

## Hirose High Power Connector Overview

### 125A High Power, Waterproof Connector for Power Supply



#### EV1

- ✓ High current capacity: 125A max
- ✓ Number of contacts: 3
- ✓ Voltage rating: AC 460 V, DC 650 V
- ✓ Vibration resistant with multiple contact springs and screw lock
- ✓ Waterproof structure rated to IP68/IPX9K
- ✓ Shielded structure
- ✓ Finger protection cap is provided
- ✓ Standard JIS tooling can be used

### 100A/200A/300A High Power Plug-in Connector



#### PS2

- ✓ Hybrid design with high current capacity: 100A/ 200A/ 300A power contacts + 5A max signal contacts
- ✓ Number of contacts: 2 x power + 6, 9, 18 or 42 signals
- ✓ Voltage rating: AC 1000 V / Signal AC 100 V
- ✓ Floating screws allow  $\pm 2.5$ mm mating misalignment
- ✓ Sequential contact structure to prevent incomplete mating
- ✓ Finger protection cap is provided
- ✓ **Connector height: 71.5mm (300A system side)**
- ✓ **Connector height: 60mm (200A system side)**
- ✓ **Connector height: 58mm (100A system side)**

### 150A Power Plug-in Connector



#### PS3

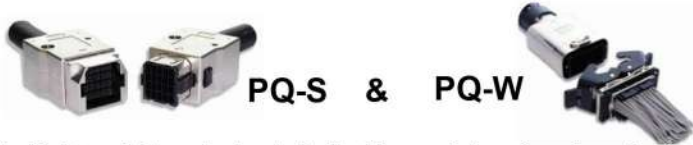
- ✓ Hybrid design with high current capacity: 150A max and optional signal/detection contacts
- ✓ Voltage rating= Power AC 1000V / Signal AC 250V
- ✓ Floating screws allow  $\pm 2.0$ mm mating misalignment in X and Y direction
- ✓ Finger protection cap is provided on power contacts
- ✓ **Connector height: 23mm (system side)**

## Power Supply Connectors - High Voltage



**PQ**

- ✓ High current capacity: 9A/600V max
- ✓ Number of contacts: 20
- ✓ High voltage rating: AC/DC 600 V capability supporting NFPA79 compliant cables
- ✓ Robust and enhanced shielding die-cast shell
- ✓ Side lock with clear tactile click
- ✓ 3-point contacts
- ✓ In-line and panel in-line version available



**PQ-S & PQ-W**

- ✓ Light weight and robust shell with special engineering plastic resin
- ✓ Enhanced shielding with metal plated shell
- ✓ IP65 water resistant type is available as PQ50W
- ✓ Number of contacts: 48 for PQ-S and 50 for PQ-W
- ✓ High current capacity: 5A/300V for PQ-S and 12.5A/300V for PQ-W
- ✓ Secure lock structure with side lock / lever
- ✓ Flexible and varieties of coding key system
- ✓ PQ50S: UL/C-UL/TÜV certified, PQ50W: UL/C-UL/TÜV pending

**PQ-WT**



- ✓ IP67 sealing level in mated condition
- ✓ 30A/600 V capability supporting NFPA79 compliant cables
- ✓ Number of contacts: up to 72
- ✓ Branch terminal allows distribution of electrical current
- ✓ Easy lock operation with single lock lever & light locking force
- ✓ Applicable to AWG#10 to 28 cables
- ✓ UL, C-UL and TÜV certified

## 130A High Power Connector for Power Supply

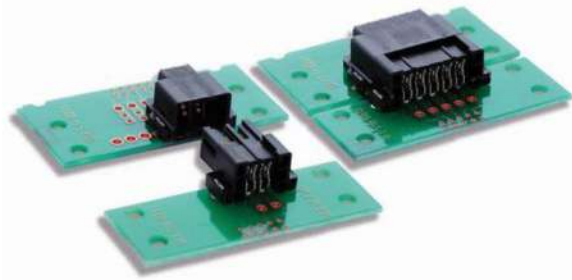


**EF1**

- ✓ High current capacity: 130\*A (at 30° C) max
- ✓ Number of contacts: 1
- ✓ Voltage rating: AC 600V
- ✓ Attachable to DIN rail
- ✓ Guide keys prevent incorrect insertion
- ✓ No screws needed to secure the contact on the housing
- ✓ One action locking structure
- ✓ Standard JIS tooling can be used

