

Pwr Profile+™

Low Profile I/O Cable Assemblies

DESCRIPTION

Pwr Profile+™ I/O cable assemblies and mating board mount headers are a low profile (8.38mm height) and high current density alternative to existing cable-to-board power connector solutions.

Pwr Profile+™ is based on very cost effective and highly reliable stamped-and-formed power contact technology similar to other power solutions from FCI.

Pwr Profile+™ incorporates an innovative power contact design that permits a more compact, lower profile package for demanding cable-to-board applications. Pwr Profile+™ addresses applications requiring additional power density where a need exists to distribute power via cabling in space-constrained, chassis-based equipment platforms.

Pwr Profile+™ is available with two power contacts (for power and return applications), two signal pins for presence detection or power control and a grounding shield on the board connector for EMC requirements. The grounding shield is optional so it can be omitted if the application does not have EMC concerns.

The signal pins for power control are very useful for applications that require current/voltage monitoring and/or feedback regarding battery charge levels (in the case of a battery back-up application). The presence detection feature includes a jumpered signal contact that allows the system to monitor which ports have mated cables and which are empty. If power control or presence detection is not needed, the signal contacts can be omitted.

Pwr Profile+™ is rated to 37A per contact without exceeding a 30°C temperature rise in still air.

The integrated latching system minimizes the connector/cable footprint and the robust housing design includes touch-proof safety features as well as polarization to ensure proper mating.



FEATURES & BENEFITS

- Current rating to 37A/contact for two power contacts without exceeding a 30°C temperature rise in still air
- Compact design is ideal for limited space applications
- Low 8.38mm profile height maximizes airflow for system cooling
- Vented cable housing design maximizes heat dissipation
- Two signal contacts are available for presence detection or power control
- Integrated latching system minimizes connector/cable footprint

- Robust design includes touch-proof safety features that are IEC 60950 compliant
- Polarized housing design ensures proper mating
- Compatible with lead-free processing temperatures

TARGET MARKETS / APPLICATIONS

- Power I/O & distribution in data, telecom & datacom/networking
- Uninterruptible power supplies (UPS)
- Battery & power strip monitoring
- Industrial controls & instrumentation
- Medical



MATERIALS

- Housing
 - High-temperature thermoplastic (UL 94V-0), black
- Contact base metal
 - High-conductivity copper alloy
- Contact finish:
 - Separable interface: 30µin (0.76µm) performance-based plating over nickel (per the GS-12-594 product specification)
 - Board connector solder tail area: Matte tin over nickel

ELECTRICAL PERFORMANCE

- Current rating: 37A/contact maximum at 30°C T-rise in still air
- Operating voltage: Up to 300V maximum
- Dielectric withstanding voltage: 1000V
- Insulation resistance
 - Power contacts: > 5,000 MΩ initially
 - Signal contacts: > 500 MΩ initially
- Contact resistance
 - Power contacts: ≤ 2.0 mΩ initially as well as after environmental exposure
 - Signal contacts: ≤ 30 mΩ initially as well as after environmental exposure

MECHANICAL PERFORMANCE

- Contact wipe distance
 - Power contacts: 4.8mm minimum
 - Signal contacts: 1.5mm minimum
- Durability: 200 mating cycles

PART NUMBERS

Right Angle Board Mount Headers 1P+2S+1P Header (w/ Ground Shield)	10089872-101LF
Cable Receptacle Assembly 1P+2S+1P Receptacle – 6mm ² Wire, 1m Cable Length & Jumpered Signal Contacts	10105849-40100DYL

ENVIRONMENTAL

- Operating temperature: -55°C to + 105°C
- RoHS information, this product is compatible according to the European Union Directive 2002/95/IEC

SPECIFICATIONS

- Product Specification: GS-12-594

CERTIFICATIONS & APPROVAL

- UL – in process
- CSA – in process
- TUV – in process

PACKAGING

- Right angle header: Tape-and-reel or trays

