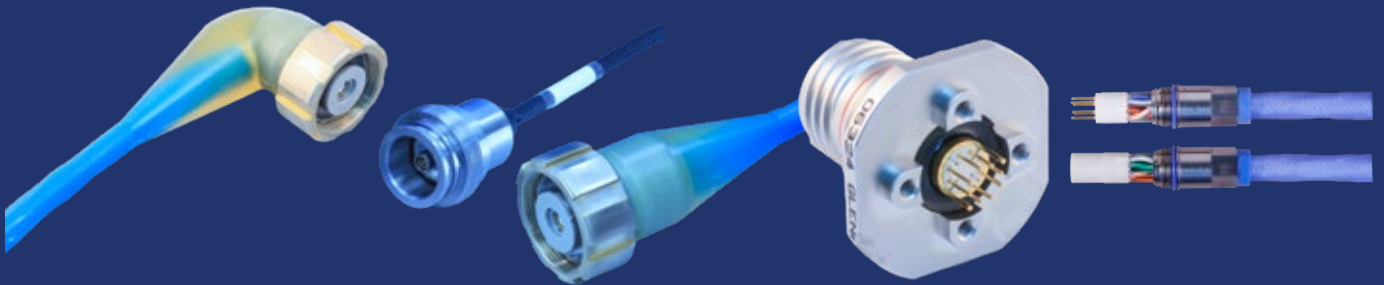
Glenair signature SpeedLine high-speed protocol cables are designed for direct application and use with VersaLink™, SpeedMaster™, El Ochito®, and other of our lightweight, small form-factor high-speed protocol connectors.



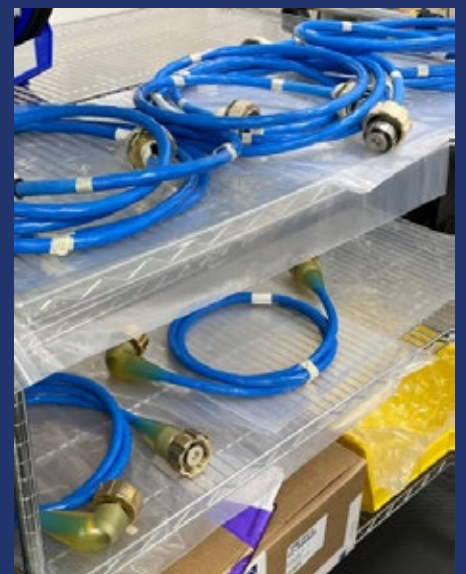
Glenair subsea cable overmolding facility achieves NAVSEA S9320-AM-Pro-020/MLDG REV 3 certification

NAVSEA "Pro-20" Certification was provided by the US Navy after auditing the Glenair overmold cable fabrication process for Subsea. Certified cables were molded in a humidity and temperature-controlled room according to exacting NAVSEA-audited procedures. The process includes special handling of constituent parts for contamination prevention, protection of special coatings, and the application of various primers on connector shells prior to molding with a special Glenair-formulated polyurethane mold compound. This translucent overmold material allows for ready inspection of cables for air bubbles and correct wire termination. In addition, compliance with Pro-20 procedures and documentation requires each cable to be serialized with its own documented AP, and tested per ATP633 and QCD-8941 with READ AND RECORD data taken at multiple stages.

CUSTOM MIL-C-24231 ASSEMBLIES: SPEEDLINE HIGH-SPEED DATA CABLE

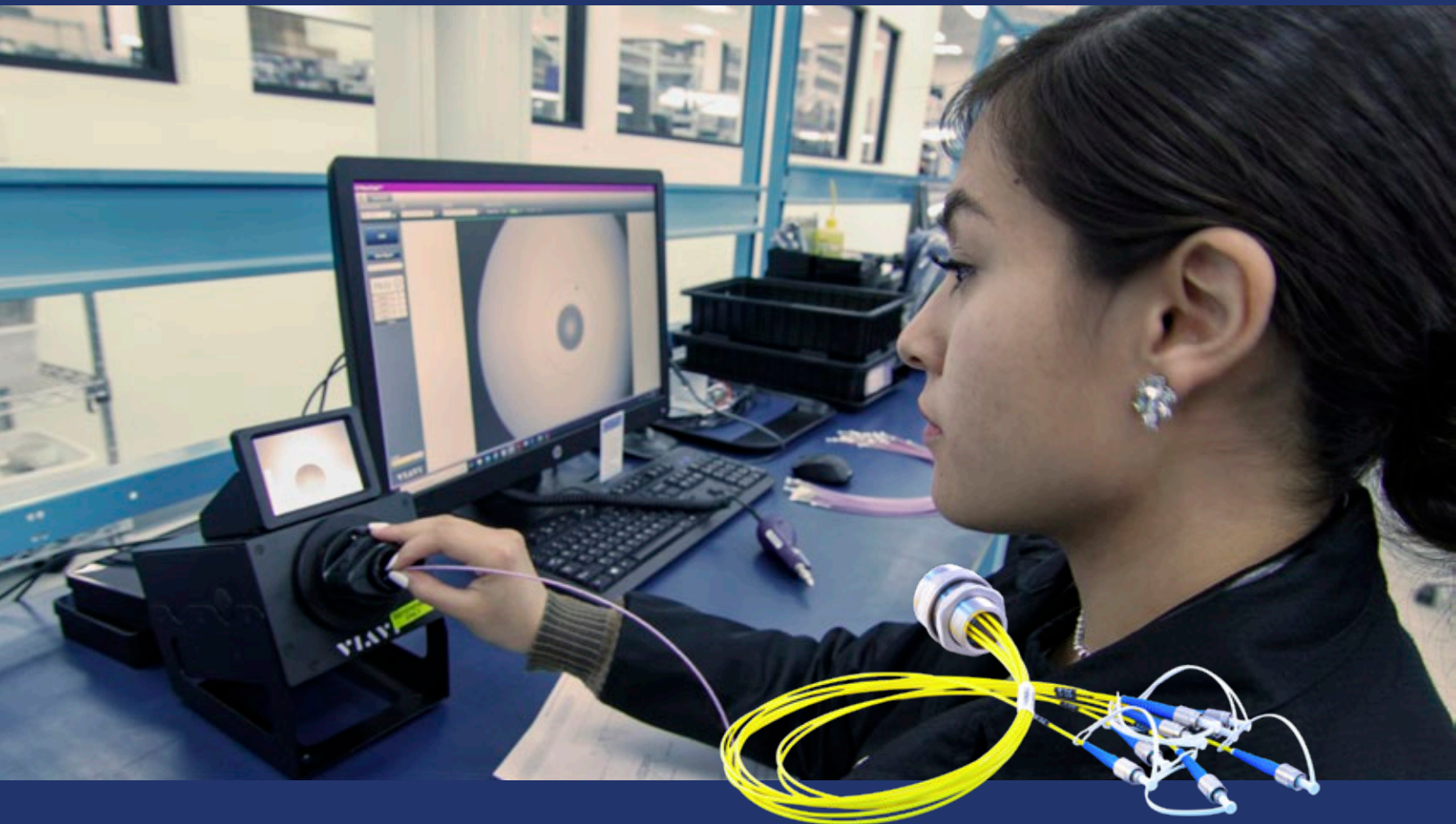


Glenair SpeedLine high-speed subsea data cable assemblies for 10G Ethernet applications: materials include SeaKing 2K PSI open-face glass-sealed connectors, non-conductive coating (NCC) on the plug and clear polyurethane overmold, per NAVSEA Pro-20. This glass-sealed SpeedMaster™ connector has an open-face pressure rating of 2,000 PSI (IAW MIL-C-24231, consult factory for higher pressure ratings) and was fully qualified to the specification at a third-party laboratory.



FIBER KING

FIBER OPTIC CABLES



Glenair is the worldwide leader in military, aerospace, and harsh-environment fiber optic interconnect assemblies. We manufacture every element in-house, from low-loss simplex, duplex, and multi-line fiber optic cables, to precision termini, military and aerospace-grade connectors, backshells, and tools. Glenair FiberKing fiber optic cables are optimized for reliable, durable performance in military and commercial aviation, space, harsh-environment oil and gas, and multi-termination (MT ribbon) assemblies.

FIBERKING FIBER OPTIC CABLES

- Lightweight, tight bend-radius fiber optic cable for 10Gb+ avionic networks
- Vibration, radiation, and temperature-resistant space-grade F/O designs
- Ultra harsh-environment (high-pressure, high-temp, water-blocking) oil & gas industry fiber optic cable assemblies
- Ruggedized fiber optic ribbon cable for multi-fiber termination (MT) applications

TURNKEY Fiber Optic Cables and Harnesses



For rugged mission-critical applications



THE FIBERKING OPTICAL CABLE ECOSYSTEM

The FiberKing optical cable ecosystem is a complete family of fiber optic data transmission interconnect technologies for demanding commercial and industrial applications. This complete 10Gb+ low-loss fiber optic solution includes single- and multimode stepped and graded-index cables in simplex, duplex, and multi-line configurations. SeaKing 700 fiber optic connectors are Glenair's signature offering for high-pressure subsea applications. Cables and connectors are rated up to 10K PSI (pressure rating dependent on exact cable construction, fiber wire, and termination type) with maximum optical loss (dB / km) at 850 nm \leq 5.0 and at 1300 nm \leq 3.0. Multimode cables are OM4 graded-index. Singlemode cables are OS1 stepped-index.



SEAKING MUX FIELD-INSTALLABLE UMBILICAL CONNECTOR

The Glenair signature MUX (Multiplexer) field-installable subsea umbilical solution is a specialized connector and cable system used in offshore and subsea operations to connect surface facilities (like drilling rigs or production platforms) with equipment on the seafloor, such as blowout preventers (BOPs), manifolds, or other subsea infrastructure.

MUX systems use digital signals to control multiple functions through a single set of electrical and/or fiber-optic lines. This minimizes the number of physical conductors required, making the umbilical lighter and more efficient—essential for controlling complex subsea equipment like BOPs, where rapid and precise control is critical.

The Glenair MUX umbilical is designed to be assembled, terminated, or connected on-site, rather than being fully pre-assembled at our facility. This provides flexibility for operators to adapt the umbilical system to specific installation requirements and accommodate unanticipated on-site changes.



FIBERKING SINGLEMODE OPTICAL FIBERS IN SEAKING 700 ASSEMBLIES

Data-intensive applications such as towed array sonar systems, well logging and monitoring equipment, digital seismic streamers, as well as magnetic flux leakage and ultrasonic inspection sensors used in intelligent pipeline inspection are ideally suited for ruggedized high-pressure fiber optics. Fiber optic interconnect systems deliver ultra-high data bandwidth, immunity from RFI and other forms of electromagnetic interference, as well as reduced size and weight compared to high-speed copper. Glenair SeaKing™ Fiber Optic solutions include harsh-environment overmolded cable assemblies, multibranch inside-the-box jumpers, as well as Glenair signature Pressure-balanced oil-filled (PBOF) cable assemblies with fiber optic media optimized for deep sea applications.

BLUMARK RF

COAX CABLES



Hybrid SeaKing™ Junior 701 RF and high-speed high-pressure overmolded cable assembly. Note: SeaKing 700 RF solutions available with open-face rated coax contacts in GC and KC6 arrangements.

Glenair is one of just a few interconnect manufacturers that can supply turnkey RF transmission line assemblies—fully connectorized and ready for immediate use—built 100% in-house with Glenair component parts. Glenair high-frequency RF assemblies are typically used in line-replaceable units and chassis that are part of an RF data transmission chain. The rugged, environmental construction of Glenair multi-port RF connector shells and contacts, combined with our high-reliability BluMark RF coax cables, makes these turnkey transmission line solutions ideal for mission-critical air, sea, land, and space applications with exacting size, weight, and frequency requirements.

BLUMARK RF

COAX CABLES

GLENAIR TURNKEY RF ASSEMBLIES ARE BUILT WITH AEROSPACE-GRADE 50 OHM LOW-LOSS COAX CABLES



Size 047
40 GHz



Size 086
40 GHz



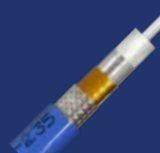
Size 130
40 GHz



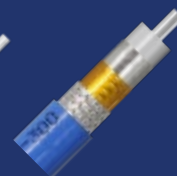
Size 160
40 GHz



Size 200
26.5 GHz



Size 235
26.5 GHz



Size 300
18 GHz

Double-Shielded • Low phase-change
Fluoropolymer Dielectric • FEP Jacket

Triple-Shielded • Low-Loss PTFE
Tape-Wrapped Dielectric • FEP Jacket

TURNKEY RF and Microwave Transmission Assemblies



With Glenair signature multi-port connectors, low-loss cables, and high-frequency contacts

BLUMARK RF™ COAX CABLES

BluMark RF 50 Ohm Coax Cables are available in seven size categories. These high-frequency, low-loss, flexible cables are suitable for radar and other aerospace applications as well as laboratory test equipment. Jacket options include FEP and radiation-resistant space-grade ETFE. Triple-shielded high-performance cables have expanded PTFE dielectric core for low loss up to 40 GHz. Application selection is based on compatibility with a particular RF / microwave connector type and size, as well as flexibility, EMI screening, weight considerations, temperature tolerance, and altitude.

962-032-200



- 50 ohm size 200 (.204" diameter, .051" conductor) 26.5 GHz max. frequency low-attenuation cable
- -55 to +200 °C rated operating temperature
- FEP jacket, expanded PTFE dielectric, solid SPC center conductor
- Triple-shielded: Tape/foil/braid shield layers with >90 dB shield effectiveness

962-032-160



- 50 ohm size 160 (.161" diameter, .036" conductor) 40 GHz max. frequency low-attenuation cable
- -55 to +200 °C rated operating temperature
- FEP jacket, expanded PTFE dielectric, solid SPC center conductor
- Triple-shielded: Tape/foil/braid shield layers with >95 dB shield effectiveness

962-032-130



- 50 ohm size 130 (.131" diameter, .029" conductor) 40 GHz max. frequency low-attenuation cable
- -55 to +200 °C rated operating temperature
- FEP jacket, expanded PTFE dielectric, solid SPC center conductor
- Triple-shielded: Tape/foil/braid shield layers with >90 dB shield effectiveness

962-025-086



- 50 ohm size 086 (.104" diameter, .020" conductor) 40 GHz max. frequency low-attenuation cable
- -65 to +165 °C rated operating temperature
- FEP jacket, LPCF dielectric, solid SPC center conductor
- Double-shielded: Tape/braid shield layers

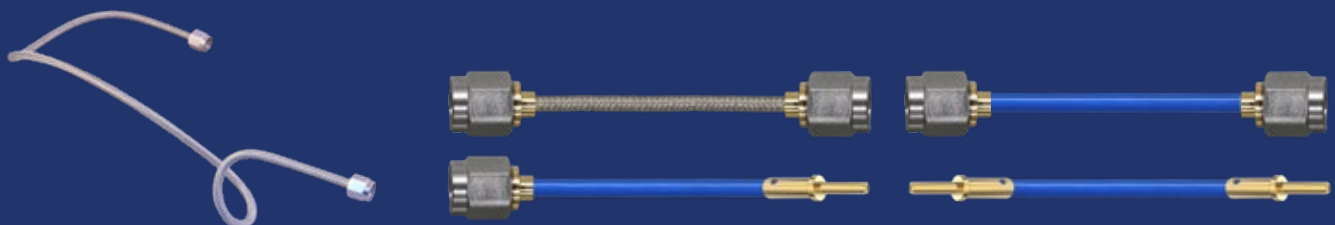
962-025-047



- 50 ohm size 047 (.056" diameter, .011" conductor) 70 GHz max. frequency low-attenuation cable
- -65 to +165 °C rated operating temperature
- FEP jacket, LPCF dielectric, solid SPC center conductor
- Double-shielded: Tape/braid shield layers

50 OHM COAX RF JUMPERS

Series GRF02 50 Ohm Coax Cable "Jumpers" are COTS, cut-to-length cable assemblies with pre-installed connectors at both ends. Turnkey RF jumpers offer excellent flexibility with a bend radius of 6mm or 1/4 in.

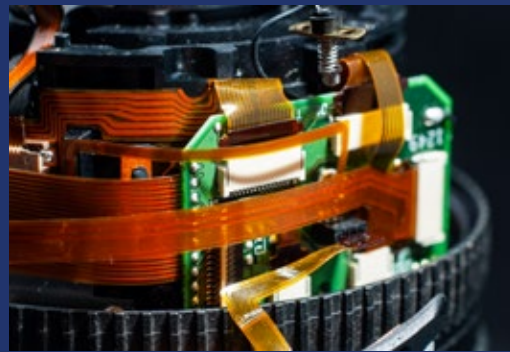


AEROSPACE-GRADE

SuperFlex™

PCB/FLEX CIRCUIT ASSEMBLIES

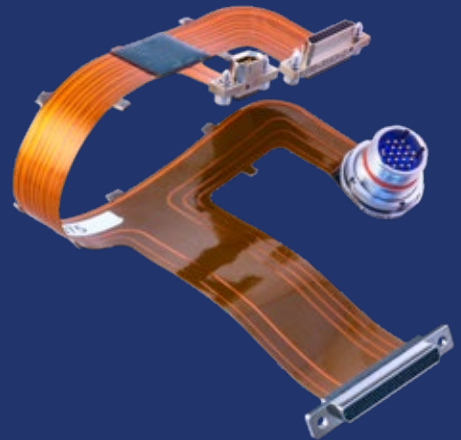
Turnkey connectorized flex, rigid flex, and rigid PCB assemblies incorporating Glenair's broad range of innovative small form-factor circular and rectangular PC-tail connector solutions for optimized ease-of-assembly and SWaP



Flex circuits—metallic layers of traces, usually copper, bonded to a dielectric layer, like polyimide—are used to interconnect embedded electronic packages, displays, backplanes, and other PCB components. Flex and rigid-flex circuits are frequently superior to conventional wiring as they can be easily routed in three dimensions, are lighter and smaller than discrete wires, and

offer virtually unlimited flex cycles in articulated applications. Flex and rigid-flex circuits are commonly deployed within avionic LRUs and other complex electronic systems, as well as between articulating components, such as disk drive, robotic arms, and other electro-mechanical devices.

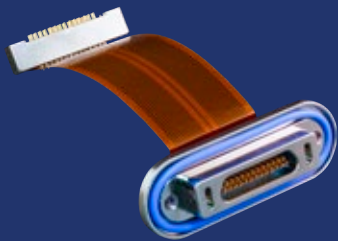
Compared with conventional wiring, compact flexible printed circuit assemblies reduce system complexity and assembly time as well as enhance reliability. Due to their low mass and high circuit density, flex circuit assemblies are less susceptible to impact and vibration damage than conventional wire harness assemblies, making them an ideal choice in missile and other reduced form-factor applications.



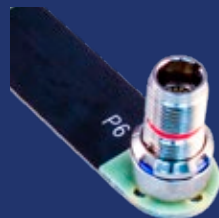
IPC 6012/6013 Class I, II, III,
Types 1-4 Certified Production

Glenair recommends commercial customers specify IPC-6012/6013 standards of workmanship, which are fully supported by Glenair. Military customers may alternatively cite specifications IAW MIL-PRF-31032.

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



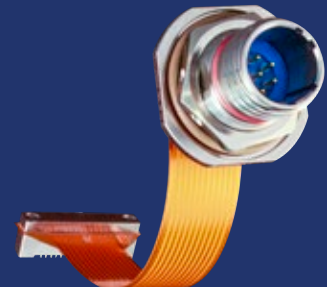
Series MWD Micro-D and spring-contact AlphaLink



Series 88 SuperFly

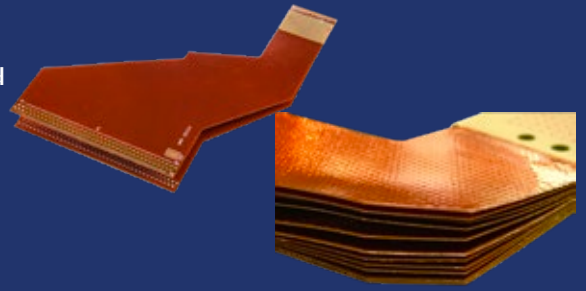


Series 79 Micro-Crimp



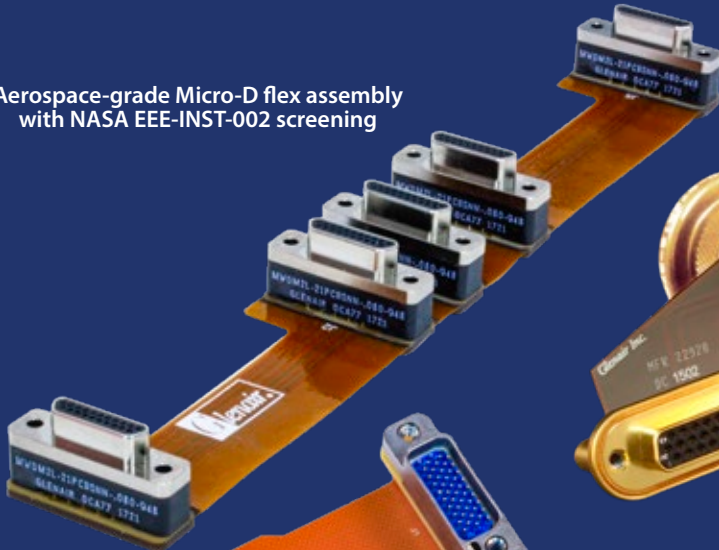
SuperNine MIL-DTL-38999 type flexi with board connector

Glenair SuperFlex turnkey connectorized flex, rigid flex, and rigid PCB assemblies begin with our signature flex circuit fabrication and innovation. All SuperFlex assemblies are optimized with ground planes and shields, strain relief features, mounting points for improved resistance to vibration and shock, and are available in multi-layer and double-sided configurations. All terminations backpotted for compliance with conformal coating processes. Optical and electrical solutions available. Special long-length assemblies up to 12 feet.