## Up to 17A High Power Board to Board Connector

### FX30B



- ✓ High current capacity: 13 to 17A max
- ✓ Number of contacts: 2,3,4,5
- ✓ Voltage rating: AC/DC 250V
- ✓ Pitch: 3.81mm, 7.62mm
- ✓ High reliability with unique 4 point contact
- ✓ Misalignment absorbing structure
- ✓ Mating guides
- ✓ Can use in combination with FX18 series
- ✓ Incorrect insertion prevention

## 30A Waterproof Push-on, Bayonet, Circular Connector

### HR08D



- ✓ High current capacity: 3A max
- ✓ Number of contacts: 10 contacts
- ✓ Voltage rating: AC 200V, DC 250V
- ✓ Oil-proof & waterproof structure in mated condition rated to IP68
- ✓ Secure cable strain relief
- ✓ 8 way adjustable cable direction
- ✓ Push-on bayonet lock
- ✓ Secure lock with high resistance to vibration
- ✓ One step mating procedure

## 20A Circular Power Supply Connectors for Harsh Environments

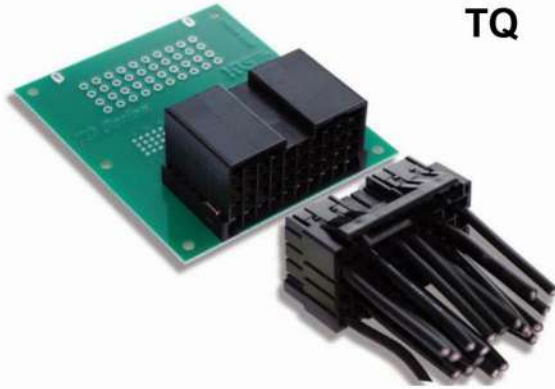
### HR41



- ✓ High current capacity: 20A max
- ✓ Number of contacts: 3, 5
- ✓ Voltage rating: AC/DC 600V and AC 600V/DC 400V
- ✓ Higher lightning surge protection (15kV)
- ✓ Waterproof structure in mated condition rated to IP68
- ✓ Anti-loosening mechanical structure for clamp tightening
- ✓ Sequential mating structure for bulkhead type (5 pos.)
- ✓ Standard JIS tooling can be used



## Power Wire to Board Connector Meeting Railway Vehicle Specification



**TQ**

- ✓ High current capacity: 5A max
- ✓ Number of contacts: 40
- ✓ Voltage rating: AC/DC 600 V
- ✓ Pitch: 5mm
- ✓ Space saving double and quadruple row connectors supporting VME rack
- ✓ One touch centre lock for easy and reliable operation
- ✓ 3-point contact design with high conductivity material
- ✓ Coding key varieties available

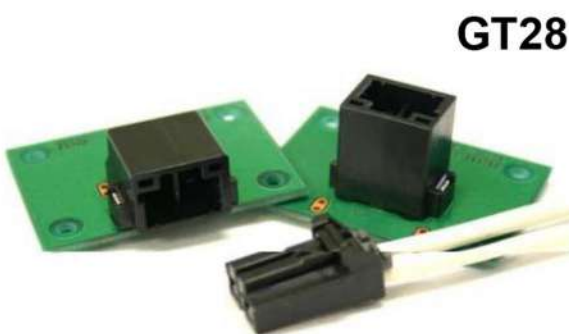
## Power Supply Connector to 50Amps



**EM-M**

- ✓ High current capacity: 50A max
- ✓ High current rating 4 pos. connector (Three-phase power source + ground)
- ✓ Voltage rating: AC/DC 500 V
- ✓ Quick and secure snap-on lock
- ✓ Attachable to DIN rail
- ✓ Easy crimp termination with standard tool
- ✓ Sequential mating
- ✓ Flexible and customized keying combination
- ✓ UL, TÜV pending

