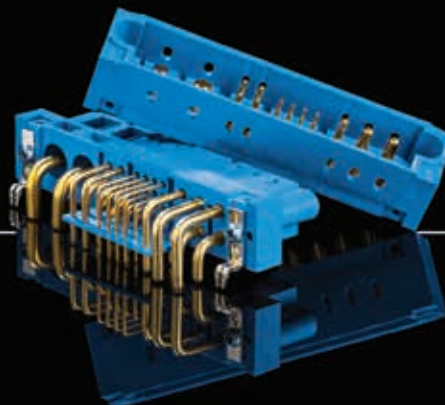
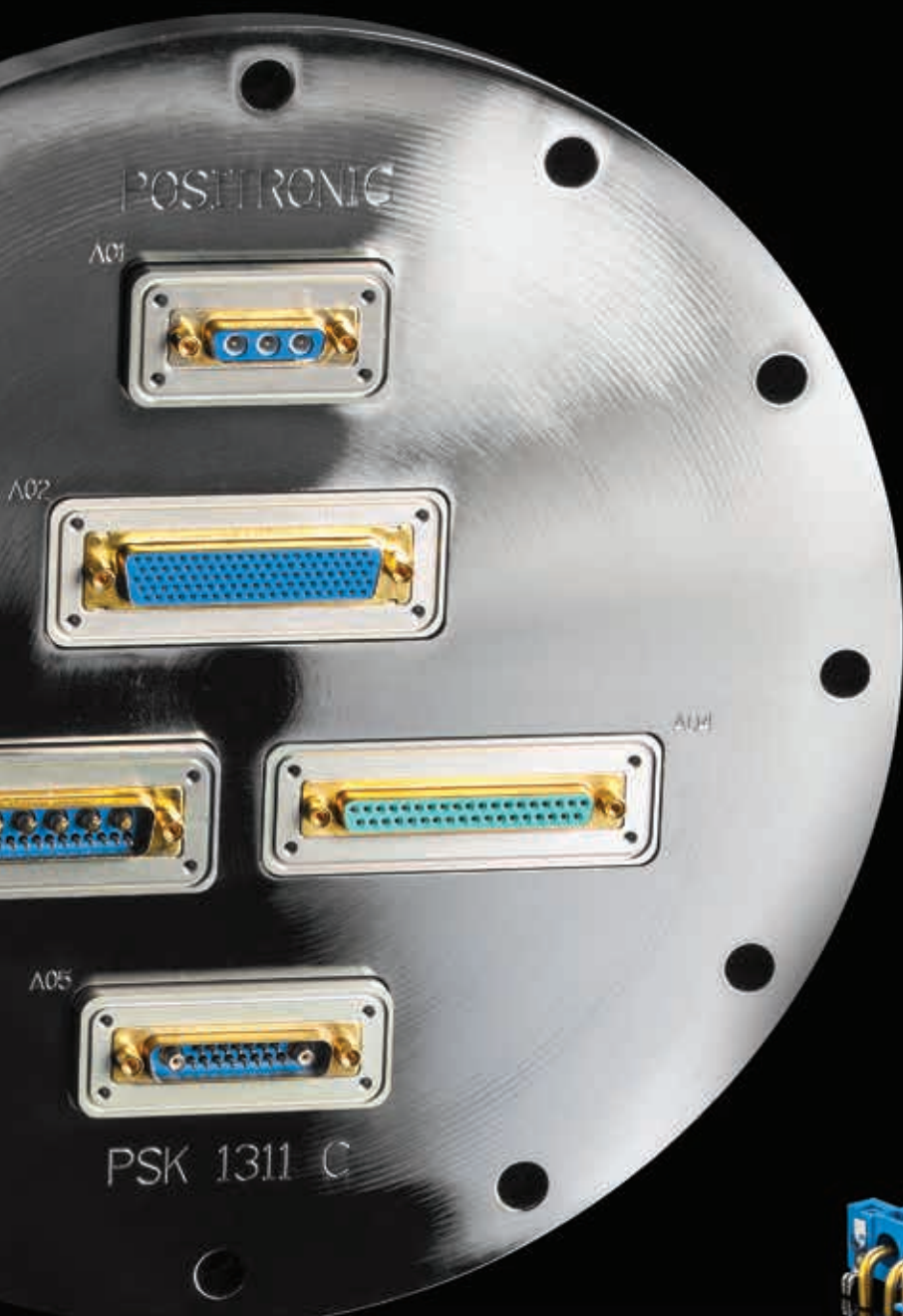




Positronic®
1966 - 2016

Connector Excellence®

2017 Product Catalog



M02U-A

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TIMELINE & HISTORY

ABOUT US

1966
Founded as
an aerospace
component
manufacturer

1978
Qualified to
MIL-DTL-28748

1980
Qualified to
MIL-DTL-24308
& MIL-C-39029

1983
Operations
in Europe
began

1991
Operations
in Puerto
Rico
began

1993
Qualified
to NASA
GSFC

1995
Operations
in Asia
began

1999
CompactPCI P47
standard power
connector interface
adopted

2005
Operations
in India began

2009
Revolutionary
PosiBand contact
introduced

2010
PosiBand receives
SAE AS39029 and
NASA qualification

Modular Scorpion
product released

2016
50th Anniversary
50 years
1966 - 2016

Founded in 1966

Divisional headquarters in
Americas, Europe and Asia

AS9100 / ISO9001

Global sales and service network

Higher level subassembly capability

Vertically integrated
manufacturing capability

Patent holder for various
connector technologies

Involved in international
connector standards development

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

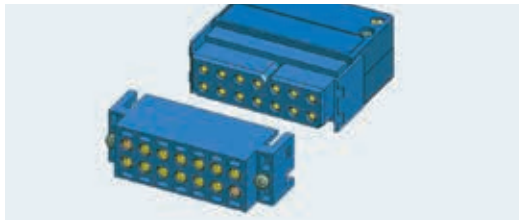
Positronic offers a wide variety of power, D-subminiature, circular and rectangular connector products and accessories. Value-added services are also available.

Our connectors feature precision machined contacts and can be provided to industrial or military performance levels to meet various target price points.

Our products are used in all areas of the electronics industry from basic power supplies to advanced weapon systems.

VERTICAL INTEGRATION

DESIGN & SUSTAINING ENGINEERING



The Engineering department accomplishes a variety of key company objectives such as designing new products for standard and customer-specific applications, modifying existing products to meet customer demands, undertaking value engineering initiatives, and offering technical support for existing product lines. A focus on 3D modeling during the design process is augmented by in-house 3D printing capabilities.

TOOLING



The Tooling department has a host of capable machines like CNCs and EDMs that are used to manufacture punch press dies, molds, assembly fixtures, cams and other tools for in-house use. The department also manufactures assembly tools used by Positronic customers worldwide.

METAL FABRICATION / STAMPING



The Metal Fab department boasts a number of punch presses in varying sizes and capabilities that are used to manufacture connector shells, backshells, angle brackets, cable clamps and other metal accessories.

TEST LABORATORY



With a variety of test equipment to choose from, the Positronic test lab is certified to carry out a variety of tests to IEC standards plus QPL testing to military standards MIL-DTL-24308, SAE AS39029 and MIL-DTL-28748. In addition, the lab is approved by UL as part of the Client Test Data program and has the ability to verify product performance to IP65 and IP67 requirements.

