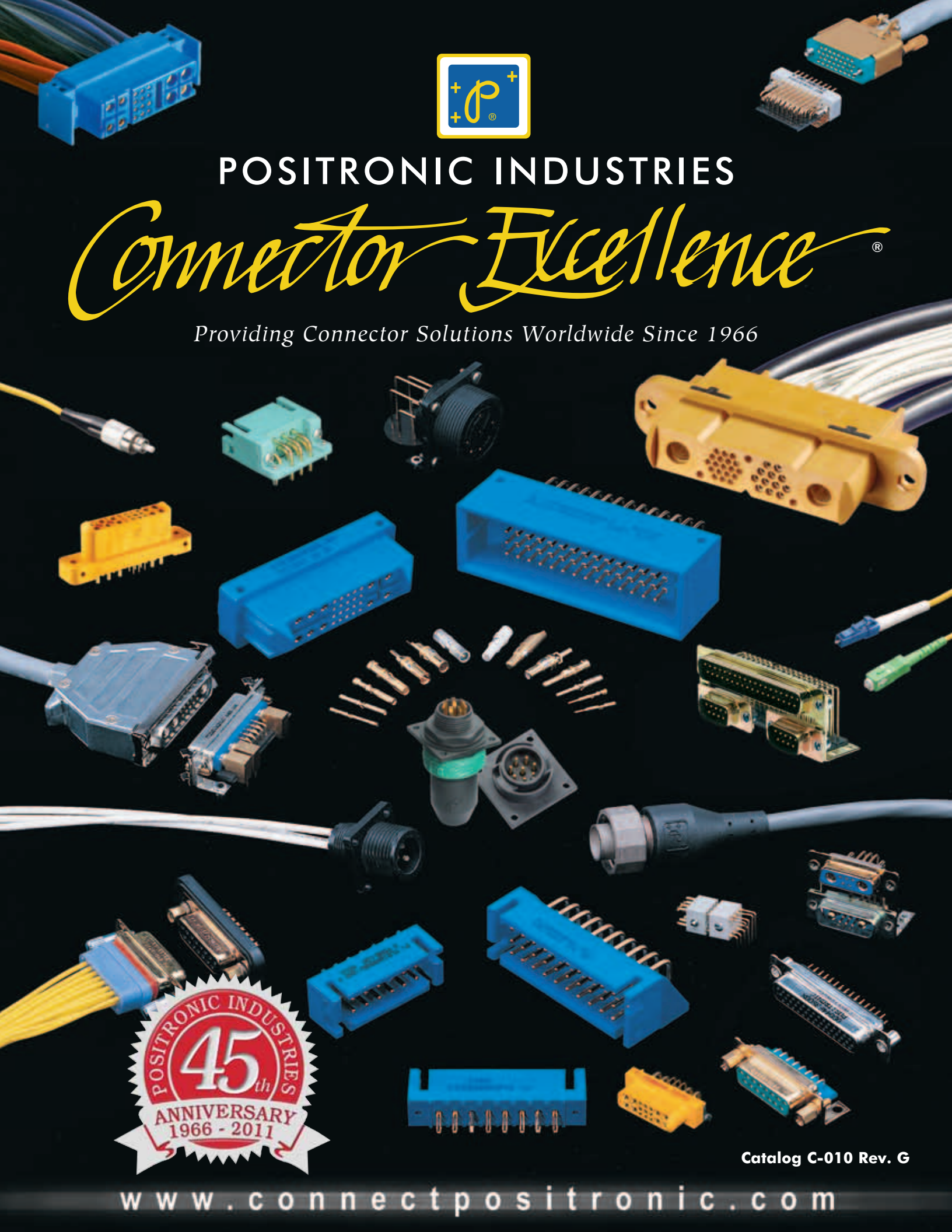




POSITRONIC INDUSTRIES

# Connector Excellence®

*Providing Connector Solutions Worldwide Since 1966*



Catalog C-010 Rev. G

[www.connectpositronic.com](http://www.connectpositronic.com)

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# MANUFACTURING

## Quality and Reliability

Since 1966, Positronic Industries has provided connector solutions to customers around the world.

Positronic offers a wide variety of power, D-subminiature, circular and rectangular connector products and accessories. Value-added services are also available.

Our connectors feature precision machined contacts and can be provided to industrial or military performance levels in order to offer various performance to cost ratio options to our customers.

Our products are used in all areas of the electronics industry including telecommunications, data communications, computer, avionics, aerospace, test/measurement, instrumentation/process control and medical applications.

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*Visit us on the web at*  
**[www.connectpositronic.com](http://www.connectpositronic.com)**

# POSITRONIC'S COMPLETE CAPABILITY CONCEPT

## QUALITY

- ❖ Select facilities are certified to ISO 9001 and AS9100. Singapore facility is also ISO 14001 certified.
- ❖ Total Quality Management programs
- ❖ Dock to stock programs
- ❖ Fully equipped testing laboratory to verify products to specification and/or customer performance requirements

## MANUFACTURING

- ❖ Automatic Swiss lathes for manufacturing precision machined contacts
- ❖ Surface finishing including gold, nickel, copper, zinc, tin, chromate conversion, and anodize coating
- ❖ Molding of plastics including thermoplastic and thermoset materials
- ❖ Metal fabrication by a variety of stamping processes
- ❖ Product assembly

## CUSTOMER SUPPORT

- ❖ Company employed technical sales personnel located in metropolitan areas throughout the world
- ❖ One-on-one customer support from factory locations around the world
- ❖ World class web site
- ❖ Detailed product information
- ❖ Finished goods inventory of standard connector products
- ❖ Value added interconnection solutions
- ❖ VMI services available

## PRODUCT DEVELOPMENT

- ❖ Research and development of connectors which meet new and unique industry requirements
- ❖ Participation in international connector standards efforts
- ❖ Design partnerships with customers to develop products for their specific applications
- ❖ Modification of existing designs to meet specific customer requirements
- ❖ In-house design and tooling of products

## GLOBAL PRESENCE

- ❖ Southwest Missouri, USA  
182,000 sq. ft. - Three facilities houses our international headquarters, sales offices and manufacturing space.
- ❖ Auch, France  
64,000 sq. ft. - Two facilities houses our European headquarters, sales offices and manufacturing space.
- ❖ Ponce, Puerto Rico  
85,000 sq. ft. of manufacturing space.
- ❖ Singapore  
42,000 sq. ft. - our Asian headquarters, sales offices and manufacturing space.
- ❖ India  
23,000 sq. ft. of manufacturing space.
- ❖ China  
2,441 sq. ft. of manufacturing space.

**POSITRONIC® IS AN  
ITAR REGISTERED COMPANY!**

Products described within this catalog may be protected by one or more of the following US. patents:

#4,900,261    #5,255,580    #5,329,697  
#6,260,268    #6,835,079    #7,115,002

Patented in Canada, 1992    Other Patents Pending



# Power Connector Products

*The widest variety of Power Connector Solutions*



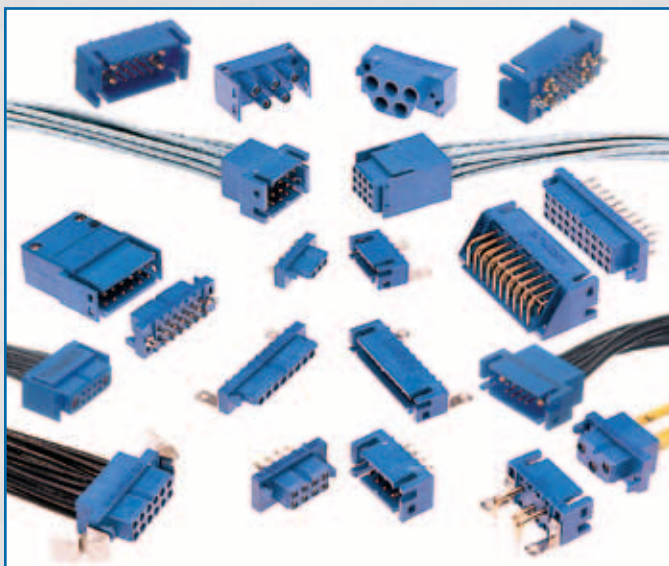
- ❖ Hot swap capability
- ❖ AC/DC operation in a single connector
- ❖ Recognized by various safety organizations
- ❖ Signal contacts for power management
- ❖ Blind mating
- ❖ Sequential mating
- ❖ Mixed density variants
- ❖ Large Surface Area contact mating system
- ❖ Bi-spring power press-fit terminations
- ❖ Cable and panel mount options
- ❖ Wide variety of variants, termination styles and accessories
- ❖ Circular connectors for use in power applications (see pages 14 & 15)



## Power Connection Systems

*The industry standard for low to mid range power applications.*

- ❖ Low contact resistance to 0.0003 ohms
- ❖ Safety shroud feature
- ❖ High current capability
- ❖ Solid power contacts
- ❖ Machined from copper alloy
- ❖ Hot plug capability
- ❖ 5.0 millimeter contact grid pattern
- ❖ Mixed density variants with size 8 power and size 20 signal



**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Male contact mating length can be varied to permit sequential mating. Current rating to 85 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request.

