

# **POWER CARD EDGE**

#### Low profile AC/DC power distribution connector system

#### **OVERVIEW**

The Power Card Edge connectors are a cost-effective system that can be used for DC power output from embedded AC/DC power supplies or for power distribution between boards within an enclosure. The narrow connector body helps maximize airflow for increased cooling and is well-suited for use in 1U rack-mount servers or on power distribution boards inside 1U redundant power supply assemblies.

Adjacent power contacts are positioned on 2.54mm pitch along the card edge. Power contacts are manufactured using a high-conductivity copper alloy. Each power contact is rated for up to 7A current measured at 30°C temperature rise in still air. Signal contacts are positioned on 1.27mm pitch.

The connector range includes options for right-angle, vertical, or straddle-mount solder termination with a full complement of power contacts. Right-angle options also include versions that combine power and power control signal contacts or power contacts and an integrated AC pass-through port in a single connector.



#### **FEATURES & BENEFITS**

- One-piece card edge design provides cost-effective power delivery with capacity for up to 7A per power contact
- An arrow connector body enables use in 1U servers and power supplies
- Low-profile design helps maximize airflow for system cooling
- Option for integration of signals and power in a single right-angle connector supports both power control and power distribution
- · Integrated connector design simplifies board assembly
- Right-angle product range includes versions with molded posts or metal fork-locks for retention

- Straddle-mount connectors feature mounting ears for secure PCB attachment
- An optional AC cable port enables a cable pass-through solution
- RoHS compatible design enables compliance with environmental regulations

#### **TARGET MARKETS/APPLICATIONS**

- Servers
- Storage
- Telecommunications
- · Datacom / Networking

## **TECHNICAL INFORMATION**

#### **MATERIALS**

- Housings: high-temperature thermoplastic (UL94V-0), black
- · Contact base material:
  - · Power high-conductivity copper alloy
  - · Signal copper alloy
- Contact area finish: gold over nickel
- · Solder area finish: matte pure tin over nickel

#### **ELECTRICAL PERFORMANCE**

- Current rating: 7A/power contact measured at 30°C temperature rise in still air
- Insulation resistance:  $5000M\Omega$  min. for power contact
- Withstanding voltage: 1000V AC for power contact
- · Contact resistance:
  - · Right-angle:  $55m\Omega$  max.
  - Straddle-mount:  $20m\Omega$  max.
  - · Vertical: 20mΩ max.

#### **MECHANICAL PERFORMANCE**

- Durability: 200 mating/un-mating cycles
- Insertion force for an add-in board:
  - · Right-angle: 13.62kg max.
  - · Vertical or straddle-mount: 8.0kg max.
- Operating temperature range: -5°C to +105°C

#### **SPECIFICATIONS**

- · Right-angle product specification: GS-12-259
- Vertical product specification: GS-12-338
- · Straddle-mount product specification: GS-12-279

#### **APPROVALS AND CERTIFICATIONS**

· UL, CSA and TUV approved

#### **PACKAGING**

Trays

## **PART NUMBERS**

Description	
Right Angle Solutions	Base Number
5 power + 12 signal + 5 power	10028886
7 power + 12 signal + 7 power	
10 power + 12 signal + 10 power	
14 power + 12 signal + 14 power	
With AC Power port	10055090
2x14, 2x17, 2x22, 2x25, 2x28, 2x29, 2x31, 2x32 power	10035388
Vertical Solutions	
2x19, 2x31, 2x32, 2x35 power	10046972
2x8 power	10046972
Straddle-Mount Options	
2x19, 2x23 power	10035388

Use the base numbers to reference the product drawings to obtain detailed dimensions and complete part numbers.

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