MOLDING



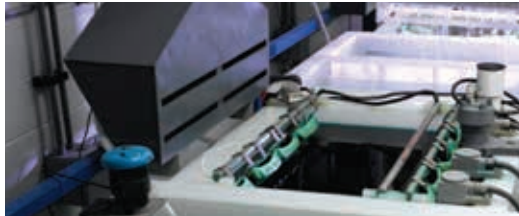
The Molding department houses multiple thermoplastic and thermoset plastic molding machines that are used to mold connector insulators, backshells, angle brackets, cable clamps and other plastic accessories. Overmolding is also available through the Positronic cable assembly divisions.

MACHINING



One of the core competencies of Positronic is screw machine technology. Across all locations, Positronic has over 200 automatic lathes to manufacture thousands of varieties of electrical contacts for use in its broad connector product lines. These machines are also used to manufacture certain types of component hardware.

PLATING



The internal plating shop applies gold, nickel, copper, zinc, tin, chromate conversion, electroless nickel and anodic coatings to connector components prior to the assembly process. Plating inspection technology exists to verify plating thickness, adhesion and appearance to meet military specifications.

MANUFACTURING ENGINEERING



Manufacturing Engineering designs and implements state of the art manufacturing processes and proprietary equipment for in-house use. This includes automated, high-speed assembly tools and robotic equipment used to maximize efficiency while minimizing manufacturing defects.

STOCKING



Positronic has multiple stocking locations around the world for both components and finished goods. Finished goods are available to ship within 1 business day from the time the order is received and PosiShop, the e-Commerce division of Positronic, offers thousands of products for sale online.

ASSEMBLY & SECONDARY OPERATIONS



The Assembly department handles finished connector assembly along with a variety of secondary manufacturing operations such as slotting, drilling, tapping, milling, depressing, sleeving, striping and reeling, among others.

QUALITY ASSURANCE



Positronic has a robust TQM program and is AS9100/ISO9001 compliant at various locations. The QA department manages continuous improvement initiatives to ensure quality is designed into the product through rigid process control and a dedicated Quality Engineering staff. The company is also certified to act as a Designated Supplier Quality Representative (DSQR) for some of the world's most respected companies.

SALES & CUSTOMER SERVICE



Positronic has an extensive sales and support network all over the world with key regional offices in the USA, France, India, Singapore and China. In addition to many highly trained direct sales staff, the company also partners with electronics distributors in strategic parts of the world to better serve the customers in those areas.

OUR FOCUS

POWER ELECTRONICS

INDUSTRIAL

COMMERCIAL AEROSPACE

TELECOM / DATACOM

DEFENSE

TEST & INSTRUMENTATION

SPACEFLIGHT

TRANSPORTATION

MEDICAL

OIL & GAS



OUR STRENGTHS

SOLID MACHINED, LOW RESISTANCE CONTACTS

POWER CONNECTORS

RECTANGULAR CONNECTORS

CUSTOM CONNECTOR DEVELOPMENT

POSIBAND CONTACT TECHNOLOGY

CABLE ASSEMBLIES

E-COMMERCE

SERVICE & SUPPORT



TECH
SPECS



FAMILY		SCORPION		LOW-PROFILE SCORPION		PANTHER		POWER CONNECTION SYSTEMS		GOLDFISH		GREAT GOLDEN		COMPACT POWER CONNECTOR		DRAGONFLY		INFINITY		AUTOSHUNT		POWER INPUT CONNECTOR		SAFETY SHROUD		WONDERSUN		VITA 41 (VXS)			
PART NUMBER PREFIX		SP		LSP		PA		PLA, PLB, PLC		GFSH		GG		PCIH, PCIA, PCIB, PCIC, PCIM		DF		IP, MIP, MMIP		PLZ, DFS		PLB3W3		PLS		WS		VPX			
PAGE NUMBER		8, 9, 19		10		11		12		13		14		15, 20		16		17		18		19		19		19		19			
CONTACT SIZE	CURRENT RATING (AMPS) *1	#4	100	#12	38	#12	25	#8	40	#12	35	#0	40	#16	40 *2	#16	20	#8	60	#12	40	#16	15	#12	40	#12	40	#8	60	#20	24
		#8	50																												
		#12	40																												
		#16	26																												
		#18	16																												
#22	3																														
FEMALE CONTACT DESIGN		Open Entry PosiBand LSA		Open Entry PosiBand LSA		PosiBand		Open Entry LSA		Open Entry PosiBand LSA		LSA Crown		Open Entry PosiBand LSA		Open Entry LSA		Open Entry LSA		LSA		LSA		LSA		LSA		Open Entry			
CONTACT TERMINATION		Crimp Solder PCB Press-Fit PCB		Crimp Solder PCB Press-Fit PCB		Crimp Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB Press-Fit PCB		Crimp Solder PCB Press-Fit PCB		Crimp Ring Terminal Busbar		Crimp Solder PCB Press-Fit PCB		Crimp Solder PCB Press-Fit PCB		Crimp Solder PCB Press-Fit PCB		Crimp Solder PCB Screw Terminal		Crimp Solder PCB Press-Fit PCB Screw Terminal		Crimp Solder PCB		Crimp Busbar		Solder PCB Press-Fit PCB			
INSULATOR MATERIAL		Polyester		Polyester		LCP		Polyester		Nylon		Nylon		Polyester		Nylon		Polyester		Nylon Polyester		Polyester		Polyester		Nylon		Polyester			
INSULATOR COLOR		Blue		Black		Black		Blue		Gold		Gold		Blue		Green Black		Blue		Green Blue		Blue		Blue		Black		Blue			
SHELL MATERIAL		--		--		--		--		--		--		--		--		--		--		--		--		--		--			
SHELL FINISH		--		--		--		--		--		--		--		--		--		--		--		--		--		--			
POLARIZATION		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Insulator		Pin Layout			
BLIND MATING		Optional		Optional		--		Optional		Included		Included		--		--		Included		--		--		--		--		--			
CONFIGURATIONS		> 1,000,000		> 100,000		3		16		6		625		12		5		16		2		1		2		1		1			
LOCKING SYSTEM		Integrated Latch Jackscrews		Integrated Latch		Jackscrews		Integrated Latch		Jackscrews		Jackscrew		--		Integrated Latch		Jackscrew		Integrated Latch		Integrated Latch		Integrated Latch		Push/Pull		--			
BACKSHELL		Plastic		--		Plastic		Plastic		Plastic		Metal		--		Plastic		Plastic		Plastic		Plastic		--		--		--			
MOUNTING		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable Panel		PCB			
TEMPERATURE RANGE (°C)		-55 to +125		-55 to +125		-55 to +200		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125			
SEQUENTIAL MATING LEVELS		2		2		2		3		3		2		3		--		3		--		2		2		--		3			
QUALIFICATIONS *4		UL		--		IP65/67 EN45545-2 HL3 NFF 16-101/102		CUL		UL		--		UL CSA		UL		UL CSA		--		--		--		--		--			

All Positronic contacts are machined from solid copper alloy and plated gold for maximum performance. Gold plating thickness options include gold flash, 30 microinches and 50 microinches. All insulators meet UL 94V-0 requirements.