**TERMINATIONS:** Crimp; screw terminal; solder cup; straight or right angle printed board mount solder or press-fit. Mother-daughter board and board to board sandwich connection systems.

**INSULATORS:** Glass-filled polyester, UL 94V-0. An assortment of variants allow for size 8, 12, 16 or 20 contacts.

**POLARIZATION:** Integral keyed polarization system. **LOCKING SYSTEM:** Power Connection Systems, easy to lock and unlock.

**CABLE ADAPTERS:** Strain reliefs, thermoplastic. **CABLIZED CONNECTORS:** Customer specified wire or cable can be supplied terminated to connectors.

**MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **U.L and CSA recognized.**

# SCORPION

**24 power / signal module configurations**

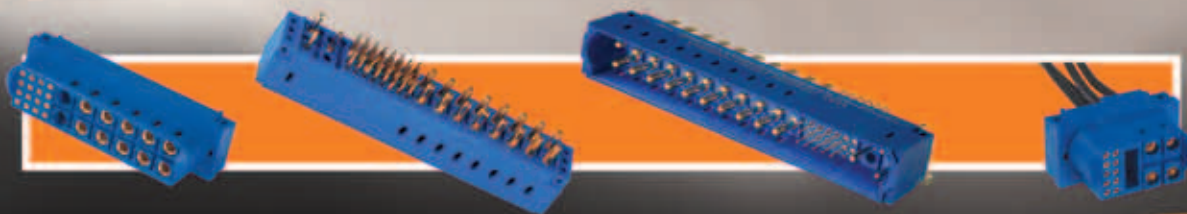


**"Select the features you require to  
CREATE the connector you DESIRE."**



For more information visit :  
<http://www.connectpositronic.com/products/146/Scorpion>

- Modular tooling produces a one-piece insulator
- Seven power contact options: current ratings ranging from 16 amps to 80 amps continuous per contact plus high density signal contacts
- Low contact resistance saves energy
- Blind mating, float mount, panel mount and cable connector options with unique locking system and jackscrews
- Printed board mount, crimp, and press-fit terminations
- Ventilation option to offer increased air cooling



## Positronic's Scorpion Connector chosen for PICMG 3.8



For more information visit :  
<http://www.connectpositronic.com/products/146/Scorpion>

The PICMG 3.8 specification defines rear transition modules in Zone 3 of AdvancedTCA systems. The Scorpion connector is specified to support the power and system management requirements.

**AdvancedTCA®**

AdvancedTCA® logo are registered trademarks of the PCI Industrial Computer Manufacturers Group

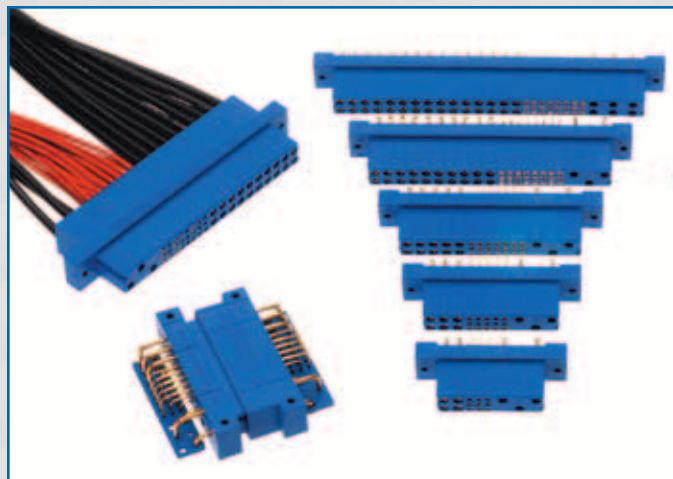


## Compact Power Connectors

*The power interface for platforms that utilize IEEE1101.10 Form factors*

- ❖ High conductivity contacts
- ❖ A.C. or D.C. input, 5mm recessed contacts
- ❖ Three level sequential mating
- ❖ Superior blind mating
- ❖ Five package sizes
- ❖ Power management connections

The 47 contact variant is compliant to the PICMG® 2.11 Power Interface Specification which details standardized power for CompactPCI®.



**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female power contact is "closed entry" design for highest reliability, signal contact is rugged "Robi-D open entry". Male contact mating length varies to permit sequential mating. Power contact current rating to 40 amperes continuous per contact. Signal contact current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; straight or right angle solder printed board mount or straight press-fit. **INSULATORS:** Glass filled polyester, UL 94V-0. Variants allow for combinations of size 16 and 20 or 22 contacts. **POLARIZATION:** Integral keyed polarization system. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **U.L and CSA recognized.**



CompactPCI® logo, AdvancedTCA® logo, and PICMG® logo and are registered trademarks and the MicroTCA™ logo is a trademark of the PCI Industrial Computers Manufacturers Group.



[www.picmg.com](http://www.picmg.com)

## Combination D-subminiature Connectors

*Power, signal, shielded, thermocouple, air and high voltage contacts in a single package*

- ❖ Twenty-two contact combination variants available within shell sizes 1, 2, 3, 4, 5 & 6

**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability, or rugged "Robi-D open entry". Size 8 power contact current rating 10 to 100 amperes continuous per contact. Signal contact current rating to 7.5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight or right angle solder printed board mount or straight press-fit; connector savers. **INSULATORS:** Glass filled polyester, UL 94V-0. An assortment of variants allow for combinations of size 8 and 20 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal, stainless steel passivated. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Conform to MIL-DTL-24308 and DSCC. 85039. Conform to IEC 60807-2 and 60807-3. Conform to MicroTCA Input Power Connector requirements. **UL and CSA recognized.**



## Goldfish Power Connectors

- ❖ Excellent power density
- ❖ Blind mating - float mounting
- ❖ 20, 35 and 50 ampere power contacts
- ❖ Hot plug capability
- ❖ A.C. or D.C. and signal contacts in a single package
- ❖ Power management connections
- ❖ Three package sizes, six configurations
- ❖ Safety agency recognition
- ❖ Sequential mating
- ❖ Small package size

### GF SERIES

**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female power contact is "closed entry" design for highest reliability, signal contact is rugged "Robi-D open entry". Male contact mating length can be varied to permit sequential mating. Power contact current rating to 20, 35 and 50 amperes continuous per contact. Signal contact current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request.

**TERMINATIONS:** Crimp; straight or right angle solder printed board mount or straight press-fit.

**INSULATORS:** Glass-filled nylon, UL 94V-0. Variants allow for combinations of size 16 and 20 contacts.

**POLARIZATION:** Integral keyed polarization system.

**MOUNTING:** Panel and printed board.

**WORKING TEMPERATURE:** -55°C to +125°C.

**CRIMPING TOOLS:** Automatic and manual. UL recognized, TUV testing in process.



*Contacts can be selectively populated for cost savings.*

## Great Golden Power Connectors

- ❖ Ultra-high amperage per connector capability when using four size "0" contacts
- ❖ Up to 256 different configurations using any combination of Positronic contacts.
- ❖ Excellent blind-mating. / Hot-Pluggable.
- ❖ "Safety-feature" contacts.
- ❖ Jackscrew / Float mount / Hood options



### GG SERIES

**CONTACTS:** Fixed and removable. Precision machined. Female size "0" use "Crown Band" technology. Power contact current ratings are 5, 20, 28, 35, 45, 60, 80, 175 and up-to 200 amperes per contact when using high-conductivity material. Male size "0" contacts have a "safety-tip" feature.

**TERMINATIONS:** Crimp, straight and (3) types of ring-terminal/bus-bar terminations for the size "0" contacts. Size "0" contacts utilize a locking C-clip in the connector housing for ease of retention and removal.

**INSULATORS:** Glass-filled Nylon, UL94V rating, Gold-colored.

**POLARIZATION:** Integral keyed polarization system.

**BLIND MATING:** Up to 4.50 mm of mis-alignment can be tolerated.

**VARIANTS:** Power and signal contacts from the entire Positronic line can be incorporated into 256 different connector variants of the GG-series.

**CRIMPING TOOLS:** Crimp tools for the size "0" contacts are available as well as all other sizes of crimp contacts.

**OPTIONS:** Jackscrew, float mount and hood hardware options are available. Sequential loading and sequential mating options are also available.



