Power Interconnect Solutions

FCI offers a broad range of standard and customizable power interconnect products for connections between circuit boards, cables, and busbars in industrial and datacenter applications.

See how we can help you create a more efficient and cost–effective solution.

power.fci.com

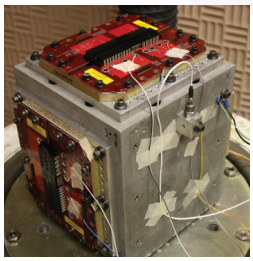
INTRODUCTION

FCI Electronics is a leading supplier of high performance power connectors to companies that manufacture computing, networking, telecommunications, industrial control, lighting, and energy conversion equipment.

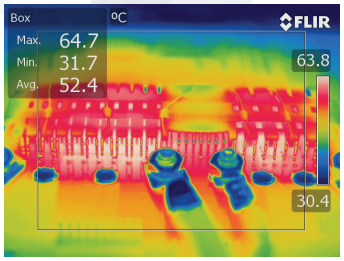
FCI goes to great lengths to ensure the quality and long-term reliability of our products. We conduct extensive accelerated life tests to validate the expected results of our power connectors after years of use. These tests include, but are not limited to, environmental exposure, (humidity, industrial gas, etc.), thermal cycling, shock and vibration, and close monitoring of current and temperature.

This brochure features some key products from FCI's Power Solutions portfolio. We've arranged the connectors from low to high power, ranging from 3 to 300 amps per contact. You'll also find information about our Power Distribution products. FCI offers complete distribution solutions custom-designed to specific applications. For more information on any of the products in this brochure please visit **power.fci.com** or contact an FCI sales representative at any FCI location.

