

SheerPwr® Circular Connector

REPEATED LOW RESISTANCE AND HIGH MIS-ALIGNMENT

SheerPwr® Circular is a high-current, low-resistance interface, designed for applications connecting busbars-to-busbars, busbars-to-boards and board-to-board configurations. It uses a robust and compliant power contact, assembled in a circular orientation. This forms a power socket, designed to mate with traditional machined pins, which provides repeated low resistance, a high misalignment tolerance and high current carrying capabilities.

The large beam deflection range in SheerPwr® Circular handles up to $\pm 0.64\text{mm}$ permanent misalignment; which allows all of the beams to make contact with the pin even when fully misaligned. In addition, SheerPwr® Circular is plated in Amphenol ICC's proprietary silver based plating technology, AGT®, which provides ultra-low contact resistance.

- Redundant contact points for improved reliability and lower resistance
- Low profile socket – regardless of current carrying capacity
- Provides a minimum of 4.00mm of gatherability, which increases with pin diameter



TARGET MARKETS



FEATURES

- Large beam deflection range handles up to $\pm 0.64\text{mm}$ permanent misalignment
- Redundant contact points
- Large gatherability
- AGT® silver plated contacts
- 3.60mm, 6.00mm, and 8.00mm mating pin sizes
- Low 6.80mm connector height
- Low halogen materials

BENEFITS

- When fully misaligned, all of the beams still make contact with the pin ensuring higher efficiency
- Low and stable resistance
- For blind-mate applications
- Lower resistance
- Current carrying range delivering 70A–200A, depending on pin diameter
- Compact size fits in many applications and allows for greater airflow
- Meets JEDEC JS709 Electronics Industry Standards

TECHNICAL INFORMATION

MATERIAL

- Housing: High temperature thermoplastic, UL 94 V-0, black
- Terminal: High conductivity copper alloy
- Contact Area: AGT® silver-based plating

MECHANICAL PERFORMANCE

- Contact Wipe Distance: Depends on pin length
- Durability: 100 mating cycles
- Mating Force: 20N to 50N

ELECTRICAL PERFORMANCE

- Contact Resistance: 0.05 to 0.10mΩ
- Current Rating (30°C temperature rise in still air)
 - 3.60mm-70A; 6.00mm-165A; 8.00mm-185A
- Operating Voltage: Depends on application
- Dielectric Withstanding Voltage: 1000V

ENVIRONMENTAL

- Operating Temperature: -40°C to +105°C
- RoHS Information: Compatible according to European Union Directive 2011/65/EU

SPECIFICATIONS

- Production Specification: GS-12-1316
- Application Specification: GS-20-0467

PACKAGING

- Trays

TOOLING INFORMATION

- General flat press tooling required for vertical press-fit configuration

TARGET MARKETS/APPLICATIONS



AC/DC Pluggable power supplies
Networking equipment
Switches



Server
Storage equipment

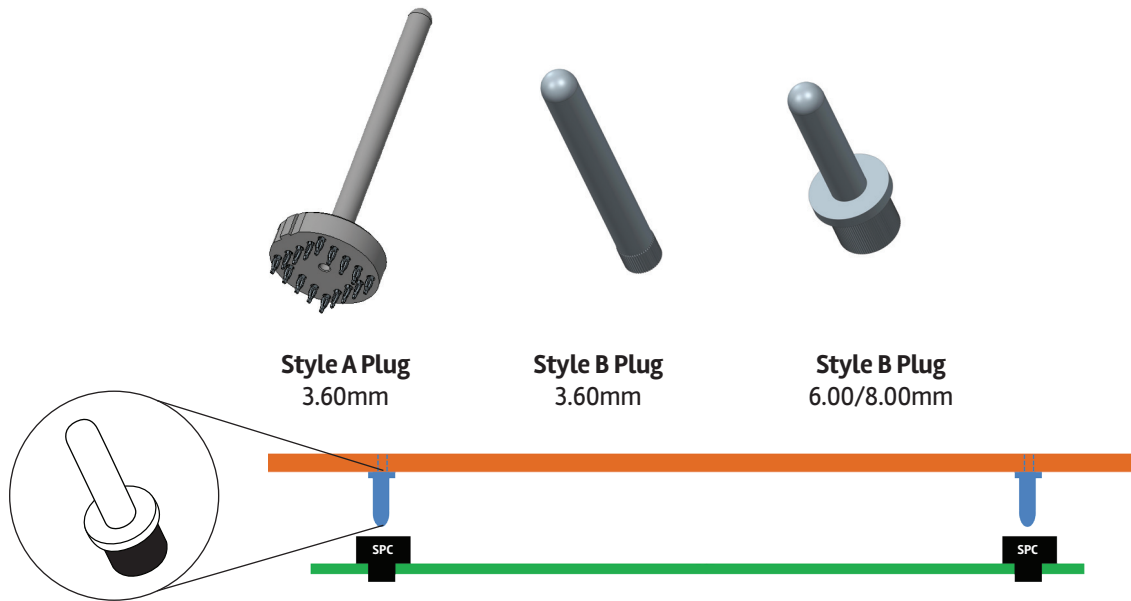


Industrial PC
Industrial Controls & Instrumentation
Circuit breakers



Medical

PART NUMBERS



Receptacle Pin Diameter	Press-fit to PCB	Mating Plug Pin Diameter	Style A Press-fit to PCB	Produces Mezzanine Stack Height *	Style B Press-fit to Busbar	Produces Mezzanine Stack Height *
3.60mm	10132381-20360LF	3.60mm	10140847-3601LF	42.00mm	10137675-XXXXLF 10139665-XXXXLF	Follows customer application
6.00mm	10132381-20600LF	6.00mm	10140553-XXXXLF	Follows customer application		Follows customer application
8.00mm	10132381-20800LF	8.00mm	10140847-XXXXLF	Follows customer application		Follows customer application

* Other stack heights available upon request.