## DragonFly Power Connectors

- ❖ Small footprint / cost effective
- ❖ High density power & signal contacts
- ❖ Integral locking system / hoods
- ❖ Printed board mount and cable terminations
- ❖ High performance

**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Male contact mating length can be varied to permit sequential mating. Power contact current rating to 20 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request.

**TERMINATIONS:** Crimp; straight or right angle solder printed board mount or straight press-fit.

**INSULATORS:** Glass-filled nylon, UL 94V-0. Variants allow for combinations of size 20 and 16 contacts.

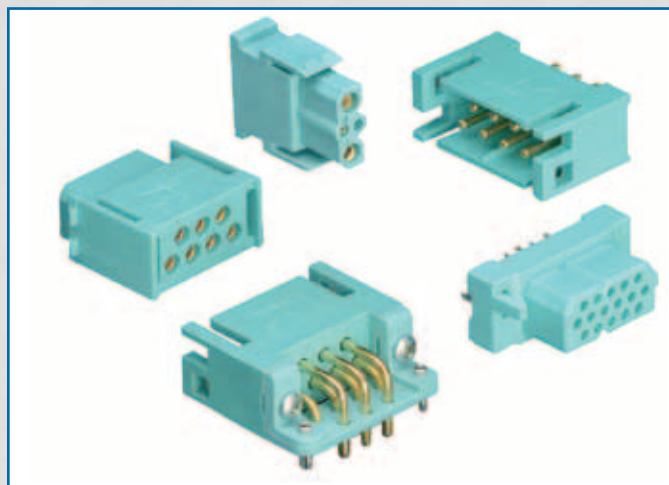
**POLARIZATION:** Integral keyed polarization system.

**MOUNTING:** Cable and printed board.

**WORKING TEMPERATURE:** -55°C to +125°C.

**CRIMPING TOOLS:** Automatic and manual.

- ❖ Three contact sizes include 22, 20 and 16.
- ❖ Variety of accessories
- ❖ 10,000 mating cycle capability



## Infinity High Power Connectors

*For low, medium and high power applications requiring outstanding blind mating capability*

- ❖ **THREE PACKAGE SIZES ARE AVAILABLE WITH A MIX OF SIGNAL AND POWER CONTACTS** in an assortment of contact variants.
- ❖ **HOT-PLUG** capability to 25 amperes.
- ❖ **THREE-LEVEL SEQUENTIAL MATING.**
- ❖ **CURRENT RATING** to 100 amperes per contact.

- ❖ **FEMALE CONTACTS MAY BE RECESSED** to conform to equipment safety regulations.
- ❖ **CONNECTOR CONTACT VARIANTS** for application specific requirements can be made available in a reasonable period of time at an attractive price.



**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Male contact mating length can be varied to permit sequential mating. Current rating to 100 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request.

**TERMINATIONS:** Crimp; straight or right angle printed board mount solder or press-fit.

**INSULATORS:** Glass filled polyester, UL 94V-0. An assortment of variants allow for combinations of size 8, 12, 16, and 20 contacts. Customer specified variants available upon request.

**POLARIZATION:** Integral keyed polarization system.

**LOCKING SYSTEM:** Jackscrew available.

**CABLE ADAPTERS:** Hoods, thermoplastic.

**CABLIZED CONNECTORS:** Customer specified wire or cable can be supplied terminated to connector.

**MOUNTING:** Panel and printed board.

**WORKING TEMPERATURE:** -55°C to +125°C.

**CRIMPING TOOLS:** Automatic and manual. UL and CSA recognized.

## VP Series Power Connectors

*VP series connectors have been developed to serve as a dedicated power interface between plug-in cards and backplanes. Three package sizes are available with one or more of the following features:*

- ❖ Integral blind mate guide
- ❖ Four level sequential mating
- ❖ Mixed power and signal contacts
- ❖ High voltage auxiliary contacts
- ❖ Compatible with IEEE 1101.2 conduction cooled boards
- ❖ Compatible with IEEE 1386 PMC cards



**CONTACTS:** Fixed. Precision machined of solid copper alloy. Female power contact is "closed entry" design for highest reliability, signal contact is rugged "Robi-D open entry" design. Current rating to 30 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Straight or right angle printed board mount solder or press-fit. **INSULATORS:** Glass filled polyester, UL 94V-0. **WORKING TEMPERATURE:** -55°C to +125°C.

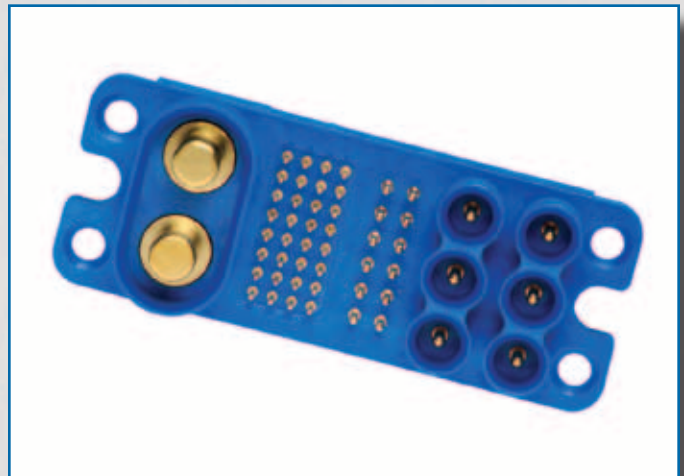


## Sumo Series Power Connectors

*Drop in replacement for popular top drawer connector*

- ❖ Size 20, 16, 12 and 0 contacts in a single package
- ❖ Outstanding blind mating
- ❖ Sequential mating options
- ❖ Available in cable and right angle and straight printed board mount.
- ❖ Select loading of contacts provides cost reduction

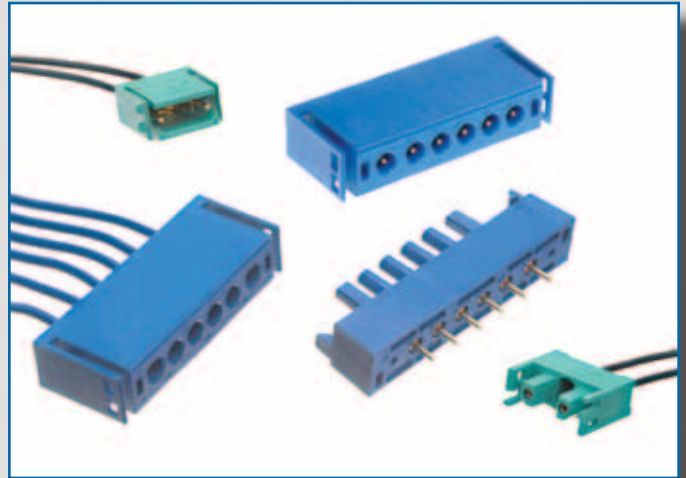
**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female power contact is "closed entry" design for highest reliability, signal contact is rugged "Robi-D open entry". Male contact mating length varies to permit sequential mating. Power contact current rating to 200 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; straight or right angle solder printed board mount. **INSULATORS:** Glass filled polyester, UL 94V-0. **POLARIZATION:** Provided by connector body design. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **UL and CSA** recognized.



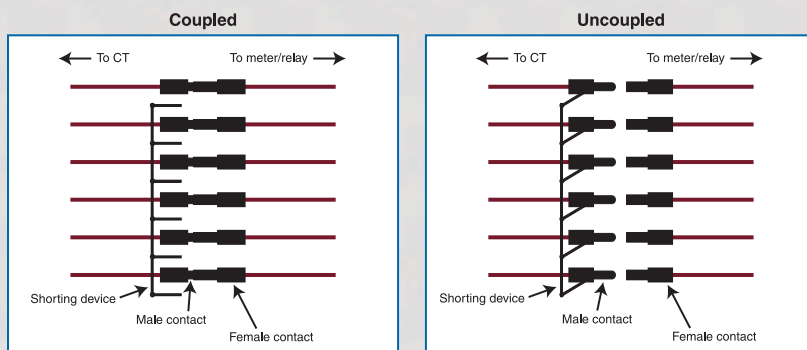
# Autoshunt Series Power Connectors

*An innovative alternative to CT (current transformer) shorting blocks*

- ❖ Innovative design automatically shorts circuits together upon connector being uncoupled
- ❖ Quick and easy alternative to commonly used CT shorting blocks
- ❖ Selective load up to six contacts for use in six-line "Delta" configurations, four-line "Y" configurations or two-line "Ground Fault Protection" configurations
- ❖ Accepts 10 and 12 AWG wire
- ❖ Reduces operating costs



## AUTOSHUNT ELECTRICAL SCHEMATIC



**CONTACTS:** Removable. Precision machined of solid copper alloy. Female power contact is "closed entry" design for highest reliability. Power contact current rating to 15 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp. **INSULATORS:** Glass filled polyester, UL 94V-0. **POLARIZATION:** Provided by connector body design. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual.

