

IPC-M50 Connectors

RUGGED INDUSTRIAL POWER CONNECTOR

Amphenol's IPC-M50 power connector is designed to house two separate 6AWG contacts rated up to 50A per contact. IPC-M50 is the ideal connector solution for battery interconnects, eMobility charging, and other DC power distribution applications. IPC-M50 features the smallest profile in Amphenol's IPC product line adequate for wire sizes from 12AWG – 6AWG. This connector is designed for cable-to-cable applications in multiple color-coded options with built-in keying features for proper mating.

- Rated up to 50A per 6AWG contact (UL rated currents up to 120A)
- Color-keyed housing design (Gray, Blue, and Red)
- Silver plated contacts rated up to 10,000 mating cycles
- UL tested and approved when cross-mated with competitive connectors

IPC



TARGET MARKETS



FEATURES

- Rated to house 6AWG contacts up to 50A/Contact
- Silver plated contacts rated up to 10,000 mating cycles
- Color-coded mechanically keyed housing design
- Small form factor

BENEFITS

- Provides high power density in a low profile
- Durable contact materials
- Prevent cross-mating devices with different voltages (all connectors UL rated to 600V, colors are identifiers to prevent accidents)
- Allows for versatility in system design

TECHNICAL INFORMATION

MATERIAL

- Power Contacts: Copper Alloy
- Housing: High temperature thermoplastic, UL 94V-0 compliant
- Retention Spring: Stainless Steel
- Finish: Contact: Silver plated

ELECTRICAL PERFORMANCE

- Operating Current Range: Size A:

ePwr™	Wire Size	UL1977	CSA
IPC-M50	6AWG	120A	50A

- Operating Voltage Rating: 600VAC/VDC

MECHANICAL PERFORMANCE

- Mating/Un-mating Force:

ePwr™	Contacts Type	Avg. Mating & Un-mating Force
IPC-M50	Wire-to-Wire high force contacts	67N

- Durability: 10,000 Mating/Un-mating Cycles (Silver plated contacts)

APPROVALS & CERTIFICATION

- DUL/CSA Approved: File # E66906

ENVIRONMENTAL

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

SPECIFICATIONS

- Product Specifications: GS-12-1905
- Application Specifications: GS-20-0861

PACKAGING

- Insulator: Bulk Packing
- Contacts: Bulk Packing

TARGET MARKETS/APPLICATIONS



Energy Storage Systems (ESS)



eMobility
EV Chargers



Industrial



Robotics

EXAMPLE PART NUMBERS

Description	Part Numbers
IPC-M50 Gray Connector	10170820-001LF
IPC-M50 Blue Connector	10170820-002LF
IPC-M50 Red Connector	10170820-003LF
IPC-S75/M50 10AWG/12AWG HD Contact	10170818-S01LF
IPC-S75/M50 6AWG HD Contact	10170818-S05LF
IPC-M50 8AWG HD Contact	10170818-S04LF

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