

PRELIMINARY

Commercial Unmanned Aerial Vehicle/System (UAV/UAS) Battery-Cartridge Connectors



Reliable and proven EXTreme Power™ Products – ideal for battery cartridges in drone applications – provide high current in a robust, compact size

Features and Benefits

EXTreme LPHPower™ System

7.50mm profile height

Facilitates optimum airflow in the battery cartridge

30.0A per contact at +30°C T-rise

Provides excellent current density of 127.0A per linear inch

Hybrid power and signal circuit layout with integrated alignment guides

Conforms to a variety of electrical requirements and applications in a robust, self-aligning package

EXTreme Ten60Power™ System

10.00mm profile height

Facilitates optimum airflow in the battery cartridge

30.0A and 60.0A power contacts at +30°C T-rise

Enhances design flexibility with both low- and high-power contacts contained in a robust, self-aligning package

Configurable product with power, signal and alignment modules

Boosts design flexibility and can be configured to fit virtually any power and signal circuit alignment

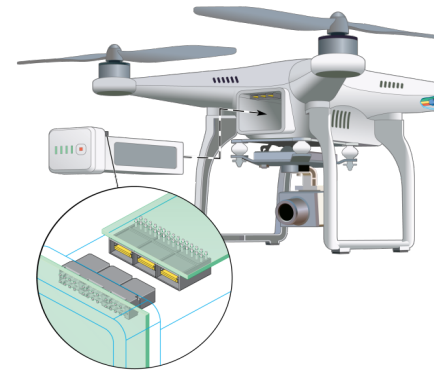
EXTreme PowerMass™ System

40.0A & 150.0A per contact at +30°C T-rise

Maximizes power delivery from the battery via extremely high-current blades

Configurable product with power, signal and alignment modules

Meets customer requirements exactly with several different high-power contacts in a robust, self-aligning package



Commercial Unmanned Aerial Vehicle/System (UAV/UAS) EXTreme LPHPower™ Battery-Cartridge Connector

Applications

Aerospace and Defense

Precision Agriculture/Fertilization

Commercial Vehicle

Package Delivery

Consumer

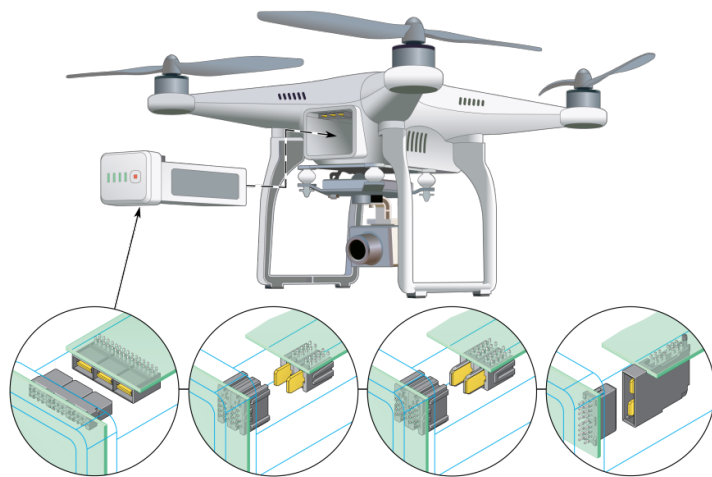
“GoPro” HD Photography

Film Industry

Surveillance

Industrial

Utility Inspection



EXTreme LPHPower™ Connector

EXTreme Ten60Power™ Connector

EXTreme Ten60Power™ Split Blade Connector

EXTreme PowerMass™ Connector

Commercial Unmanned Aerial Vehicle/System (UAV/UAS) Battery-Cartridge Connectors

Specifications

EXTreme Ten60Power™ Connectors

REFERENCE INFORMATION

Packaging: Tray
 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
 RoHS Compliant: Yes
 Designed In: Millimeters

ELECTRICAL

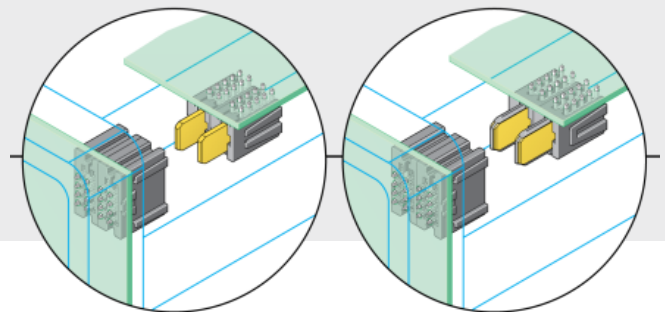
Voltage (max.):
 Power: 600V
 Signal: 250V
 Current (max.):
 Power: 60.0A
 Signal: 2.5A
 Dielectric Withstanding Voltage: 1500V
 Insulation Resistance: 5000 Megohms