^{*1} High conductivity contacts are available for most product families. On average, the current rating will be improved by 20-50%.
^{*2} 28 amp rating applies to DC output and 40 amp rating applies to AC/DC input.
^{*3} 7.5 amp rating applies to GAP/GAPL series and 13 amp rating applies to GMCT series.
^{*4} The listed qualification may not apply to all products within the family. Safety agency certifications not listed here may have been pending at the time of printing. Consult sales for current status.

ADVANCEDTCA		STANDARD DENSITY	HIGH DENSITY		COMBO-D	SPACEFLIGHT	WATERPOOF	DUAL PORT (STACKED)	OPTIK-D	STANDARD DENSITY	HIGH DENSITY	UTILITY	CIRCLE HEX	FRONT RUNNER	KING COBRA												
VPB		SD, MDX, RD, HDC, XAVAC, SAVAC, HIVAC	ODD, DD, PCDD, XAVAC, SAVAC, HIVAC		CBD, CBM, CBC, CBDD, CBCD, QB, XAVAC, SAVAC, HIVAC	SND, SDD, SCBC, SCBM, SCBCD, SCBDD	WD, WDD, EVD	DP, MDP, XD, DDA, DDB, DDC, CBDP	CBF	GMCT, GM, GAP, GAPL	SGM, SGM, SMPL	GF, GFPL	GH, MGH	FR	KC, BKC												
20		22, 28		23, 28		20, 24, 28		25		26		27		30		31		32		33		33		34		35	
#16 #22	30 2	#20	7.5	#22	5	#8 #16 #20 #22	40 16 7.5 5	#8 #16 #20 #22	40 16 7.5 5	#20 #22	7.5 5	#8 #20 #22	40 7.5 5	#16 #16 #20	13 7.5 7.5	#22	5	#20	7.5	#20 #22	7.5 5	#12 #16 #20 #22	25 13 7.5 5	#16 #20 #22	20 7.5 3		
Open Entry LSA		Open Entry PosiBand		Open Entry PosiBand		Open Entry PosiBand LSA		PosiBand LSA		Open Entry PosiBand		Open Entry PosiBand LSA		LSA		Open Entry PosiBand		Open Entry		Open Entry		Open Entry LSA		Open Entry LSA			
Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB Pre-Wired		Solder PCB		Crimp Solder Cup Solder PCB Optical Cable		Crimp Solder Cup Solder PCB Press-Fit PCB		Crimp Solder Cup Solder PCB		Solder Cup Solder PCB		Solder Cup Solder PCB		Crimp Solder PCB		Crimp Solder Cup Solder PCB Screw Terminal			
Polyester		DAP Nylon Polyester		Polyester		Polyester		DAP Polyester		DAP Nylon Polyester		Nylon Polyester		Polyester		DAP		DAP		DAP		DAP		DAP		Nylon	
Blue		Green Black Blue		Blue Black		Blue		Green Blue		Green Black		Black Green		Blue		Gray		Green Gray		Gray		Green Gray		Black		Green Black	
- -		Steel Stainless Steel		Steel Stainless Steel		Steel Stainless Steel		Brass		Steel Stainless Steel		Steel Stainless Steel		Steel Stainless Steel		Aluminum		Aluminum		- -		- -		- -		- -	
- -		Tin Zinc Cadmium		Tin Zinc Cadmium		Tin Zinc Cadmium		Gold		Tin Zinc Cadmium		Tin Zinc Cadmium		Tin Zinc Cadmium		Black Anodize Yellow Anodize Yellow Chromate		Black Anodize Yellow Anodize Yellow Chromate		- -		- -		- -		- -	
Insulator		Trapezoidal		Trapezoidal		Trapezoidal		Trapezoidal		Trapezoidal		Trapezoidal		Trapezoidal		Guide Pilots Jackscrews		Guide Pilots Jackscrews		Pin Layout		Pin Layout		Insulator		Insulator	
Included		Optional		Optional		Optional		- -		- -		- -		- -		- -		- -		- -		- -		- -		- -	
1		5		6		29		37		10		Variable		8		16		14		2		6		16		5	
- -		Jackscrew Lock Lever		Jackscrew Lock Lever		Jackscrew Lock Lever		Jackscrew		Jackscrew		Jackscrew Locking Lever		Jackscrews		Jackscrews Lock Lever		Jackscrews Lock Lever		- -		Lock Spring		Coupling Nut		Coupling Nut	
- -		Metal Plastic		Metal Plastic		Metal Plastic		Metal		Metal Plastic		- -		Metal Plastic		Metal		Metal		- -		Metal Plastic		Plastic		Plastic	
PCB		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB		Free Cable PCB Panel		Free Cable PCB Panel		Free Cable PCB Panel	
-55 to +125		-55 to +125		-55 to +125		-55 to +125		-55 to +125		-25 to +85 -55 to +125 -40 to +125		-55 to +125		-55 to +125		-55 to +125 -65 to +150		-55 to +135		-55 to +125		-55 to +125		-55 to +125		-55 to +125	
4		- -		- -		- -		- -		- -		- -		- -		- -		- -		- -		- -		2		- -	
UL CNR		UL CSA MIL-DTL-24308 SAE AS39029		UL CSA MIL-DTL-24308 SAE AS39029		UL CSA DESC 85039 SAE AS39029		MIL-DTL-24308 GSFC S-311		IP65/67 UL CSA SAE AS39029		UL CSA		ARINC 801 SAE AS39029		UL MIL-DTL-28748 SAE AS39029		UL MIL-DTL-28748 SAE AS39029		UL		UL		IP65/67		UL IP65	

The most **versatile** modular power/signal connector on the market

FEATURES

Modular tool design allows for practically limitless customer-defined contact arrangements

Molding process yields a one-piece insulator

The connector width is variable up to 101.00 mm

High conductivity contacts available to maximize current density

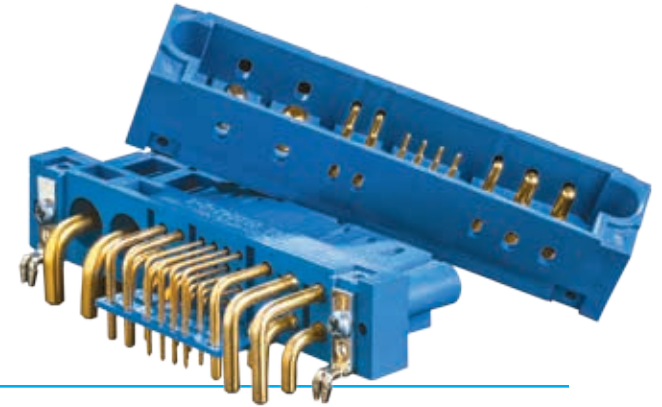
For high voltage requirements, increase creepage and clearance distances with spacer modules

