

High-Power Cable Assemblies



High-Power Cable Assemblies offer discrete wires or overmolded cables from 6 to 12 AWG and deliver 30.0 to 80.0A current ratings

Features and Advantages

Custom assemblies for production

Meet design needs after prototyping is complete. Molex's extensive design and manufacturing expertise can meet the unique challenges of the most demanding applications



Mega-Fit High-Power Cable Assemblies

Mega-Fit Discrete Wire and Overmolded Cable Assemblies are standard products

Provides immediate, off-the-shelf availability for both prototyping and production



EXTreme Guardian High-Power Cable Assemblies

UL-approved discrete wires

Ready to use in electronic appliance applications. Provide ease of design, prototyping and production



EXTreme Ten60Power High-Power Cable Assemblies

Assembled in ISO/TS16949-certified facilities

Ensures high quality. Meets current automotive industry standards

Pin-to-pin mapping from receptacle to PCB header

Provides ready-to-use, plug-and-play connections

Meets 2011/65/EU RoHS compliance

Decreases engineering time and resources



EXTreme Ten60Power Connector

The EXTreme Ten60Power provides power blades rated up to 60.0A

Ensures maximum current-to-length ratio



EXTreme Guardian Power Connector

The EXTreme Guardian System offers 80.0A per blade and EMI/RFI shielding

Delivers a superior current-density option. Delivers superior electrical performance



Mega-Fit Power Connector

Mega-Fit Power Connectors deliver a 23.0A current rating and premium housing features

Provides high power and a reliable connection

Markets and Applications

Telecommunications/Networking

- Power supplies and distribution
- Routers
- Servers
- Switches
- Cellular base stations

Data/Computing

- High-end servers

Industrial Automation

- Lighting and automation
- Machinery and heavy manufacturing
- Spa and pool manufacturers

Consumer

- Uninterruptable power supply (UPS)

Automotive

- Electric vehicles

Commercial Vehicle

- Power converters
- Unsealed electronic control modules

Home Appliance

- Heaters and air conditioners
- Washers and dryers
- Electric vehicles



Servers



Routers



Cellular Base Station

Specifications

Mega-Fit Power Connector System

ELECTRICAL

Voltage (max.):
 Overmolded Assembly: 300V
 Discrete Wire Assembly: 600V
 Current (max.): 23.0A
 Contact Resistance (max.): 6 milliohms

EXTreme Guardian System

REFERENCE INFORMATION

Packaging: Tray, Reel or Bulk
 UL File No.: E29179
 CSA File No.: LR19980 (1779070)
 Mates With: PCB Headers (Series 46817, 151035, 151053) mate with Overmolded Cable Assemblies (Series 68790 or 111119)
 Use With: Power Harness Crimp Receptacles (Series 46818, 151034) Use High-Power Terminals (Series 46819) and TPA Clips (Series 151076)
 Designed In: Millimeters
 RoHS: Yes
 Halogen Free: Yes
 Glow Wire Compliant: No

EXTreme Ten60Power High-Current Connector

REFERENCE INFORMATION

Packaging: Bulk
 UL File No.: E29719
 CSA File No.: LR-19980_A_Class 6233-81
 CSA tested to UL-1977 and
 CSA C22.2 No. 182.3-M1987
 TUV: R 72081037
 Designed In: Millimeters
 RoHS Compliant: Yes

PHYSICAL

Housing: 30% glass filled LCP or PBT
 Contact:
 Power Contacts — Copper (Cu) Alloy
 Signal Contacts — Copper (Cu) Alloy
 Plating:
 Contact Area — Select Gold (Au)
 Solder Tail Area — Tin (Sn)
 Underplating — Nickel (Ni)
 Flammability Rating: 94V-0
 Operating Temperature: -40 to +105°C

MECHANICAL

Contact Insertion Force into Housing (max.): 30N
 Contact Retention to Housing (min.): 175N
 Latch Strength (min.): 200N
 Insertion Force to PCB: TBD
 Mating Force (max.): 5.6N per Circuit (Gold)
 Unmating Force (min.): 5.6N per Circuit (Gold)
 Durability (max.): 200 Mating Cycles (Gold)

ELECTRICAL

Voltage (max.): 600V AC/DC
 Current (max.): 80.0A per blade
 Dielectric Withstanding Voltage: 2,200V AC

PHYSICAL

Housing: Polyester, 94V-0
 Contact: Copper (Cu) Alloy
 Plating:
 Contact Area — Gold (Au)
 Solder Tail Area — Tin (Sn)
 Underplating — Nickel (Ni)
 PCB Thickness (min.): 1.40mm
 Operating Temperature: -40 to +105°C

MECHANICAL

Pitch:
 Original 3-Row Connectors:
 Power — 5.50mm (DC) or 7.50mm (AC)
 Signal — 2.54 by 2.45mm
 High-Density Signal 5-Row Connectors:
 Power — 5.50mm (DC) or 7.50mm (AC)
 Signal — 2.00 by 1.65mm
 Mating Force (max. per circuit):
 Power Contacts:
 Vertical Receptacle — 764g
 Right-Angle Receptacle — 460g
 Signal Contacts — 75g
 Unmating Force (min. per circuit):
 Power Contacts:
 Vertical Receptacle — 340g
 Right-Angle Receptacle — 235g
 Signal Contacts — 30g
 Durability: 200 cycles

PHYSICAL

Housing: Overmolded Assembly: PBT
 Discrete Wire Assembly: Nylon
 Contact: Copper Alloy
 Plating:
 Contact Area — Overmolded Assembly: Gold
 Discrete Wire Assembly: Matte Tin
 Termination — Matte Tin
 Operating Temperature: -40 to +105°C

MECHANICAL

Contact Retention to Housing (average): 26.61N
 Mating Force (max.): 36.60N
 Unmating Force (max.): 34.39N
 Durability (min.): 25 cycles

ELECTRICAL

Voltage (max.):
 Power — 600V
 Signal — 250V
 Current (max.):
 Power:
 Board-to-Board — 60.0A
 Wire-to-Board — 50.0A
 Panel-to-Board — 50.0A
 Signal — 2.5A
 Dielectric Withstanding Voltage: 1500V
 Insulation Resistance (min.): 5000 Megohms

Ordering Information

Series No.	Cable Assembly	Lengths	Custom Product	Description
45136	Mega-Fit Off-the-Shelf Discrete Wire Cable Assembly	150.00mm, 300.00mm, 1.0m	Contact Molex	Custom High-Power Cable Assemblies
245136	Mega-Fit Off-the-Shelf Overmold Cable Assembly	0.50, 1.0, 2.0m		

www.molex.com/link/highpowerassemblies.html