

## MiniCirc Connectors >

Electric bike and scooter designers face the challenge of integrating reliable electrical connections within compact frames that demand lightweight, space-saving and durable components capable of withstanding harsh outdoor conditions. With IP68 protection, a compact and short-body design, vibration resistance, and tactile feedback upon full mating, MiniCirc Connectors provide the ideal solution by affording secure and long-lasting connections.



### ADVANTAGES AND FEATURES

#### Provides clear tactile feedback when fully assembled

The buckle design ensures a firm and reliable mechanical lock, preventing accidental disconnection and guaranteeing proper mating.

#### Allows easy integration and cable threading

The compact size of the connectors reduces installation complexity by minimizing space consumption.

#### Provides easy mating and unmating

The different color-coded arrow symbols reduce confusion during assembly, offering immediate identification of connector types. The poka-yoke design helps prevent incorrect connections by allowing only the correct mating configuration.

Current (max.)	3.0A (2 to 5 pins); 2.5A (6 pins)
Voltage (max.)	60V DC
Connector Mating Length	30.00mm
IP Rating	IP68

#### Helps simplify cable routing

The short-body design eliminates the difficulty of threading connectors through narrow, angled or curved tubes in e-bikes and scooter frames by reducing connector length and bulk.

#### Lowers risk of corrosion and connection failure

The IP68 rating of the connectors prevents dust and water ingress in harsh environments.

#### Helps reduce opening size in outdoor applications by providing the option to seal the opening

The circular design of the connectors supports smaller, easier-to-seal openings, thereby enhancing protection and durability in outdoor applications.



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## MARKETS AND APPLICATIONS

### Agricultural machinery

Harvesters  
Irrigation system sensors  
Robotic mowers

### Automotive

Electric bikes and scooters  
Golf carts  
Motor boats  
Quad bikes  
Snowmobiles

### Charging Infrastructure

Charging gums  
Charging stations  
Portable charging gums

### Electrical and power

Alarm systems  
Lighting strings  
Security sensors

### Home Energy storage

Batteries  
Inverters

### HVAC

Air conditioners  
Heat pumps  
Ventilation units



*Robotic Mowers*



*Electric Bikes and Scooters*



*Charging Stations*



*Security Sensors*



*Inverters*



*Heat Pumps*

## SPECIFICATIONS

### Reference Information

Packaging: Anti-static bags  
Designed in: Millimeters  
RoHS/REACH: Yes  
Halogen Free: Yes  
PFAS Free: Yes

### Electrical

Voltage (max.): 60V DC  
Current (max.): 3.0A (2 to 5 pins); 2.5A (6 pins)  
Insulation Resistance (min.): 100 Megohms  
Contact Resistance (max.): 10 milliohms  
Dielectric Withstanding Voltage: 600V DC

### Mechanical

Wiring Connection: Crimping  
Connector Mating Length: 30.00mm  
Mating Force: 10.4N  
Unmating Force: 10.4N  
Durability (min.): >200 cycles

### Physical

IP Rating: IP68  
Salt-spray Resistance: 72H  
Operating Temperatures: -40 to +85°C

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