Sequential mating

Superior blind mating

Venting options for improved cooling

Backshell available

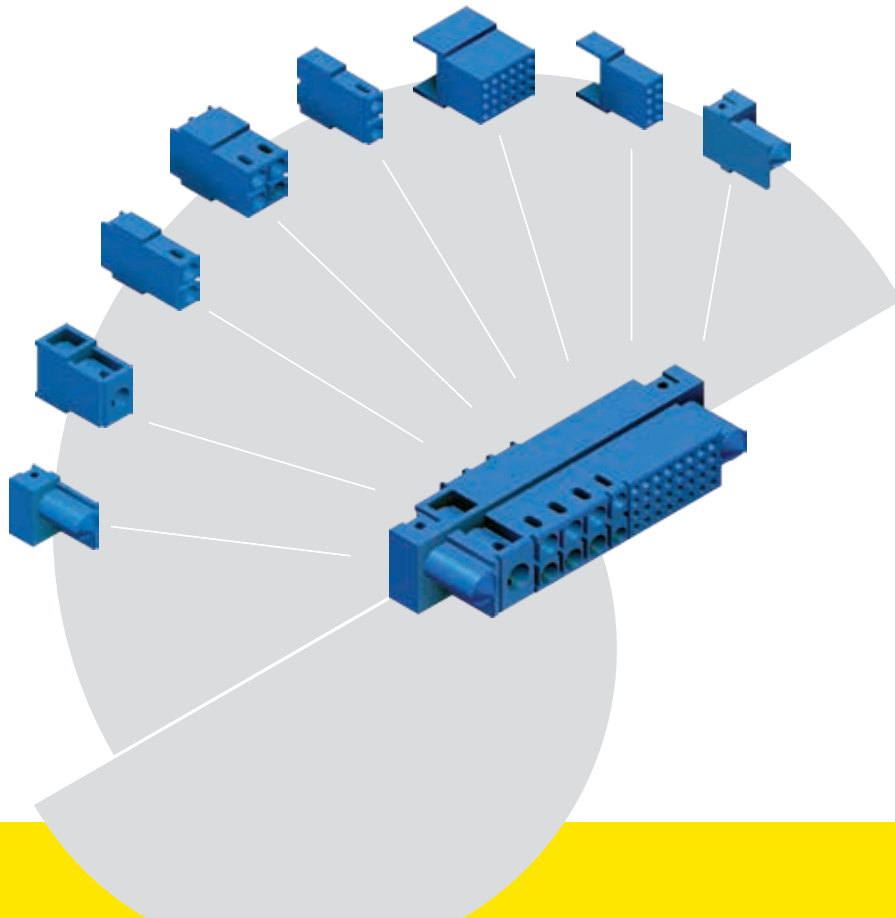


	PART NUMBER PREFIX		SP
CONTACTS	CONTACT SIZE ^{*1}		CURRENT RATING (AMPS) ^{*2}
	4		100
	8		50
	12		40
	16		26
	18		16
	22		3
CONNECTORS			
TERMINATIONS			

^{*1} Contact Sales for size 24 options.

^{*2} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

1. Define the requirements
2. Select the modules
3. Configure the part number



MODULES	Size 4	
	Size 8	
	Size 12	
	Size 16	
	Size 18	
	Size 22	
	Size 24 ^{*1}	
	Spacers	

^{*1} Contact Sales for size 24 options.

A **low-profile** (8.20mm) version of the modular Scorpion family



FEATURES

Modular tool design allows for tens of thousands of customer-defined contact arrangements

Molding process yields a one-piece insulator

Maximize power throughput and minimize space claim

The connector width is variable up to 101.00 mm

High conductivity contacts available to maximize current density

For high voltage requirements, increase creepage and clearance distances with spacer modules

Sequential mating

Integrated blind mating

Venting options for improved cooling

	PART NUMBER PREFIX		LSP
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	12	●	38
	20	●	12
	22	●	3
CONNECTORS	<div>100K+</div> CONFIGURATIONS		
TERMINATIONS	<div>crimp wire</div> <div>solder PCB</div> <div>press-fit PCB</div>		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Rugged **IP65/67** connector for use in rail, earth moving, battery and related applications



FEATURES

Meets EN45545-2 HL3 smoke and toxicity requirements for rail passenger applications

IP65/67 ratings are achieved in mated condition

Operating temperatures to 200°C

Contact current ratings to 35 amps per contact when using high conductivity versions

	PART NUMBER PREFIX		PA
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	12	●	25
	18	●	TBD
	22	●	TBD
CONNECTORS	1		3
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	<div> <div>crimp wire</div> <div>solder PCB</div> <div>press-fit PCB</div> </div>		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

The **original blue** power connector with size 16 contacts



FEATURES

An industry-leading, high reliability power connector for more than 20 years

One, two or three contact row options

High conductivity contacts available to maximize current density

Sequential mating

Locking latch integrated into connector housing

Unique right angle press-fit available

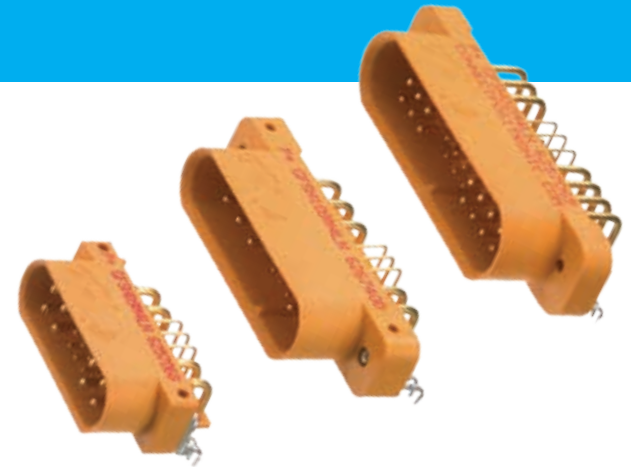
Terminate a variety of wire gauges into a single connector

Economical

	PART NUMBER PREFIX		PLA, PLC, PLC
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		40
	16		18
	20		7.5
CONNECTORS	14		16
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS			

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

A **economical**, blind mating power/signal connector with many options



FEATURES

Ideal for applications requiring robust blind mating in a compact, economical package

Mixed density (hybrid) connector offers options for AC/DC input, DC output at multiple voltages and signal control

Touch-safe recessed female contacts

High conductivity contacts available to maximize current density

Sequential mating

Excellent blind mating

Hot swap

	PART NUMBER PREFIX		GFSH
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	12	●	35
	16	●	20
	20	●	5
	22	●	3
CONNECTORS	3		6
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire	solder PCB	press-fit PCB

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%..

Up to **400 amps** of throughput
in a robust, modular housing



FEATURES

Fixed-length modular connector for ultra-high power applications









Select one of five different modules for each of the four insert positions

Busbar options available

Superior blind mating

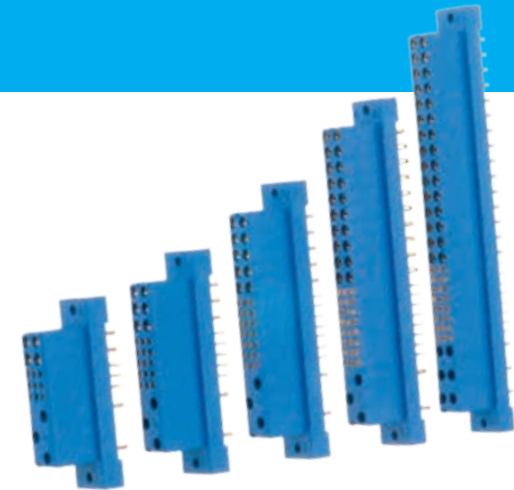
Robust housing stands up to abuse

Hot swap

	PART NUMBER PREFIX		GG
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	0		175
	8		40
	12		35
	16		20
	20		5
CONNECTORS	 PACKAGE SIZE		 CONFIGURATIONS
TERMINATIONS	 ^{*1} Ring terminal and busbar options available		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Plug-in power interface for **CompactPCI** and other platforms



FEATURES

P47 connector (PCIH47) is compliant to the PICMG 2.11 Power Connector Interface specification also known as CompactPCI

Mixed density (hybrid) connector offers options for AC/DC input, DC output at multiple voltages and signal control

Touch-safe recessed female contacts

Keying options

Sequential mating

Coplanar mounting options

	PART NUMBER PREFIX		PCIH, PCIA, PCIB, PCIC, PCIM
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	16	●	40 ^{*2}
	16	●	28 ^{*2}
	20	●	5
	22	●	3
CONNECTORS	5		12
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	<div> <div>crimp wire</div> <div>solder PCB</div> <div>press-fit PCB</div> </div>		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

^{*2} 28 amp rating applies to DC output and 40 amp rating applies to AC/DC input.