# Wondersun Power Connectors

- ❖ Size 8 contacts rated to 60 amperes each
- ❖ "Posi Click" locking mechanism
- ❖ Panel to cable or cable to cable
- ❖ Single pole or multi-pole configurations

- ❖ Size: 15.60 x 14.50 to 35.20 x 41.50 mm
- ❖ Variety of accessories / options

**CONTACTS:** Removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Current rating to 60 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp. **INSULATORS:** Glass filled nylon, UL 94V-0. **POLARIZATION:** Provided by connector body design. **MOUNTING:** Panel. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. Consult technical sales for UL and TUV recognition.





## Bi-Spring Power Press-Fit Terminations

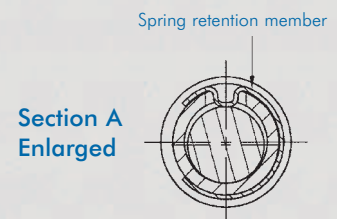
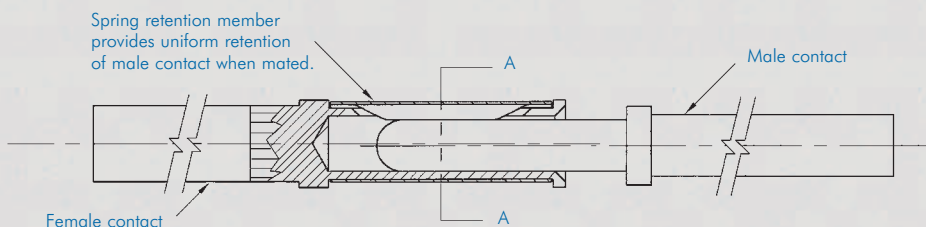
*The next evolution in compliant technology. Fully compliant, fully reliable.*



- ❖ Low average insertion and extraction forces do not produce stresses in P.C. boards and backplanes that can occur with higher insertion forces. These stresses can cause board warpage and hole damage.
- ❖ Bi-Spring terminations are designed to meet the applicable performance requirements and hole diameters as listed in the internationally recognized specification IEC 60352-5.
- ❖ Lower insertion and extraction forces eliminate the need for expensive pressing equipment.

## Large Surface Area Contact System

- ❖ Separates mechanical and electrical functions for superior performance
- ❖ Low contact resistance provides minimized voltage drop across the contact
- ❖ "Closed Entry" design prevents damage to female contacts and will not allow misaligned or bent contacts to enter
- ❖ Precision machined from solid, high conductivity copper alloy
- ❖ Uniform insertion withdrawal forces through repeated mating cycles



# D-subminiature Connector Products

*A wide variety of styles and performance levels provide connector solutions*

- ❖ High performance contacts precision machined from copper alloy
- ❖ Standard and high density package sizes
- ❖ A multitude of contact variants utilizing contacts in sizes 20, 22 and 8
- ❖ A variety of termination styles including crimp, solder, and press-fit
- ❖ Safety to international requirements
- ❖ A wide selection of accessories provide many connector system choices
- ❖ Compliance to internationally recognized standards including IEC 60807-2, IEC 60807-3 and MIL-DTL-24308
- ❖ Conformance to EIA RS 232, EIA RS 449 and CCITT X.24
- ❖ Multiple performance to cost choices



## — Professional Quality D-subminiature Connectors —

*Meets European and American dimensional requirements*

**CONTACTS:** Fixed. Precision machined of solid copper alloy; male, brass alloy or female high tensile phosphor bronze. Current rating to 7.5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Solder cup; mini-wrap; straight or right angle printed board mount solder or press-fit (inch or metric footprints); connector savers. **INSULATORS:** Nylon, UL 94V-0. Six variants of 9, 15, 25, 29, 37 and 50 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **QUALIFICATIONS:** Conform to IEC 60807-2, performance level 2, compatible with connectors conforming to MIL-DTL-24308. **UL and CSA recognized.**

### MELO-D/EURO-D SERIES



## — Professional Quality D-subminiature Connectors —

### LOW COST CONNECTIONS

#### SOLI-D SERIES



**CONTACTS:** Removable. Precision machined of solid copper alloy; male, brass alloy or female, high tensile phosphor bronze. Female contact is rugged "Robi-D open entry" design. Current rating to 7.5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Rear insertion and rear removable solder cup; crimp; straight solder printed board mount. **INSULATORS:** Nylon, UL 94V-0. Five variants of 9, 15, 25, 37 and 50 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **QUALIFICATIONS:** Conform to IEC 60807-3, Performance Level 2, compatible with connectors conforming to MIL-DTL-24308. **UL and CSA recognized.**

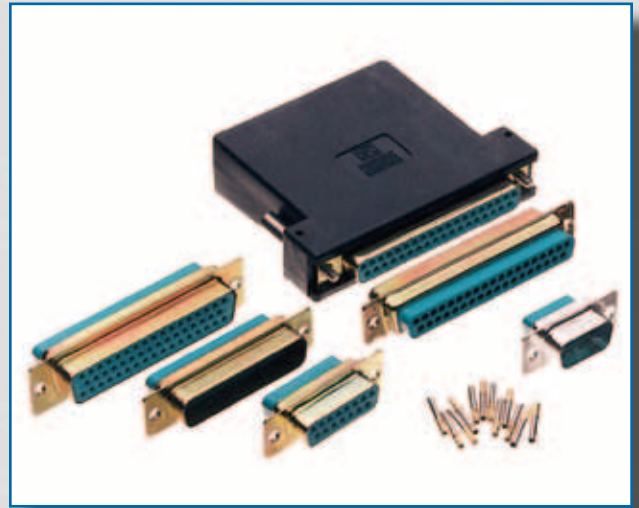


## Military Quality D-subminiature Connectors

MIL-DTL-24308/1, /2, /3, /4, /5, /6, /7, /8, /23, /24, /25, /26  
SAE AS39029/57, /58, /63, /64

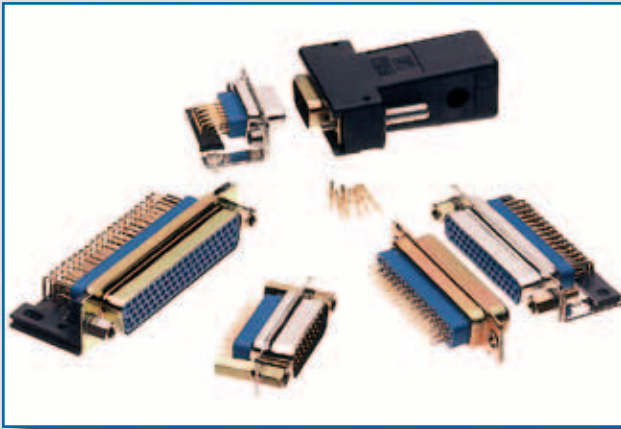
**HIGH RELIABILITY. CONTACTS:** Fixed and Removable. Precision machined of solid copper alloy; male, brass alloy or female, high tensile copper alloy with stainless steel shroud. Female contact is "closed entry" design for highest reliability. Current rating to 7.5 amperes. Thermocouple contact options available. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; mini-wrap; straight or right angle solder printed board mount (inch and metric footprint). **INSULATORS:** Glass-filled DAP, UL 94V-0. Six variants of 9, 15, 25, 29, 37, and 50 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal, stainless steel, passivated. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Conform to MIL-DTL-24308 and SAE AS39029. Conform to IEC 60807-2 and 60807-3, Performance Level 1. **UL and CSA recognized.**

### RHAPSO-D/HARMO-D SERIES



## High Density D-subminiature Connectors

### DENSI-D SERIES



### MILITARY QUALITY

**HIGH RELIABILITY, 76% CONTACT DENSITY INCREASE. CONTACTS:** Removable. Precision machined of solid high tensile copper alloy; female with stainless steel shroud is "closed entry" design for highest reliability. Current rating to 5 amperes. Thermocouple contact options available. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight or right angle solder printed board mount; connector savers. **INSULATORS:** Glass-filled polyester, UL 94V-0. Six variants of 15, 26, 44, 62, 78 and 104 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal; stainless steel, passivated. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Conform to MIL-DTL-24308 and SAE AS39029. **UL and CSA recognized.**

### ODD SERIES



### LOW COST

**76% CONTACT DENSITY INCREASE. CONTACTS:** Fixed and removable. Precision machined of solid high tensile copper alloy; female contact is rugged "Robi-D open entry" design. Current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight or right angle solder printed board mount. **INSULATORS:** Glass-filled polyester, UL 94V-0. Six variants of 15, 26, 44, 62, 78 and 104 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308. **UL and CSA recognized.**



# Combination D-subminiature Connectors

*Power, signal, shielded, thermocouple, air, and high voltage contacts in a single package*

**Twenty-two contact combination variants available within shell sizes 1, 2, 3, 4, 5 & 6**

**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Removable power, shielded, air and high voltage contacts available. Size 8 power contact current rating 10 to 100 amperes continuous per contact. Signal contact current rating to 7.5 amperes. Thermocouple contact options available. Gold flash over nickel plate. Other finishes available upon request.