MULTIBRANCH SUPERFLEX ASSEMBLIES WITH GLENAIR SIGNATURE CONNECTORS

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



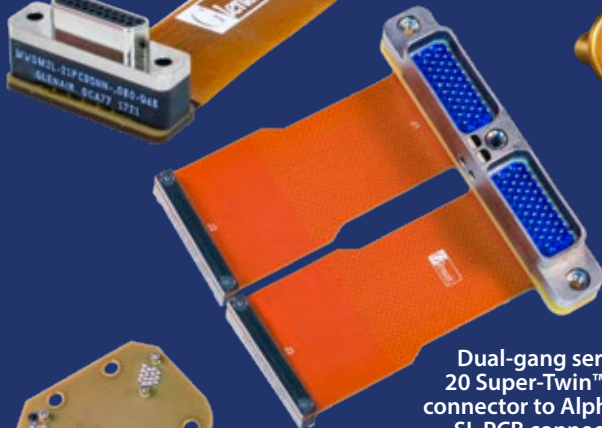
High-shock matched-impedance Mighty Mouse assembly with flex circuit



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



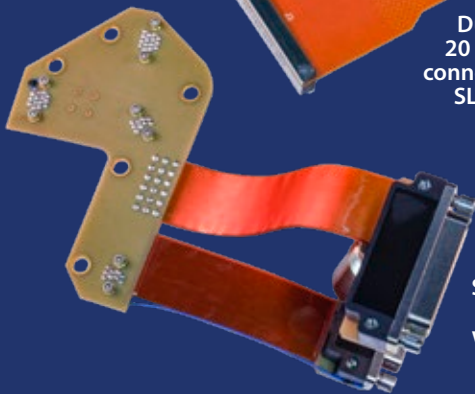
Dual-gang series 20 Super-Twin™ I/O connector to AlphaLink SL PCB connector



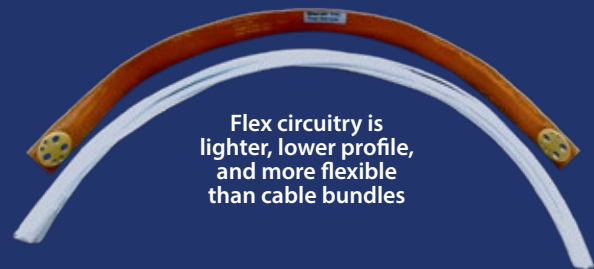
Hybrid flex/rigid flex multibranch Micro-D and Series 23 SuperNine flex assembly with discrete RF circuits



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



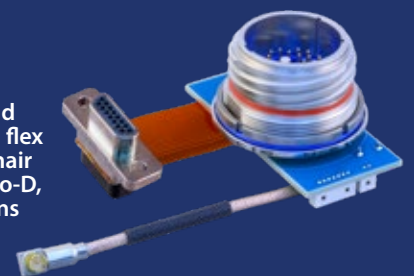
Flex circuitry is lighter, lower profile, and more flexible than cable bundles



Special "Fairway-Flex" long-length HiPer-D assembly with clock-spring design element



High vibration and shock resistant rigid flex assembly with Glenair Mighty Mouse, Micro-D, and RF connections



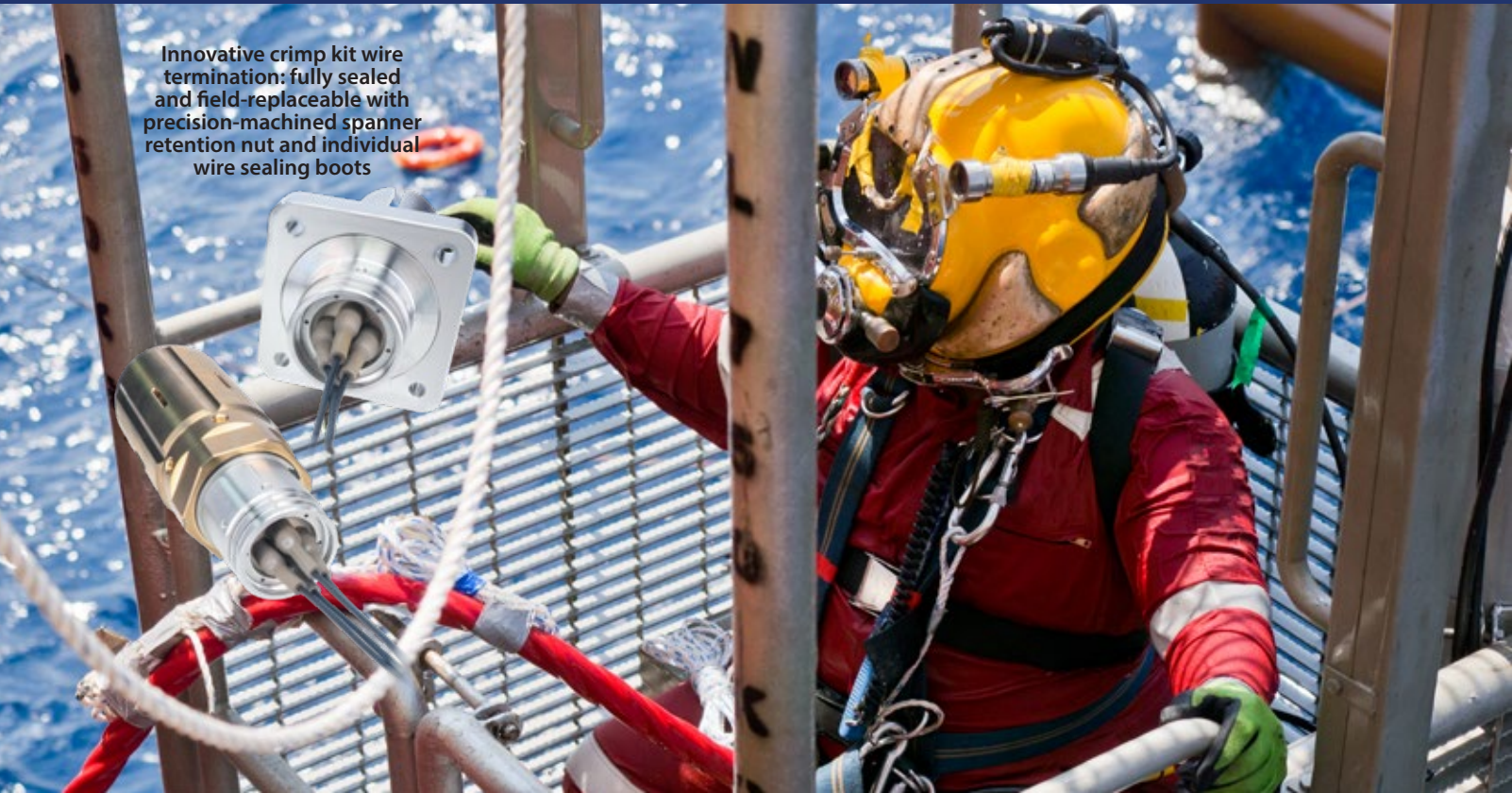
OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



SeaKing™ WetMate

Diver-Mate • Stab-Plate • ROV-Mate 10K
psi Open-Face Rated Wet Mate Connector

Innovative crimp kit wire termination: fully sealed and field-replaceable with precision-machined spanner retention nut and individual wire sealing boots



Glenair SeaKing WetMate Interconnect Now in Final Qualification Testing

The SeaKing 700 series of high-pressure Oil & Gas industry underwater connectors will see a major expansion in 2025 with the introduction of an oil-bladder filled, field-serviceable wet mate connector compliant to API Standard 17F. The new series will be supplied in diver, stab-plate, and ROV-mate connectors, and is uniquely engineered for use with aerospace-grade split-tine crimp contacts with state-of-the-industry sealing and Glenair's commitment to quality, reliability, and service. SeaKing WetMate features a solder-free rear crimp contact body with field-replaceable insert stack and 10K psi mated and open-face rating. Supplied in stainless steel or titanium with marine bronze coupler, as well as glass-filled composite thermoplastic PEEK for advanced deep-sea corrosion protection and cathodic delamination protection.

TECHNICAL FEATURES

- 1KV AC-rated
- #10 AWG wet-mate contacts, bladder type
- Stainless steel / titanium shell bodies with PEEK inner insert molded assemblies
- Natural rubber inner/outer bladders and cable boots
- 4, 8, and 12 contact arrangements
- 10K psi mated and open-face rating
- Operating depth up to 20,000 ft. (10K psi)
- Field-replaceable insert stack, contacts, and sealed wire termination zone

SeaKing™ WetMate



Diver-Mate • Stab-Plate • ROV-Mate
10K psi Open-Face Rated Wet Mate Connector

SEAKING WETMATE DESIGN FEATURES AND ADVANTAGES



- Precision spanner nut retention plates
- Socket insert module (factory oil-filled) removable for field maintenance
- Crimp contact materials and design IAW aerospace specifications
- Field-replaceable overmolded pin contacts with dual O-rings
- Split-tine socket contacts with Glenair low-resistance Crown Ring feature
- Indexable flange for top mating position clocking
- High-conductivity copper alloy provides lower contact resistance and higher heat dissipation
- Cable assembly termination rear crimp kit (factory or field)
- Proven crimp contact used throughout military / commercial industry. (No soldering required)
- Utilizes standard crimp tooling providing a robust termination every time
- Rugged Stub-ACME mating thread

Performance Specifications

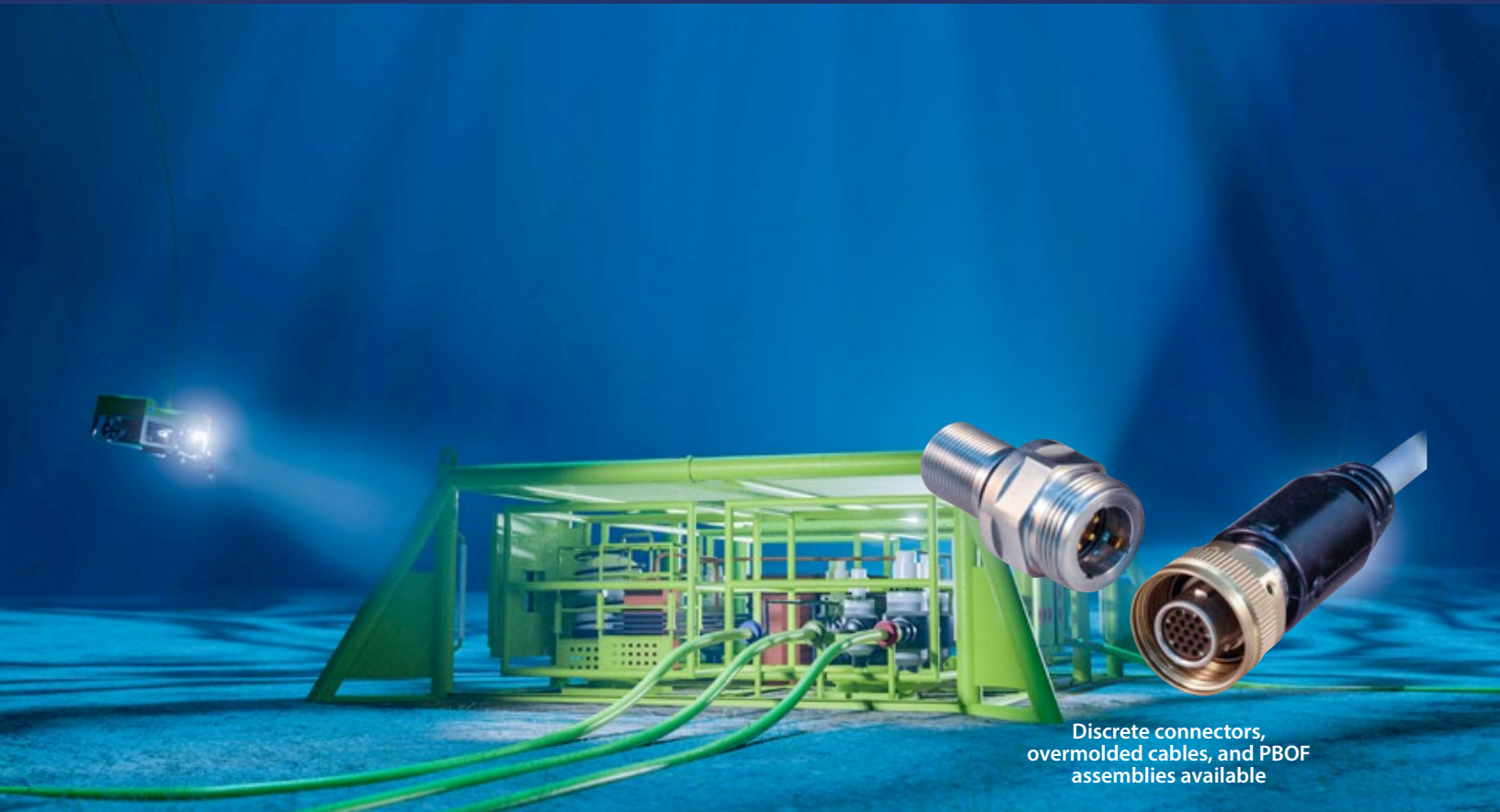
Requirement	SeaKing WetMate
Operating Depth	20,000 ft, 6500 m, 10,000 psi
Test Pressure	15,000 psi (1.5 X over operating pressure)
Operational Temperature	Seawater: -5°C to +60°C Air: +20°C to +50°C
Storage Temperature	40°C to 70°C
Mate/Demate Cycles	1000 total, 200 in turbid seawater
Mating Force	112 lbf max (reference)
Demate Force	112 lbf max (reference)
Design Life	30 years
Circuit Count	4, 8, or 12
Max Operating Current	30 – 35 Amps at depth, 15 – 18 Amps in Air
Max Operating Voltage AC	1.0 kVAC (P-G), 1.73 kVAC (P-P)
Max Operating Voltage DC	3.3 kVDC
Insulation Resistance	> 10 g ohm @ 1000 V
Contact Resistance	< 10 m ohm, per contact
Max Wire Conductor size	4mm ² (12 AWG)

Specification for 4-way, 3mm pin prototype, Crimp version - 30 amps, Voltage 1.0 kVAC (P-G), 1.73 kVAC (P-P), 3.3 kVAC 10,000 psi Rated (7000M depth) Test 1.5 MOS (15,000 psi)

OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES



SeaKing™ 700 Dry-Mate Underwater Connectors and Mil-Qualified / MCOTS Cable Assemblies



Discrete connectors,
overmolded cables, and PBOF
assemblies available

SeaKing 700 is an innovative 10K PSI open-face rated underwater connector series that eliminates a broad range of mechanical design weaknesses found in many of today's high-pressure subsea connector families. From its double O-ring seals and retractable engaging nut, to its multi-keyed mating interface, the SeaKing underwater connector represents a far more reliable approach to subsea power and signal connectivity.

- High density, small form-factor connector
- Dual O-ring seals ensure high-pressure performance for every leak path
- Signal, power, RF, and optical insert arrangements
- Stainless steel or titanium with anti-galling marine bronze engaging nut or cathodic delamination-free PEEK
- Full-mate inspection ports
- Easy O-ring replacement
- Key and keyway polarization

10K PSI / 700 BAR OPEN-FACE RATING SeaKing™ High-Pressure Subsea Connectors



Electrical · Optical · Power · Turnkey Cables

Retractable engaging nut retention ring for easy O-ring inspection/replacement.

Optional overmold delamination ring accessory

Engaging nut set screw (3 places)

SeaKing Flange Connector Receptacles feature a removable spoked body and indexable flange.

Indexable flange

Disengage flange to rotate body for multiple locking positions.

Wrench flats

Accessory thread and overmold features

Multiple PBOF backshell indexing points

Full-mate inspection port

Available in both metal and PEEK

Dual O-rings

Dual O-rings

Replaceable Nitrile or Buna-N (NBR) O-ring seals facilitate fast and trouble-free field replacement.

Available pressure-balanced oil filled (PBOF) back end for use with oil-filled cables.

Dual O-rings

BCR with keyway-assisted mating, polarization keys, and wrench flats for secure attachment to pressure bulkheads.

SeaKing™ 700 overmolded and pigtail "HotShot" cable assemblies are available from the factory with accelerated lead times as short as two weeks.

Revolutionary PBOF swivel assembly with kink-proof hose swivel, straight, 45° and 90° routing, and superfast assembly.

SEAKING PEEK, SEAKING POWER, AND SEAKING FIBER OPTIC CONFIGURATIONS

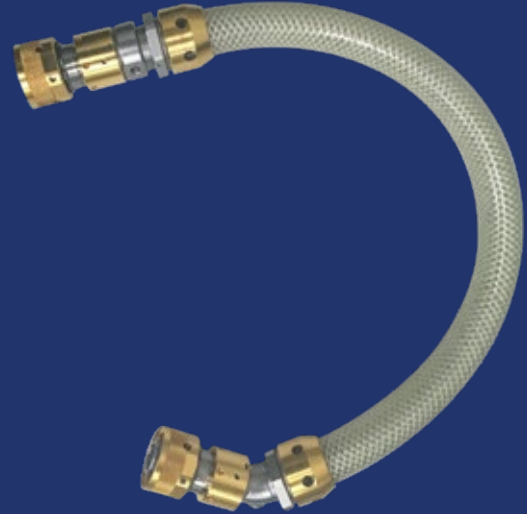


OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

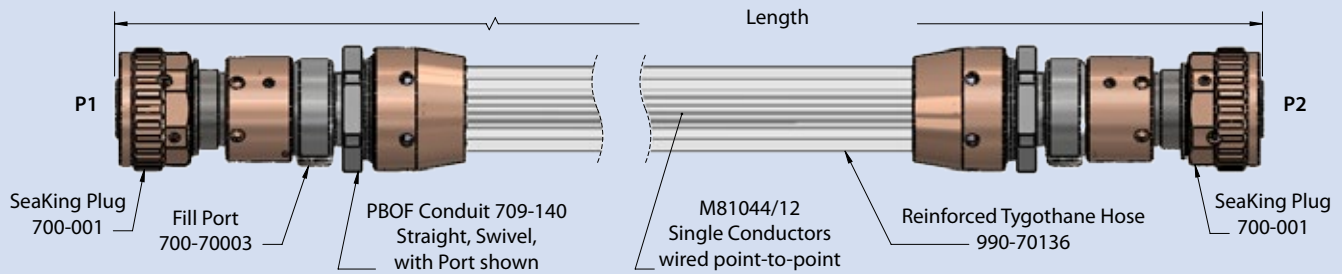


SeaKing™ 700 Dry-Mate Underwater Connectors and Mil-Qualified / MCOTS Cable Assemblies

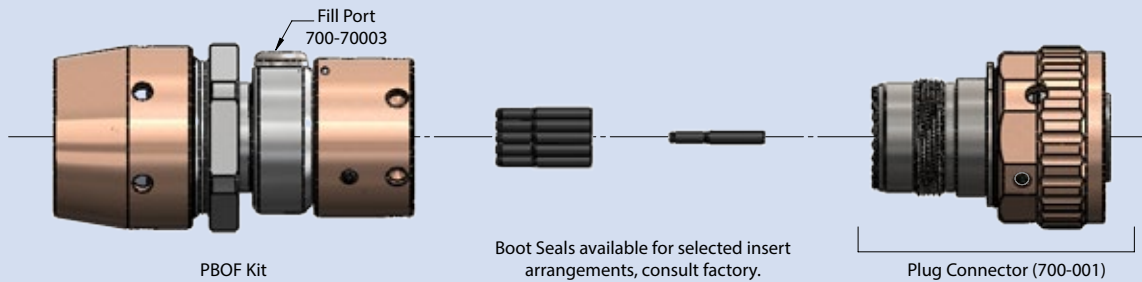
10K PSI Open-Face
SeaKing PBOF wired
and connectorized PBOF
assemblies, fittings, and
accessories with Glenair
signature swivel hose
attachment accessories