## 20A High Current Power Supply Connector Compliant to Automotive Specification



**GT28**

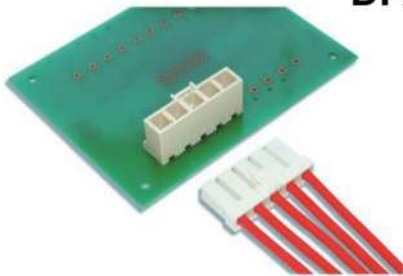
- ✓ High current capacity: 20A max
- ✓ Number of contacts: 2
- ✓ Voltage rating: AC 600 V
- ✓ Pitch: 6.5mm
- ✓ Robust and reliable 3-point contact design
- ✓ Retainer for secure crimp contact assembly and vibration resistance
- ✓ Highly reliable lock structure
- ✓ High PCB retention force
- ✓ Satisfies severe automotive requirements
- ✓ RoHS and ELV (End of Life Vehicles Directive) compliant

## Small Size High Power Board to Wire Connectors



**DF60**

- ✓ High current capacity: 50A max
- ✓ Number of contacts: 1 - 6
- ✓ Voltage rating: AC/DC 1000 V
- ✓ Pitch: 10.16mm
- ✓ Inertia lock provides clear tactile click and secure mating
- ✓ Highly reliable 5-point contact with independent contact springs
- ✓ Available in straight, right angle and in-line panel versions
- ✓ Accepts AWG 8 to 12 cables
- ✓ UL, TÜV pending



**DF22**

- ✓ 20 to 30A max
- ✓ Pitch: 7.92mm
- ✓ AC/DC 1000 V
- ✓ AWG10-16

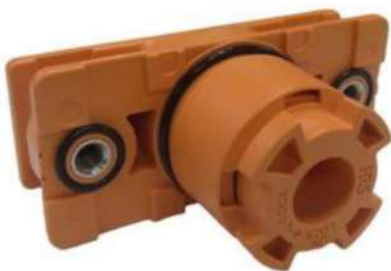


**DF33C**

- ✓ 5A max
- ✓ Pitch: 3.3mm
- ✓ AC/DC 500 V
- ✓ AWG20-22

## Service Plug Supporting 200Amps

**EM30MSD**



- ✓ Signal contact with interlocking switch to detect mating status
- ✓ Shock resistant multi-contact & bayonet lock systems
- ✓ IP 68 water resistant
- ✓ Commercially available crimp terminal is applicable
- ✓ Safety design with IP2X finger protection
- ✓ UL certified, TÜV certificate pending
- ✓ Voltage rating: AC/DC 1500 V, 250V signal
- ✓ 200A power/ 1A signal capability with small size

## 90A Small Size High Power Board to Wire Connectors

### EM12M



- ✓ Supports 90 Amps using 22mm<sup>2</sup> cables
- ✓ Quick and secure snap-in inertia lock
- ✓ Number of contacts: 1
- ✓ Safety design with finger protection
- ✓ Crimp termination with commercially available crimp tool
- ✓ Keying and colored housings prevents mis-wiring
- ✓ TÜV, UL certified
- ✓ Voltage rating: AC/DC 600 V

## Service Plug Supporting 200Amps

### HR43



- ✓ Passed severe vibration testing applicable to railway application
- ✓ IP67 water resistant rating in mated condition
- ✓ Independent wire sealing design against water intrusion minimizes the connector length
- ✓ Aluminum alloy on metal shell contributes to weight saving as well as robustness
- ✓ Crimp termination
- ✓ Number of positions: 3
- ✓ RoHS compliant
- ✓ Voltage Rating: AC 600 V