**TERMINATIONS:** Crimp; solder cup; straight or right angle solder printed board mount or straight press-fit; connector savers. **INSULATORS:** Glass filled polyester, UL 94V-0. An assortment of variants allow for combinations of size 8 and 20 contacts.

**SHELLS:** Steel or brass; tin plate and zinc or cadmium plate with chromate seal; stainless steel, passivated. **LOCKING SYSTEM:** Jackscrews and slide lock system.

**CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel and printed board.

**WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual.

**MILITARY QUALIFICATIONS:** Conform to MIL-DTL-24308 and DSCC 85039. Conform to IEC 60807-2 and 60807-3. Conform to MicroTCA Input Power Connector requirements. **UL and CSA recognized.**



**SHIELDED CONTACTS:** Removable. Precision machined of solid copper alloy with teflon insulator. Signal contact plated to 0.000030 inches (0.76  $\mu$ ) gold over nickel. Contact body plated gold flash over nickel. Other finishes available upon request.

**TERMINATIONS:** Straight or right angle solder printed board mount and straight or right angle cable with crimp/crimp, crimp/solder and solder/solder (contact body/signal contact) to accommodate RG cable numbers 58B/U, 178B/U, 179B/U, 180B/U, 316/U.

**ELECTRICAL CHARACTERISTICS:** Characteristic impedance of 50 ohm. VSWR of 1.15 average at 1 GHz, 1.56 average at 2 GHz. Insertion loss of -0.46dB at 1 GHz and -1.5dB at 2 GHz. Proof Voltage is 1000 V r.m.s. Signal contact resistance is 0.008 ohm maximum.

**MECHANICAL CHARACTERISTICS:** Durability of 500 cycles minimum. Vibration tested at 20g and 10 Hz to 500 Hz. Shock tested at 30g for 11ms. 10 day damp heat. 48 hour salt spray. **WORKING TEMPERATURE:** -55°C to +125°C.

## HIGH VOLTAGE, POWER AND SHIELDED CONTACTS

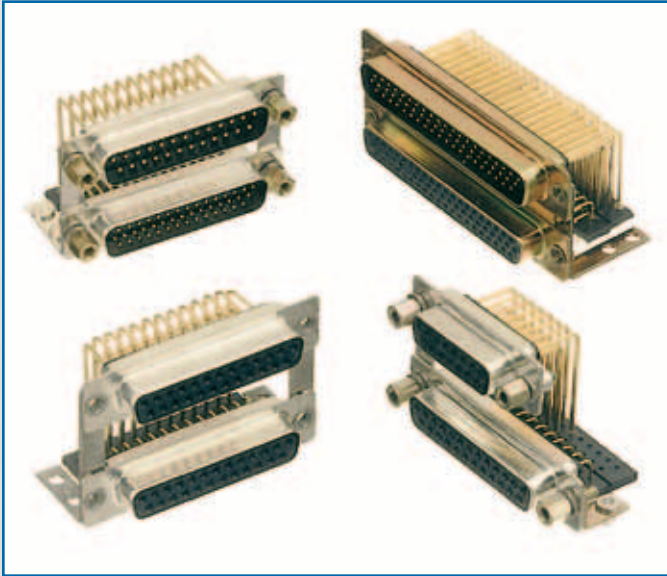


# Dual Port D-subminiature Connectors

*Space saver/cost saver fully or partially populated connectors*

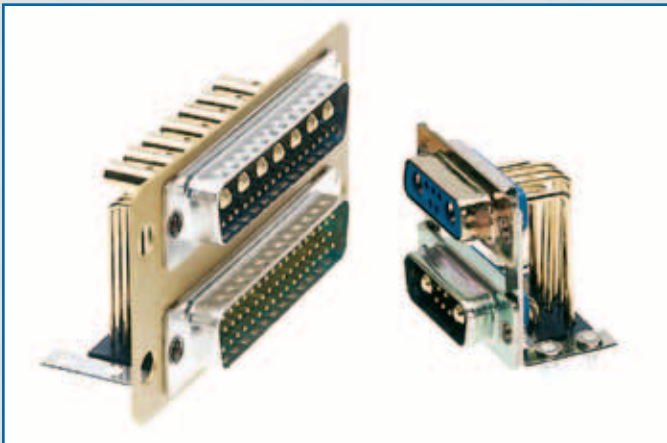
*Contacts selectively positioned to order*

## STANDARD/HIGH DENSITY DUAL PORT



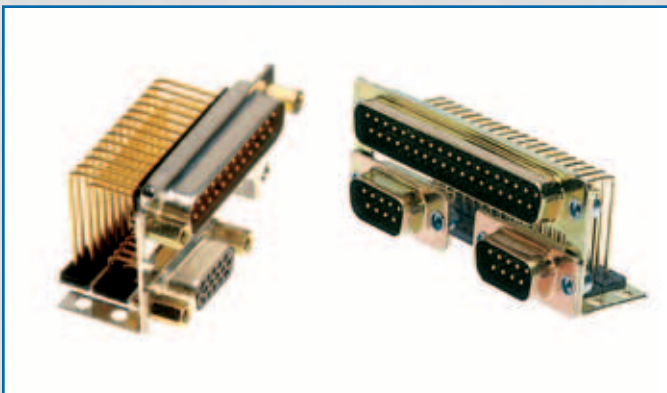
**CONTACTS:** Fixed. Precision machined of solid copper alloy; male, brass alloy or female, high tensile phosphor bronze. Current rating to 7.5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Right angle solder printed board mount (inch and metric footprint). **INSULATORS:** Nylon, UL 94V-0. Six variants of 9, 15, 25, 29, 37, and 50 contacts. **SHELLS:** Steel and brass; tin plated and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **WORKING TEMPERATURE:** -55°C to +125°C. **QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308, IEC 60807-2, and meets interface connection requirements for EIA RS 232 and RS 449 and the CCITT X.24 recommendation. **UL and CSA recognized.**

## POWER/SIGNAL CONTACT DUAL PORT



**CONTACTS:** Fixed. Precision machined of solid high tensile copper alloy. Current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Right angle solder printed board mount. **INSULATORS:** Glass-filled polyester, UL 94V-0. Four variants of 15, 26, 44, and 62 contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **WORKING TEMPERATURE:** -55°C to +125°C. **QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308. **UL and CSA recognized.**

## MIXED VARIANT DUAL PORT



**CONTACTS:** Fixed. Precision machined of solid copper alloy; male, brass alloy or female, high tensile phosphor bronze. Size 8 power contact current rating to 15 amperes continuous per contact. Signal contact current rating to 7.5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Right angle solder printed board mount. **INSULATORS:** Glass-filled polyester, UL 94V-0. Fifteen variants of different combinations of signal and power contacts. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **WORKING TEMPERATURE:** -55°C to +125°C. **QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308 and DESC 85039. **UL and CSA recognized.**

**CONTACTS:** Fixed. Precision machined of solid copper alloy. Current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Right angle solder printed board mount. **INSULATORS:** Nylon or glass-filled polyester, UL 94V-0. **SHELLS:** Steel and brass; tin plate and zinc or cadmium plate with chromate seal. **LOCKING SYSTEM:** Jackscrews and slide lock system. **WORKING TEMPERATURE:** -55°C to +125°C. **QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308 and IEC 60807-2. **UL and CSA recognized.** Contact Positronic Industries technical sales about providing most D-subminiature connectors in a Dual Port package.