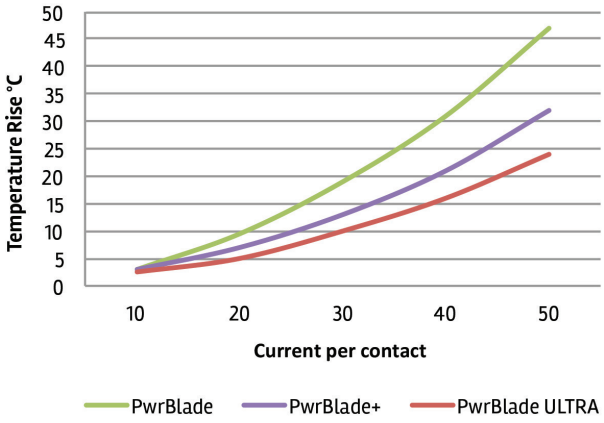
Shock and Vibration Testing



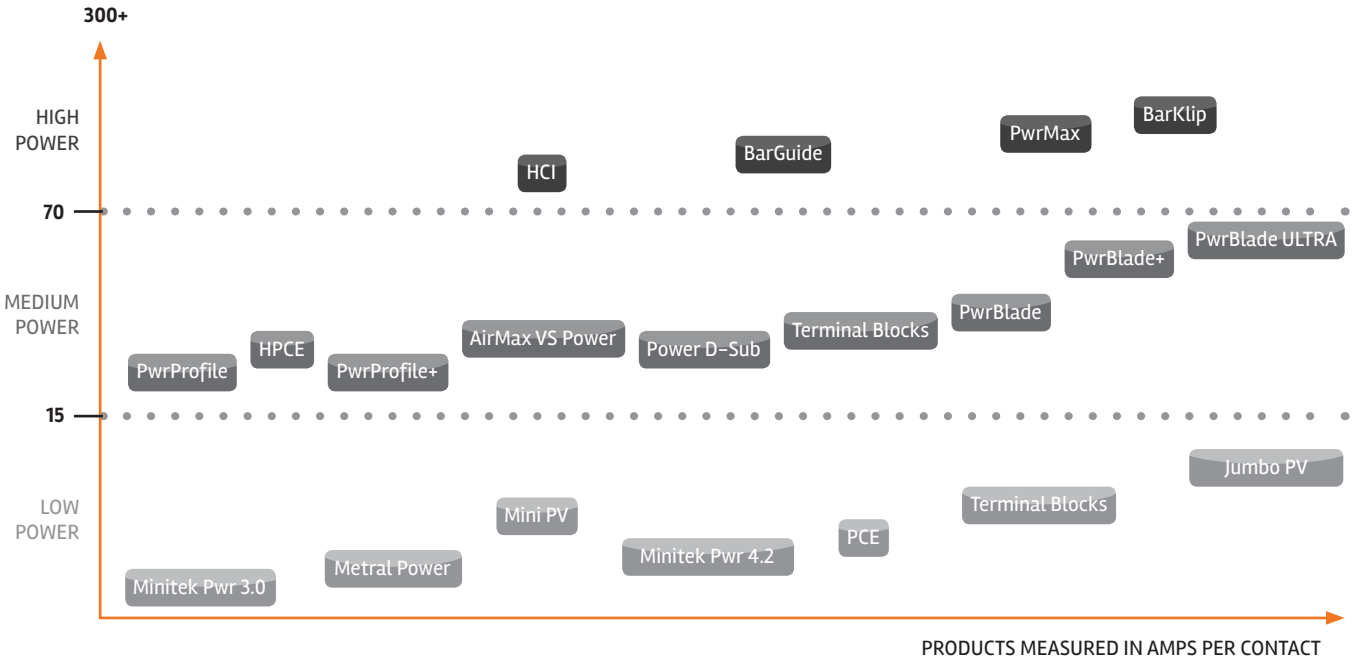
Temperature Monitoring at Extreme Environments



