

High Current Connector

PS2 Series



■ Features

1. Power/Signal Hybrid Connector

The Hybrid design saves space by combining power

and signal contacts together in one unit with dedicated power contacts to handle 100, 200 or 300 Amps.

2. Floating Structure

The structure allows up to ± 2.5 mm of float in the X and Y directions, which makes mating easier even when the mating position is not clearly visible.

3. Sequential Contact System

This series utilizes sequential contacts, the power contacts mate before the signal contacts. This prevents incomplete mating and also prevents hot swapping.

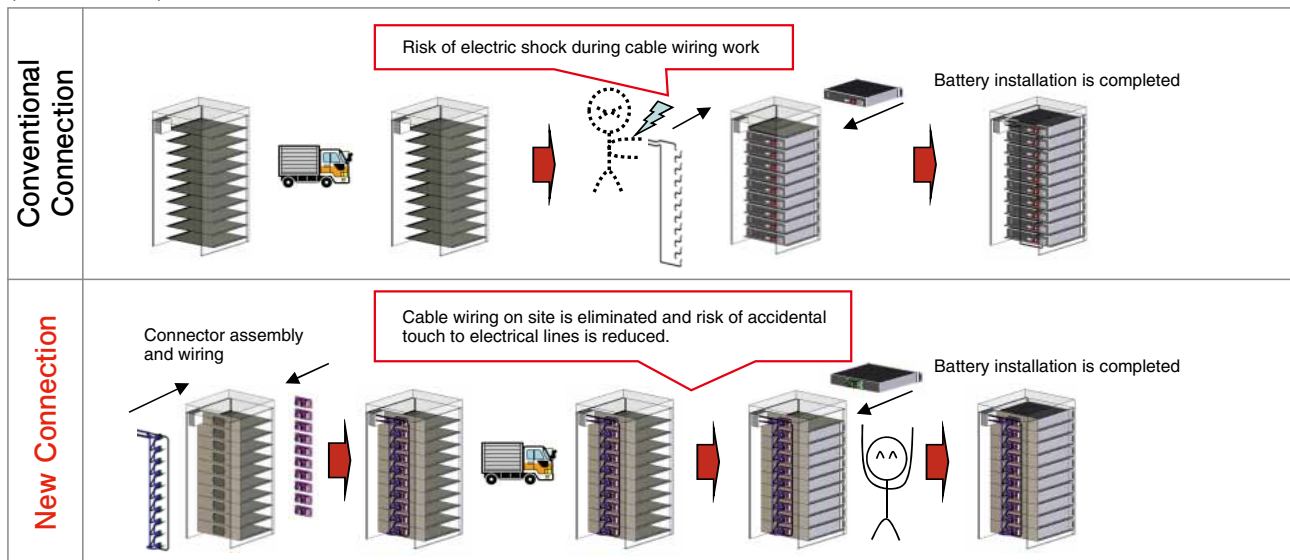
4. Finger Protection Structure

For added safety, the plug side (battery side) is designed to prevent shock hazard and provides for more user safety and security.