## Environmental D-subminiature Connectors

NEMA 250-1991  
MIL-STD-1344

IEC 60529  
IP67

Liquid Immersible

Humidity Resistant

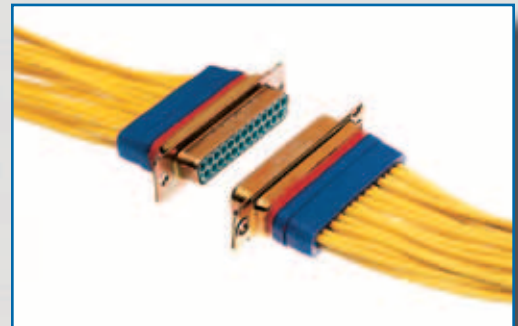
*Environmental protection of the connector is provided by the fluorosilicone grommet, interfacial seal and bonded connector components.*

**CONTACTS:** Removable. Precision machined of solid copper alloy; male, brass alloy or female, high tensile copper alloy with stainless steel shroud. Female contact is "closed entry" design for highest reliability. Current rating to 7.5 amperes. 0.000030 inches (0.76  $\mu$ ) gold over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp and solder cup. **INSULATORS:** Glass-filled DAP, UL 94V-0. Five variants of 9, 15, 25, 37 and 50 contacts. **SHELLS:** Steel and brass; zinc plate with chromate seal; stainless steel, passivated. **LOCKING SYSTEM:** Jackscrews. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **MOUNTING:** Panel. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Exceeds MIL-DTL-24308 performance, SAE AS39029 contacts.

*Environmental protection of the connector and inside enclosure is provided by panel mount sealing plate, interfacial seal and bonded connector components.*

**CONTACTS:** Fixed. Precision machined of solid high tensile copper alloy. Female contact is "open entry" design. Current rating to 5 amperes. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Solder cup; straight or right angle solder printed board mount; and epoxy encapsulated flying leads. **INSULATORS:** Normal density, nylon, UL 94V-0. Five variants of 9, 15, 25, 37, and 50 contacts. High density, glass-filled polyester, UL 94V-0. Five variants of 15, 26, 44, 62, and 78 contacts. **SHELLS:** Steel and brass; zinc plate with chromate seal; stainless steel, passivated. **LOCKING SYSTEM:** Jackscrews. **CABLE ADAPTERS:** Hoods; metal, thermoplastic, composite, EMI/RFI. **CABLIZED CONNECTORS:** Customer specified wire or cable can be supplied epoxy encapsulated and terminated to connector. **MOUNTING:** Panel, printed board and free cable. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Compatible with connectors conforming to MIL-DTL-24308, meets IEC 60807-2, performance level 2 mechanical and dimensional requirements.

### EVD SERIES



### WD AND WDD SERIES



## Space Craft/Space Flight D-subminiature Connectors

*Space flight application quality connectors designed specifically to withstand the rigors of launch and subsequent space flight.*

Connector Savers are also available in normal density and high density contact variants. Connector Savers conform to the same specifications listed previously.



**CONTACTS:** Normal Density: Fixed and removable. Precision machined of solid copper alloy; male, brass alloy or female, high tensile copper alloy with brass shroud. Female contact is "closed entry" design for highest reliability. Current rating to 7.5 amperes. High Density: Removable. Precision machined of solid high tensile copper alloy, female with brass shroud is "closed entry" design for highest reliability. Current rating to 5 amperes. Combination: Fixed and removable. Precision machined of solid copper alloy; male, brass alloy or female, high tensile copper alloy with brass shroud. Female contact is "closed entry" design for highest reliability. Signal contact current rating to 7.5 amperes. 0.000050 inches (1.27  $\mu$ ) gold over copper plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight or right angle solder printed board mount. **INSULATORS:** Normal Density, glass-filled DAP, UL 94V-0 with 9, 15, 25, 37 and 50 contacts. High Density, glass-filled polyester, UL 94V-0 with 15, 26, 44, 62, 78 and 104 contacts. Combination, glass-filled polyester, UL 94V-0 with 20 different combinations of signal, power, shielded and high voltage contacts. **SHELLS:** Brass or lightweight aluminum, gold plate over copper. **LOCKING SYSTEM:** Jackscrews. **CABLE ADAPTERS:** Hoods; brass and aluminum. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **MILITARY QUALIFICATIONS:** MIL-DTL-24308 and DSCC 85039. Qualified to the outgassing requirements of ASTM E-595 and NASA-RP-1124. Conform to GSFC S-311-P-4, GSFC S-311-P-10 and JPL CS512091. **UL and CSA recognized.**



# Circular Connector Products

## *High performance at a reasonable price*

- ❖ High performance, light weight composite construction
- ❖ EMI/RFI shielding
- ❖ Environmental options
- ❖ Power, signal, shielded and thermocouple contact options
- ❖ High power contacts with hot plug capability
- ❖ Two level sequential mating
- ❖ Variety of termination types



## Front Runner Circular Connectors



*The Front Runner Series offers a multiplicity of connector features which makes it a first choice to meet the high performance and high reliability requirements of Avionics, Medical, Shielded Transportation and Industrial Control Applications.*

### TWO LEVEL SEQUENTIAL MATING OF CONTACTS

- ❖ NON-CORRODIBLE, LIGHTWEIGHT COMPOSITE MATERIALS
- ❖ ENVIRONMENTAL VERSION features dust and water ingress protection to I.E.C. IP67
- ❖ EMI/RFI SHIELDED VERSION
- ❖ HOT PLUGGABLE CAPABILITIES to 25 amperes
- ❖ EASY CONTACT SERVICING



**CONTACTS:** Removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Thermocouple contact options available. Current rating to 25, 13, 7.5, and 5 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; straight and right angle solder printed board mount. **INSULATORS:** Glass-filled DAP, UL 94V-0. Sixteen variants of size 12, 16, 20, and 22 contacts. **HOUSING:** Thermoplastic, EMI/RFI. **POLARIZATION:** Integral keyed polarization system. **LOCKING SYSTEM:** Coupling nut. **CABLE ADAPTERS:** Hoods; thermoplastic, EMI/RFI. **CABLIZED CONNECTORS:** Customer specified wire or cable can be supplied terminated to connector with cable adapters or overmolded cable assemblies. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual.

## Circle Hex Circular Connectors

### GH/MGH SERIES



### QUICK AND EASY MOUNT TO PANEL CONNECTION

*The threaded circular connector body, with hexagonal shoulder at the connector face, allows for quick panel mounting by simply threading the mounting nut onto the connector body up to the hexagonal shoulder.*

**CONTACTS:** Fixed. Precision machined of solid copper alloy. Current rating to 7.5 and 5 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Solder cup. **INSULATORS:** Glass-filled DAP, UL 94V-0. Six variants of 3, 4, 5, 7, 9, and 10 contacts. **POLARIZATION:** Contact orientation. **LOCKING SYSTEM:** Locking spring system. **CABLE ADAPTERS:** Hoods, plastic and aluminum. **MOUNTING:** Panel. **WORKING TEMPERATURE:** -55°C to +125°C. UL recognized.

## King Cobra Circular Connectors

- ❖ Circular "Twist-Lock" connectors with competitive pricing
- ❖ Dust and water ingress protections to IP 65 per IEC 60529

*The King Cobra is a rugged circular connector with performance you might expect from higher priced products.*

- ❖ High reliability power and signal solid machined contacts
- ❖ High mating cycle life and vibration-resistant capabilities

**CONTACTS:** Removable or fixed. Precision machined of solid copper alloy. Screw termination contact is available. Current rating to 20, 7.5, and 3 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight and right angle solder printed board mount. **INSULATORS:** Glass filled nylon, UL 94V-0. Three variants: three size 16, eight size 20, and 12 size 22. **POLARIZATION:** polarization system is integral to insulator design. **LOCKING SYSTEM:** Twist lock. **CABLE ADAPTERS:** Hoods; nylon, IP65 and non-environmental versions available. **CABLIZED CONNECTORS:** Customer specified wire or cable can be supplied terminated to connector with cable adapters or over-molded cable assemblies. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55° to +125°C. **CRIMPING TOOLS:** Automatic and manual.