Comparison Testing
Current vs. Temperature Rise



FEATURED PRODUCTS



TYPICAL DATACENTER APPLICATION

AirMax VS® Power

- Backplane
- 30A per contact

BarKlip™

- 150/300A per contact

Busbars

- Custom shape/ sizes
- Up to 1000A

PwrBlade+™

- 25/60A per contact

Pwr TwinBlade®

- Wire-to-board
- 100A per wire

Terminal Blocks

- Wire-to-board
- 5–50A per contact

PwrBlade®

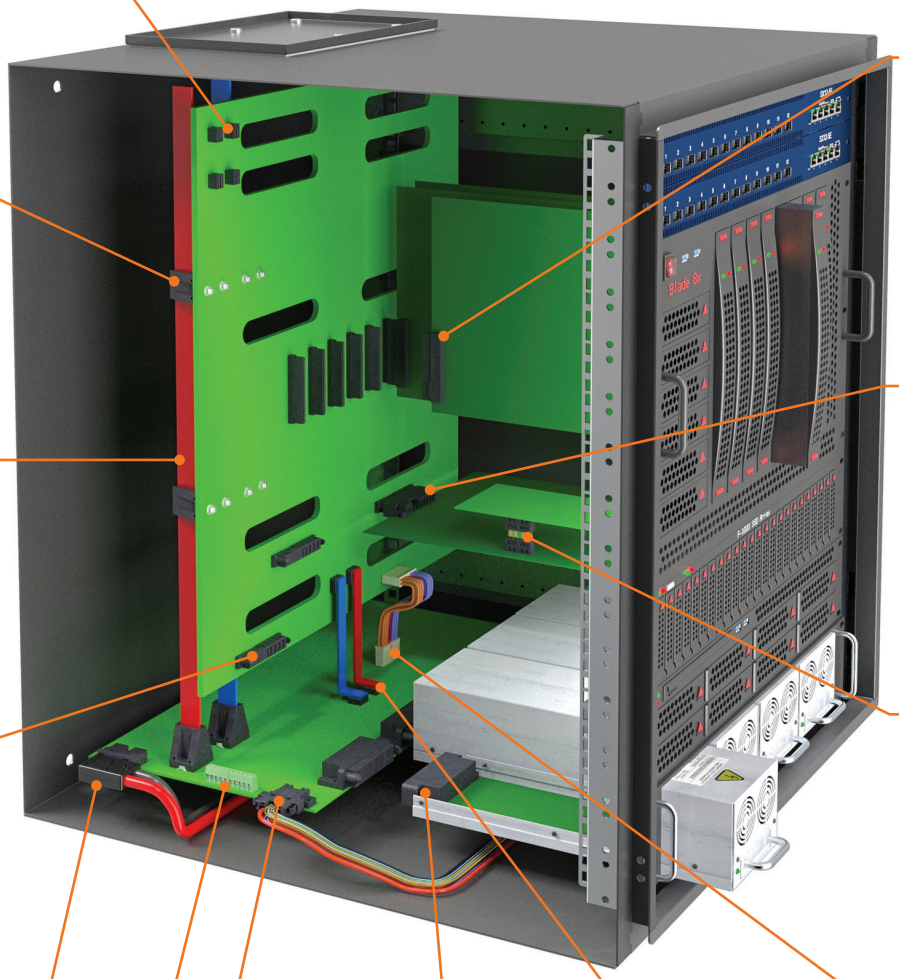
- Wire-to-board
- 40A per contact

PwrMax™

- 19.8mm tall
- 100A per contact

BarGuide™

- 60–250A per contact



HPCE®

- 7.5mm wide
- 15/30A per contact

PwrBlade ULTRA®

- 9.6mm tall
- 25/65A per contact

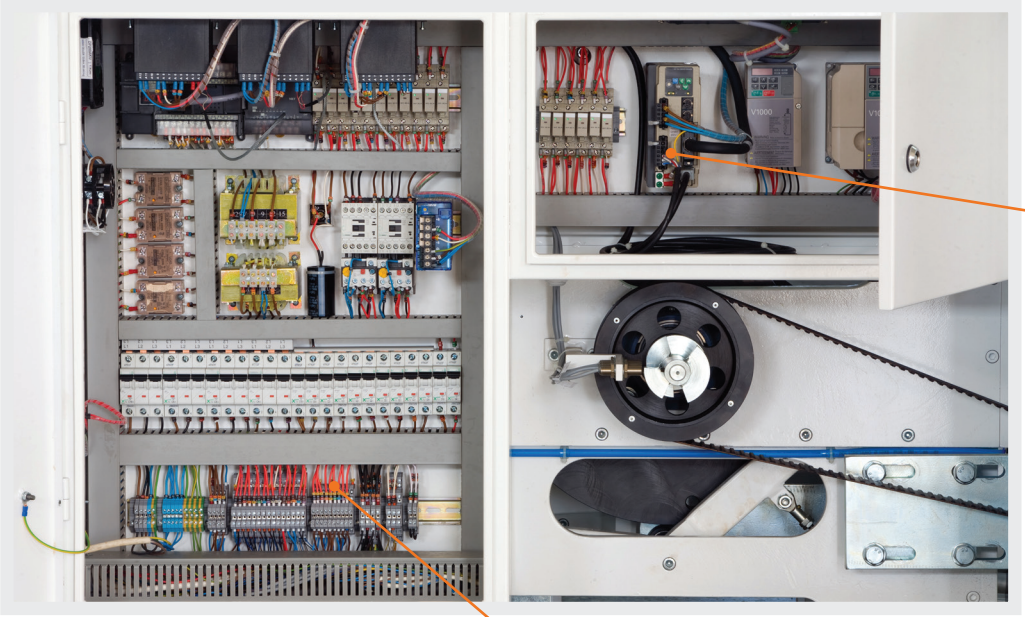
HPCE® Mezzanine

- 32mm–44mm tall
- 15/30A per contact

Minitek Pwr™

- Wire-to-board
- 4/9A per contact

TYPICAL INDUSTRIAL APPLICATIONS

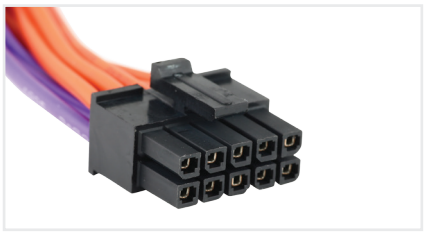


OTHER TYPICAL APPLICATIONS

For more information,
please contact: Communications@fci.com
or visit us at www.fci.com

