60 A Universal AC Input Connector and Cable Assemblies

HIGH POWER 20U POWER SHELF CONNECTOR AND CABLE ASSEMBLY

Amphenol's 60 A AC Input Connectors and Cable Assemblies are designed to meet 20U power distribution architecture standards while providing a high power and seamless method of routing power directly from the busway to the power shelf. The overmolded shell design and positive locking mechanism ensure reliability while maintaining high-current capabilities within space-constrained applications. The slim 7-pin design provides an optimal connection for PCB and wired connections within the power shelf and offers easy configurability to meet various voltage and current ratings. Amphenol's 60 A AC Whip meets IEC cable industry standards and offers a best-in-class solution for data center applications, including modular racks, power shelves (PSUs), battery backup units (BBUs), and hyperscale computing architecture.



TARGET MARKETS

- Distributes up to 60 A per contact and 600 VAC/VDC
- Overmolded shell design ensures reliability in space-constrained applications
- Simple, configurable plug-and-play solution to meet various current and voltage ratings
- 7-pin connector design for Star, Delta, and single-phase connections
- Design flexibility through right-angle, vertical, and 90-degree top exit options

FEATURES	BENEFITS
Contacts with high-conductivity Copper Alloy	Up to 60 A per contact Power/Return (CNR 30 °C temperature-rise) 120 A total
Overmolded shell design	Ensures reliability and maintains high-current capabilities
IP20, touch-safe, and pin sequencing (plug/receptacle)	Provides additional safety with live electrical parts and customized sequencing options for application requirements
Right-angle, vertical, and 90-degree top exit options	Permits additional design flexibility
Polarization and guidance between connectors, panels, and PCBs	Ensures proper mating of cables and prevents misalignment during installation
Low-profile configuration	Ideal for 20U power supplies or distribution systems
Positive latching mechanism	Provides a secure connection

TECHNICAL INFORMATION

MATERIAL

- Power Contacts: High Conductivity Copper Alloy
- Female contact – Cool Band: Copper Alloy
- Housing: High-temperature thermoplastic, UL 94 V-0, Halogen-free
- Finish: Gold over 1.27 µm min. Nickel underplated

ELECTRICAL PERFORMANCE

- Power Contacts:
- 60 A Power / Return (CNR 30 °C temperature-rise)
- 70 A Power / Return (UL / UNR 30 °C at RTI temperature)
- 70 A Power / Return (TUV at RTI Temperature)
- Operating Voltage Range:
- 600 VDC/VAC (CNR 30 °C temperature-rise)
- 600 VDC/VAC (UL / UNR 30 °C at RTI temperature)
- 600 VDC/VAC (TUV at RTI Temperature)
- Contact Resistance:
- Power Contact: End-of-life resistance of 0.05 mΩ max.

MECHANICAL PERFORMANCE

- Industry standard 2-piece strain relief options
- Custom low-profile overmolded strain relief
- Mating / Un-mating Force: Mating force shall not exceed 260 N max., and un-mating shall not be less than 18.8 N
- Durability: 100 mating cycles

ENVIRONMENTAL

- Operating Temperature Range: Between -40 °C and +105 °C

APPROVALS AND CERTIFICATIONS

- UL 94 V-0
- EIA 364
- IEC / EN 61984
- IPC / WHMA-A-620

SPECIFICATIONS

- GS-12-1912
- GS-20-0911

PACKAGING

- Carton

TARGET MARKETS/APPLICATIONS



Data Center
Hyperscale Computing Architectures
AI & ML



Power Supply Units
Battery Backup Units
Industrial Energy Storage

PART NUMBERS

Description	Part Numbers
60 A AC Whip Connector Straight-Exit with IEC Cable	10176921-08-FXXXLF
60 A AC Whip Connector Right-Angle with IEC Cable	10176921-07-FXXXLF
7-pin Straight-Exit Boardside Connector	10173750-07PL01
7-pin Right-Angle Boardside Connector	10173750-07PR01

Find part number details using the search box on www.amphenol-cs.com

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