Economical and **miniature** power/signal connector

FEATURES

Power/signal connector ideal for applications requiring high power density at an economical price

Sequential mating

Integrated locking system

Maintains low contact resistance over 10,000 mating cycles

2-pole, auto-shunting version available



	PART NUMBER PREFIX		DF
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	16	●	20
	20	●	7.5
	22	●	3
CONNECTORS	4		5
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	<div>crimp wire</div> <div>solder PCB</div> <div>press-fit PCB</div>		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Superior **blind mating**, mixed density connector with robust housing

FEATURES

Mixed density (hybrid) connector offers options for AC/DC input, DC output at multiple voltages and signal control

Touch-safe recessed female contacts

3-level sequential mating

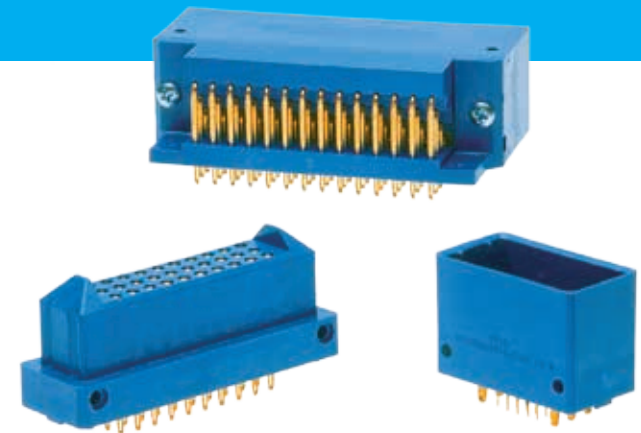
High conductivity contacts available to maximize current density

Excellent blind mating compensating for 7.62mm of misalignment

Robust housing stands up to abuse

High voltage capability

Hot swap



	PART NUMBER PREFIX		IP, MIP, MMIP
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		60
	12		40
	16		20
	20		5
CONNECTORS	 PACKAGE SIZES		 CONFIGURATIONS
TERMINATIONS			

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

An innovative alternative to CT shorting blocks

FEATURES

Quick and easy alternative to commonly used
CT (current transformer) shorting blocks

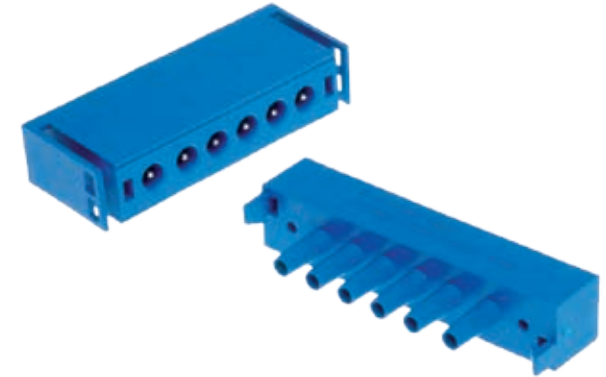
Innovative design automatically shorts male contacts (circuits)
together upon decoupling







For use in six-line “Delta” configurations or four-line
“Y” configurations

Two position connector is ideal for “Ground Fault
Protection” configurations

Accepts 10 and 12 AWG wire

Reduces operating cost

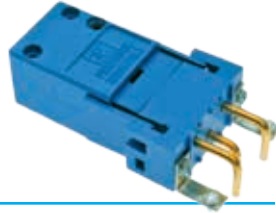


	PART NUMBER PREFIX		PLZ, DFS
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	16		15
CONNECTORS			
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	  		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

POWER INPUT CONNECTOR

(3) size 12 contacts spaced ideally for AC/DC power input



FEATURES

Screw termination facilitates field installation

Sequential mating

Hot swap

WONDERSUN

Push-pull, single pole connector that is building-block capable



FEATURES

Modular design allows side-by-side stacking

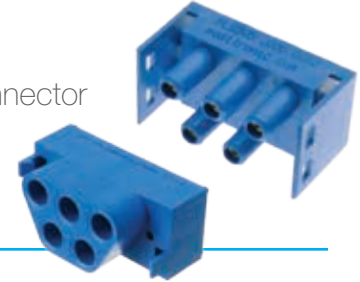
Push/pull locking feature is ideal for breakaway applications and provides auditory/tactile feedback

Ideal as a battery or busbar disconnect

Hot swap

SAFETY SHROUD

Shrouded, touch-safe power connector in 5 and 7-pin versions



FEATURES

Prevents unsafe exposure to both male and female contacts

High voltage capability

Hot swap

VITA 41 (VXS)

System power interface for VITA 41 systems



FEATURES

Standard power interface for VITA 41 (VXS) systems

Ultra-miniature

Three-level sequential mating

AdvancedTCA

THE PICMG 3.0 AdvancedTCA
Zone 1 connector of choice



FEATURES

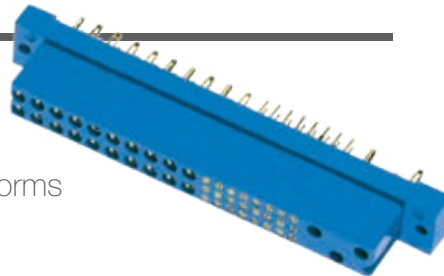
The original Zone 1 power interface for
AdvancedTCA systems – copied but never duplicated

Four-level sequential mating

Internal blind mate guide

CompactPCI

Plug-in power interface for
CompactPCI and other platforms



FEATURES

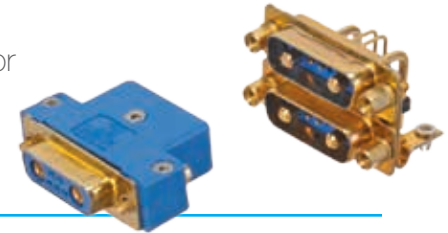
P47 connector (PCIH47) is compliant to the PICMG 2.11 Power
Connector Interface specification also known as CompactPCI

Mixed density (hybrid) connector offers options for AC/DC input,
DC output at multiple voltages and signal control

Keying options

MicroTCA

The power input connector for
MicroTCA power modules



FEATURES

The original power interface for MicroTCA systems, which are
smaller form factor than AdvancedTCA systems

Specialized mounting bracket allows the board connector to
hang off the edge of the PCB resulting in a lower profile

Multiple pin arrangements available for 12V, 24V
and 48V systems

AdvancedTCA RTM

For data and management on the rear
transition modules (RTM) in PICMG 3.0 R3.0



FEATURES

Common in instrumentation and high energy physics
applications

Integrated blind mating

Small size minimizes space claim

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High reliability D-sub
with size 20 machined contacts