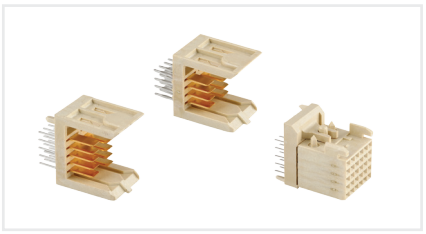
Disclaimer
Please note that the above information is subject to change without notice.

LOW POWER CONNECTORS



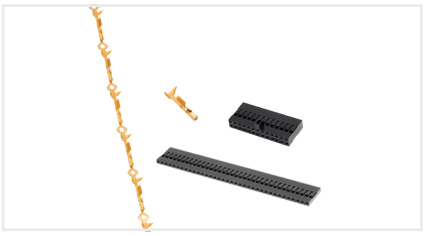
Minitek Pwr™ 3.0

- Wire-to-wire and wire-to-board
- Up to 5A per contact
- 3.0mm contact pitch
- 26AWG – 24AWG wires
- Vertical and right-angle PCB headers



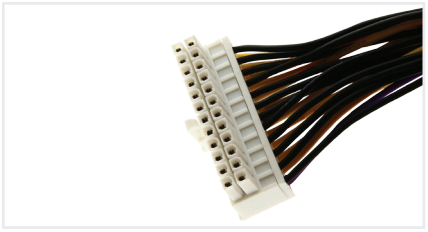
Metral® Power

- Board-to-board
- 3A per contact
- 12.5mm hard metric
- IEC 61076-4 compatible end-to-end with other Metral modules



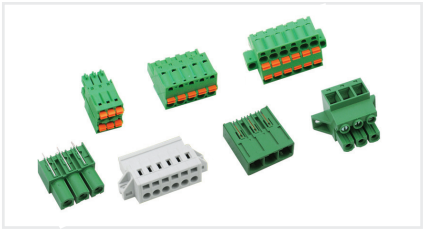
Mini PV

- Wire-to-board
- 3A per contact
- 28AWG – 26AWG
- High durability contact up to 1,000 mating cycles



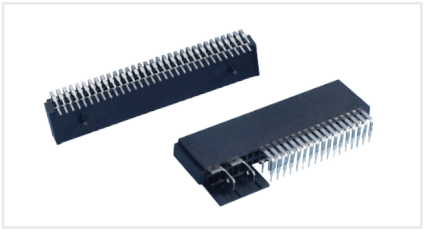
Minitek Pwr™ 4.2

- Wire-to-wire, wire-to-board and wire-to-panel
- Up to 9A per contact
- 4.2 contact pitch
- 24AWG – 18AWG wires
- Right-angle or straight receptacles



Terminal Blocks

- Wire- to-board
- Up to 20A per contact
- Pitch from 2.5mm – 19.0mm
- 24AWG – 6AWG
- Vertical and right angle PCB mount
- Rising-cage or spring-contact designs



PCE

- Card edge-to-board
- Up to 7A per contact
- 2.54mm contact pitch
- Right angle, vertical and straddle mount

Jumbo PV

- Wire-to-board
- Up to 7A per contact
- Pitch from 2.5mm – 19.0mm
- High durability contact up to 1,000 mating cycles

MEDIUM POWER CONNECTORS

PwrProfile®

- Cable–to–board
- Up to 20A per contact
- 16AWG – 14AWG
- Low profile: 7.5mm board height