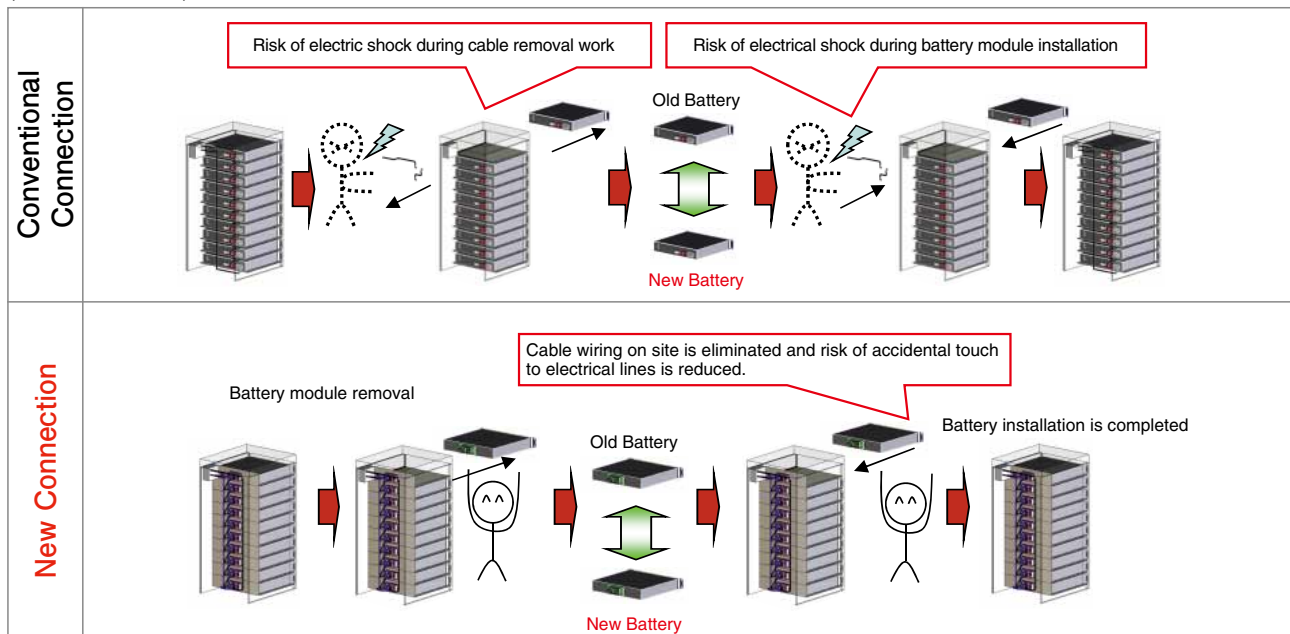
5. Plug-in Design

Its unique plug-in design provides enhanced safety features, reduced production costs related to its installation and the maintenance of high current units.

(Installation)



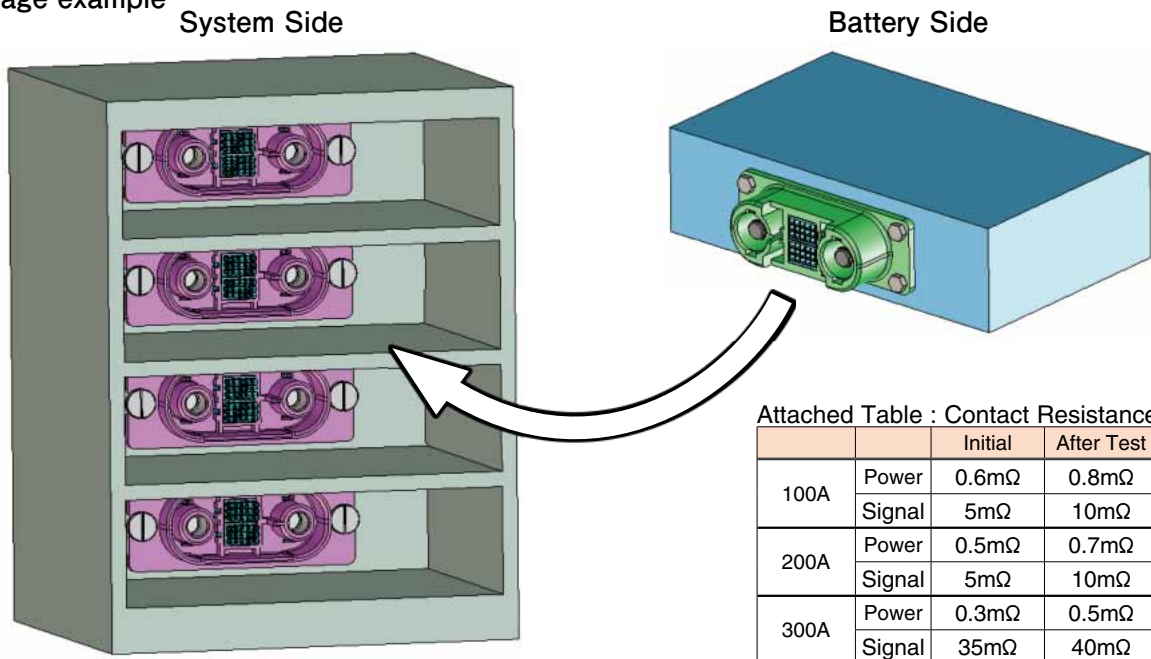
(Maintenance)