### KC SERIES



# Rectangular Connector Products

*A wide variety of options provide connector solutions*

- ❖ High performance contacts precision machined from copper alloy
- ❖ Standard and high density package sizes
- ❖ A multitude of contact variants
- ❖ High reliability large surface area contact mating system
- ❖ Cable and panel mount options
- ❖ Straight and right angle P.C. board mount options
- ❖ A wide variety of accessories which provide many connector system choices
- ❖ Compliance to internationally recognized standards including: IEC 60807-6, IEC 60807-7, MIL-DTL-28748 and V.35



## High Density Rectangular Connectors



SGM/SGMC/SMPL SERIES

### CRIMP & SOLDER TERMINATIONS

#### FOURTEEN CONTACT VARIANTS

4 through 104 poles

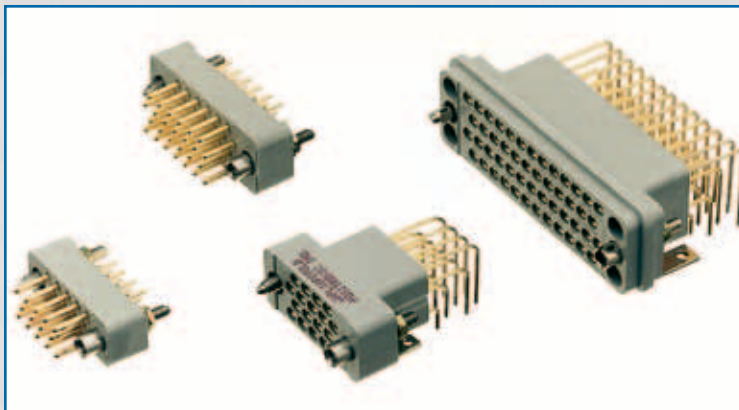
**CONTACTS:** Fixed and removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Current rating to 5 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight and right angle solder printed board mount. **INSULATORS:** Glass-filled DAP, UL 94V-0. Variants of 4, 5, 7, 9, 11, 14, 20, 26, 29, 34, 44, 50, 75 and 104 contacts. **POLARIZATION:** Guide pilots and sockets, jackscrews and shells. **LOCKING SYSTEM:** Jackscrews and vibration lock system. **CABLE ADAPTERS:** Hoods, aluminum. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Conform to MIL-DTL-28748/7, MIL-DTL-28748/8, MIL-C-28748/13, and MIL-C-28748/14 and SAE AS39029/34 and /35. IEC 60807-7, performance level 1. **UL recognized.**

# Standard Density, Heavy Duty Rectangular Connectors

## GMCT SERIES



## GAPL/GAP SERIES



## CRIMP, SOLDER & MICROCOAXIAL CONTACTS

### TWELVE CONTACT VARIANTS

9 through 104 poles

**CONTACTS:** Fixed and Removable. Precision machined of solid copper alloy. Female contact is "closed entry" design for highest reliability. Current rating to 13 and 7.5 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Crimp; solder cup; straight and right angle solder printed board mount or straight press-fit; wrap post; crimp shielded. **INSULATORS:** Glass-filled DAP, UL 94V-0. Variants of 9, 14, 18, 20, 26, 34, 41, 42, 50, 66, 75, and 104 contacts. **POLARIZATION:** Guide pilots and sockets, jack-screws and shells. **LOCKING SYSTEM:** Jackscrews and vibration lock system. **CABLE ADAPTERS:** Hoods, aluminum. **MOUNTING:** Panel and printed board. **WORKING TEMPERATURE:** -55°C to +125°C. **CRIMPING TOOLS:** Automatic and manual. **MILITARY QUALIFICATIONS:** Conform to MIL-DTL-28748/3, /4, and SAE AS39029/34 and /35. IEC 60807-7, performance level 1. **UL recognized.**

## MICROCOAXIAL CONTACTS

**SHIELDED CONTACTS:** Removable. Precision machined of solid copper alloy with Kel-F insulator. Signal contact plated to 0.000030 inches (0.76  $\mu$ ) gold over nickel. Contact body plated gold flash over nickel. Other finishes available upon request. **TERMINATIONS:** Straight crimp to accommodate RG cable numbers 178B/U, 179B/U, 196B/U and 316/U. **MECHANICAL CHARACTERISTICS:** Durability of 500 cycles minimum. Vibration tested at 20g and 10 Hz to 500 Hz. Shock tested at 30g for 11ms. 10 day damp heat. 48 hour salt spray. **WORKING TEMPERATURE:** -55°C to +125°C.

### ELECTRICAL CHARACTERISTICS:

MICRO-COAXIAL CONTACTS	CONTACT/WIRE COMBINATIONS			
	126N		226N	
	RG178	RG196	RG179	RG316
Characteristic Impedance (ohms)	50	50	75	50
Frequency Range	0-500 MHz			
VSWR				
0 to 200 MHz	1.25			
200 to 500 MHz	1.70		2.25	
Insertion loss @ 500 MHz	0.2 dB		1.0 dB	



### Dielectric Strength

At Sea Level:

Initial Contact Resistance:

Insulation Resistance:

600 V rms

0.012 ohms maximum

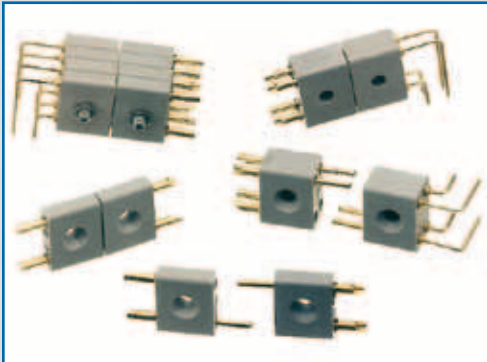
5 G ohms



# Utility Connectors

## "STACKABLE" LOW PROFILE CONNECTORS

### GF/GFPL SERIES

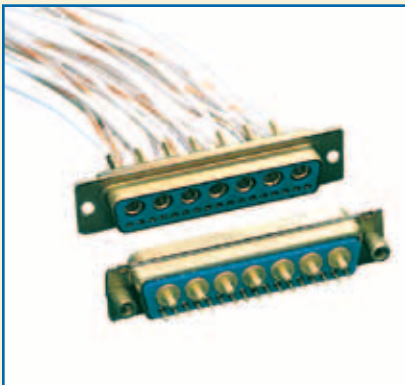


*Custom build multi-pole connectors to your particular needs using both two and four contact low profile connectors. Polarization is easily accomplished by positioning male and female contacts alternately in the same connector body.*

**CONTACTS:** Fixed. Precision machined of solid copper alloy. Current rating to 7.5 and 5 amperes continuous per contact. Gold flash over nickel plate. Other finishes available upon request. **TERMINATIONS:** Solder cup; straight and right angle solder printed board mount. **INSULATORS:** Glass-filled DAP, UL 94V-0. Variants of 2 and 4 contacts. **POLARIZATION:** Reverse contact gender within the same connector. **MOUNTING:** Side panel mount and printed board, both vertical and horizontal. **WORKING TEMPERATURE:** -55°C to +125°C.

## Connectors with Thermocouple Contacts

### CBD/CBC SERIES



**Combo-D** offers a choice of power, signal, shielded, and thermocouple contacts in a single connector.

More information on thermocouple contacts can be found in the [Combo D-subminiature Connectors catalog](#), view table of contents for page listing.

### HD, RD, DD, ORD SERIES



**Standard density and high density D-subminiature connectors** with a wide variety of accessories.

More information on thermocouple contacts can be found in the [Catalog of Industrial and Military Applications D-subminiature Connectors](#), view table of contents for page listing.

### FRONT RUNNER SERIES



**Circular connectors** made from lightweight composite materials. Environmental and EMI/RFI options available.

More information on thermocouple contacts can be found in the [Front Runner Circular Connectors catalog](#), view table of contents for page listing.

### Type E, K and T

Thermocouple contacts are available with crimp or printed board mount solder terminations.

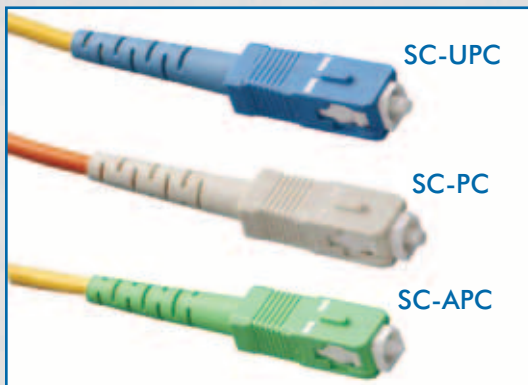
# Fiber Optic Products

Fiber Optic Patch-Cords offer high bandwidth over great distances while being immune to EMI/RFI. Fiber Optic Patch-Cords are also nearly impossible to tap (secured communications) are lightweight, have extremely thin fiber diameters, yet offer superior handling capabilities.