AirMax VS® Power

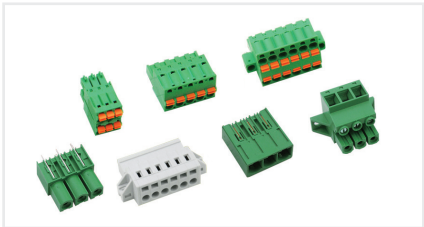
- Board–to–board
- Up to 30A per contact
- 12.5mm hard metric
- Designed for use with ZipLine®, AirMax VS® and Millipacs® connector series

HPCE®

- Card edge–to–board, board–to–board, cable–to–board and cable–to–card edge
- 30A per contact (quad–beam) and 15A per contact (dual–beam)
- Right angle, vertical, straddle mount and cable
- Wide variety of connector sizes

Power D–Sub

- Cable–to–board
- Up to 40A per contact
- Full power and mixed layout (signal + power) – 2V2 to 36W4
- Power contacts available in solder or crimp termination

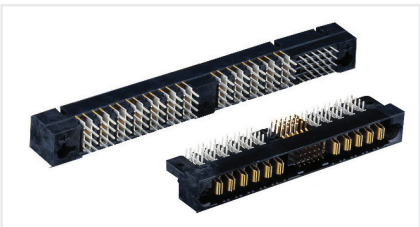


Terminal Blocks

- Wire– to–board
- Up to 50A per contact
- Pitch from 2.5mm – 19.0mm
- 24AWG – 6AWG
- Vertical and right angle PCB mount
- Rising–cage or spring–contact designs

PwrProfile+®

- Cable–to–board
- Up to 34A per contact
- 14AWG – 12AWG
- Signal contacts included for hot swap applications



PwrBlade®

- Board–to–board and cable–to–board
- Up to 40A per contact
- 5.08mm, 6.35mm and 7.62mm contact pitch
- 14AWG – 8AWG wires
- Vertical and right angle PCB mount and cable
- Configurable power and signal mix

PwrBlade+™

- Board–to–board, cable–to–board
- Up to 60A per contact
- 5.08mm, 6.35mm and 7.62mm contact pitch
- 14AWG – 6AWG wires
- Vertical and right angle PCB mount and cable
- Low power and high power contacts

PwrBlade ULTRA®

- Board–to–board
- Up to 65A per contact
- 3.5mm, 5.01mm and 7.0mm contact pitch
- Vertical and right angle PCB mount
- 9.6mm above PCB; 24% lower in height than PwrBlade®

HIGH POWER CONNECTORS

HCI®

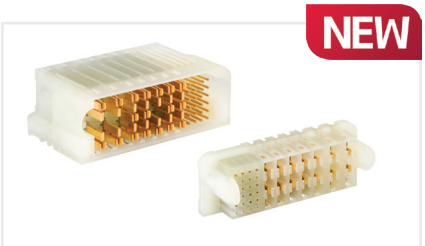
- Board-to-board
- Up to 100A per contact
- 6mm contact pitch
- 12.5mm hard metric
- Right angle and vertical PCB Mount

BarKlip™

- Busbar-to-busbar, busbar-to-cable and busbar-to-board
- Up to 300A per contact
- 14AWG – 2AWG wires
- Right angle, vertical, and cable
- Open-end walls allow for infinite busbar length

BarGuide™

- Board-to-board, busbar-to-board and busbar-to-busbar
- Up to 250A per contact
- High reliability and low contact resistance
- Low mating force/ high cycle durability