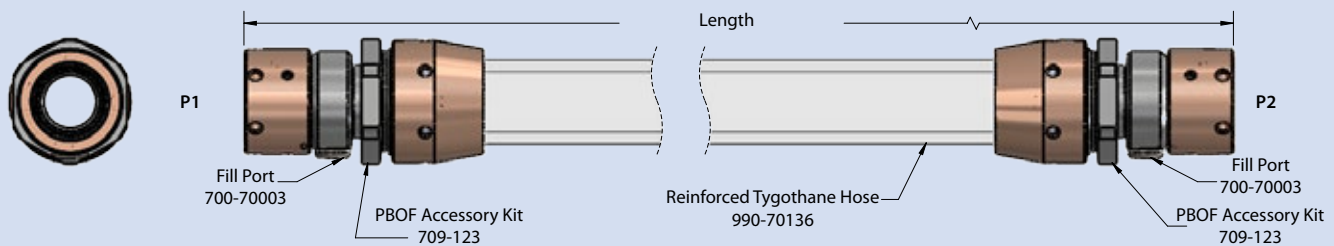
WIRED / CONNECTORIZED PBOF CONDUIT ASSEMBLIES



CONNECTOR / BACKSHELL / BOOT SEAL ASSEMBLY



UNWIRED PBOF CONDUIT ASSEMBLIES



10K PSI / 700 BAR

SeaKing™ High-Pressure Subsea Connectors



Electrical · Optical · Power · Turnkey Cables

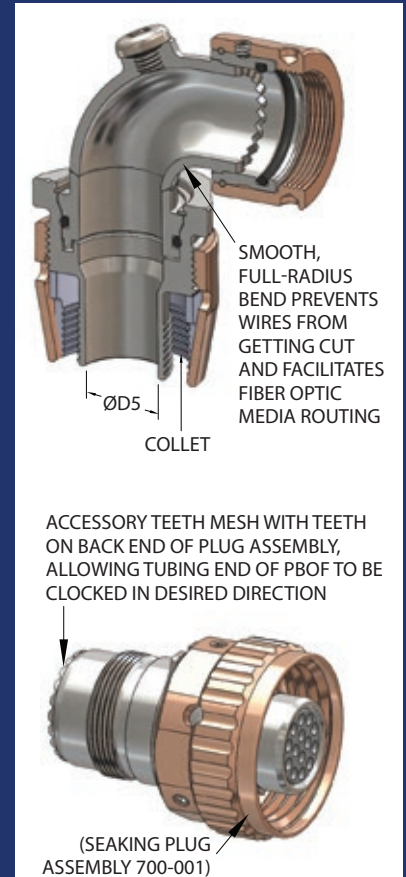
REVOLUTIONARY PBOF SWIVEL HOSE ATTACHMENT ACCESSORIES



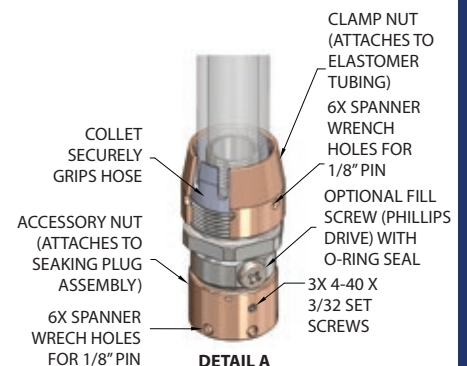
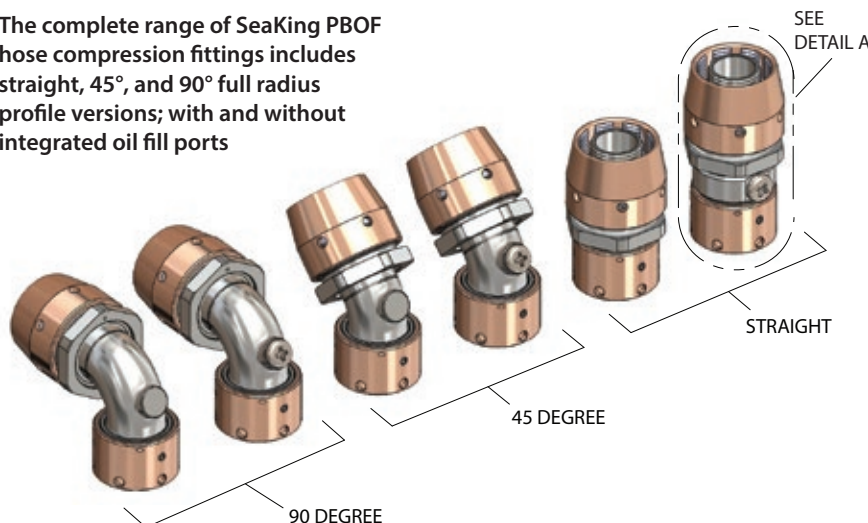
Hose barb fittings for PBOF assemblies are the perennial weak link in subsea oil & gas applications. Kinked and twisted hoses, leaky fittings, corroded hose clamps, and other performance problems

characterize most existing solutions. The Glenair PBOF swivel hose attachment for SeaKing™ 700 series connectors solves these problems and more. Designed from the sea floor up to perform flawlessly and reliably, this revolutionary attachment puts an end to the long list of field maintenance problems associated with oil-filled cable applications.

- Straight, 45°, and 90° “full radius” profile hose routing
- Hose angle adjustment feature reduces risk of oil leakage
- Corrosion-resistant materials used throughout
- Threaded couplers with safety set-screws for fail-safe leak and decoupling protection—no special tools required for assembly
- Compact PBOF compression fitting with optional 340° swivel-action hose for an extra degree freedom of routing in compact situations
- Support for the broad range of hose diameters and wall thicknesses
- Collet-type hose-clamp securely and uniformly grips the hose with 360° of uniform pressure



The complete range of SeaKing PBOF hose compression fittings includes straight, 45°, and 90° full radius profile versions; with and without integrated oil fill ports



OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



Composite Thermoplastic SeaKing™ PEEK for use in anti-cathodic delamination applications



Discrete connectors,
overmolded cables, and
PBOF assemblies available

SeaKing 700 is an innovative underwater connector series that eliminates a broad range of mechanical design weaknesses found in many of today's high-pressure subsea connector families. From its double O-ring seals and retractable engaging nut, to its multi-keyed mating interface, the SeaKing underwater connector represents a far more reliable approach to subsea power and signal connectivity. The series is available in stainless steel or titanium, as well as PEEK fiber-

reinforced composite thermoplastic. PEEK shell material is electrically non-conductive and galvanically inert for superior corrosion resistance and immunity from cathodic delamination even in mixed-material configurations. SeaKing PEEK composite thermoplastic shares all the same insert arrangements, wire support, cabling, and PBOF capabilities as metal versions.

- **Non-conductive. Superior corrosion resistance, durability, and immunity from cathodic delamination**
- **Same high-pressure performance as stainless steel**
- **Lighter weight with lower deployment costs**
- **Low magnetic signature**
- **Galvanically compatible with all metal materials**
- **Full range of SeaKing 700 series insert arrangements: power, signal, and high-speed**



SERIES 700 10K PSI / 700 BAR / 7000 M SeaKing™ PEEK Composite Connectors



700 Series with non-metallic PEEK shells

SEAKING™ PEEK



Corrosion-free / cathodic-delamination free SeaKing PEEK connectors utilize an innovative indexable flange and rugged overmolding for optimized cable routing in complex installations such as on the next-generation Remote Operated Vehicle shown below. These Glenair signature connectors are constructed with a glass-filled polymer composite that delivers the same high-pressure performance as stainless steel but at a fraction of the weight. A lighter-weight system allows operators to reduce deployment costs.



ABOUT GLENAIR 100% MOLDED PEEK COMPOSITE THERMOPLASTIC CONNECTORS

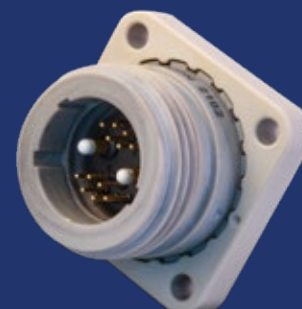
For applications subject to cathodic delamination, Glenair produces its 10K psi open-faced seal SeaKing in a composite thermoplastic configuration called SeaKing PEEK. SeaKing PEEK is made from a 30% glass-filled polymer composite material that delivers the same high-pressure performance as stainless steel, with superior corrosion protection, life-of-system durability, and complete immunity from cathodic delamination—a common failure mechanism in polymer-to-metal bonds in cathodically-polarized subsea equipment.

Metal-connector overmolded cable assemblies that have been deployed subsea for more than 3 to 5 years routinely suffer delamination between the overmold and the conductive metal shell, resulting in cable failure. An additional advantage of SeaKing PEEK is lighter weight, which allows for a smaller deployment infrastructure (operations jargon for a smaller boat)—translating to reduced deployment costs—a critical concern considering deployment can be as much as 50%-60% of the overall cost of the system.

In military/defense applications, such as sonar-based underwater detection and tracking systems, the replacement of metal connectors with composite plastic offers the critical benefit of a reduced magnetic signature, rendering equipment invisible to sensors that easily detect metallic equipment. Importantly, PEEK material is galvanically compatible with metal housing materials including aluminum, SST, titanium, and bronze, eliminating the need to galvanically match SeaKing PEEK with other components in the system.



700-201 cable connector plug (CCP), PEEK



700-206 Glass reinforced epoxy or glass Hermetic seal insert, flange connector receptacles (FCR), PEEK



700-207 Glass reinforced epoxy or glass-to-metal seal insert, bulkhead connector receptacle (BCR), PEEK

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



High-density, dry-mate, harsh-environment connectors and cables for lighter-duty ROV applications such as lights and sensors



High-density Series 701 SeaKing Junior connectors are the perfect choice for harsh-environment Oil & Gas industry equipment that does not require open-face pressure rating, PBOF cable construction, or back-pressure performance. All designs are equipped with single piston-seal nitrile O-rings to withstand exposure to corrosive chemicals and high-pressure environments in the mated condition. These 5K psi pressure-rated connectors feature high-density crimp-contact or solder cup inserts and are significantly smaller than heavy-duty series 700 SeaKing interconnects—albeit with lesser performance as stated. Connectors are backfilled with epoxy potting compound for easy incorporation into overmolded cables. Crimp-contact versions for field installation and repair are also available. SeaKing Junior is specifically designed for high-pressure, mated condition applications that do not require the extra fail-safe features and cost of an open-face rated solution such as is supplied in SeaKing™ 700 series products.

- **5000 psi (mated condition) pressure rated connector for overmolded (non-PBOF) applications**
- **High density, small form-factor solution—up to 50% reduction in size and weight compared to industry standard solutions**
- **Micro miniature high-density pin configurations: #22D, #20, #20HD, #16, #12, #8 signal, power, and high-speed datalink shielded contacts**



Harsh-environment polyurethane overmolded point-to-point cables with 10 GbE SpeedMaster insert



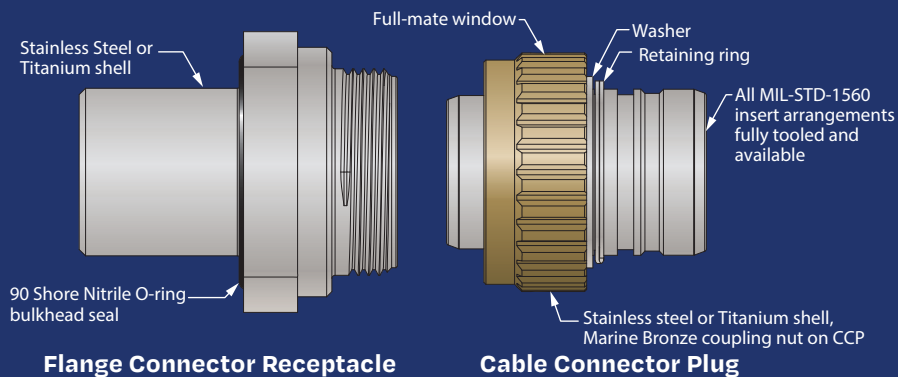
SeaKing Junior Bulkhead Connector Receptacle with hybrid signal and high-frequency RF contacts

HIGH-DENSITY DRY-MATE SeaKing™ Junior Connectors



5000 psi piston-sealed connectors and cables

SERIES 701 SEAKING™ JUNIOR MECHANICAL FEATURES AND CONFIGURATIONS



Stainless Steel or Titanium shells, Marine Bronze coupling nuts

Available in nine sizes from 2 to 128 contacts, Series 701 connectors feature stainless steel or marine bronze shells. Nitrile O-rings resist high temperature and corrosive chemicals.

5,000 psi

These connectors withstand up to 5,000 psi hydrostatic pressure in a mated condition.



Series 701-011 Cable Connector Plug (CCP) supplied as overmolded cables only



Series 701-016 Flange Connector Receptacle (FCR) supplied as discrete connectors or in pigtail assemblies



Series 701-017 Bulkhead Connector Receptacle (BCR) supplied as discrete connectors or in pigtail assemblies

SEAKING™ JUNIOR CONTACT SPECIFICATIONS, MATERIALS AND FINISHES, AND CRIMP TOOLS

Service Ratings			
Service Rating	Sea Level DWV (VAC)	Operational	
		VAC	VDC
M	1300	433.3	612.8
N	1000	333.3	471.4
I	1800	600.0	484.5
II	2300	766.7	1084.2

Current Rating		
Contact Size	Amps	Wire Size
#8	46.0	8 AWG
#10	33.0	10 AWG
#12	23.0	12-14 AWG
#16	13.0	16-20 AWG
#20	7.5	20-24 AWG
#22D	5.0	22-28 AWG

Performance Specifications	
Insulation Resistance	5000 megohms at 500 VDC
Operating Temperature	-65° C to +175° C
Hydrostatic Pressure	5,000 psi mated condition, tested per ISO 13628-6
Durability	300 mating cycles

Series 701 Polarization				
Plug	Receptacle	Key Position	Key Rotation	
			A°	B°
		Normal (N)	150°	210°
		A	75°	210°
		B	95°	230°
		C	140°	275°

Material and Finish	
Shells, Jam Nuts	Stainless steel or Titanium
CCP Coupling Nuts	Marine bronze, unplated
Contacts	Copper alloy, gold plated.
Insulators	Composite thermoplastic
Retaining ring and hardware	Stainless steel
Interfacial Seal (pin inserts only) and Grommet	Fluorosilicone
O-rings and Seals	Nitrile, 90 shore Viton®, 90 shore Viton® O-rings offer wider temperature range

Contact Crimp Tools		
Contact Size	Crimp Tool	Positioner
#12	809-136	809-137
#16	809-136	809-137
#20	809-136	809-137
#22D	809-015	K42 Pin
		K40 Skt

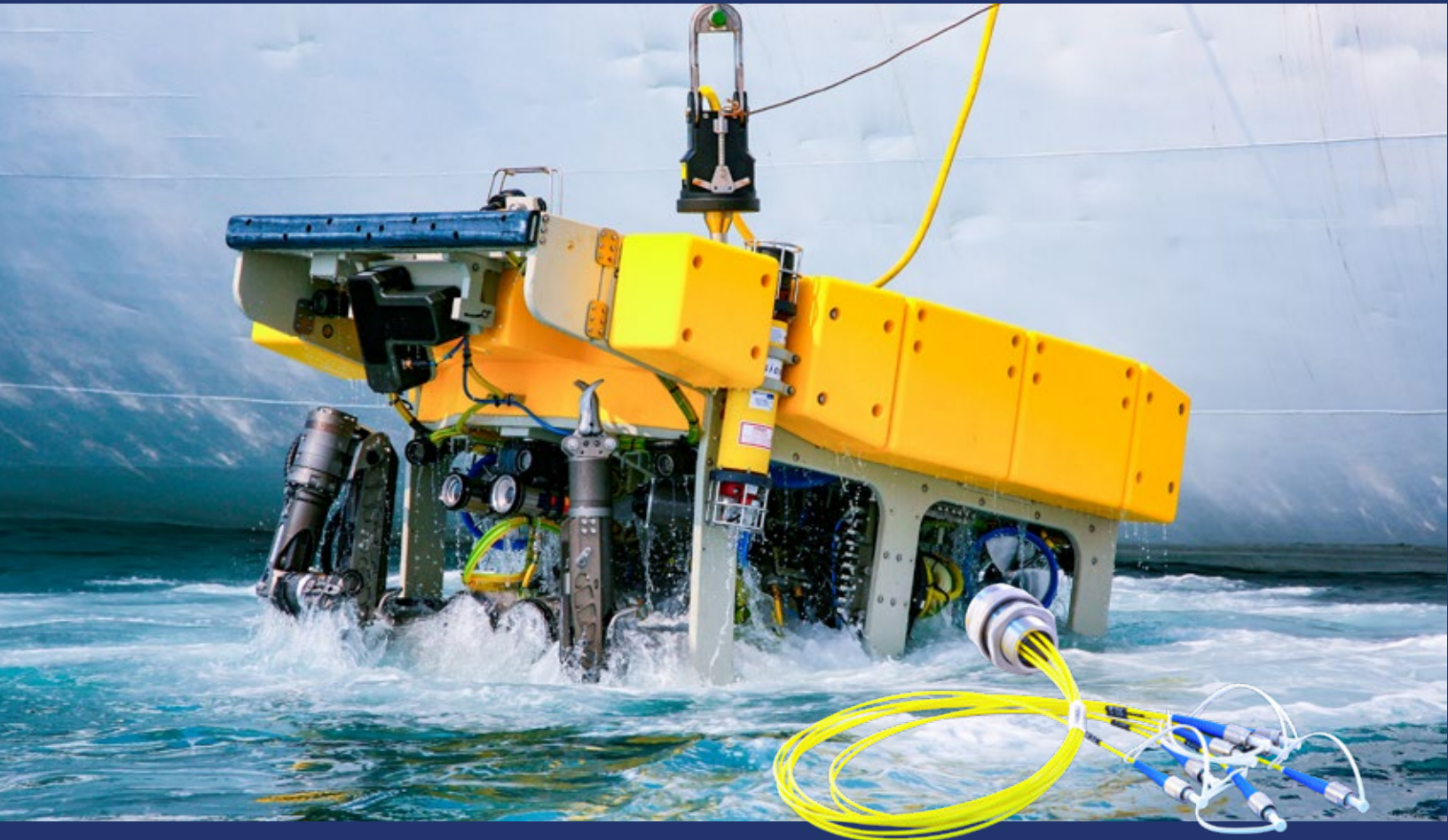


Tooled insert arrangements include high-density and combo layouts for Coax, Twinax, and El Ochito® contacts

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



Open-face pressure rated
fiber optic connectors,
cables and jumpers—
singlemode and multimode
with low dB data loss



Data-intensive applications such as towed array sonar systems, well logging and monitoring equipment, digital seismic streamers, as well as magnetic flux leakage and ultrasonic inspection sensors used in intelligent pipeline inspection are ideally suited for ruggedized high-pressure fiber optics. Fiber optic interconnect systems deliver ultra-high data bandwidth, immunity from RFI and other forms of electromagnetic interference, as well as reduced size and weight compared to high-speed copper. Glenair SeaKing™ Fiber Optic solutions include harsh-environment overmolded cable assemblies, multibranch inside-the-box jumpers, as well as Glenair signature pressure-balanced oil-filled (PBOF) cable assemblies with fiber optic media optimized for deep sea applications.

- **Environmental overmolded, pigtail, and PBOF butt-joint assemblies**
- **Full hydrostatic qualification test report available**
- **Wide range of fiber and hybrid fiber/electric layouts**
- **Singlemode and multimode**
- **Optical performance: <1.0dB insertion loss per mated connection when measured @ 1310nm wavelength**



DEEP WATER SeaKing™ Fiber Optic Interconnects



Open-face pressure-rated fiber optic connectors and cables

ENVIRONMENTAL OVERMOLDED FIBER OPTIC JUMPERS



Straight and right-angle cable routing

High-pressure fiber optic cable

Chemical-resistant Viton® or polyurethane overmolding

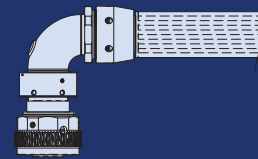
PRESSURE-BALANCED OIL-FILLED (PBOF) HIGH-PRESSURE FIBER OPTIC ASSEMBLIES



High-pressure fiber optic cable in clear polyurethane tubing

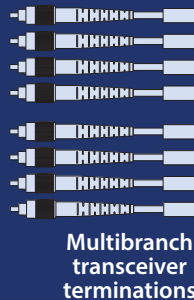


PBOF backshell, Straight, 45°, and 90° options

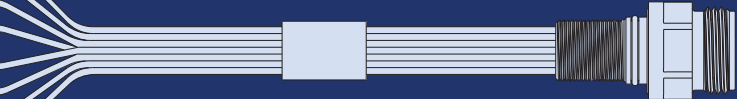


10K psi high-pressure open face SeaKing Fiber connector

SEAKING™ BCR OR FCR TO COMMERCIAL FIBER OPTIC PIGTAIL ASSEMBLY FOR I/O-TO-BOARD MODULE APPLICATIONS



Multibranch transceiver terminations



Glenair singlemode or multimode fiber optic cable

10K psi high-pressure open face SeaKing Fiber connector

ABOUT SEAKING FIBER PRESSURE RATINGS



SeaKing Fiber connector hardware is rated for 10K psi, but actual pressure rating is dependent on cable configuration (PBOF versus overmolded), bulk fiber optic wire type, and termination style. Generally, SeaKing Fiber connectors deliver up to 3K psi performance for molded assemblies, and 10K psi for PBOF assemblies. The factory is able to provide exact pressure ratings for each unique SeaKing Fiber application.

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



1–6.6kV connector designs
for deep sea Oil & Gas
primary power junctions

Blow Out Preventer
(BOP) Photo: Bureau of
Safety and Environmental
Enforcement



SeaKing Power connector designs are rated up to 10K psi in open-face or mated condition. These bespoke high-voltage (1–6.6kV) and high-amperage (up to 50 Amps) solder-cup and crimp-contact connectors are ideally suited for deployment in PBOF and umbilical termination cable configurations for primary power junction applications. SeaKing Power is a signature Glenair capability—with design and application engineering geared to meet exact customer requirements.

AVAILABLE SEAKING POWER DESIGN FEATURES

- Fully redundant dual O-ring sealing
- Indexable flange or threaded bulkhead designs
- Keyed mating interface for mismatch prevention
- Cable Connector Plug (CCP), Flange Connector Receptacle (FCR), and Bulkhead Connector Receptacle (BCR) configurations
- Sealed PBOF cable interface

HIGH VOLTAGE SUBSEA SeaKing™ Power Connectors



Example configurations and features

CABLE CONNECTOR PLUG (CCP)



SeaKing™ Power
Cable Connector Plug (CCP)

- PBOF-compatible cable connector plug designs
- Super duplex stainless steel or titanium construction with glass-reinforced thermoplastic insulator
- Backshell accessory attachment interface
- Aggressive coupling nut knurling for easy field mating
- Spanner wrench holes and coupling nut lock set screws for foolproof resistance to mechanical force decoupling
- Available conductor sealing boots protect solder cup and crimp wire-to-contact terminations in select insert arrangements in the event of a flooded hose
- Industry-standard power cable accommodation

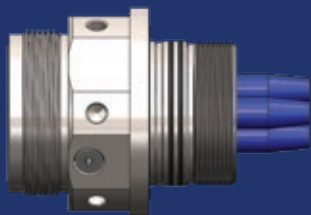
FLANGE CONNECTOR RECEPTACLE (FCR)



SeaKing™ Power
Flange Connector Receptacle (FCR)

- FCR delivers up to 10K psi sealing in both mated and open-face condition
- Indexable flange allows receptacle shell rotation for 360° routing flexibility of right-angle-mating cable plugs
- Super duplex stainless steel or titanium shells for complete compatibility with mating CCP
- Available wire sealing boots ensure reliable environmental protection of cable-to-connector interface
- Custom insert arrangements

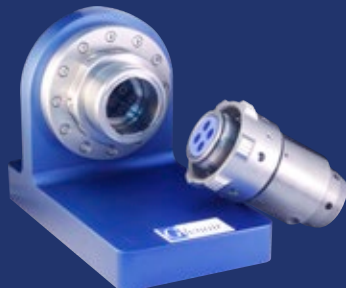
BULKHEAD CONNECTOR RECEPTACLE (BCR)



SeaKing™ Power
Bulkhead Connector Receptacle
(BCR)

- BCR is designed for direct threaded bulkhead mounting
- Supplied washer, mounting nut, and bulkhead-mate O-ring seals ensure secure sealing and grounding to equipment housing
- BCR shell equipped with both wrench flats and spanner wrench holes for convenient installation regardless of tool choice
- Custom insert arrangements
- Threaded backshell accessory interface

AVAILABLE HYDROSTATIC TEST LAB REPORTS



Glenair maintains one of the Subsea Oil & Gas industry's premier hydrostatic test labs here in our Southern California factory. All SeaKing Power designs as well as production parts for customer use are subjected to rigorous pressure testing up to and beyond rated 10K psi. Test reports are available for existing SeaKing Power type products and may also be supplied for new customer-bespoke designs.

