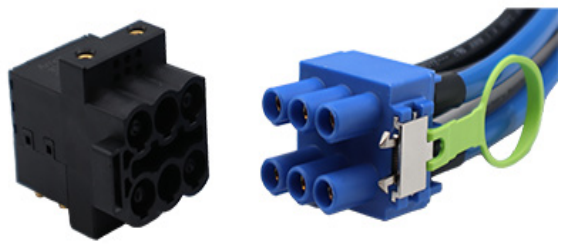
Power Solutions

Amphenol

M-CRPS +54V Connectors & Cable Assemblies

DESIGNED FOR OCP M-CRPS +54VDC RACK & POWER BASE SPECIFICATION STANDARDS

Amphenol's M-CRPS (+54V) Connectors and Cable Assemblies are designed to meet the Open Compute Project's M-CRPS power supply input specifications, providing robust performance and flexibility. Capable of delivering up to 40A per contact, these connectors support 8AWG – 12AWG wire sizes, enabling standardized DC-MHS rack and power architecture while maintaining design adaptability. Featuring two mate-last, break-first sense contacts, the M-CRPS +54V enables hot-swapping functionality for enhanced system and connector protection. Its keyed housing and polarization features guarantee proper mating and prevent misalignment during installation, while the low-profile pull-tab latch maintains a secure and reliable connection. Optimized for power distribution, this connector facilitates the seamless transition of existing 12V system designs into 54V ORv3 rack architecture, delivering best-in-class performance for modern data center applications.



TARGET MARKETS

- Fully compliant with OCP M-CRPS +54VDC base specifications
- Ideal solution for retrofitting 12V applications into 54V rack architecture
- Mate-Last, Break-First (MLBF) signal contacts for hot-swapping functionality
- 8AWG – 12AWG wiring options
- Low-profile pull-to-release latching system

FEATURES	BENEFITS
Fully compliant with M-CRPS+54V rack & power base specification	Enables standardized DC-MHS rack & power design architecture
Keyed housing and polarization features	Ensures proper mating and prevent misalignment
Integrated sense contacts	Permits Mate-Last, Break-First capability (MLBF)
Overmolded cable availability	Ensures reliability and enhances durability
8AWG – 12AWG wire size options	Permits flexibility in design and application needs

TECHNICAL INFORMATION

MATERIAL

- Power Contacts – High conductivity Copper Alloy
- Housings – High temperature thermoplastic, UL 94V-0 compliant
- Finish – Gold flash over 1.27µm min. Nickel underplated

ELECTRICAL PERFORMANCE

- Power Contacts: Up to 40A/Pin (8AWG, 30°C temperature-rise over ambient, still air)
- Operating Voltage: 600VDC/VAC
- Dielectric Withstanding Voltage: 4000VDC for power contact
- Contact Resistance: End-of-life contact resistance of 0.6mΩ

ENVIRONMENTAL

- Operating Temperature Range: -40°C to +105°C

MECHANICAL PERFORMANCE

- Mating / Unmating Force: Mating force shall not exceed 156N and un-mating force shall not be less than 9.730N

SPECIFICATIONS

- Product Specification: GS-12-1818
- Application Specification: GS-20-0791

APPROVALS AND CERTIFICATIONS

- UL/CSR/CSA
- TUV

PACKAGING

- Bag/Carton

TARGET MARKETS/APPLICATIONS

Power Supply Units

Networking Switches
Hyperscale Computing Architectures
Server/Storage Sleds
Artificial Intelligence (AI) & Machine Learning (ML)

PART NUMBERS

Description	Part Numbers
M-CRPS AC Input Power Board Connector (6-pin)	10170331-*
M-CRPS AC Input Overmold Cable Assembly	10168773-*
M-CRPS AC Input Cable Assembly	10168682-*

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

PWRMCRPS54V1224EA4