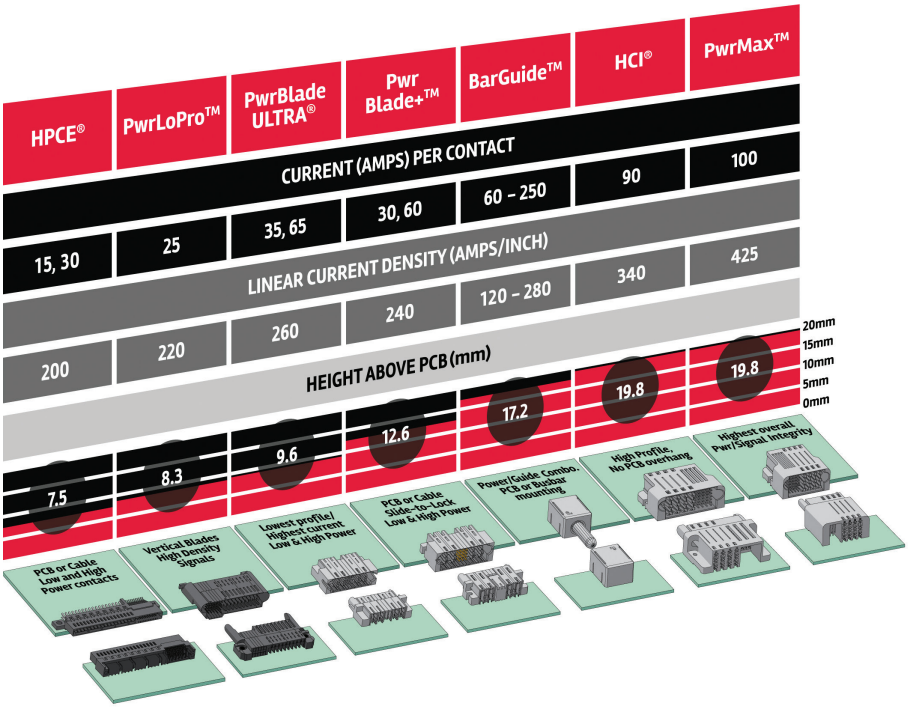


PwrMax™

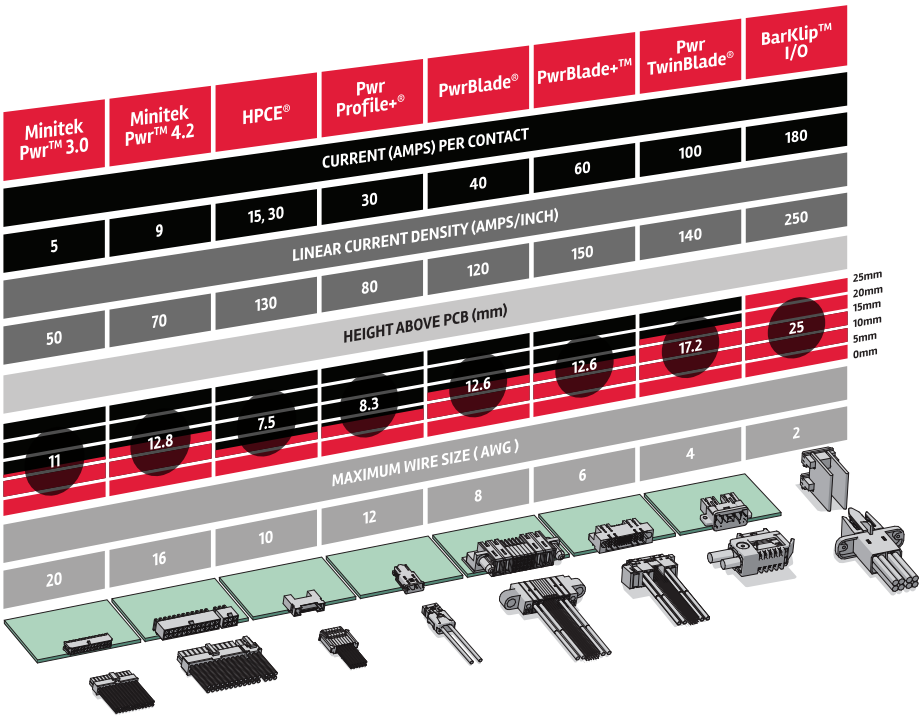
- Board-to-board
- Up to 100A per contact
- 5.0mm pitch