FEATURES

Various performance levels for best cost/performance ratio

#1 in the world for MIL-DTL-24308 connectors

Mix and match connector with accessories to suit application requirements

Stainless steel shells available for corrosion protection or near zero magnetism

Ability to provide application-specific modifications at low MOQs

Connector savers available for all sizes

Popular lock lever available

Thermocouple contact options available

Hermetic options available

	PART NUMBER PREFIX		SD, MDX, RD, HDC
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	20	●	7.5
CONNECTORS	5		5
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire	solder cup wire	solder PCB press-fit PCB

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

High reliability D-sub with size 22 machined contacts



FEATURES

Maximize signal count and minimize space claim while adhering to standard D-sub shell sizes

Shell size 6 (104-pin) available

Various performance levels for best cost/performance ratio

#1 in the world for MIL-DTL-24308 connectors

Mix and match connector with accessories to suit application requirements

Stainless steel shells available for corrosion protection or near zero magnetism

Ability to provide application-specific modifications at low MOQs

Connector savers available for all sizes

Thermocouple contact options available

Hermetic options available

	PART NUMBER PREFIX		ODD, DD, PCDD
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	22	•	5
CONNECTORS	6		6
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire	solder cup wire	solder PCB
			press-fit PCB

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Mixed density D-sub to mix signal/power/coax/HV and fiber optic

FEATURES

High quality, mixed density D-sub to combine signal, power, coax, high voltage and fiber optic (ARINC 801) in a single package

Ideal for mixed mode I/O on slim “black boxes”

Shell size 6 (104-pin) available

Stainless steel shells available for corrosion protection or near zero magnetism

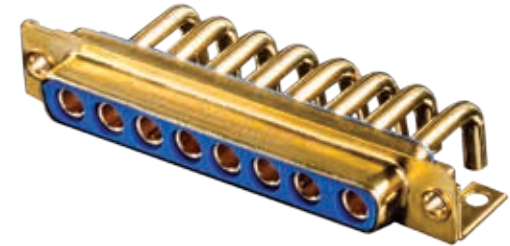
Ability to provide application-specific modifications at low MOQs

Connector savers available for all sizes

Thermocouple contact options available

Sequential mating options

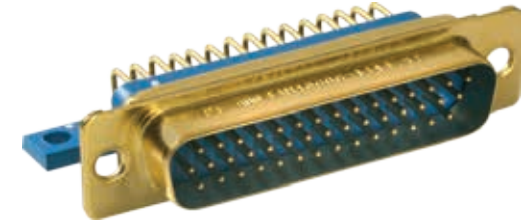
MicroTCA version available



	PART NUMBER PREFIX		CBD, CBM, CBC, CBDD, CBCD, QB
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		40
	16		16
	20		7.5
	22		5
CONNECTORS	6		29
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS			

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

For **extreme** applications requiring non-outgassing and low magnetism



FEATURES

Highest reliability D-subminiatures for mission critical applications

Select products qualified to NASA Goddard Space Flight Center S-311 requirements and MIL-DTL-24308 Class M

Non-outgassing

Near zero magnetic characteristics

Standard and high density signal options

Standard and high density Combo-D options

Connector saver options

Lightweight aluminum backshells available

	PART NUMBER PREFIX		SND, SDD, SCBC, SCBM, SCBCD, SCBDD
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		40
	16		16
	20		7.5
	22		5
CONNECTORS	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS			

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

For applications requiring **IP65 / IP67**
waterproofing characteristics

FEATURES

Water and dust ingress protection to IP65 / IP67

Standard and high density signal options

Panel mount and cable versions available

Overmolding available



	PART NUMBER PREFIX		WD, WDD, EVD
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	20	●	7.5
	22	●	5
CONNECTORS	5		10
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire		solder cup wire
			solder PCB

*Pre-wired option available

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Stacked right angle D-sub connectors to save panel and board space

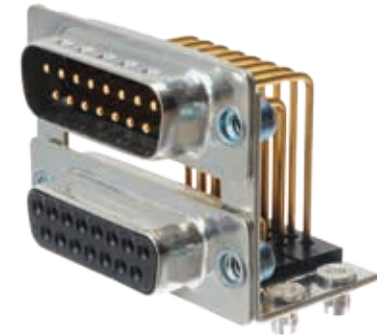
FEATURES





Two D-sub connectors, vertically stacked and assembled as one unit saving panel and board space

Assembly costs are reduced by streamlining two assembly processes into one

Available in numerous combinations of standard density, high density, and Combo-D D-sub connectors

Multiple spacings available between upper and lower connector bodies



	PART NUMBER PREFIX		DP, MDP, XD, DDA, DDB, DDC, CBDP
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		40
	20		7.5
	22		5
TERMINATIONS			

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Feedthroughs for vacuum applications

FEATURES



Intended for use as an electrical feedthrough in high vacuum applications

Helium leakage rate at ambient temperature:
 $< 5 \times 10^{-9}$ mbar.l/s under a vacuum of 1.5×10^{-2} mbar

Signal, power, coax and high voltage versions available

Connectors can be mounted on flange assembly per customer specification (See opposite page)



	PART NUMBER PREFIX		XACAC, SAVAC, HIVAC
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	8		40
	20		7.5
	22		5
CONNECTORS	15+ PACKAGE SIZES		50+ CONFIGURATIONS
TERMINATIONS	FEEDTHROUGHS		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