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



Advanced-Performance Series 55 type 10K psi Connectors and Cables



High-pressure open-face bulkhead (BCR) and flange receptacles (FCR)

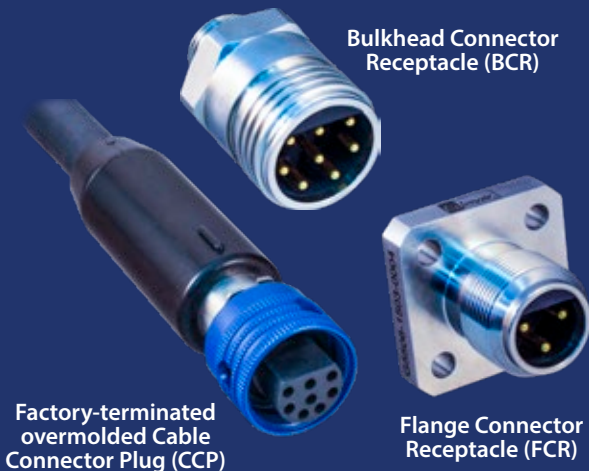


The SuperG55™ family of dry-mate underwater deep-sea high-pressure connectors is a revolutionary upgrade of the popular industry standard used in countless ROV, underwater camera, diver communications, lights, pan and tilts, and other deep subsea applications.

Available in multiple shell sizes, the SuperG55™ is manufactured from 316L Stainless Steel with insert molded contact assemblies designed for pressure-sealed applications up to 10K psi mated and unmated. Intermateable and intermountable with other "55" series connectors, the Glenair solution introduces a long list of product innovations designed to improve performance and durability. Our PBOF versions, for example, utilize easy-to-assemble

threaded fittings that deliver superior sealing performance while reducing installation time. Other innovations include full-mate inspection ports, improved solder cup contact design, and more. Cable plugs and receptacles are available in attachable (user-terminatable) versions as well as factory overmolded single-ended whips.

- 10,000 psi mated/ unmated (20,000 ft / 7,000m)
- Recessed socket contacts in plugs for electrical safety
- Intermateable and intermountable with other "55" series connectors
- 4 shell sizes — 15, 20, 24, and 32 with 3 to 39 contacts
- PBOF versions available
- 600 VDC, 5 to 18 Amps (dependent on conductor and cable size and make-up)



Bulkhead Connector Receptacle (BCR)

Flange Connector Receptacle (FCR)

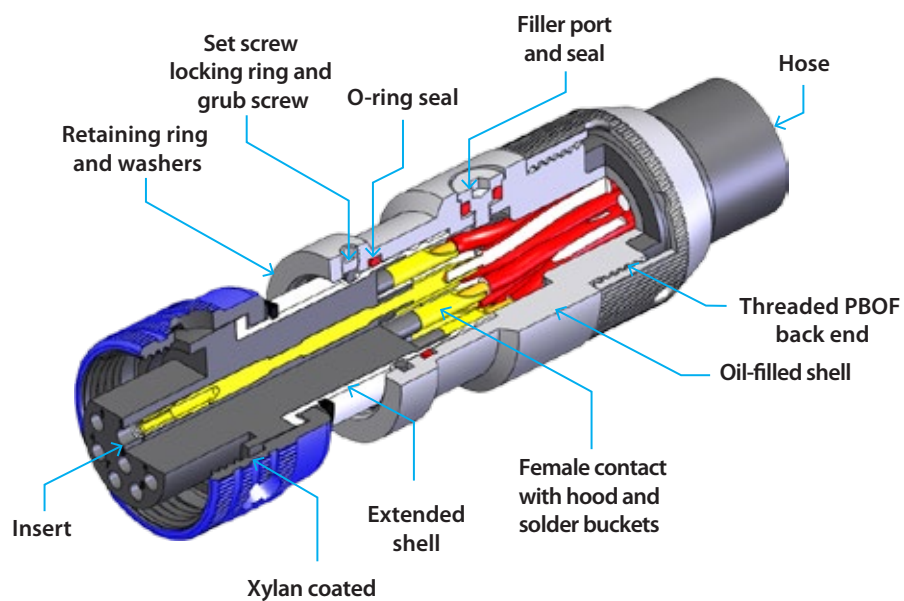
Factory-terminated overmolded Cable Connector Plug (CCP)

ADVANCED-PERFORMANCE 10K PSI / 700 BAR / 7000M SuperG55™ Connectors and Cables



Key mechanical and environmental features

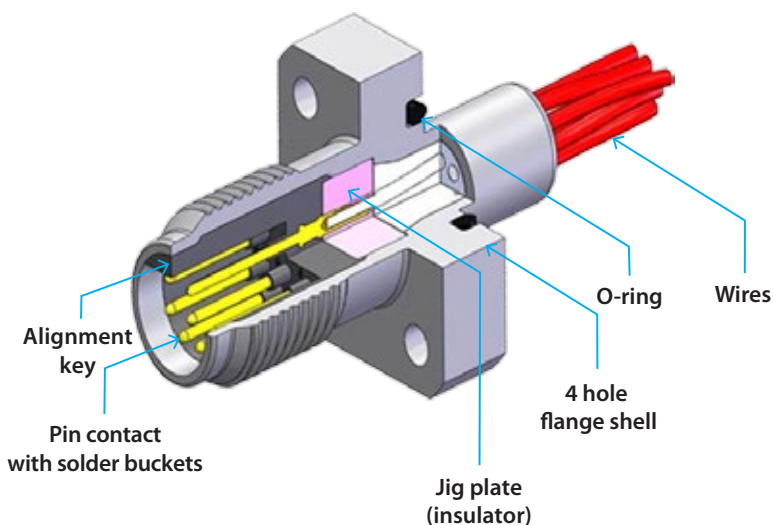
SUPER G55™ PRESSURE-BALANCED OIL-FILLED CABLE CONNECTOR PLUG (CCP)



Super G55™ Performance Specifications	
Mating Cycles	500
Pressure	689 bar (10,000 psi) Mated and Un-mated
Operating Temperature	-20°C to +90°C
Voltage Rating	600 VDC / 440 Vac
Current (max.)	5 to 18 Amps (dependant on contact and cable conductor sizes)

Super G55™ Material/Finish	
Shells	316L Stainless Steel/ Passivated
Insulator	PEEK/NA
Insert	Neoprene/NA
Contacts	Copper Alloy/Gold Plated
O-rings	Nitrile/NA
Overmold and Cable	Polyurethane or Neoprene/NA
Coupling Nut	316L Stainless Steel/ Protective Coating Blue
Bulkhead Receptacle Tails	PTFE Insulated 16 AWG Wire/NA
Cable	Polyurethane or Neoprene Jacketed/NA

SUPER G55™ FLANGE CONNECTOR RECEPTACLE (FCR)



NON-STANDARD MATERIALS: Other material options are available as part of our non-catalog offerings including anodized aluminum, titanium, and aluminum bronze. Glenair is also able to supply SuperG55™ interconnects in composite thermoplastic (PEEK) to meet application requirements for reduced cathodic corrosion as well as weight reduction without affecting connector performance.

HIGH-SPEED ETHERNET: The SuperG55™ Ethernet option is available in the 1508, 2013, and 2022 contact configurations and provides both high-speed operation up to 75 meters, and power (600 Volts) in a full subsea environment (10,000 psi) solution.

Material Finish Codes

Code	Material/Finish	Code	Material/Finish
	Anodized Aluminum	PK	Composite Thermoplastic (PEEK)
NAB2	Aluminum Bronze	B	Brass
T	Titanium	Alternative materials available, contact factory	

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

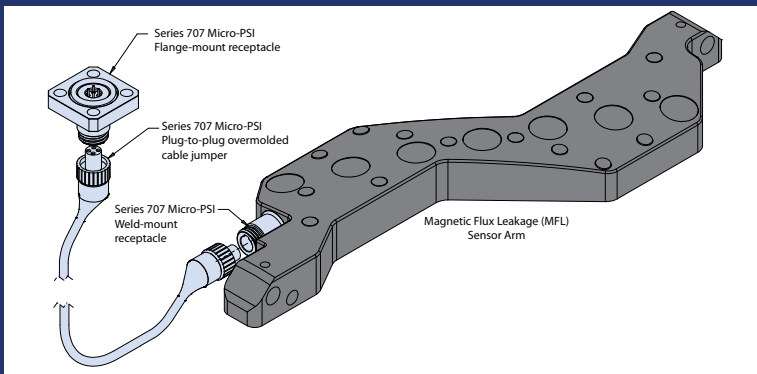


10K PSI Open-Face Micro Miniature, High-Speed Interconnect Solution



The Series 707 Micro-PSI is a micro miniature 10K psi high-pressure, high-temperature interconnect designed specifically for pipeline inspection applications in Magnetic Flux Leakage and ultrasonic pipeline inspection PIGs. The Micro-PSI insert arrangements feature high-density micro TwistPin layouts for sensor applications and high-speed Gigabit Ethernet, and a coax contact layout for 3 GHz performance. Micro-PSI connectors are supplied as discrete plugs, or overmolded plug cordsets with rugged Viton or Polyurethane jacketing. Bulkhead and flange mount receptacles are 10K psi open-face pressure sealed, and incorporate fused vitreous glass inserts for $<1 \times 10^{-7}$ scc He/sec hermetic performance. Serviceable O-rings on plugs and face O-rings on receptacles provide high-reliability sealing.

- High-density, high-pressure, small form-factor interconnect, ideal for In Line Inspection (ILI) and pipeline PIG inspection tools
- 10,000 psi pressure rated
- Less than 1×10^{-7} scc He/sec @ 1 ATM pressure differential
- Special-purpose high density (.056" contact spacing)
- 3 GHz Coax contact arrangements
- 2 Amp high-speed Gigabit Ethernet-ready
- -20° to +150°C temperature range
- Field-serviceable O-rings



Application example shows the 707 Micro-PSI used to interconnect an MFL sensor to on-board PIG data storage.

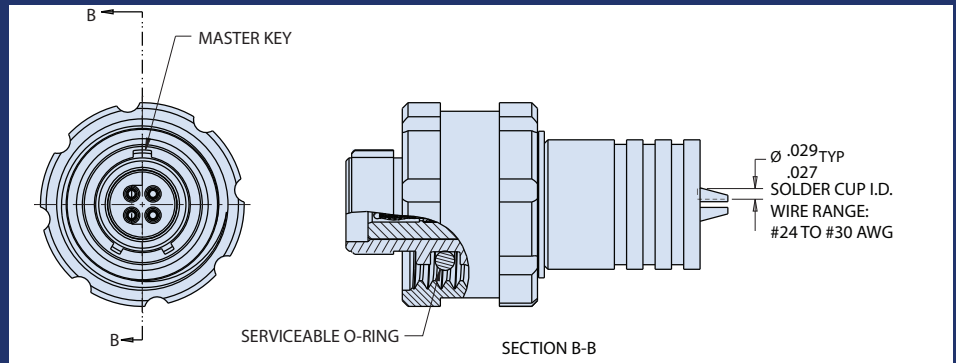
Micro-PSI Micro-Miniature High-Speed, High Pressure I/L Connector



Product selection guide

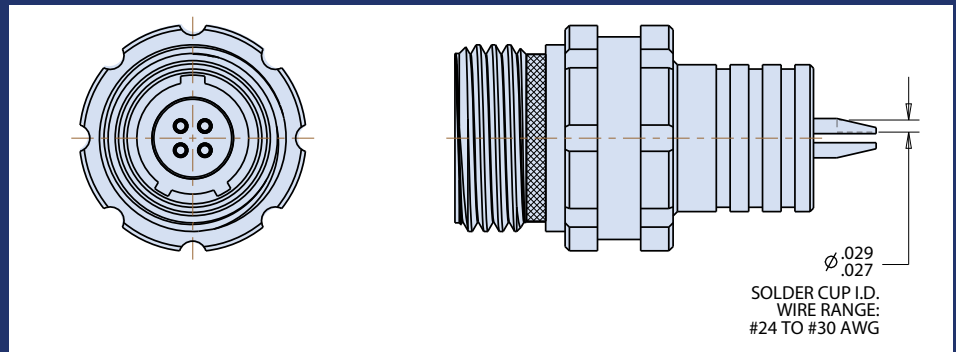
707-0264-1 MICRO-PSI ENVIRONMENTAL CABLE CONNECTOR PLUG

- Red alignment indicator for accurate mating
- Serviceable O-ring for reliable sealing and easy maintenance
- Mates with 707-0264-5 CCR, 707-0264-6 FCR and 707-0264-7 BCR



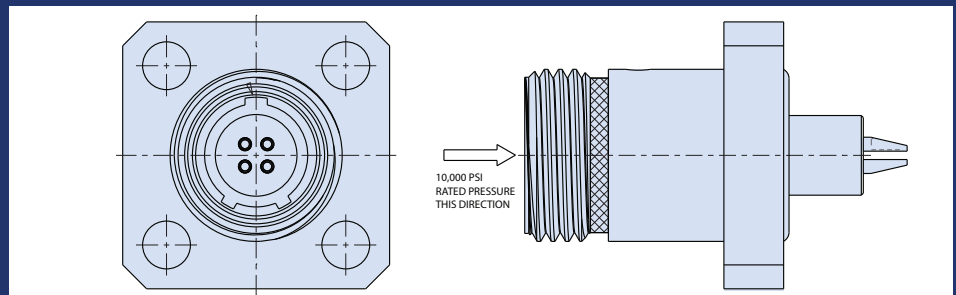
707-0264-5 MICRO-PSI HERMETIC CABLE CONNECTOR RECEPTACLE

- Operating temperature -20° to +150° C
- Alignment and full-mate indicators
- Flying lead option available
- Mates with 707-0264-1 CCP Plugs



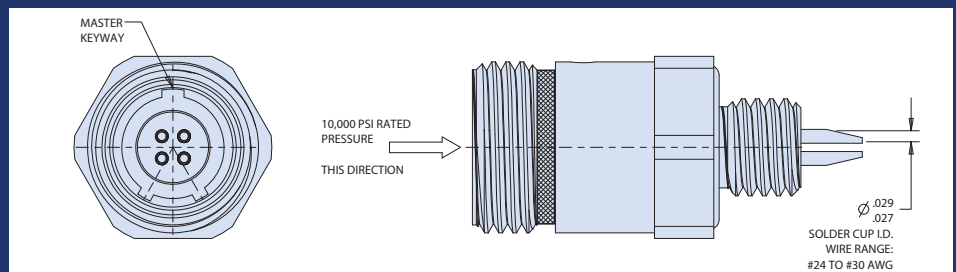
707-0264-6 MICRO-PSI HERMETIC FLANGE MOUNT RECEPTACLE

- Operating temperature -20° to +150° C
- Alignment and full-mate indicators
- Flying lead option available
- Mates with 707-0264-1 CCP Plugs



707-0264-7 MICRO-PSI HERMETIC BULKHEAD MOUNT RECEPTACLE

- Operating temperature -20° to +150° C
- Alignment and full-mate indicators
- Flying lead option available
- Mates with 707-0264-1 CCP Plugs



OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES

**MARINE
MOLDED™**

Industry-standard wet-pluggable
rubber molded connectors



Marine Molded configurations include inline and bulkhead designs. Symmetrical plan forms from 2 to 16 contacts



Intermateable and intermountable industry-standard rubber molded connectors for ROVs and other Oil & Gas applications

Glenair Marine Molded (Series GLMC) rubber molded connectors are fabricated using only the highest-grade materials and quality controls. Prewired inline and bulkhead connectors are supplied in symmetrical layouts from two to sixteen contacts for subsea ROV, towed-array, offshore oil, and other harsh oil and gas industry applications. The industry-standard connector series is fully compatible (intermountable and intermateable) with other connector series of this type.

KEY FEATURES

- Wet pluggable
- Up to 10,000psi / 690bar (6,800m/22,500ft) mated and open face
- 2 to 16 contacts
- Anti-galling locking sleeve, blue Delrin
- Stainless steel bulkhead (standard), brass and PEEK available
- 600 Volts for 2-4 way, 300 Volts for 5-16 way
- Up to 10 Amps per contact
- Overmolded with standard Polyurethane, Neoprene, or high-performance Duralectric

SERIES GLMC Rubber Molded Connectors and Cables



Marine Molded™ Wet-Pluggable

GLENAIR MARINE MOLDED (GLMC) - AVAILABLE CONFIGURATIONS

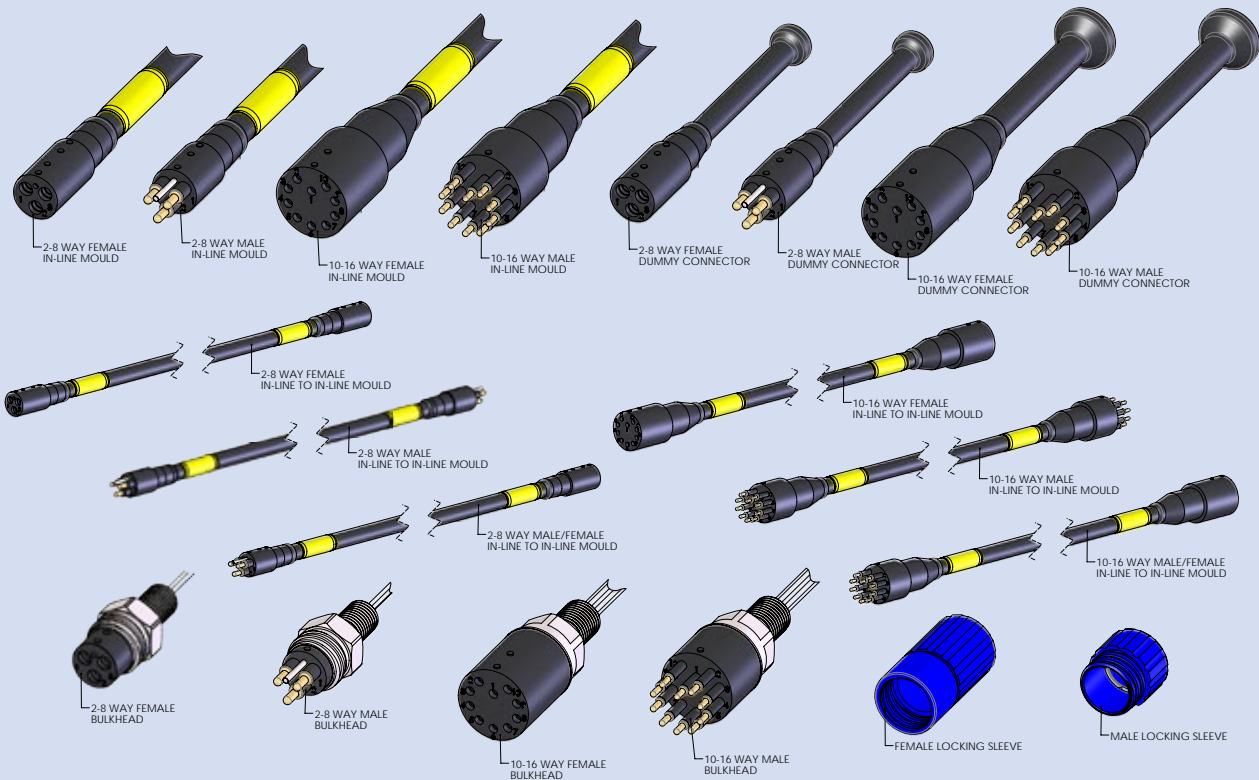


TABLE 4 - MATERIALS / FINISH

COMPONENT	MATERIAL	FINISH
CONNECTOR SHELL(S)	316L STAINLESS STEEL	PASSIVATION.
INSULATOR	PEEK	N/A
INSERT	NEOPRENE	N/A
CONTACTS	COPPER ALLOY	GOLD PER OVER NICKEL.
O RINGS	NITRILE	N/A
OVERMOULD	POLYURETHANE OR NEOPRENE	N/A
LOCKING SLEEVE	POLYOXYMETHYLENE	VARIOUS
BULKHEAD RECEPTACLE TAILS	P.T.F.E. INSULATED 20/22 AWG WIRE.	N/A
CABLE	POLYURETHANE OR NEOPRENE JACKETED	N/A
GUIDE PIN	STAINLESS STEEL 303	N/A

TABLE 2 - PERFORMANCE DATA

WATERING CYCLES	500
PRESSURE (WATER)	68.9 BAR (7000in ²) (10,000 PSI) (250000)
PRESSURE (HYDRAULIC)	68.9 BAR (7000in ²) (1,000 PSI) (250000)
TEMPERATURE RATING (WATER)	-40 TO 60°C (25°F TO 140°F)
TEMPERATURE RATING (AIR)	-40 TO 60°C (-40 TO 140°F)
STORAGE TEMPERATURE RATING	-40 TO 60°C (-40 TO 140°F)

TABLE 3 - CONTACT CONFIGURATIONS.