MECHANICAL

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

PHYSICAL

Housing: 30% Glass-Filled LCP or PBT
 Contact:
 Power: Copper (Cu) Alloy
 Signal: 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



EXTreme LPHPower™ Connector

EXTreme Ten60Power™ Split Blade Connector

Specifications

EXTreme LPHPower™ Connectors

REFERENCE INFORMATION

Packaging: Tray or Tube
 UL File No.: E29179
 CSA File No.: LR-19980
 TUV: 30683046.001
 Designed In: Millimeters

PHYSICAL

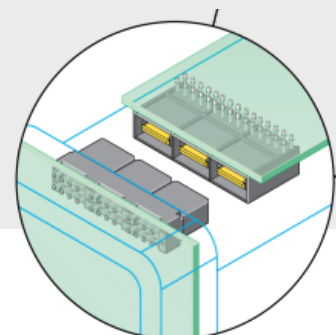
Housing: LCP
 Contact:
 Power: Copper (Cu) Alloy
 Signal: Phosphor Bronze
 Plating:
 Contact Area: Select Gold (Au)
 Solder Tail Area: Tin (Sn)
 Underplating: Nickel (Ni)
 Flammability Rating: 94V-0
 Operating Temperature: -40 to +105°C

ELECTRICAL

Voltage (max.): 250V
 Current (max.):
 Power: 30.0A
 Signal: 1.0A
 Contact Resistance (per contact):
 Power: 0.50 milliohms
 Signal: 6.24 milliohms
 Dielectric Withstanding Voltage: 1500V
 Insulation Resistance (min.): 5000 Megohms
 Current Interruption:
 Power: 30.0A at 48V DC
 Signal: 1.0A at 30.0V

MECHANICAL

Pitch:
 Power: 12.00mm
 Signal: 1.27mm
 Mating Force (max. per circuit):
 Power Contacts: 6.87N (1.54 lb)
 Signal Contacts: 1.08N (0.24 lb)
 Unmating Force (min. per circuit):
 Power Contacts: 5.88N (1.32 lb)
 Signal Contacts: 0.02N (0.03 lb)
 Durability (min.): 250 cycles



EXTreme LPHPower™ Connectors

Commercial Unmanned Aerial Vehicle/System (UAV/UAS) Battery-Cartridge Connectors

Specifications

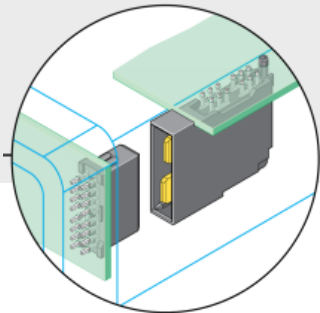
EXTreme PowerMass™ System

REFERENCE INFORMATION

Packaging: Tray
 UL File No.: E29179
 CSA File No.: LR-19980
 TUV: Pending
 Designed In: Millimeters

PHYSICAL

Housing: LCP
 Contact: Copper (Cu) Alloy
 Plating (min.):
 Contact Area: 30 μ " Gold (Au)
 Solder Tail Area: 150 μ " Tin (Sn)
 Underplating: 50 μ " Nickel (Ni)
 Flammability Rating: 94V-0
 Operating Temperature: -40 to +105°C



EXTreme PowerMass™
System

MECHANICAL

Pitch:
 Signal Module: 2.50mm
 150.0A Module: 9.90mm
 Multi-Path:
 80.0A Module: 7.40mm
 40.0A Module: 3.00mm
 Mating Force (max. per circuit):
 Signal Module: 120g per pin
 150.0A Module: 2600g
 Multi-Path: 2920g
 80.0A Module: 1460g
 40.0A Module: 730g
 Unmating Force (min. per circuit):
 Signal Module: 65g
 150.0A Module: 1720g
 Multi-Path: 1600g
 80.0A Module: 800g
 40.0A Module: 400g
 Contact Retention: 225g
 Durability (min.): 50 cycles

ELECTRICAL

Voltage (max.):
 Signal Module: 250V
 150.0A Module: 600V
 Multi-Path:
 80.0A Module: 450V
 40.0A Module: 600V
 Current (max.):
 Signal Module: 3.0A per circuit
 150.0A Module: 150.0A
 Multi-Path: 40.0A per circuit (4 circuits)
 80.0A Module: 40.0A per circuit (2 circuits)
 40.0A Module: 40.0A
 Contact Resistance (per contact):
 Signal Module: 10 milliohms
 150.0A Module: 0.16 milliohms
 Multi-Path: 0.55 milliohms (both 80.0A and 40.0A Modules)
 Dielectric Withstanding Voltage: No Breakdown
 Insulation Resistance (min.): 5000 Megohms

Note: Molex reserves the right to delay or cancel production of the depicted product without additional notice. Please contact your Molex customer service representative for product availability.

www.molex.com/link/uavbattery.html