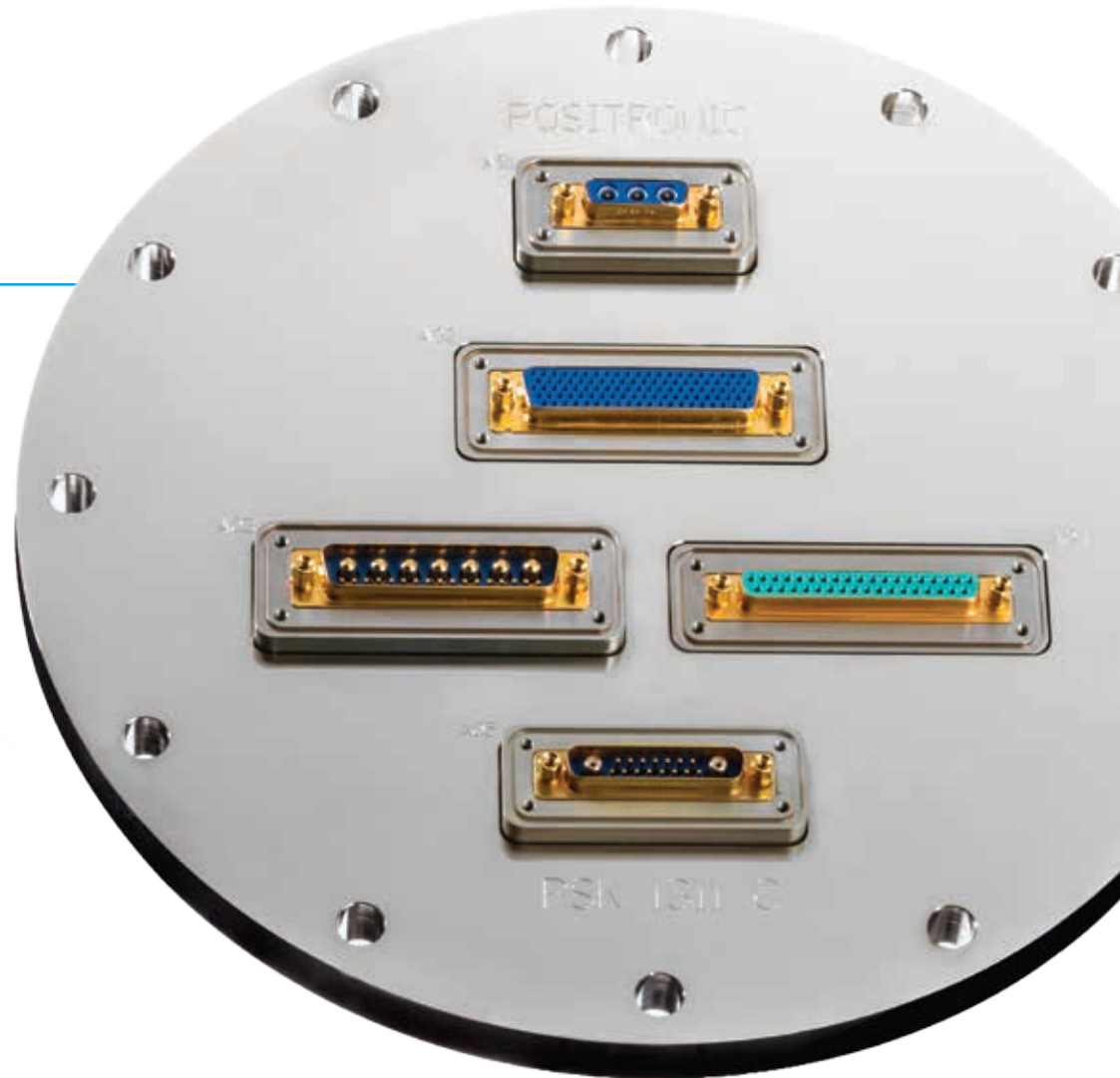
Custom Flange Assemblies

Diameter, bolt-hole locations, material, etc
per customer requirement

Capable of feeding through 1000s of signals

Mix power, high voltage, coax and signal

Single flange simplifies maintenance



OPTIK-D

ARINC 801, multimode fiber optic terminus for use in Combo-Ds



FEATURES

Ultra low insertion loss (IL) of 0.06 dB (typical)

Return loss (RL) > 45 dB

Suitable for harsh environments

More cost effective than D38999 or ARINC 600-based systems

Hybrid connector allows for mixing modes such as optical, power, signal, high voltage and/or coax

Advantages of fiber optics include:

Safe in explosive environments

High bandwidth

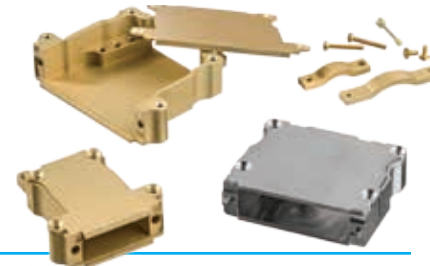
EMI immune

Reduced bulk and weight in wire bundles

Protected by United States Patents 8,944,697 & 9,304,263

BACKSHELLS & ACCESSORIES

For D-sub connectors



FEATURES

Lightweight aluminum backshell with internal grounding capability

Quick disconnect locking device

Multi-gender jackscrew options

Economical plastic backshell options

Brackets and spacers

Float mount options

360° shielding capability

Robust connectors for rack & panel applications



FEATURES

Rugged, durable design

Select products certified to MIL-DTL-28748 and SAE AS39029

Multiple keying (coding) options

Great option for use as a ruggedized power connector

Terminate a variety of wire gauges into a single connector

Grounding block connector available

	PART NUMBER PREFIX		GMCT, GM, GAP, GAPL
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	16	●	13 ^{*2}
	16	●	7.5 ^{*2}
	20	●	7.5
CONNECTORS	16		16
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire	solder cup wire	solder PCB press-fit PCB

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

^{*2} 7.5 amp rating applies to GAP/GAPL output and 13 amp rating applies to GMCT series.

High density connectors for **rack & panel** applications

FEATURES

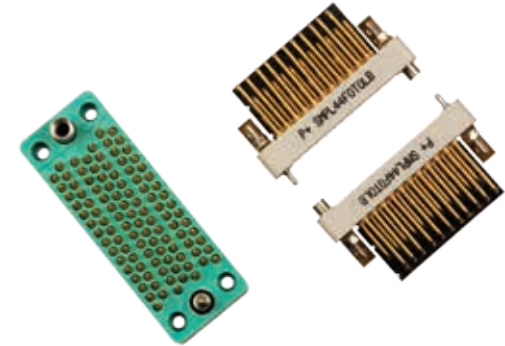
Low-profile insulator is ideal for board-to-board stacking where reliability and ruggedness are key

Select products certified to MIL-DTL-28748 and SAE AS39029

Multiple keying (coding) options

Miniature and lightweight

104-pin option available



	PART NUMBER PREFIX		SGM, SGM C, SMPL
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) * ¹
	22	•	5
CONNECTORS	14		14
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire		solder PCB
	solder cup wire		

*¹ High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

UTILITY

Low-profile building-block connector



FEATURES

Low-profile, wafer design

Stackable feature with countersink screw allows for modularity and flexibility

Numerous options for polarization and keying

Miniature, lightweight and economical

CIRCLE HEX

For legacy avionics applications



FEATURES

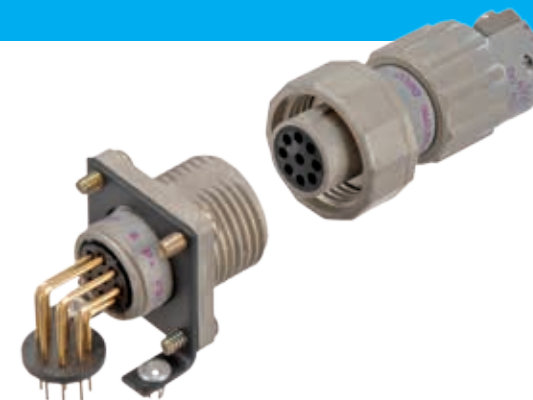
Miniature and lightweight

Twist ring locking device

Round profile

Two sizes available – standard and miniature

Size 11 and size 19 **composite** circular



FEATURES

Lightweight, non-corrodible material

Right angle PCB mount options







Sequential mating

Environmental sealing/waterproof options to IP65/67

EMI/RFI shielded version, electroless nickel-plated

Thermocouple contact options

Defense quality on a budget

	PART NUMBER PREFIX		FR
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	12		25
	16		13
	20		7.5
	22		5
CONNECTORS	 PACKAGE SIZES		 CONFIGURATIONS
TERMINATIONS	 		

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

Quarter-turn **economical** circular



FEATURES

Quarter-turn locking system

Two sizes available – standard and miniature

Lightweight, non-corrodible, composite material

Economical

Environmental sealing/waterproof options to IP65

	PART NUMBER PREFIX		KC, BKC
CONTACTS	CONTACT SIZE		CURRENT RATING (AMPS) ^{*1}
	16	●	20
	20	●	7.5
	22	●	3
CONNECTORS	2		5
	PACKAGE SIZES		CONFIGURATIONS
TERMINATIONS	crimp wire	solder cup wire	solder PCB
			screw terminal

^{*1} High conductivity contacts are available for most product families.
On average, the current rating will be improved by 20-50%.

