



**THE DATASHEET OF
10106139-4003002LF**



PwrBlade+[®] Connectors

NEXT GENERATION AC/ DC POWER DISTRIBUTION CONNECTOR SYSTEM

The PwrBlade+[®] connector is a next generation AC/DC power distribution connector system for demanding applications requiring higher linear current density and low power loss. It is capable of 192A/linear inch with eight adjacent high power contacts energized simultaneously and 0.70m power contact resistance after environmental exposure.

The PwrBlade+[®] connector builds on the PwrBlade[®] connector's proven technology but includes enhancements to achieve increased performance and density. It is rated up to 58A per power contact without exceeding a 30°C temperature rise in still air. This product features an innovative high power contact design and housing that allows higher current carrying capability in a more compact package.

The high power contact features an optimized beam design and material property enhancements that significantly increase linear current density making it ideal for next generation 1U/2U servers, storage enclosures, telecommunications equipment, EV charging stations, and datacom/networking equipment.

The PwrBlade+[®] connector also features a highly vented housing design, a low power contact option for applications with multiple voltages and lower power requirements and half-bullet guides for a reduced connector footprint.

The PwrBlade+[®] connector is available with power and signal contacts integrated into a single molded housing for power distribution and power control. PwrBlade+[®] is modularly tooled making the product highly configurable in terms of the number and placement of the power and signal contacts for custom power needs. Right angle and co-planar options are available to accommodate various system architectures.

- Up to 58A per contact
- Suitable for 1U or 2U power supplies
- Press-fit options are available



TARGET MARKETS



FEATURES

- High power contact option up to 58A per contact, at 30°C temperature rise in still air
- Low power contact option up to 40A per contact, at 30°C temperature rise in still air
- Highly vented housing design
- Half-bullet guides
- Large operating temperature range from -40°C to +125°C
- Right angle and coplanar options available with both power and signal contacts
- Number and placement of power and signal contacts
- Solder or press-fit tails are available

BENEFITS

- Cost-effective power delivery in 1U and 2U power supplies or power distribution applications
- Supports applications with multiple voltages and lower power requirements
- Maximizes heat dissipation for effective system cooling
- Reduced connector footprint
- Suitable for extreme environments
- Aids power distribution and power control
- Highly configurable for custom power needs
- Enhanced termination flexibility

TECHNICAL INFORMATION

MATERIAL

- Housing: High temperature thermoplastic (UL 94 V-0, halogen-free), Black
- Power Contact: High conductivity Copper Alloy
- Contact Finish:
 - Separable Interface: 30µin. (0.76µm) performance based plating over Nickel (per the GS-12-658 product specification)
 - Board Connector Solder Tail Area: Matte Tin over Nickel

ELECTRICAL PERFORMANCE

- Current Rating (30°C T-rise in still air)
 - High Power Contacts: Up to 58A per contact
 - Low Power Contacts: Up to 40A per contact
- Operating Voltage (fully loaded)
 - High Power Contacts: 912V max.
 - Low Power & Signal contacts: 124V max.
- Dielectric Withstanding Voltage
 - High Power Contacts: 2500V
 - Low Power & Signal contacts: 1000V
- Insulation Resistance (initially and after environmental exposure)
 - High & Low Power Contacts: >1,000MΩ
 - Signal Contacts: >500MΩ
- Contact Resistance (initially and after environmental exposure)
 - High Power Contacts: ≤0.7mΩ
 - Low Power Contacts: ≤1.5mΩ
 - Signal Contacts: ≤20mΩ

MECHANICAL PERFORMANCE

- Contact Wipe Distance:
 - High Power Contacts: 5.08mm
 - Low Power Contacts: 3.81mm
 - Signal Contacts: 3.81mm
- Durability: 500 mating cycles

ENVIRONMENTAL

- Operating Temperature Range: -40°C to +125°C
- RoHS Information: This product is compatible according to the European Union Directive 2011/65/EU

SPECIFICATIONS

- Product Specification: GS-12-658
- Application Specification: GS-20-141

APPROVALS AND CERTIFICATIONS

- UL E66906
- TUV 14 09 34414 019

PACKAGING

- Tray

TARGET MARKETS/APPLICATIONS



AC/DC Pluggable Power Supplies
Networking Equipment



Industrial PCs
Industrial Controls & Instrumentation



Medical





EV Charging

PART NUMBERS

Description	Part Numbers
PwrBlade+® 2P+16S+2P Right Angle Header	10106124-4004001LF
PwrBlade+® 2P+16S+2P Right Angle Receptacle	10106126-4004001LF
PwrBlade+® 10HDP+32S Right Angle Header	10106132-A008001LF
PwrBlade+® 10HDP+32S Vertical Receptacle	10106139-A008001LF

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