

HIGH POWER CARD EDGE (HPCE®) CABLE ASSEMBLY

OVERVIEW

The HPCE® cable assembly is a next-generation power cable assembly for demanding applications requiring high linear current density and low power loss. It offers both one-piece (cable to card edge) and two-piece (cable to header) solutions. Both have a low profile height (7.5mm) and are based on very cost-effective and highly reliable stamped-and-formed power contact technology similar to other power solutions from FCI.

The HPCE® cable assembly incorporates an innovative power contact and housing design that permits a more compact and lower profile package for demanding AC and DC power distribution applications. HPCE® cable assembly offers low profile height (for maximized airflow), significantly increased linear current density and low contact resistance characteristics make it ideal for next generation 1U/2U servers, storage enclosures, telecommunications equipment and datacom/networking equipment.



FEATURES & BENEFITS

- Current rating of 36A for high power contact and 21A for low power contact (with multiple power contacts fully energized) without exceeding a 30°C temperature rise in still air
- Low profile height (7.5mm) maximizes airflow for effective system cooling
- Highly vented housing design maximizes heat dissipation
- Signal contacts are available for power control
- Number and placement of power and signal contacts are highly configurable for custom power needs
- Polarized housing option ensures proper mating board orientation for one-piece solution
- Integrated guide features make it ideal for blindmate applications for two-piece solution
- Robust design includes touch-proof safety features that are UL/IEC 60950 compliant

- Power & Signal First-Mate, Last-Break sequencing available for hot swap applications
- Various contact types to meet many power distribution applications:
 - High Power: (10 to 14 AWG CtB)
 - Low Power: (14 to 16 AWG CtB)
 - Signal: (22 to 26 AWG CtB)

TARGET MARKETS/APPLICATIONS

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

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TECHNICAL INFORMATION

MATERIALS

- Contacts: High performance copper alloy
- Plating: Performance based plating at separable interface (Telecordia GR-1217 CORE Central Office) tin or tin-lead over nickel on press-fit tails
- Housings: High temperature thermoplastic, UL94-V0

ELECTRICAL PERFORMANCE

- Contact resistance (maximum change from initial reading after environmental exposure)
 - Power: <1.5mΩ max.
 - Signal: 20mΩ max.
- Current rating (with <30°C temperature rise above ambient)
 - Power: Current rating to 36A for high power contact and 21A for low power contact (with multiple power contacts fully energized)
 - Signal: 4A/contact

ENVIRONMENTAL

- Operating temperature: -55°C to +105°C

MECHANICAL PERFORMANCE

- Nominal contact wipe distance
 - First mate power: 5.07mm
 - First mate signal: 3.93mm
 - Last mate power: 3.80mm
 - Last mate signal: 2.86mm
- Durability: 200 mating cycles

SPECIFICATIONS

- Production specification: GS-12-1031
- Application specification: GS-20-TBD
- RoHS information, this product is compatible according to the European Union Directive 2002/95/IEC
- Telcordia GR-1217-CORE Central Office qualification: Pending

CERTIFICATIONS & APPROVAL

- UL and CSA pending

PART NUMBERS

Description	Part References
36P-24S (24P-24S) Cable mates to edge card	Contact FCI for part number information
36P-24S (36P-24S) Cable mates to edge card-molded latch	
36P-24S (24P-24S) Cable mates to header with guide post	
36P-24S (24P-24S) Cable mates to header with guide post-molded latch	
36P-24S (24P-24S) R/A header with guide slot	
36P-24S (24P-24S) R/A header with guide slot-molded latch	
36P-24S (24P-24S) Vertical header with guide slot	
36P-24S (24P-24S) Vertical header with guide slot-molded latch	
14DC+ 24S + 14DC Vertical Receptacle	

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