SHELL SIZE	CONTACT CONFIGURATION (FACE VIEW OF MALE BULKHEAD CONNECTOR) NOT TO SCALE		
2 - 8 WAY	<p>2 WAY 2 x 20 AWG (0.50mm²)</p>	<p>3 WAY 3 x 20 AWG (0.50mm²)</p>	<p>4 WAY 4 x 20 AWG (0.50mm²)</p>
	<p>5 WAY 5 x 22 AWG (0.34mm²)</p>	<p>6 WAY 6 x 22 AWG (0.34mm²)</p>	<p>8 WAY 8 x 22 AWG (0.34mm²)</p>
	<p>10 WAY 10 x 22 AWG (0.34mm²)</p>	<p>12 WAY 12 x 22 AWG (0.34mm²)</p>	<p>16 WAY 16 x 22 AWG (0.34mm²)</p>

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

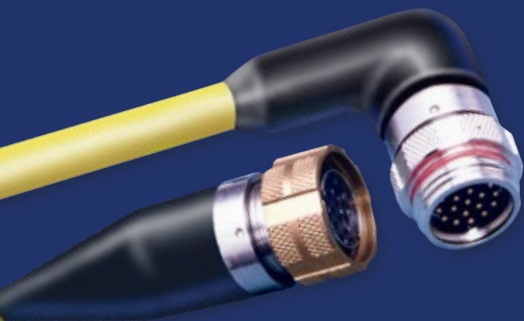


**5000 PSI
pressure-rated
harsh environment
connectors and
overmolded cables**



High-pressure harsh-environment connectors and overmolded cables for towed array and other shallow subsea applications

Designed for use in oceanographic, geophysical, and other severe industrial environments, Glenair Series 22 Geo-Marine® Connectors and Cables are the ultimate harsh-environment power and signal connector solution. Built to withstand hydrostatic pressures up to 5,000 PSI and exposure to extreme temperatures and corrosives, the Series 22 Geo-Marine® is ideally suited for applications such as towed array sonar systems, submersibles and ROVs, offshore oil drilling equipment, seabed exploration, well monitoring equipment, and digital seismic streamers.



Geo-Marine® plugs are equipped with arctic coupling nuts—made from marine-grade naval bronze—with easy-to-grip castellated knurling and a powerful ratcheted anti-decoupling mechanism which guarantees reliable mating and demating performance in even the harshest environments. Supplied as discrete connectors—or more typically in build-to-print overmolded cable assemblies.

- **5000 PSI pressure rated**
- **Marine Grade 316 stainless steel machined shells and Naval Bronze coupling rings**
- **High-pressure environmental and hermetically sealed receptacles for field applications**
- **Power and signal insert arrangements from 2 to 128 contacts**
- **Anti-vibration ratcheted coupling nuts with castellated knurling**
- **Available Viton® overmolded cable assemblies**

5000 PSI PRESSURE-RATED Geo-Marine® Connectors

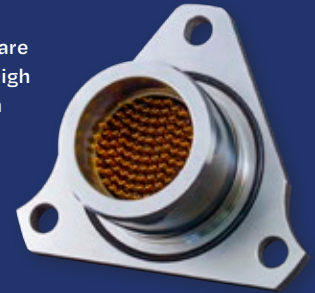


High-pressure fused-glass underwater /
harsh-environmental connectors



Range of Offerings

Series 22 Geo-Marine® connectors are supplied with either fused-glass or high grade thermoplastic insulators. Both classes of connectors are supplied with rugged, corrosion-resistant materials. Low-profile and scoop-proof cable plugs and receptacles, as well as bulkhead feed-thrus are available. Specially-designed cable sealing backshells as well as EMI/RFI shield termination backshells and environmentally-sealed protective covers complete the range of discrete product offerings. 35 insert arrangements (contact sizes #12, #16, #20 and #22) are tooled and fully available. Special in-line single-pin HTHP glass fused contacts also available.



WIDE RANGE OF PLUG CONFIGURATIONS WITH ANTI-GALLING ARCTIC COUPLING NUTS



Cable plug with
accessory threads



Cable plug with
overmold adapter



Panel-mounted
plug



Factory overmolded
plug

HIGH-PRESSURE ENVIRONMENTAL AND FUSED-GLOSS RECEPTACLE CONFIGURATIONS



Jam Nut



In-Line



Square Flange



Solder-Mount



Bulkhead
Feed-Thru



Single-pin HTHP

RUGGEDIZED STAINLESS STEEL BACKSHELLS AND OTHER CONNECTOR ACCESSORIES



Environmental strain
relief backshell



Overmolding
adapter



Right-angle
strain relief backshell



Environmentally sealed
protective covers

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



IECEX and ATEX Qualified Hazardous / Explosive-Zone Connectors and Cables



- Over 40 power and signal contact arrangements
- Full support for armored and unarmored cable
- MIL-DTL-5015 crimp-contact derivative solution
- Locking set screw-equipped coupling nut and protective safety covers
- Extended shell labyrinth cooling zone and potting chamber on all designs
- Mechanical cable clamp, basket weave, and Ex d cable gland accessories
- IP68 water, vapor, moisture, and dust protection in mated condition
- Qualified replacement for Amphenol Amphe-EX



Glenair's factory in Bologna, Italy, is fully qualified to IECEX Standards

SERIES ITS-EX IECEX/ATEX Qualified Explosive Zone Connectors and Cables



ITS-EX CONNECTOR CONFIGURATIONS AND STYLES MEET EVERY EX APPLICATION REQUIREMENT



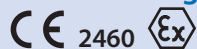
RANGE OF APPLICATIONS

- Automotive fueling stations
- Oil & gas extraction
- Oil refineries
- Gas pipelines / distribution
- Chemical processing plants
- Aircraft refuelling / hangars
- Transportation
- Pharmaceuticals
- Food processing
- Metal surface grinding
- Sugar refineries
- Grain handling and storage
- Coal mining
- Well Control Equipment



ATEX / IECEx LABELS Glenair ITS-Ex connectors are supplied with a non-removable label per ATEX and IECEx directives:

ATEX Marking

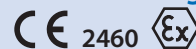


II 2 G Ex db IIC T6, T5 Gb
II 2 D Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

IECEx Marking

Ex db IIC T6, T5 Gb
Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

ATEX Marking FOR PANEL MOUNT CONNECTORS ONLY:



II 2 G Ex de IIC T6, T5 Gb
II 2 D Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

IECEx Marking

Ex de IIC T6, T5 Gb
Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



Reverse-Bayonet Super ITS-MB Seacrow™ Connectors



For oil rig, shipboard, and other harsh-environment oil & gas applications

Super ITS - MB Seacrow reverse bayonet marine bronze series connectors are compliant with MIL-DTL-5015, using the same power and signal insert arrangements but with reverse-bayonet coupling and precision-machined marine bronze construction. These ultra-harsh environment connectors are ideally suited for above-deck navy shipboard applications where repeated exposure to seawater and salt spray can quickly degrade effectiveness of connector finishes leading to corrosion and possible failure.

Super-ITS MB Seacrow connectors exceed VG95234 standards for both sealing and durability. Over 200 MIL-STD-1651A standard and combo insert arrangements are available in 9 shell sizes, fully tooled and ready for immediate shipment. A wide selection of backshell options including cable shield termination for EMI/RFI applications and cable sealing backshells for conduit termination are also available. IP67 protection standard with IP68 available on request.

- Precision-machined marine bronze alloy construction for superior corrosion resistance and reliable topside mating in seawater splash zones and other harsh environments
- IP67 environmental sealing in mated condition; IP68 versions available
- Over 200 power and signal arrangements IAW MIL-DTL-5015 / VG95234
- Special single-pole versions for low- to medium-voltage power applications
- Super ITS - MB Seacrow connectors accommodate wires from 26 AWG to 4/0 AWG
- A wide variety of backshells allow the ITS-MB to accept jacketed cables, single or multi-poles, with or without RFI/EMI shielding, conduits with PG or metric thread.

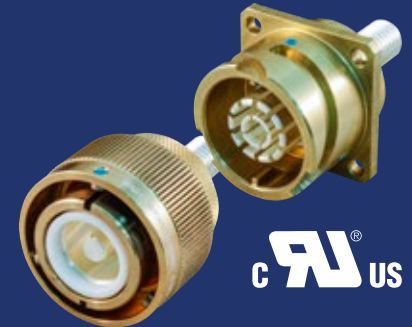
REVERSE-BAYONET Super ITS - MB and IGE - MB Seacrow



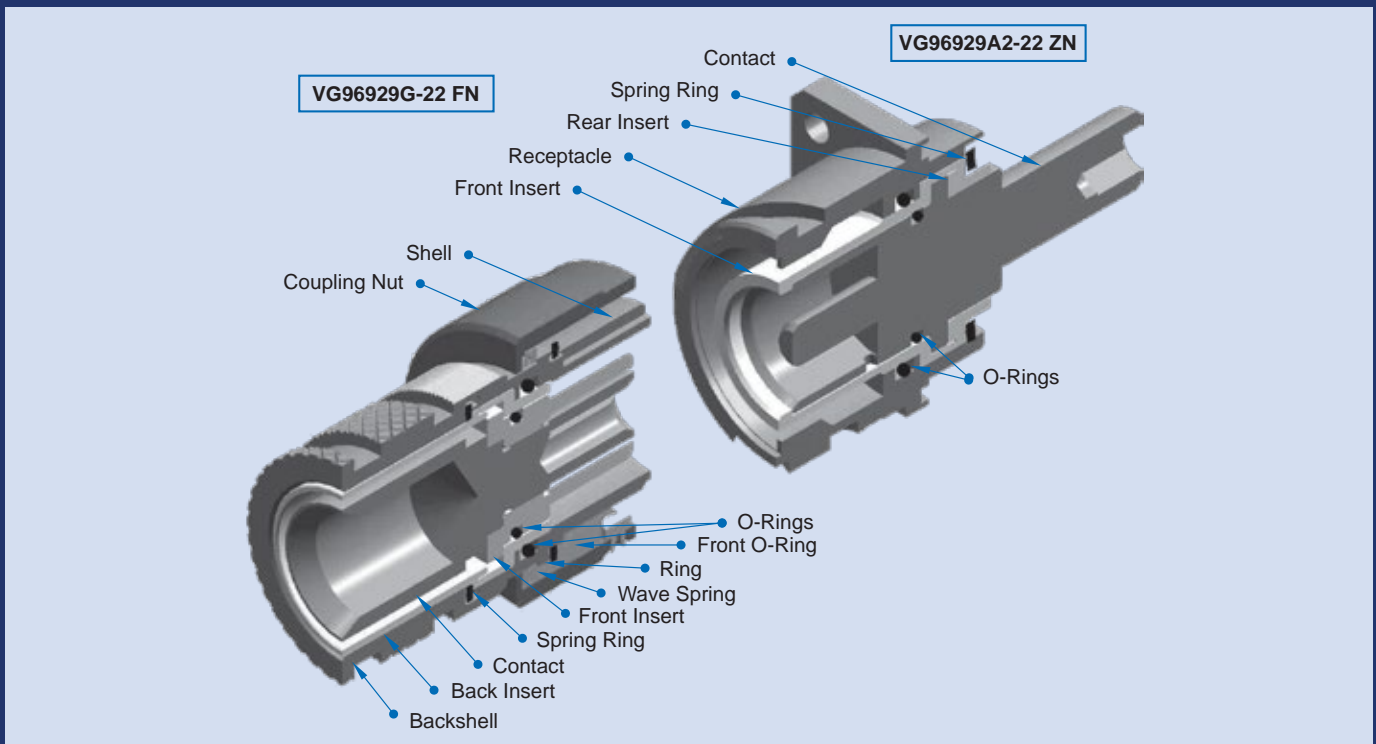
Harsh-environment, precision-machined marine bronze connectors

Low- to medium-voltage single-pole power connector versions

Single-pole versions of Super ITS - IGE marine bronze Seacrow™ connectors achieve high-performance working current and peak current, making them ideal for engines, power supplies, and power distribution boxes. Seacrow 5015-type reverse-bayonet connectors are qualified to VG96929 standards. Several backshells available in either straight or 90° elbows for convenient cable routing, IP67 standard, IP68 available.



- Precision-machined marine bronze alloy for superior corrosion resistance in seawater and other harsh environments
- Chemical-resistant Viton® gaskets and O-rings
- Single-pole high-power VG96929 qualified
- IP67 environmental sealing in mated condition; IP68 available
- High power, single pole connectors accommodating cables from 25 mm square to 240 mm square
- Keyed polarization
- Rugged reverse-bayonet mating



OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



Reverse-Bayonet 5015-Type Rubber-Covered Plug Power and Signal Connectors



The Reverse-Bayonet Power and Signal Connector with Improved User Ergonomics

Glenair Super ITS-RG Series connector plugs with RadGrip™ rubber coupling nut covers are ideal for harsh environmental field applications such as geophysical exploration in arctic conditions. Super ITS-RG RadGrip™ connectors feature wide, easy-to-grip castellations as well as a raised thumb tab. Built for maximum durability and mechanical protection of plug coupling nuts, Super ITS-RG RadGrip™ is the perfect solution for protection against abusive handling and other forms of mechanical damage. In addition, RadGrip™ facilitates rapid mating and demating of connectors, even when surfaces are slick with oil, dust, water, and other fluids. The highly durable rubber compound may be specified in seven different colors for improved connector and cable identification and management.

Colors available: Black, Yellow, Red, Blue, Light Green, Orange, and Grey. RadGrip™ covers adhere easily to aluminum alloy, stainless steel, and marine bronze versions of Glenair ITS reverse-bayonet power and signal connectors.



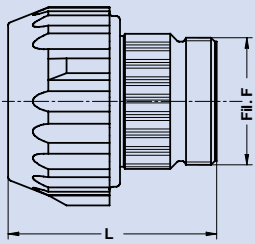
- **Fast, easy, reverse-bayonet coupling: 1/4 Turn**
- **IP67 (mated condition)**
- **Compatible with all Series ITS 5015 Type connectors**
- **High shock and vibration resistance**
- **200 plus insert arrangements available with contact sizes from #20 to #4/0**
- **Audible and visual coupling indicators**
- **Colored materials facilitate connector and cable identification such as in multi-phase power applications**

REVERSE-BAYONET Super ITS - RG RadGrip™ Rubber Overmolded Plug Connectors

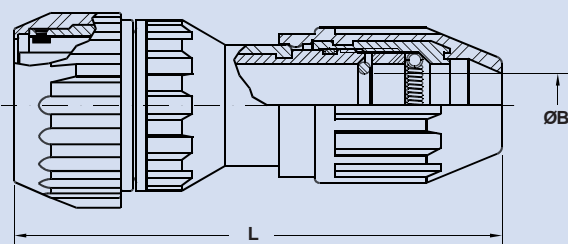
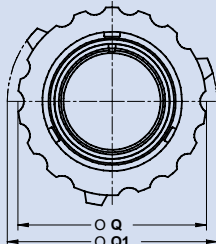


Power and signal IAW MIL-DTL-5015

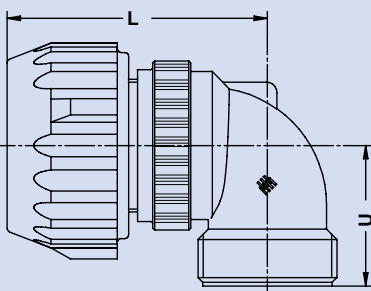
AVAILABLE RADGRIP-EQUIPPED SUPER ITS CONFIGURATIONS



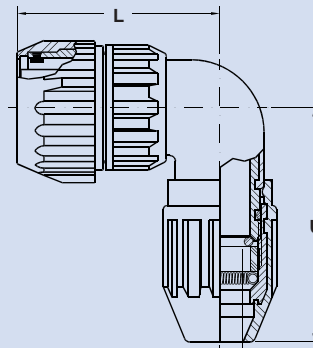
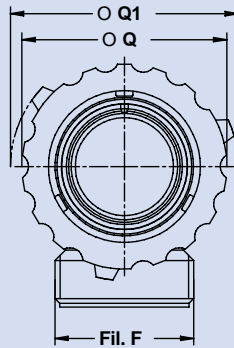
ITS-RGG (06) Straight Plug



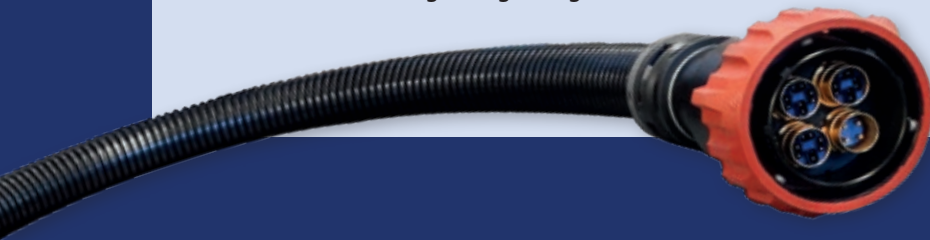
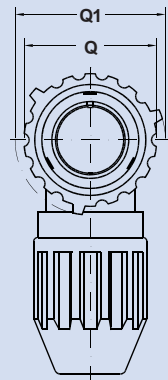
ITS-RRG (06) Straight Plug with
EMI/RFI Cable Sealing Backshell



ITS-RGG (08) 90° Right-Angle Plug



ITS-RRG (08) 90° Right-Angle Plug with
EMI/RFI Cable Sealing Backshell



Turnkey Super ITS-RG RadGrip cable assemblies available. Example shown equipped with high-speed OctoByte contacts and high-temperature wire-protection conduit.

SUPER ITS-RG RADGRIP™ REINFORCED RUBBER COUPLING NUT CONNECTORS



Super ITS-RG
(Basic Black)



Super ITS-RG
(Yellow)



Super ITS-RG
(Fiber Optic Blue)



Super ITS-RG
(Safety Red)

OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES

 **SuperNine**[®]

The advanced-performance MIL-DTL-38999
Series I, II, III, and IV type connectors



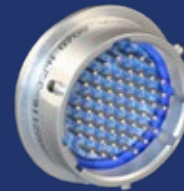
Wide range of signature PC
tail standoff designs, all with
superior sealing and resistance to
vibration and shock

SuperNine[®] is a "Better-than-QPL" MIL-DTL-38999 Series I, II, III, and IV connector family with outstanding durability, sealing, ease of shield termination, PC tail configurations, environmental and hermetic classes, connector savers, as well as off-the-shelf EMI/EMP filter connectors and more—all with Glenair's legendary service, support, and product availability.

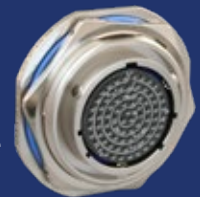
SUPERNINE SERIES I AND SERIES II BAYONET-LOCK CONNECTORS



SuperNine
Series I



SuperNine
Series II



SuperNine Series I (scoop-proof) and
Series II (low-profile) bayonet-lock
connectors (available now in Class G
space-grade)

SERIES 23

SuperNine MIL-DTL-38999 Series I, II, III, and IV



Advanced performance environmental and hermetic military-type connectors

SUPERNINE MIL-DTL-38999 SERIES III QPL COMPOSITE CLASSES J AND M



- DLA-qualified composite classes J (Cad / O.D.) and M (Electroless Nickel)
- QPL and Glenair signature series
- Available integrated banding porch with 50% weight savings
- D38999/26 plug and D38999/20 wall-mount receptacle
- 100% molded composite (not machined) for superior strength and durability
- 30% glass-filled PEEK
- 20% weight savings versus standard metal connector

SPECIAL DERIVATIVE SERIES FOR HIGH-TEMPERATURE, HIGH-SPEED, AND HIGH-POWER



High-temperature and cryogenic ThermoRex solutions



High-speed El Ocho Octaxial solutions for 10Gb Ethernet, USB 3.0, and SATA

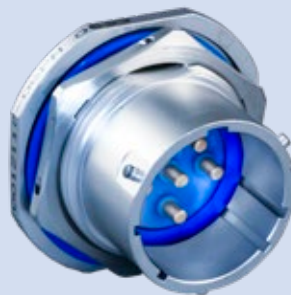


SuperNine PowerPlay high-voltage connectors with temperature-tolerant Crown Ring contacts

SUPERNINE MIL-DTL-38999 SERIES I AND III HIGH-PRESSURE HERMETIC SOLUTIONS



Glass-to-metal sealed and lightweight CODE RED encapsulant sealing hermetic-class connectors



D38999 Hermetic Series I bayonet and Series III stub-ACME mating interfaces



Hermetic bulkhead feed-thrus and bulkhead penetrators

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

SERIES
806
MIL-AERO

Series 806 Mil-Aero: Advanced performance, reduced size and weight



Two mating styles available:
Triple-start stub ACME and
bayonet-lock

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as high-altitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

SIZE AND WEIGHT SAVING SOLUTIONS: CATALOG OR CUSTOM



High-availability catalog solutions plus custom designs such as this unique Quadrax implementation

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

Series 806 Mil-Aero Micro Miniature Circular Connectors



For small form-factor harsh-environment applications IAW MIL-DTL-38999

SERIES 806 MIL-AERO: FEATURES / SPECIFICATIONS

- **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**
- **“Triple ripple” wire sealing grommet (75,000 ft. rated)**
- **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**

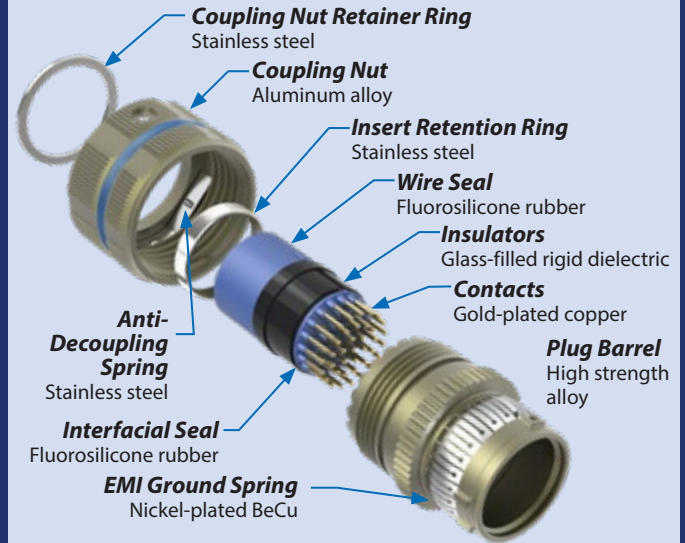


AVAILABLE LIGHTWEIGHT ALUMINUM “CODE RED” HERMETICS

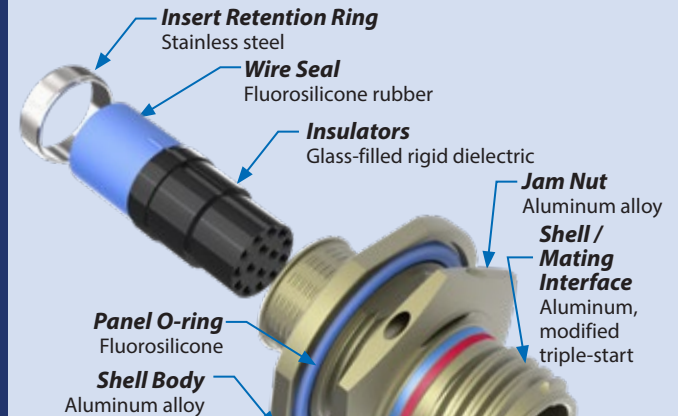
CODE RED is a lightweight encapsulant sealing and assembly process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ESA) provides durable hermetic sealing with 1×10^{-7} leak rate performance. Gold-plated copper contacts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



SERIES 806 MIL-AERO PLUG



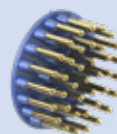
SERIES 806 MIL-AERO RECEPTACLE



SMALLER AND LIGHTER WITH EQUAL D38999 PERFORMANCE?