## High Current 2 Pos. Cable Connector Supporting 150Amps for Storage Battery

### PS3C

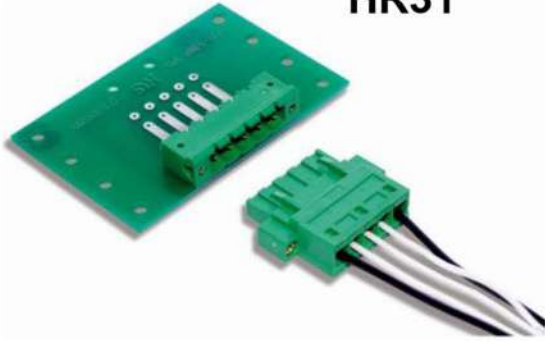


- ✓ Rated up to 150 Amps using 50 sq wire
- ✓ 180 reversal mate allows flexible cabling
- ✓ Downsized receptacle saves space inside a battery unit
- ✓ Right angle plug saves space for cable wiring
- ✓ Supports the use of hard lock nut, eliminating the re-tightening process of male contact connection
- ✓ Safety design with IP2X finger protection
- ✓ Guide key and color coding prevents mis-mating between plus and minus electrode
- ✓ Voltage Rating: AC/DC 1000 V
- ✓ Applicable cable: 14 to 50 sq (WL1, WL2)
- ✓ UL, TÜV certified



## 12A Interface Connectors for Factory Automation Network

### HR31



- ✓ Conforms to requirements of Factory Automation Network DeviceNet standards
- ✓ The screw lock style connector features secure mating and a higher locking force retention
- ✓ The snap lock plug features a structure that creates a tactile click during mating
- ✓ Use crimp tools conforming to JIS C 9711 standards
- ✓ When installed, the crimped contacts are protected completely by the plug housing
- ✓ Rated up to 12 Amps
- ✓ Voltage Rating: AC 250 V / DC 350 V

## IP68 Waterproof, 10A Small Plastic Power Connector

### HR41A



- ✓ IP68 weather-resistant waterproof connector for outdoor use
- ✓ Higher lightning surge protection (15kV) and withstanding voltage
- ✓ Snap-in mating with user-friendly push-on bayonet lock
- ✓ Bayonet assembly eliminates torque management and re-tightening of screw
- ✓ Number of contacts: 3, 5
- ✓ Rated up to 10 Amps
- ✓ Voltage Rating: 600 V
- ✓ UL, TÜV certified

## 12A Interface Connectors for Factory Automation Network

### PS4



- ✓ Plug-in connection to improve efficiency and safety of assembly, maintenance, and unit expansion works
- ✓ Floating structure to absorb mounting misalignment approx. 2mm in direction
- ✓ High current support: 150A. Supported busbar thickness: 3mm or 125 inch (3.175mm) and 300A. Supported busbar thickness: 6mm 25 inch (6.35mm)
- ✓ Compact design applicable to 1U size
- ✓ Multiple contact points on power contact decrease heat generation by current flow
- ✓ Safety design in consideration of deterioration of resin over time
- ✓ Large effective mating length reserves sufficient design margin of a unit
- ✓ UL/C-UL/TÜV pending

## 50A Waterproof Bayonet Lock Connector for Power Supply

### EM-W



- ✓ High current capacity: 50A max
- ✓ Number of contacts: 4 (Three-phase power source + ground)
- ✓ Voltage rating: AC/DC 250 V
- ✓ Applicable cable conductor size 8mm<sup>2</sup>
- ✓ Quick and secure bayonet lock
- ✓ Waterproof structure in mated condition rated to IP68
- ✓ Sequential ground contact
- ✓ Standard JIS tooling can be used



## Applications

**Robot**



**FA Controller**



**Solar / Wind Turbine**



**Lights for construction or fishing**



**Servo Amplifier & Motor**



**Machinery**



**UPS / Battery**



**Railway**