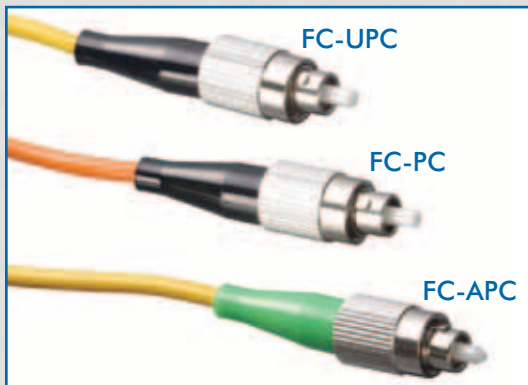


## Fiber Optic Connector or Patch-Cord

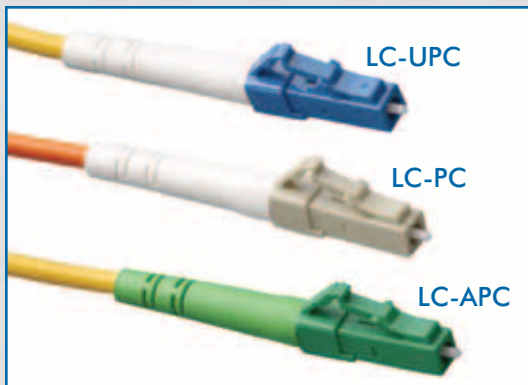
### SC SERIES



### FC SERIES



### LC SERIES



### Features/Benefits for Connectors/Patch-Cords

- ❖ Easy push-pull installation/mechanism (SC connectors)
- ❖ Screwed on mechanisms (FC connectors)
- ❖ Push and latch mechanisms (LC connectors)
- ❖ Meets Telcordia GR-326 Core requirements (SC, FC or LC Patch-Cords)
- ❖ Meets EIA/TIA-568-B.3 (SC, FC or LC Patch-Cords)
- ❖ Suited for standard density applications (SC and FC Patch-Cords)
- ❖ Utilizes a 2.5 mm ceramic ferrule (SC and FC connectors)
- ❖ Suited for high density applications (LC Patch-Cords)
- ❖ Utilizes a 1.25 mm ceramic ferrule (LC connectors)
- ❖ Pre-radius ceramic ferrules configured for UPC, PC and APC polishing (SC, FC or LC connectors)
- ❖ Low back reflection (SC, FC or LC Patch-Cords)
- ❖ Low insertion loss (SC, FC or LC Patch-Cords)
- ❖ Corrosion resistant body (FC connectors)
- ❖ Available in single mode or multi-mode applications (SC, FC or LC Patch-Cords)





# Positronic<sup>®</sup> Cable & Harness Assemblies

## Many Industries Served including:

- Aerospace
- Datacom / Telecom
- Medical
- Industrial
- Military / Defense
- Transit / Rail

## Support Capabilities:

- Design, development, engineering support, and documentation
- Build to customer print
- Assist in expansion of qualified suppliers on BOM
- Select facilities are certified to ISO 9001 and AS9100
- Adherence to IPC-620 standards
- Product prototyping and first articles
- Electrical and mechanical testing

## Products & Services

- Cable and harness assemblies
- Flex circuit assemblies
- Coaxial cable assemblies
- Kitting services
- EMI/RFI shielded assemblies
- Box builds
- Hermetic assemblies

**SAVE TIME AND MONEY! Let Positronic support you  
by cablizing your connector selection.**

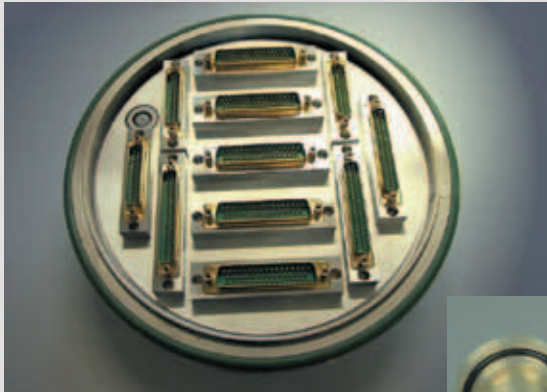
For more details contact *Technical Sales* or visit our *web site* at: <http://www.posicables.com>



## Positronic Hermetic Connector Assemblies

*Positronic can supply Hermetic Connector Assemblies for use in vacuum applications using the following connector types:*

- ❖ Standard and high density D-subminiature
- ❖ Combination power and signal D-subminiature
- ❖ Circular
- ❖ Leakage rate:  $< 5 \times 10^{-9}$  mbar.l/s under a vacuum of  $1.5 \times 10^{-2}$  mbar
- ❖ Application specific designs
- ❖ Shock and vibration resistant



## Connectors Designed To Customer Specifications

*Positronic connectors can be modified to customers specifications.*

Examples: select loading of contacts for cost savings or to gain creepage and clearance distances; longer printed board mount terminations; customer specified hardware.

*Positronic can develop and tool new connector designs with reasonable price and delivery.*

**Contact Technical Sales with your particular requirements.**



*Positronic Industries is proud to participate in the important work of the following organizations....*



[www.picmg.com](http://www.picmg.com)

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[www.psmma.com](http://www.psmma.com)



[www.eia.org](http://www.eia.org)



**POSITRONIC<sup>®</sup>**  
GLOBAL *Connector* SOLUTIONS



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Canada Sales Office	800 327 8272	<a href="mailto:info@connectpositronic.com">info@connectpositronic.com</a>
Mexico Sales Office	800 872 7674	<a href="mailto:info@connectpositronic.com">info@connectpositronic.com</a>
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### ASIA/PACIFIC LOCATIONS

#### SINGAPORE, Asia/Pacific Headquarters

Factory Sales and Engineering Offices	65 6842 1419	<a href="mailto:singapore@connectpositronic.com">singapore@connectpositronic.com</a>
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#### ASIA, Direct Sales Offices

China - Zhuhai Factory and Sales Office	86 756 362 6762	<a href="mailto:zhuhai@connectpositronic.com">zhuhai@connectpositronic.com</a>
Shenzhen Sales Office	86 755 2601 0941	<a href="mailto:shenzhen@connectpositronic.com">shenzhen@connectpositronic.com</a>
Shanghai Sales Office	86 158 2907 9779	<a href="mailto:shanghai@connectpositronic.com">shanghai@connectpositronic.com</a>
Xian Sales Office	86 29 8839 5306	<a href="mailto:xian@connectpositronic.com">xian@connectpositronic.com</a>
Beijing Sales Office	86 10 8203 7718	<a href="mailto:beijing@connectpositronic.com">beijing@connectpositronic.com</a>
Korea Sales Office	82 31 909 8047	<a href="mailto:korea@connectpositronic.com">korea@connectpositronic.com</a>
Taiwan Sales Office	886 2 2937 8775	<a href="mailto:taiwan@connectpositronic.com">taiwan@connectpositronic.com</a>

#### JAPAN, Direct Sales Offices

Sales and Engineering Offices	81 3 6310 5830	<a href="mailto:japan@connectpositronic.com">japan@connectpositronic.com</a>
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#### INDIA, Direct Sales Offices

Factory Sales and Engineering Offices	91 20 2469 9910	<a href="mailto:india@connectpositronic.com">india@connectpositronic.com</a>
Bangalore Sales Office	91 94 4907 3251	<a href="mailto:bangalore@connectpositronic.com">bangalore@connectpositronic.com</a>
New Delhi Sales Office	91 80 1071 1175	<a href="mailto:delhi@connectpositronic.com">delhi@connectpositronic.com</a>

#### ASIA/PACIFIC, Technical Agents

Technical Agents in Australia, Hong Kong, Malaysia, New Zealand, Philippines, Thailand and Vietnam.

## POSITRONIC INDUSTRIES, S.A.S.

Zone Industrielle d'Engachies • 46 Route d'Engachies • F-32020 Auch Cedex 9 France  
Telephone 33 5 6263 4491 • Fax 33 5 6263 5117 • [contact@connectpositronic.com](mailto:contact@connectpositronic.com)

### EUROPEAN LOCATIONS

#### FRANCE, Auch Factory, European Headquarters

Factory Sales and Engineering Offices	33 5 6263 4491	<a href="mailto:contact@connectpositronic.com">contact@connectpositronic.com</a>
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#### EUROPE, Direct Sales Offices

North France Sales Office	33 1 4588 1388	<a href="mailto:jchalaux@connectpositronic.com">jchalaux@connectpositronic.com</a>
South France Sales Office	33 5 6263 4491	<a href="mailto:plafon@connectpositronic.com">plafon@connectpositronic.com</a>
Eire + Northern Ireland	33 5 6263 4557	<a href="mailto:tauvin@connectpositronic.com">tauvin@connectpositronic.com</a>

#### Italy Sales Office

	39 02 5411 6106	<a href="mailto:rmagni@connectpositronic.com">rmagni@connectpositronic.com</a>
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#### Germany Sales Office

	49 23 5163 4739	<a href="mailto:cbouche@connectpositronic.com">cbouche@connectpositronic.com</a>
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#### UK Sales Office

	44 1242 897 493	<a href="mailto:lbriwell@connectpositronic.com">lbriwell@connectpositronic.com</a>
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#### EUROPE & MIDEAST, Technical Agents

Technical Agents in Austria, Benelux, Eastern Europe Countries, Greece, Ireland, Israel, Russia, Scandinavia, Spain, Switzerland, Turkey, Ukraine and the United Kingdom.

For most current sales office information, please visit [http://www.connectpositronic.com/contact/sales\\_offices.html](http://www.connectpositronic.com/contact/sales_offices.html)

LOCAL CATIONS

[www.connectpositronic.com](http://www.connectpositronic.com)