

# HCI® CONNECTOR SYSTEM

## OVERVIEW

The HCI® connector system anticipates the continued trend toward increased system power demands that is driving the need for increased power density. The HCI® connector system is designed to address requirements that extend beyond the capability of FCI's proven PwrBlade® connector system, the industry standard for DC power supply interfaces and power distribution.

The HCI® connector system likewise provides capability for both power and signal contacts in a single connector to enable power distribution and power control. Integrated HCI® power connector solutions, enabling DC power, AC power, and signal contacts in a single molded housing, also provide incredible flexibility to address requirements for custom configurations.

HCI® connectors employ stamped and formed power contacts, initially pioneered by FCI with its PwrBlade® system, as an innovative and cost effective alternative to expensive screw-machined contacts for high-current applications.

The touch-proof HCI® housing is designed to optimize airflow. The housing permits airflow through the connector by providing vents above the signal field as well as vents above the power contacts that permit airflow away from the mated interfaces and along the entire length of the contacts.

Available HCI® options support standard coplanar (right-angle header to right-angle receptacle) and backplane (right-angle header to vertical receptacle) form factors.



## FEATURES & BENEFITS

- Up to 144A/power contact without exceeding a 30°C temperature rise in still air
- For high-wattage or high current density needs in power supplies & power distribution applications
- Provides power contacts for power distribution and signal contacts for power control
- Number and placement of power and signal contacts are highly configurable for custom power needs
- Power contact spacing options exist for AC (400V max) and DC (250V max) power
- Highly vented housing design maximizes airflow effects around and through the connector system
- Rugged, molded-in guides enable blind mating
- Connector housing does not overhang the board edge so the board-to-board spacing can be adjusted if needed
- Up to 3 levels of sequential contact including a short detect pin for hot swap applications
- Two and three position modules are available for use alongside the ZipLine®, AirMax VS® or Millipacs® Hard Metric-compatible connector series
- UL/CSA and TUV approved
- Board retention devices are provided to secure connectors during wave solder process
- AC cable port option (cable passthrough) as well as direct attach to busbars for power distribution are available

## TARGET MARKETS/APPLICATIONS

- AC/DC pluggable power supplies in data, telecom & datacom/networking
- Industrial PCs
- Industrial controls & instrumentation
- Medical



## TECHNICAL INFORMATION

### MATERIALS

- Housings: High-temperature thermoplastic (UL94V-0), black
- Contact base material:
  - Power – high-conductivity copper alloy
  - Signal – copper alloy
- Contact finish:
  - Separable interface: 30µin. (0.76µm) performance-based plating over nickel
  - Board termination area: Matte tin over nickel

### ELECTRICAL PERFORMANCE

- Current rating:
  - 86 Amps – 10 contacts fully energized at 30°C temperature rise in still air
  - 144 Amps – 1 contact fully energized at 30°C temperature rise in still air
- Power contact resistance: ≤0.5mΩ after after environmental exposure

### MECHANICAL PERFORMANCE

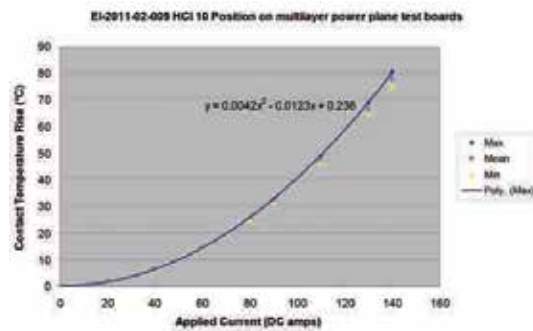
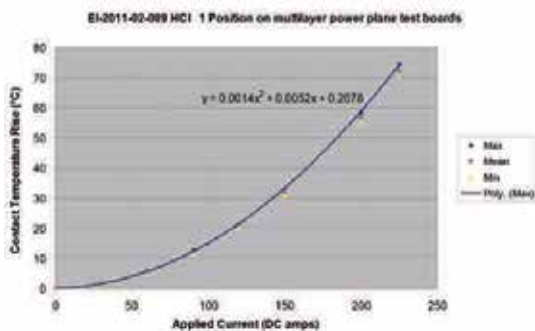
- Mating force: The force to mate a receptacle connector and compatible header shall not exceed 36.5 ounces per power contact and 3.5 ounces per signal contact
- Withdrawal force: The withdrawal force shall not be less than 26 ounces per power contact and 0.64 ounces per signal contact

### SPECIFICATIONS

- Product specification:
  - GS-12-380
- Application specification:
  - GS-20-070

### APPROVALS AND CERTIFICATIONS

- UL-1977, CSA – 95 Amps per contacts with 10 contacts energized in still air
- TUV



Description	Part Numbers
2DC+ 16S + 4DC Right Angle Header	10074864-003LF
2DC+ 16S + 4DC Vertical Receptacle	10074866-001LF
20S+ 8DC Right Angle Header	10078546-001LF
20S+ 8DC Vertical Receptacle	10078548-001LF
10DC+ 24S Right Angle Header	10065864-003LF
10DC+ 24S Vertical Receptacle	10065127-001LF
11DC+ 24S Right Angle Header	10082091-003LF
11DC+ 24S Vertical Receptacle	10082093-001LF
7DC+ 24S + 4DC Right Angle Header	10082722-001LF
7DC+ 24S + 4DC Right Angle Receptacle	10082724-001LF
14DC+ 24S + 14DC Right Angle Header	10084757-001LF
14DC+ 24S + 14DC Vertical Receptacle	10084759-001LF

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