POSIBAND CONTACTS

Closed entry female contacts are often used to enhance the performance and reliability of connectors. In legacy designs, a sleeve is placed over a standard “split-tine” contact to achieve the closed entry feature. However, true closed entry contacts have an unbroken ring of solid material at the mating end of the contact. This design offers a degree of increased reliability while the split-tine approach has its inherent weaknesses. The PosiBand overcomes these weaknesses!

FEATURES

Separates mechanical and electrical functions for superior performance

Maximized surface area at the male/female contact interface

Low contact resistance improves system efficiency

Lower average insertion forces without compromising electrical performance requirements

Contact body does not require annealing of the crimp barrel eliminating unintentional heat treating of the mating barrel

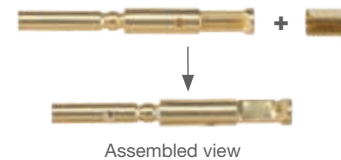
Qualified to SAE AS39029, MIL-DTL-24308 and the higher 40 gram separation requirement of the NASA GSFC S-311 specification

Used primarily on size 20 and 22 contacts

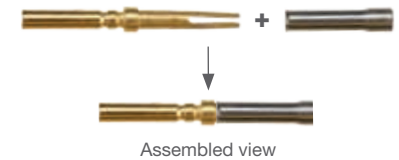
Protected by United States Patent 7,115,002



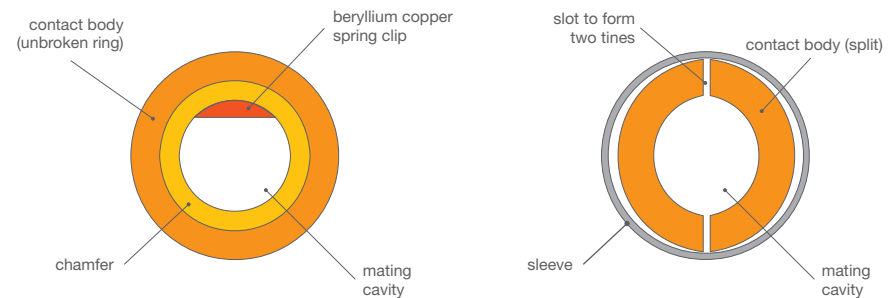
PosiBand



Legacy Closed Entry



Mating Barrel Cross Sections



LSA & PRESS-FIT CONTACTS

LARGE SURFACE AREA (LSA)



FEATURES

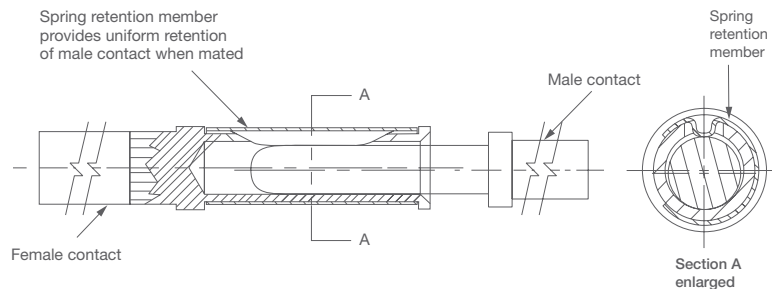
Separates mechanical and electrical functions for superior performance

Low contact resistance provides minimized voltage drop across the contact

True closed entry design prevents damage to female contacts and will not allow misaligned or bent contacts to enter

Precision machined from solid copper alloy

Stable insertion and withdrawal forces throughout repeated mating cycles



BI-SPRING PRESS-FIT



FEATURES

One-piece construction from tip to tail

Low PCB insertion forces reduce board warpage and plated-through-hole damage

Designed to meet the applicable performance requirements and hole diameters as listed in the internationally recognized specification, IEC 60352-5

Protected by United States Patent 5,255,580 and 5,329,697

CABLE ASSEMBLIES

OVERVIEW

As is evidenced by their names, wire-to-board and wire-to-wire connector systems require at least one connector to be wire (cable) terminated. End users typically handle the cabling of their connectors in one of two ways — they assemble the cables internally or they outsource the cable assembly work to an external fabricator. In these latter cases, Positronic is ready, willing and capable to bid on your cable assembly/wire harness project. Give us an opportunity to show you how we can bring even more value to your supply chain.



SUPPORT CAPABILITIES

Design, development, engineering support and documentation

Build to customer print

Assist in expansion of qualified suppliers on BOM

Certified to ISO9001 and AS9100

Adherence to IPC620 standards

Product prototyping and first article inspection (FAI)

Electrical and mechanical testing



PRODUCTS & SERVICES

Cable and wire harness assemblies

EMI/RFI shielded assemblies

Coaxial cable assemblies

Box builds

Kitting services

Inkjet & laser marking

Bar coding & serialization

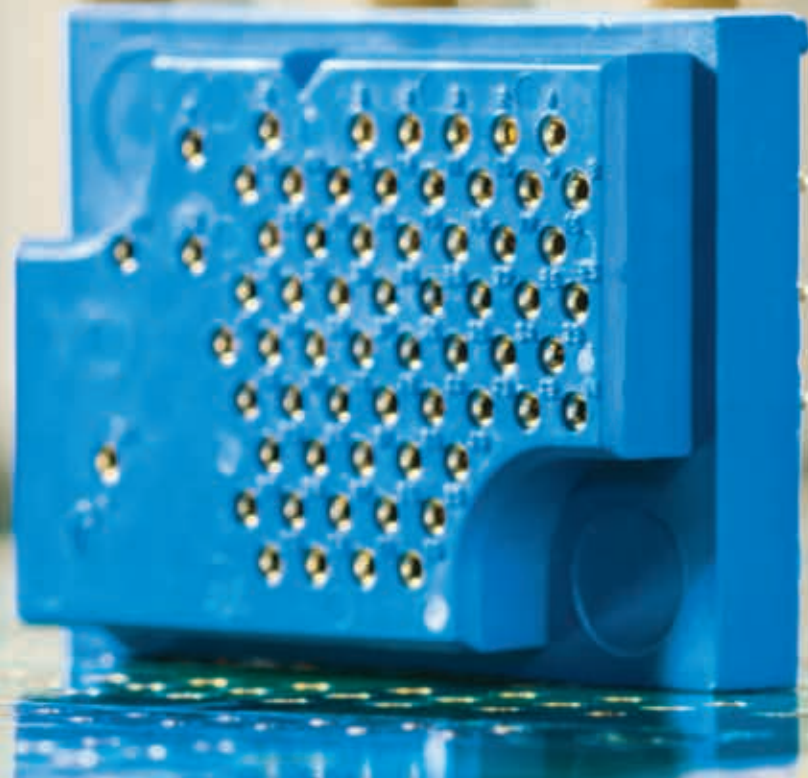
Overmolding

Potting

Electrostatic controlled work areas

CUSTOM CONNECTORS

Positronic stands alone in our ability and desire to provide custom connectors at low volume. The phrase “custom connectors” covers the spectrum from basic modifications to clean-sheet designs. Although we boast a large catalog of standard products, customized solutions are common for us.



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The following trademarks are registered to PCI Industrial Computers Manufacturers Group: CompactPCI[®], AdvancedTCA[®], MicroTCA[™] and PICMG[®].

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	#8,944,697	#9,304,263

Other Patents Pending

*Patented in Canada, 1992