High-Density Layouts

Twice as many contacts in a smaller package



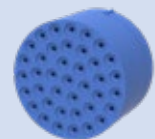
“Top Hat” Insulator

High voltage rating, foolproof alignment



Triple Ripple Wire Seal

Reliable 75,000 ft. altitude immersion



OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES



Mighty Mouse micro
miniature connector series
for optimized SWaP

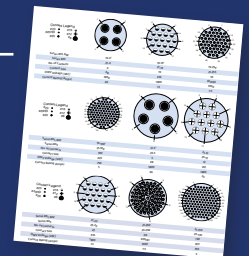


Mighty Mouse vs. 38999: less than half the size and weight.

Mighty Mouse Connectors: Reducing the Size and Weight of Electrical Wire Interconnect Systems Since 1997

- 8 coupling styles and 67 contact arrangements from 1 – 130 contacts
- MIL-DTL-38999 caliber performance
- Size #23, #22, #20, #20HD, #16, #12, #8 signal, power, RF, and high-speed contacts
- Discrete connectors and turnkey cable assemblies

FULL RANGE OF SUPPORTED CONTACTS, 67 CONTACT ARRANGEMENTS



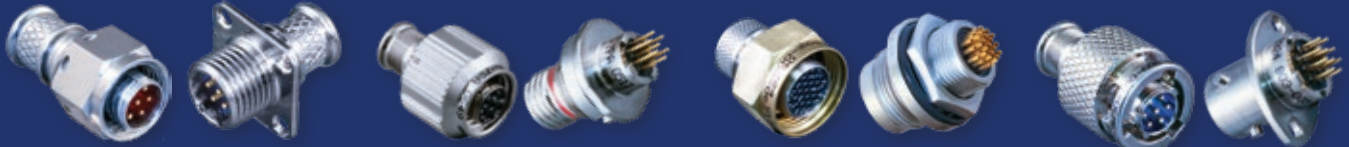
67 arrangements,
from 1–130 contacts

SERIES 80 MICRO MINIATURE Mighty Mouse Connectors and Cables



Awesome performance, itty-bitty package

CHOOSE FROM 8 DIFFERENT COUPLING DESIGNS



Series 800
UN thread

Series 801
double-start ACME thread

Series 802
AquaMouse UNEF thread

Series 803
bayonet coupling



Series 804
quick-disconnect

Series 824
locking quick-disconnect

Series 805
triple-start thread, size #23
contact layouts

Series 806
modified triple-start, size #22HD
and #20HD layouts

MIGHTY MOUSE SERIES ENVIRONMENTAL, HERMETIC, AND OTHER CLASSES



IP67
environmental

Glass-to-metal seal
hermetic

CODE RED
encapsulant-seal hermetic

EMI/RFI
Filter

EMP Transient Voltage
Suppression



Bulkhead feed-thrus and
penetrators

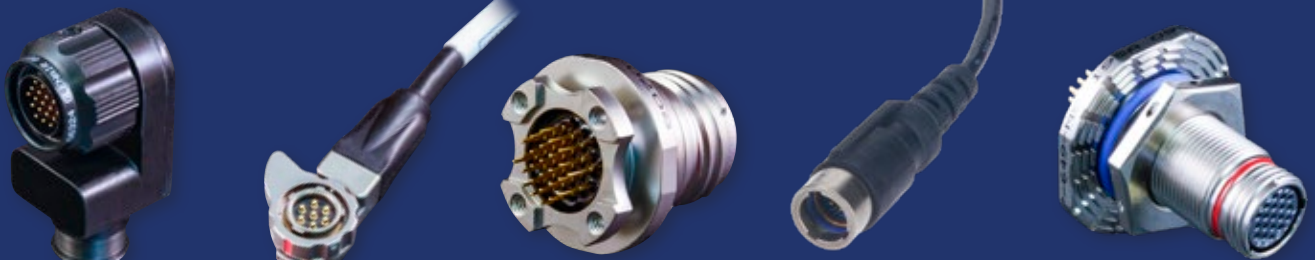
Sav-Con[®]
connector savers

High-frequency
RF / Microwave

High-speed
Ethernet

Single- and multimode
fiber optic

AVAILABLE COTS SPECIAL-PURPOSE DESIGNS AND PACKAGING



Low-profile COBRA

Mouse Bud

Double-standoff PC tail

Mighty Mouse USB 3.2
LEMO replacement

Special feed-thrus

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

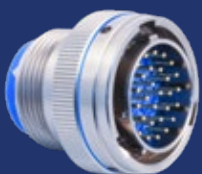
MIL-DTL-26482 Series 2 Type rugged bayonet-coupling crimp-contact environmental and hermetic connectors



- For rugged military and industrial applications that require quick mate/demate three-point bayonet-lock coupling.
- Glenair 26482 Series 2-style connectors offer high-performance plating options unavailable in standard mil-spec parts including TZ tin-zinc, our recommended RoHS-material AMS2434 Type 2 qualified cadmium-compatible replacement, ZR black zinc-nickel, and Z1 passivated stainless steel.
- Complete range of tooled MIL-STD-1669 insert arrangements for size #20, #16, and #12 signal and power crimp, rear-release contacts. The Glenair solution offers three shell size 8 arrangements not available in the mil-spec version.
- Available integrated cable-shield banding porch option as well as PCB versions with rugged threaded standoffs for secure circuit board attachment.

Two styles of wall mount receptacles (narrow and wide flange). Plugs available with and without grounding fingers, and threaded connector accessory interface and wire sealing grommet. Glenair signature integrated band porch versions also available.

MIL-DTL-26482 SERIES 2 ENVIRONMENTAL-CLASS CONNECTORS



Plug connectors



Narrow-flange
wall-mount receptacles



Wide-flange
wall-mount receptacles



Cable-connecting
receptacles



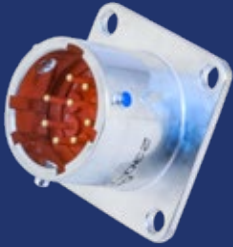
Jam-nut
receptacles

BAYONET-LOCK MIL-DTL-26482 Series 2 type



Glenair signature and QPL (pending)

MIL-DTL-26482 SERIES 2 HERMETIC CONNECTOR OFFERINGS



Square-flange
hermetic receptacles



Jam-nut
hermetic receptacles



Weld-mount
hermetic receptacles



Hermetic
bulkhead feed-thrus

MIL-DTL-26482 SERIES 2 CONNECTOR ACCESSORIES



Leonardo's ProSeal
spring-action protective cover



Swing-Arm 3-in-1 cable clamp



EMI banding backshell



Environmental
heat-shrink boot

MIL-SPEC CRIMP CONTACTS FOR GLENAIR SERIES 260-002 M26482 TYPE CONNECTORS

Glenair Series 260-002 MIL-DTL-26482 Series 2 type connectors are supplied with contacts (including spares), insertion / removal tool, and sealing plugs. Connectors may also be ordered without contacts. Additional contacts, insertion/removal tools, crimp tools, and positioners may be ordered using the part numbers on this page:

M39029/4-110 Size 20 pin contact	M39029/5-115 Size 20 socket contact	M39029/4-111 Size 16 pin contact	M39029/5-116 Size 16 socket contact	M39029/4-113 Size 12 pin contact	M39029/5-118 Size 12 socket contact

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

High-Temperature / High Pressure (HTHP) Hermetic Bulkhead Penetrators and Feedthroughs

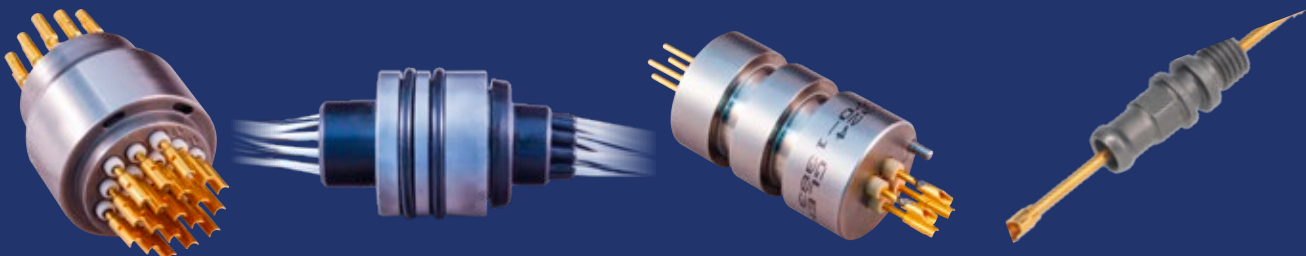


Glass Sealed Penetrators and Feedthroughs

Glass sealed penetrators and feedthroughs provide sealed interconnect solutions for downhole applications such as logging while drilling (LWD) and measurement while drilling (MWD) applying methods such as near-balanced, underbalanced, and overbalanced drilling. In these environments, conditions can reach temperatures approaching 300°C while experiencing elevated shock and vibration, downhole fluids / pressures, and limited working room. Glenair HTHP penetrators are typically used where a waterproof seal is needed but connectorized separation from equipment is not. Standard plugs are rated to 10K PSI, mated condition. Standard receptacles are rated to 10K PSI both mated and open-face.

- Available in 7 shell sizes and 17 insert arrangements
- Standard penetrators with hermeticity of $<1 \times 10^{-7}$ sccHe/sec @ 1 atmosphere differential and rated to 10,000 PSI
- High-pressure / high-temperature penetrators rated to 25,000 PSI and hermeticity of $<1 \times 10^{-8}$ sccHe/sec @ 1 atmosphere differential

MULTI-PIN AND SINGLE-PIN PENETRATORS, RECEPTACLES, AND FEED-THRUS



707-0015

707-0030

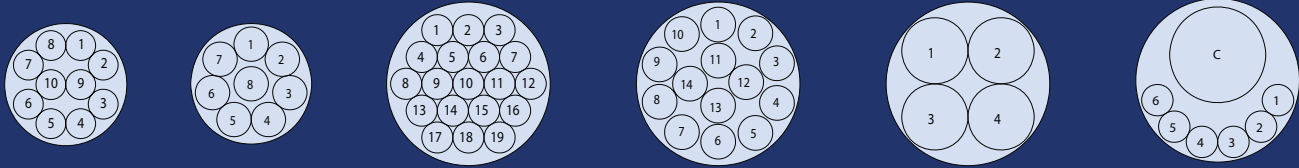
2570-1383

2570-1364

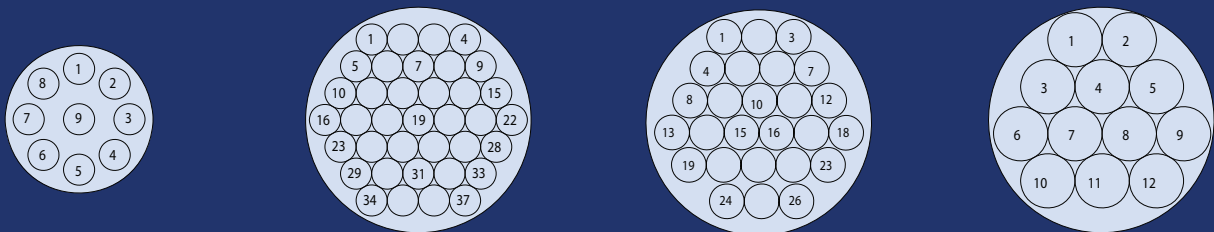
DOWNHOLE HTHP High Pressure/High Temperature Penetrators



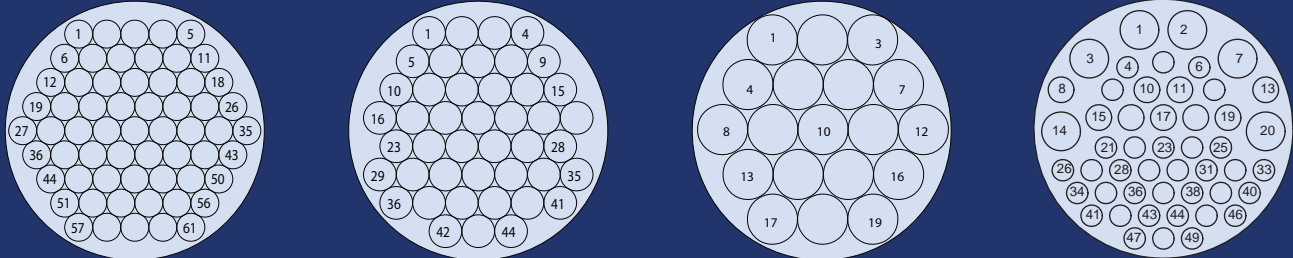
Glass sealed insert contact arrangements - Mating face view of pin insert
(socket insert IDs are reversed)



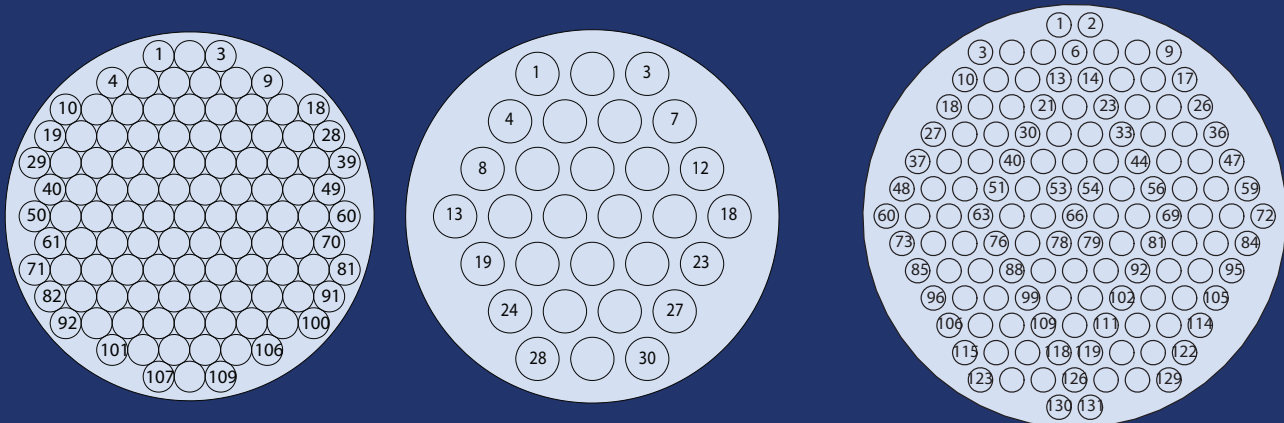
Size G		Size K			
G10	G8	K19	K14	K4	KC6
10 Size #22 Contacts	8 Size #20 Contacts	19 Size #22 Contacts	14 Size #20 Contacts	4 Size #16 Contacts	One 75 Ohm Coax, 6 #22



Size L	Size M		
L9	M37	M26	M12
9 Size #16 Contacts	37 Size #22 Contacts	26 Size #20 Contacts	12 Size #16 Contacts



Size O			
O61	O44	O19	OX49
61 Size #22 Contacts	44 Size #20 Contacts	19 Size #16 Contacts	49 Contacts 6 #16 • 9 #20 • 34 #22



Size Q		Size R
Q109	Q30	R131
109 Size #22 Contacts	30 Size #16 Contacts	R131, 131 #22 AWG

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES

ThermaRex™

CRYO • HIGH TEMP • ULTRA HIGH-TEMP

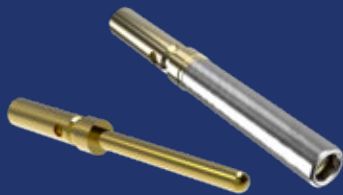
Cryogenic and high-temperature tolerant connectors, cables, and conduit systems



ThermaRex UHT ultra high-temperature assembly: Series 806 connectors, high-temperature wire, high-temperature metal-core conduit.

High-temperature downhole and cryogenic-temperature (LNG) applications require highly specialized temperature-tolerant interconnects

HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS: ThermaRex™ HT SERIES



Glenair Signature Crown Ring contact series provides reduced contact resistance, superior conductivity, and higher temperature-tolerance than conventional AS39029 contacts.

Superior conductivity performance compared to beryllium copper contacts, across full temperature range

Up to 60% lower contact resistance than AS39029 contacts (normalized, less wire)

Contact bodies made from high-temperature and stress-relaxation-resisting non-beryllium copper material

Stainless steel Crown Ring

Provides socket forces without stress relaxation at high-temperatures

Moves socket spring function from socket body to ring, allowing use of high-conductivity copper

Gold over nickel plating

Thicker plating than industry standards for reduced contact fretting and higher temperature endurance

Gold over nickel is “gold standard” for high-reliability aerospace contacts

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

HIGH-TEMPERATURE TOLERANT ThermaRex Interconnect Solutions



High-temperature, Ultra high-temperature, and Cryogenic

The ThermaRex product family includes connectors, cables, and wire protection conduit systems organized into three temperature ranges: ThermaRex HT (high-temperature), ThermaRex UHT (ultra high-temperature), and ThermaRex Cryo.

300°C ThermaRex HT Connector



- Service rating up to 300°C
- Vibration-resistant threaded coupling
- High-temperature ceramic insulators and silicone seals
- Durable stainless steel construction
- Available in Series 806, SuperNine®, or Series 79 rectangular
- Utilizes Glenair Crown Ring contacts

600°C ThermaRex UHT Connector



- 300°C to 600°C service range
- Vibration-resistant threaded coupling
- Specialized contacts, laser welds, and metal seals
- Utilizes ultra-high temperature flexible ceramic-insulated cable
- Ideal for nuclear and other extreme temperature applications

-195°C ThermaRex Cryo Connectors for Liquefied Natural Gas Sensor Applications



Environmental



Hermetic

Environmental

- Environmental-class service rating down to -195°C
- Vibe and shock at D38999 level, immersed in LN2
- Cryogenic temperature-resistant Duraelectric K grommet and interfacial seals
- Cold temperature-resistant thermoplastic dielectric insulator

Hermetic

- Hermetic-class service rating -195°C to +200°C
- Series 806 micro-miniature high-density packaging
- Corrosion-resistant stainless steel shell construction
- Glass-to-metal hermetic seal leak rate $< 1 \times 10^{-7}$ cc He / sec @ 1 ATM

Complementary ThermaRex Ecosystem Technologies



High- and low-temperature hookup wire and shielded twisted pair



High-temperature polymer-core wire protection conduit



Flexible stainless steel metal-core jacketed conduit



Three classes of HT and UHT flexible braided shielding

OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



The Micro-D Connector for High-Temperature Downhole Applications



Standard Micro-D connectors are rated for +125°C. Glenair's MWDM Micro-D can withstand +150°C continuous operating temperature and can be upgraded to +200°C if assembled with special high temperature epoxies. But oil, gas and geothermal wells can subject electronic instruments to temperatures as high as +260°C. The GHTM Series Micro-D meets the need for a high density, high performance connector capable of handling this temperature. The GHTM features contacts made from a special alloy that resists softening when exposed to temperatures up to +260°C (500° F). Rugged passivated stainless steel shells and hardware, high temperature liquid crystal polymer (LCP) insulators allow these connectors to survive the most demanding environments. Unique angled mounting ears allow the Well-Master™ 260° to fit in confined spaces.