PERFORMANCE COMPARISON CHARTS

POWER SOLUTIONS PORTFOLIO
BOARD–TO–BOARD PERFORMANCE MATRIX



POWER SOLUTIONS PORTFOLIO
CABLE ASSEMBLY PERFORMANCE MATRIX



For more information,
please contact: Communications@fci.com
or visit us at www.fci.com

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POWER DISTRIBUTION ASSEMBLIES

BUSBAR POWER DISTRIBUTION

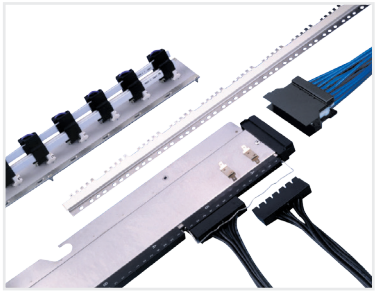
- Space-saving
- Ease of installation
- Improved thermal characteristics
- Improved electrical performances
- Long-term reliability and better quality
- A cost-effective solution

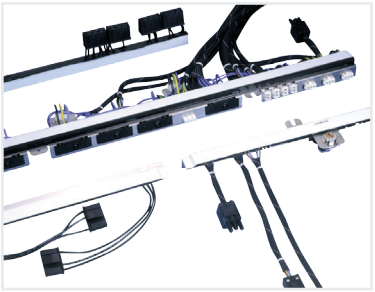
CAPABILITIES

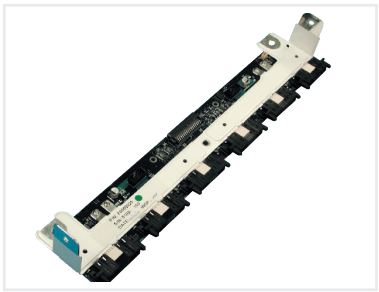
- Single Coated
- Laminated
- Potting
- Powder Coating
- Welding
- 1mm to 6mm

APPLICATIONS

COMMUNICATIONS & DATA

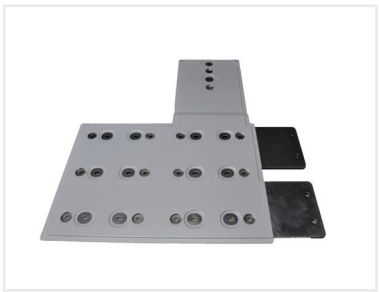




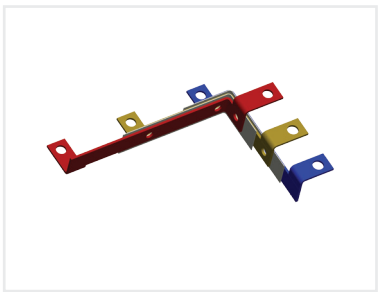


Backplanes & Power
Connectorized Boards

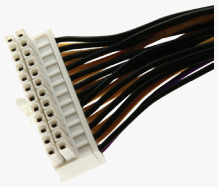
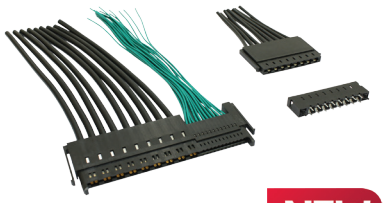
RENEWABLE ENERGY



HYBRID AND ELECTRIC VEHICLES (HEV)