- **+260°C operating temperature**
- **Angled mounting ears to fit in small diameter instruments**
- **High reliability twistpin contact system with special high temperature alloy**
- **.050" Pitch contact spacing for reduced size**
- **Solder cup, pre-wired or PCB**



PCB Header



Pre-Wired Cable Receptacle



Pre-Wired Cable Plug

SERIES GHTM WELL-MASTER 260° Downhole Micro-D Connector

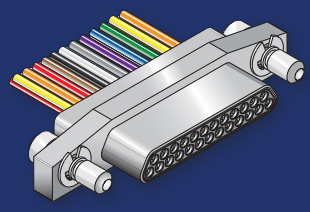


Reference information / insert arrangements

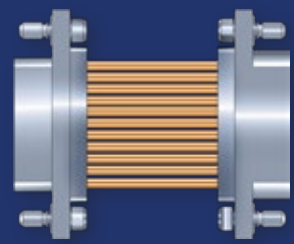
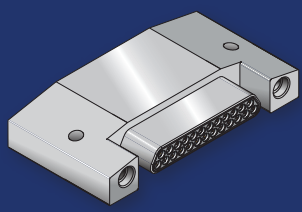
In addition to extreme high temperature tolerance, and demating resistance to vibration and shock, the Glenair Well-Master™ 260° Micro-D connector features unique shell packaging designed to conform with the cylindrical shape of instrument housings. Special angled mounting ears facilitate incorporation of the connector into available space, and the Micro-D's overall reduced size compared to other rectangular connector solutions allows for more efficient utilization.



High Temperature Micro-D with insulated Wire Pigtails



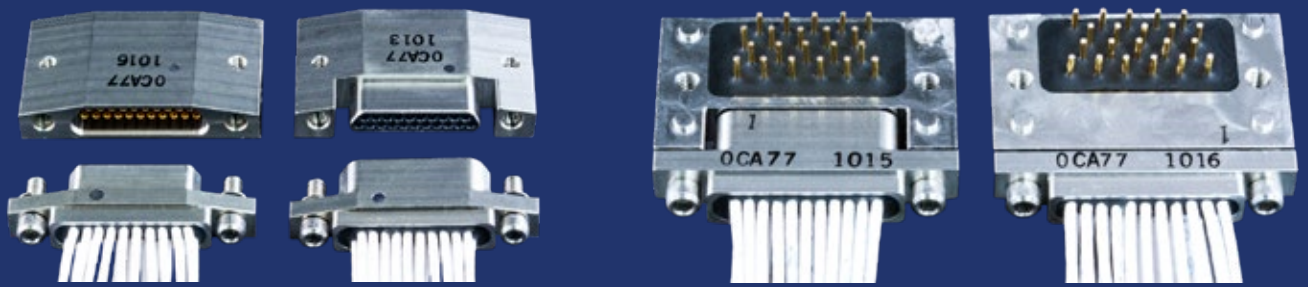
High Temperature PCB Header



High Temperature Back-to-Back Micro-D

GHTM High Temperature Insert Arrangements (Pin Face View)			
<p>1 2 3 4 5 6 7 8 9</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>
9	15	21	25
<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51</p>	
31	37	51	

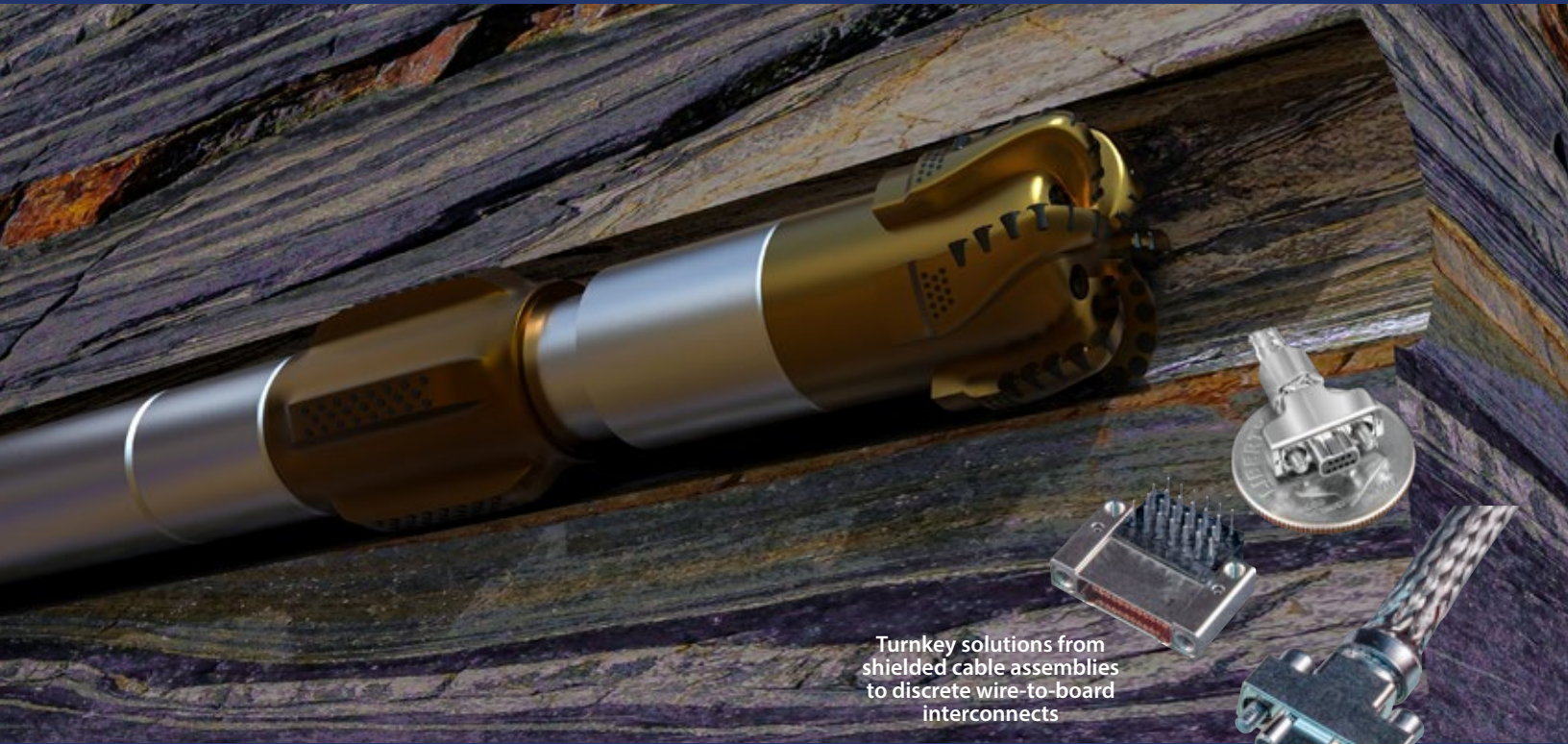
Mating face of pin connector. Socket connector contact numbers are reversed.



OIL & GAS CONNECTORS AND CABLE ASSEMBLIES



MIL-DTL-32139 QPL and Glenair Signature
Nano miniature connector designs



Turnkey solutions from
shielded cable assemblies
to discrete wire-to-board
interconnects

The M32139 Nano is the smallest and lightest mil-spec connector in the business. 1 Amp contacts are set on .025" centers and terminated to 30 AWG wire or PCB tails. Glenair supplies both standard QPL designs as well as a broader range of signature offerings.

- Single and double row
- Metal shell, aluminum, titanium or stainless steel
- TwistPin contact system
- Gold alloy contact, unplated
- Thru-hole and surface-mount PCB versions

THE NANO TWISTPIN ADVANTAGE



Transverse cross-section
of a TwistPin contact crimped
to solid wire



- Gas-tight crimp joint
- Better shock and vibration performance
- Corrosion proof contact alloy



SERIES 89 Nano miniature Connectors



Nano high density · single- and dual-row · cable and PCB

SERIES 89 NANO MINIATURE CONNECTOR PERFORMANCE

Contact Spacing	.025" (0.64mm) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Max
DWV	250 VAC RMS Sea Level
Insulation Resistance	5000 Megohms Minimum
Operating Temperature	-55° C. to +125° C.
Contact Resistance	71 Millivolt Drop Maximum
Shock, Vibration	100g's, 20 g's
Durability	200 Mating Cycles
Corrosion Resistance	48 Hours Salt Spray
Mating Force	5 Ounce Max, 0.4 Ounce Min

How Small Are They?



D-SUBMINIATURE CONNECTOR
25 Contacts
on 0.109 Inch Spacing



MICRO-D CONNECTOR
25 Contacts
on 0.050 Inch Spacing



NANO CONNECTOR
25 Contacts
on 0.025 Inch Spacing

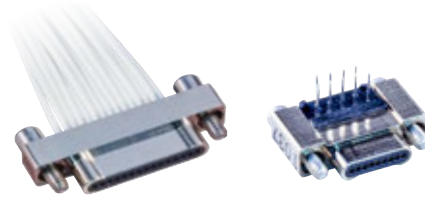


Also available: aerospace-grade Nano circulars

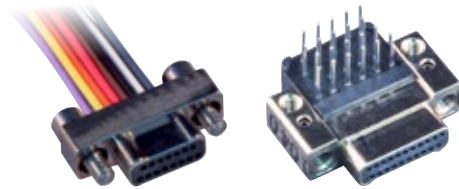
Nano Circular Connectors and Accessories



Nano Rectangular Single-Row Connectors and Accessories



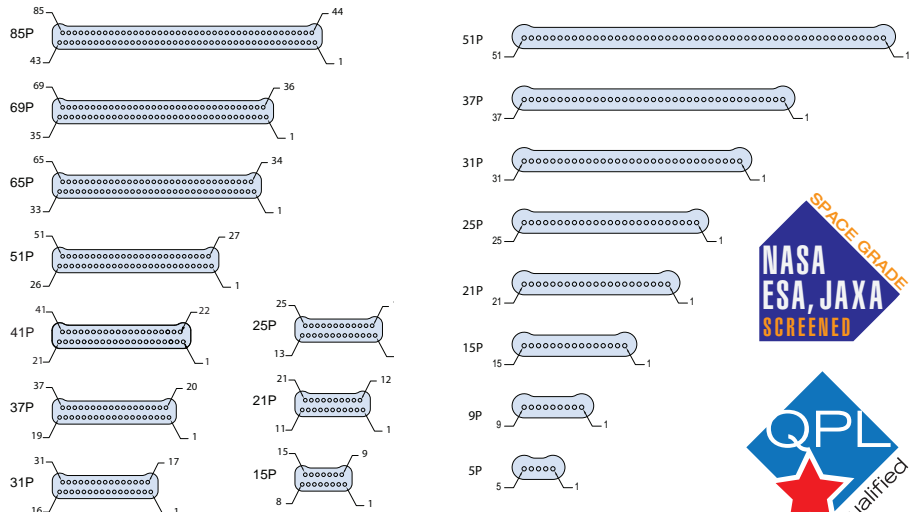
Nano Rectangular Dual-Row Connectors and Accessories



MIL-DTL-32139 Qualified Connectors and Accessories



NANO MINIATURE CONTACT ARRANGEMENTS



OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES

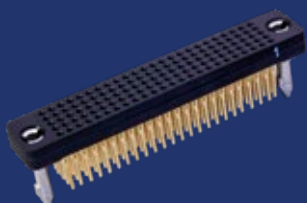
HDSTACKER™

High-density, solder-free, compliant pin board-to-board stackable connectors

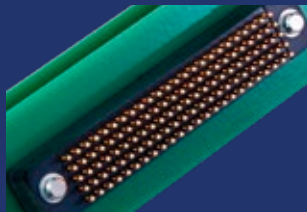


HD Stacker: the innovative mission-critical board-to-board connector with fail-safe signal integrity and rugged, reliable harsh-environment performance

- High-density .0625" pitch Chevron Contact System: 55% more contacts per connector size
- PCIe 3.0 capable
- Performance up to 10.5 Gbps
- Polarized insulator and hardware options
- Solder free "eye of the needle" compliant tail for press fit installation
- High-temp PPS insulator meets NASA outgassing requirements
- Available wired / flex jumpers
- Available between-board spacers up to 1 inch



Solder-free press-fit (compliant pin) board mounting



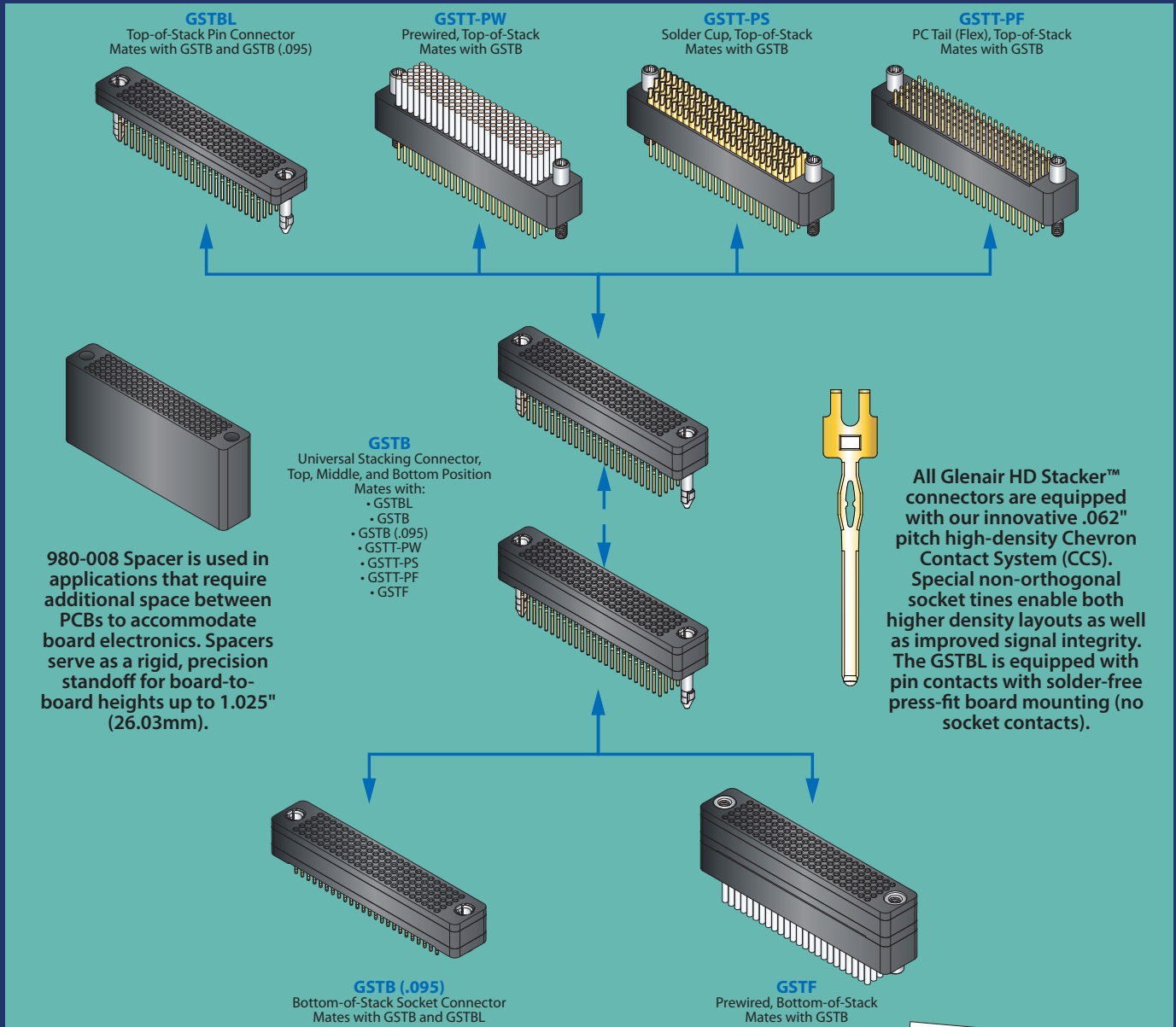
.0625" pitch contact spacing: highest available density



Polarized shells and keyed guide pin hardware prevent mis-mating

High-density, rugged, solder-free compliant pin board-to-board stackable connectors

HD STACKER™ POSITION AND MATING COMPATIBILITY GUIDE



QUALIFICATION TESTING / HIGH-SPEED PERFORMANCE

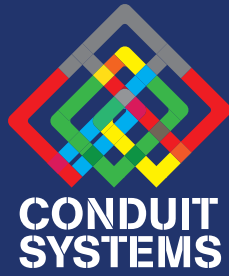
Stacker connectors were qualified in accordance with MIL-DTL-55302G testing for:

- Contact engagement/separation
- Contact retention
- DWV
- Electrical resistance
- Mechanical vibration and shock
- Insulation resistance
- Thermal shock
- Contact resistance
- Humidity

High-frequency electrical performance tests were performed for: Insertion loss, return loss, crosstalk, and time domain performance metrics including impedance and eye pattern. Complete test reports are available at www.glenair.com/test-reports-and-technical-information



**OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES**



**Wire Protection
Conduit Systems**



Turnkey conduit assembly for a rugged charging application

TURNKEY FACTORY-TERMINATED CONDUIT ASSEMBLIES



Complex multibranch fighter jet electrical wire conduit assembly

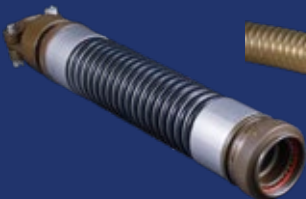


Lightweight, halogen-free rail industry wire conduit assembly



Crush-resistant commercial aerospace metal-core conduit assembly

SPECIAL-PURPOSE CONDUIT MATERIALS AND CONFIGURATIONS



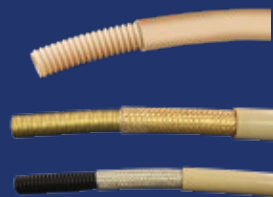
Spring-reinforced polymer-core assemblies



Halogen-free PEEK tubing



Special composite fiber optic backshells



Conduit and jacket color options including Desert Tan



Special processing including drain holes, ovalization, and split-entry

HARSH-ENVIRONMENT Metal- and Polymer-Core Conduit Systems

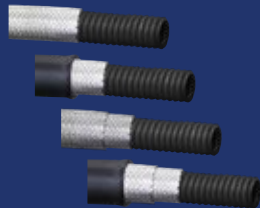


High-temperature · crush-resistant · EMI/RFI shielded

LIGHTWEIGHT, SEALED/FLEXIBLE POLYMER-CORE ANNULAR CONDUIT WIRE PROTECTION SYSTEMS



Kynar, PVDF, and G-Flex Siltem materials



Braided shielding and jacketing options



Easy-to-install Guardian wire protection system

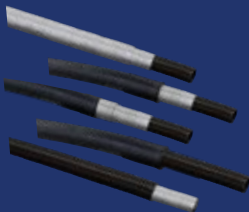


Sentry economical wire protection system



Non-wired factory-terminated assemblies

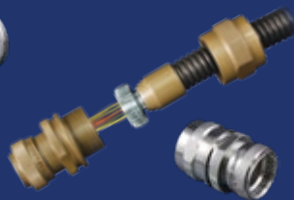
HIGH-TEMPERATURE, HIGH-STRENGTH HELICAL POLYMER-CORE WIRE PROTECTION SYSTEMS



High-temperature, high-strength helical conduit



Easy-to-install Hat-Trick wire protection system



Internal braid wire protection system



AeroLite wire protection system

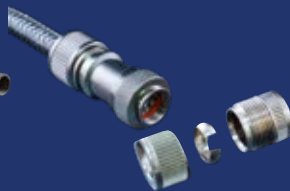


Non-wired factory-terminated assemblies

HEAVY-DUTY METAL-CORE CONDUIT WIRE PROTECTION SYSTEMS



Flexible, crush-proof EMI/RFI metal-core conduit



Low-profile RP Plus wire protection system



Heavy-duty metal and weight-saving composite systems

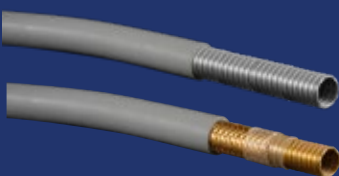


Legacy Mil-C-24758 wire protection system

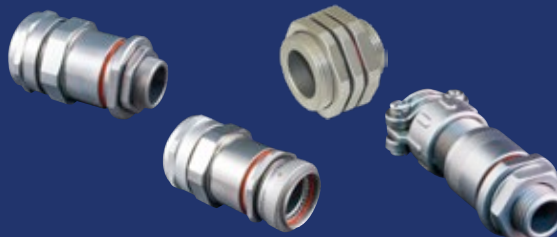


Non-wired factory-terminated assemblies

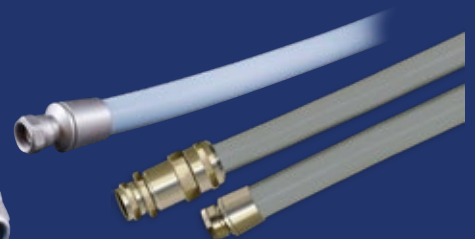
MIL-PRF-24758 SHIPBOARD CONDUIT WIRE PROTECTION SYSTEMS



Stainless steel and brass metal-core conduit with UV-resistant BlueJacket



Complete range of qualified MIL-PRF-24758 fittings



Non-wired factory-terminated assemblies

OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES



Rugged environmental
heat-shrink boots for
cable-to-connector sealing



For advanced abrasion
protection, environmental
sealing, splicing, and wire
protection



NAVSEA-Qualified
Heavy-Wall Boot
5617649



ALSO AVAILABLE: AUTOSHRINK COLD-SHRINK BOOTS



Autoshrink D
UV-resistant / LSZH



Autoshrink F
Advanced fluid resistant



Autoshrink S
Subsea



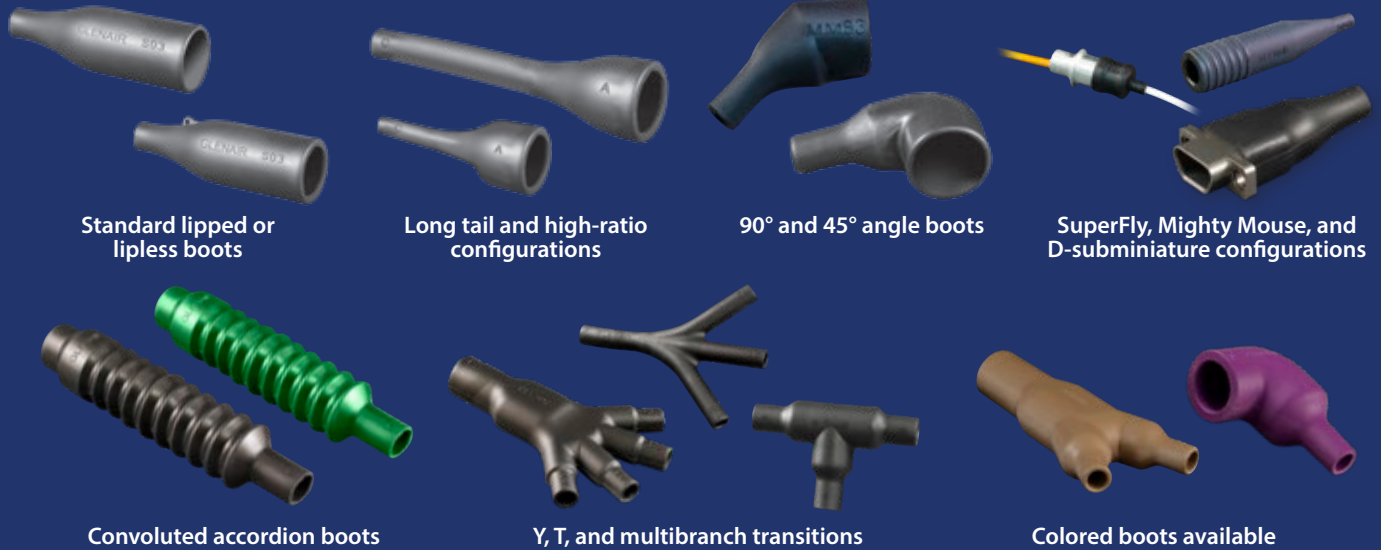
Autoshrink T
High-temperature-tolerant

ENVIRONMENTAL Heat-Shrink and Autoshrink™ Boots and Molded Shapes



Abrasion protection · environmental sealing · splicing

COMPLETE RANGE OF ENVIRONMENTAL HEAT-SHRINK BOOTS AND MOLDED SHAPES



GLENAIR SERIES 77 "FULL NELSON" TACOM APPROVED SHRINK BOOTS

Description	Military Part Number	Glenair Part Number	Raychem Part Number	Hellermann Part Number	Description	Military Part Number	Glenair Part Number	Raychem Part Number	Hellermann Part Number
Heat Shrinkable Low Profile 3-Entry "Y" Transition	12273148-1**	770-009Y*05	381A301-**	492H412-*	Heat Shrinkable Straight Lipped 2-Entry Long Tail Boot	12273147-1**	770-020S*02	202F211-**	313F322-*
	12273148-2**	770-009Y*06	381A302-**	492H413-*		12273147-2**	770-020S*03	202F221-**	313F332-*
	12273148-3**	770-009Y*07-01	381A303-*01	492H414-*01		12273147-3**	770-020S*04	202F232-**	313F343-*
	12273148-4**	770-009Y*08-01	381A304-*01	492H415-*01		12273147-4**	770-020S*05	202F242-**	313F353-*
	12273148-5**	770-009Y*07	381A303-**	—		12273147-5**	770-020S*06	202F253-**	313F364-*
Heat Shrinkable Low Profile 3-Entry "T" Transition	12273162-1**	770-012T*01	301A511-**	412H622-*	12273147-6**	770-020S*07	202F263-**	313F374-*	
	12273162-2**	770-012T*02	301A512-**	412H623-*	12273147-7**	770-020S*08	202F274-**	313F385-*	
	12273162-3**	770-012T*03	301A513-**	412H624-*	Heat Shrinkable 90° Lipped 2-Entry Long Tail Boot	12273176-1**	770-021A*02	222F211-**	333F322-*
	12273162-4**	770-012T*04	301A514-**	412H625-*		12273176-2**	770-021A*03	222F221-**	333F332-*
Heat Shrinkable Low Profile 4-Entry 3:1 Transition	12273163-1**	770-014*09	462A421-**	573H532-*		12273176-3**	770-021A*04	222F232-**	333F343-*
	12273163-2**	770-014*10	462A422-**	573H533-*		12273176-4**	770-021A*05	222F242-**	333F353-*
	12273163-3**	770-014*11	462A423-**	573H534-*		12273176-5**	770-021A*06	222F253-**	333F364-*
Heat Shrinkable Adapter Shim Boot	12273164-1**	770-019SB*01	202E334-**	313E445-*		12273176-6**	770-021A*07	222F263-**	333F374-*
	12273164-2**	770-019SB*02	202E344-**	313E447-*		12273176-7**	770-021A*08	222F274-**	333F385-*
	12273164-3**	770-019SB*03	202E336-**	313E447-*	Heat Shrinkable Convoluted Strain Relief 2-Entry Boot	12273242-1**	770-022C*01	202C611-**	313C722-9
12273164-4**	770-019SB*04	202E346-**	313E457-*	12273242-2**		770-022C*02	202C621-**	313C732-9	
Heat Shrinkable Convoluted Strain Relief 2-Entry Boot	12273242-1**	770-022C*01	202C611-**	313C722-9		12273242-3**	770-022C*03	202C632-**	313C743-9
	12273242-2**	770-022C*02	202C621-**	313C732-9		12273242-4**	770-022C*04	202C642-**	313C753-9
	12273242-3**	770-022C*03	202C632-**	313C743-9		12273242-5**	770-022C*05	202C653-**	313C764-9
	12273242-4**	770-022C*04	202C642-**	313C753-9		12273242-6**	—	202G621-**	—
	12273242-5**	770-022C*05	202C653-**	313C764-9		12273242-7**	—	202G632-**	—
12273242-6**	—	202G621-**	—	12273242-8**		—	202C642-**	—	
12273242-7**	—	202G632-**	—	12273242-9**		—	202C653-**	—	
12273242-8**	—	202C642-**	—						
12273242-9**	—	202C653-**	—						



M85049/140 (straight), /141 (right-angle), and /142 (transitions)

OIL & GAS
CONNECTORS
AND CABLE
ASSEMBLIES



Circular backshell and
accessory designs for life-
of-system durability and
optimal reliability



Innovative solutions for harsh- 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 problems in harsh-environment 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. Glenair can supply light weight and corrosion-resistant connector backshell solutions for all harsh-environment interconnect applications including cable routing, shield termination, environmental sealing, and cable strain relief.



Glenair backshells—from standard strain relief cable clamps, to EMC shield termination devices are supplied for every popular connector series in use today.

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 Circular Backshells and Accessories



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

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



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



Pressure boundary composite feed-thru

Firewall pressure boundary feed-thru

EMI/RFI split-shell metal feed-thru

- 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

RUGGED AND SPECIAL-PURPOSE CONNECTOR AND CABLE ACCESSORIES



Self-locking protective covers

Heavy-duty wire mesh grip strain relief

Heat shrink boot / wire routing clamp assembly

Shield termination banding adapter backshells

Band-Master ATS® advanced shield-termination system

Color-coded composite dust caps

GLENAIR GLENDALE:
Complete vertical integration
of manufacturing resources—
at home in Southern California
since 1956

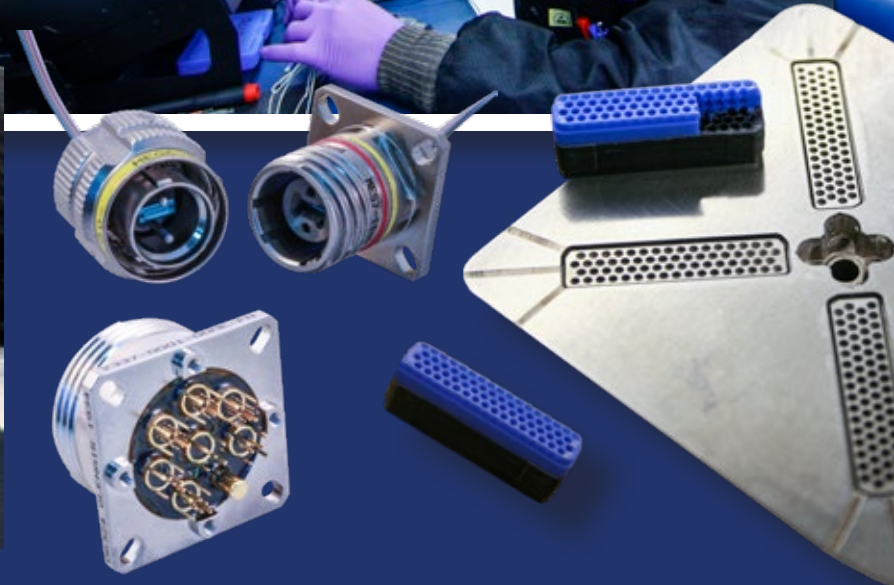


Glenair operates the largest high-reliability interconnect manufacturing operation in the United States, allowing us to fully support our broad range of land, sea, air, and space customers.





Glenair SoCal's most important asset: highly technical staff, fully empowered with all the right facilities and operation resources.



HYDROSTATIC TEST LAB GLENDALE, CALIFORNIA:

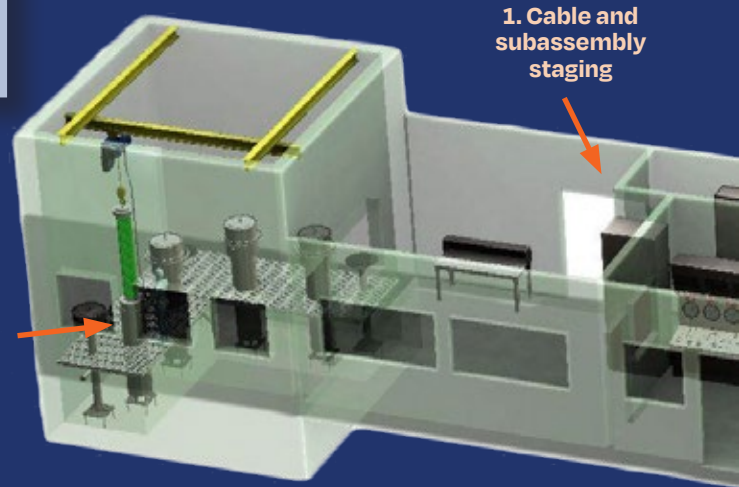
Manufacturing harsh-environment military, nuclear, and aerospace interconnect technologies for power, high-speed Ethernet, and hermetic seal applications.



DISCRETE CONNECTOR TESTING:
All Glenair high-pressure interconnects are subjected to 100% inspection and test



2. Large cable and subassembly pressure test bunker



1. Cable and subassembly staging

LARGE PRESSURE VESSELS: Built to accommodate complete cable assemblies, mated connectors, and customer-supplied subassemblies



TECHNICAL STAFF: Knowledgeable and trained subsea specialists perform both in-house product qualification testing, as well as customer subassembly testing.

SAFETY MOMENT: This technician is in the early, non-pressurized stage of a complex test setup so we will cut him some slack. Otherwise, I think we can all agree, safety glasses should always be worn in the lab.

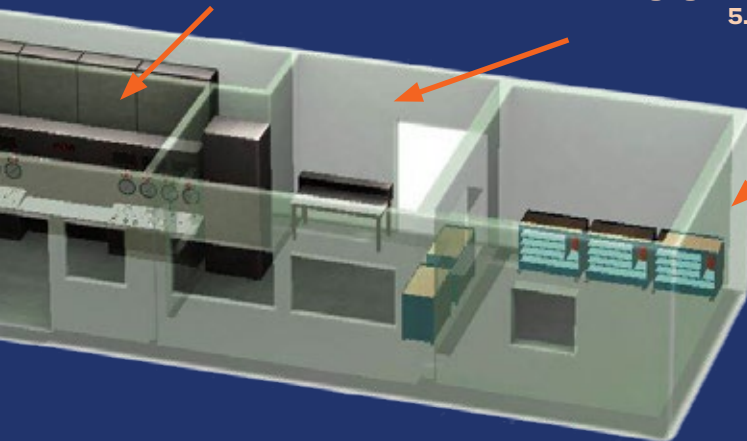
CONTROL ROOM: The modular consoles in the control room provide for up to 8 pressure circuits, operating in manual mode or automated. Each circuit is capable of a maximum of 16.5K psi. Monitors display: automated test profiles, data acquisition, remote viewing of test rooms and more. System is network connected for access to profiles and distribution of test reports.



3. Hydrostatic test lab control room

4. Production connector staging

5. Small connector pressure test bunker



SeaKing™ and SuperG55™ QUALIFICATION TESTING: Both Glenair Series 70 SeaKing and SuperG55 rugged dry-mate subsea connectors have been tested and qualified to their 10K psi pressure rating—open-face and mated—in Glenair's state-of-the-art hydrostatic test lab. Additional testing included mating cycles, salt spray, and electrical continuity.



Glenair Hydrostatic Test Lab Technical Specifications and Pressure Test Standards

Pressure test profiles	Automated or manual
Maximum test pressure	16.5K psi
Data acquisition types	Pressure, time, temperature, and electrical performance
Performance monitoring under pressure	I/R, continuity, insertion loss, and backreflection (optical)
Industry profiles	All major Oil & Gas standards
Custom profiles	Yes, including customer-supplied subassemblies
Capacity (large pressure vessels)	Working volume = 12" diameter x 72" depth; Test specimen weight up to 1500 lbs.



SAME-DAY SHIPMENT STOCKING

Immediate availability for high-demand connectors and tooling.



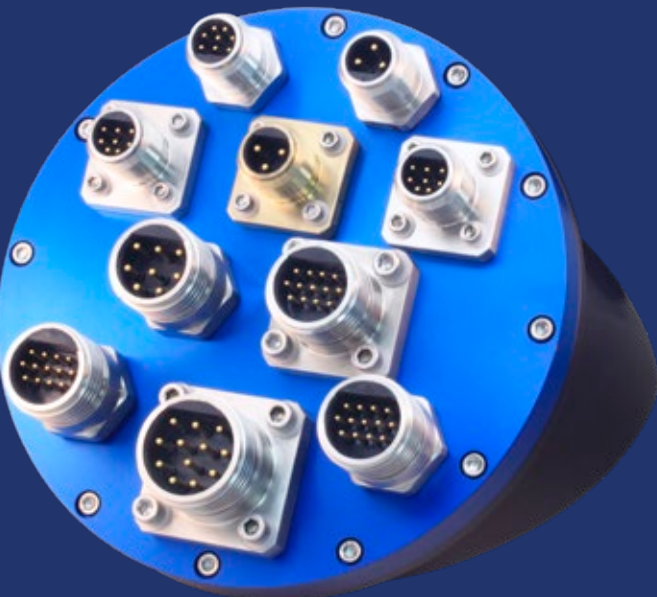
HARNESS ASSEMBLIES

For Micro-D, Nanominiature, and fiber optic connectors and cable assemblies.



IN-HOUSE TESTING CAPABILITIES

Glenair UK operates an independently accredited BS9000:CECC:IECQ test lab for internal and third-party product development / design verification and connector qualification including pure air standards.



Glenair UK high-pressure SuperG55 sealed interface plate for a deep water ROV application

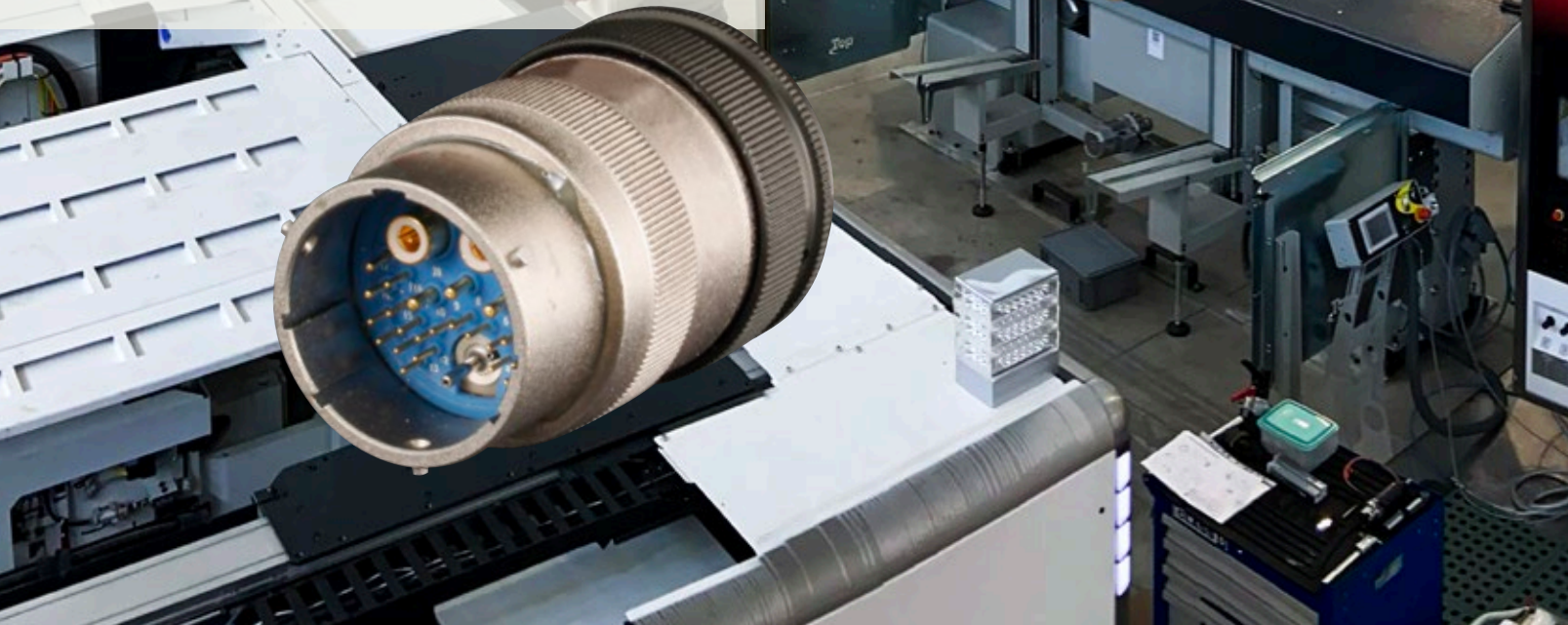




GLENAIR UK:
Mission-critical connectors
and assemblies for UK and
European markets with
a special focus on micro
and Nanominiature flexi
assemblies

GLENAIR ITALIA:

Manufacturing harsh-environment military, nuclear, and aerospace interconnect technologies for power, high-speed Ethernet, and hermetic seal applications.



HIGH-CAPACITY CNC MACHINING CENTERS

Allow Glenair BLQ to provide lightning-fast turnaround on small and custom orders as well as large production runs, all with superior surface finishes and better part quality.



ADVANCED CONNECTOR PLATING CAPABILITIES

Gold, nickel, and signature Cadmium-free Tin-Zinc plating performed in-house.



TOTAL VERTICAL INTEGRATION

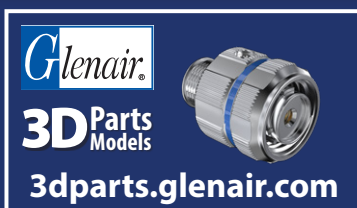
Includes in-house rubber and thermoplastic injection molding.

ADVANCED HERMETIC-SEAL CONNECTOR FACILITY

Rugged reverse-bayonet hermetic connectors, unique feedthru configurations, glass-seal Micro-D rectangular designs.



MISSION-CRITICAL INTERCONNECT SOLUTIONS



Glenair, Inc.

1211 Air Way • Glendale, California • 91201-2497
Telephone: 818-247-6000 • Fax: 818-500-9912
sales@glenair.com • www.glenair.com

Glenair East

20 Sterling Drive
Wallingford, CT
06492

Telephone:
203-741-1115
Fax:
203-741-0053
sales@glenair.com

Glenair UK Ltd

40 Lower Oakham Way
Oakham Business Park
Mansfield, Notts
NG18 5BY England

Telephone:
+44-1623-638100
sales@glenair.co.uk

Glenair Microway Systems

7000 North Lawndale Avenue
Lincolnwood, IL
60712

Telephone:
847-679-8833
Fax:
847-679-8849

Glenair Nordic AB

Gustav III:s Boulevard 42
SE-169 27 Solna
Sweden

Telephone:
+46-8-50550000
sales@glenair.se

Glenair GmbH

Schaberweg 28
61348 Bad Homburg
Germany

Telephone:
06172 / 68 16 0
Fax:
06172 / 68 16 90
info@glenair.de

Glenair Iberica S.L.

Av. De Manoteras, 24 – 2º
28050 Madrid
Spain

Telephone:
+34 915 562 687
sales@glenair.es

Glenair Italia S.p.A.

Via Del Lavoro, 7
40057 Quarto Inferiore –
Granarolo dell'Emilia
Bologna, Italy

Telephone:
+39-051-782811
Fax:
+39-051-782259
info@glenair.it

Glenair France SARL

7, Avenue Parmentier
Immeuble Central Parc #2
31200 Toulouse
France

Telephone:
+33-5-34-40-97-40
Fax:
+33-5-61-47-86-10
sales@glenair.fr

Glenair Korea

6-21Tapsil-ro 58beon-gil
Giheung-gu, Yongin-si
Gyeonggi-do
Republic of Korea

Telephone:
+82-07-5067-2437
Fax:
+82-504-375-4549
sales@glenair.kr

Glenair Japan

40F, Nagoya Lucent Tower,
6-1, Ushijima-cho,
Nishi-ku, Nagoya, 451-6040
Japan

Telephone:
+81-52-569-2521
Fax:
+81-52-569-2523
sales@glenair.jp