CABLE ASSEMBLIES

PRODUCTS	WIRE SIZE	CURRENT RATING	HIGHLIGHTS	CAPABILITIES
 Minitek Pwr™ 4.2	24–18AWG (0.25–0.75mm²)	Up to 9A	Right angle or straight receptacles.	▪ Custom over-molding ▪ Crimp quality monitoring ▪ Ultrasonic Welding ▪ High Flex Wires
 HPCE® NEW	26–10AWG (0.14–6mm²)	Up to 30A	1 piece (cable mating to edge card) and 2 piece (cable mating to PCB header).	
PwrBlade+™ NEW	14–6AWG (2.5–16mm²)	Up to 60A	Connects with right angle or vertical board mounted headers. Squeeze to release or panel mount form factors.	
Pwr TwinBlade®	10–2AWG (6–35mm²)	100A/Twin Contact	Both halves are touch proof. Four coding options.	
BarKlip™ I/O NEW	14–2AWG (2.5–35mm²)	Up to 200A	Direct pluggable connection to busbar. True compliant spring adjusts for variations in busbar alignments and surface finish.	

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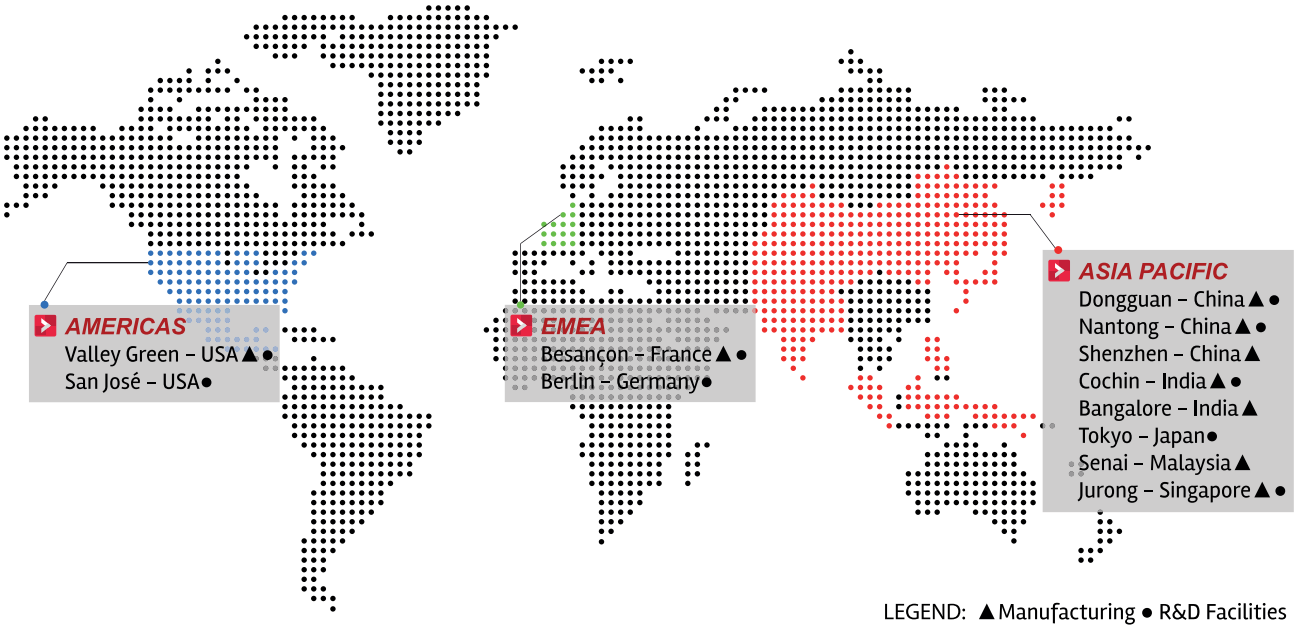
Email: technicalservices@fci.com

When you purchase a Power Interconnect Solutions Product from FCI, you can also feel comfortable knowing that you're being responsible.

Our corporate social responsibility (CSR) objective is to minimize our effects on the environment, ensure safe and healthy working conditions, promote human rights and give back to the community. We support the Electronics Industry Citizenship Coalition (EICC) common code of conduct for supply chain responsibility and engage with suppliers to minimize risks and address shared challenges on CSR.

FCI MANUFACTURING AND R&D FACILITIES



LEGEND: ▲Manufacturing ● R&D Facilities

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