Applications

Storage Battery, UPS

Usage example



Attached Table : Contact Resistance

| | | Initial | After Test |
|------|--------|---------|------------|
| 100A | Power | 0.6mΩ | 0.8mΩ |
| | Signal | 5mΩ | 10mΩ |
| 200A | Power | 0.5mΩ | 0.7mΩ |
| | Signal | 5mΩ | 10mΩ |
| 300A | Power | 0.3mΩ | 0.5mΩ |
| | Signal | 35mΩ | 40mΩ |

Product Specifications

| Ratings | — | Power Part | Derating curve, ambient temp 25°C | Applicable cables | Signal Part | Operating Temp. Range |
|---------|---------|-------------|-----------------------------------|-------------------|-------------|-----------------------|
| | Current | 300A | — | 150sq, 300MCM | 5A | -40~105°C |
| | | 200A | 330A | 180sq, AWG#3/0 | | Storage Temp. Range |
| 100A | 175A | 38sq, AWG#2 | -55~60°C | | | |
| Voltage | 1,000V | | | 100V | | |

| Item | Specifications | Conditions |
|--------------------------|--|--|
| 1. Contact resistance | Attached table | Measured at DC 1 A Measured at DC 100 mA |
| 2. Insulation resistance | 5,000 MΩ or more | Measured at DC 250 V |
| 3. Withstand voltage | No flashover or breakdown | Power: Apply AC 2,000 V for one minute Signal: Apply AC 1,000 V for one minute |
| 4. Durability | Attached table | 50 mating cycles |
| 5. Shock resistance | No electrical discontinuity of 10 μs or more | Acceleration 490 m/s ² , duration 11 ms, half-sine wave, 3 times each for each of the 3 axes. |
| 6. Vibration resistance | No electrical discontinuity of 10 μs or more | 10 cycles in each of 3 axial directions at frequency 10-55 Hz, half amplitude 0.75 mm |
| 7. Temperature cycles | Attached table Minimum of 1,000 MΩ | Temperature: -40 → 105°C Time: 30 → 30 min |
| 8. Salt water spray | No significant corrosion | 5% salt water spray concentration while keeping samples at 35°C for 48 hours. |

Materials / Finish

Receptacle

| Parts | Materials | Color/Finish | Remarks |
|------------------|-----------------------|--------------------|---------|
| Insulation case | Synthetic resin | Black | UL94V-0 |
| Power contact | Brass/Copper alloy | Silver plated | — |
| Contact spring | Copper alloy | Silver plated | — |
| Rotation stopper | Synthetic resin | Black | UL94V-0 |
| Crimp case | Synthetic resin | Black | UL94V-0 |
| Signal contact | Copper alloy | Gold plated | — |
| Floating screw | Stainless steel/Steel | —/Trivalent chrome | — |

Plug

| Parts | Materials | Color/Finish | Remarks |
|------------------|--------------------|---------------|---------|
| Insulation case | Synthetic resin | Black | UL94V-0 |
| Power contact | Brass/Copper alloy | Silver plated | — |
| Rotation stopper | Synthetic resin | Black | UL94V-0 |
| Cap | Synthetic resin | Black | UL94V-0 |
| Crimp case | Synthetic resin | Black | UL94V-0 |
| Signal contact | Copper alloy | Gold plated | — |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

Connector

PS2 – **2** **W** **P** / **6C** / **6C**
 ① ② ③ ④ ⑤ ⑥

Crimp Case

PS2 – **6** **PC**
 ① ⑦ ⑧

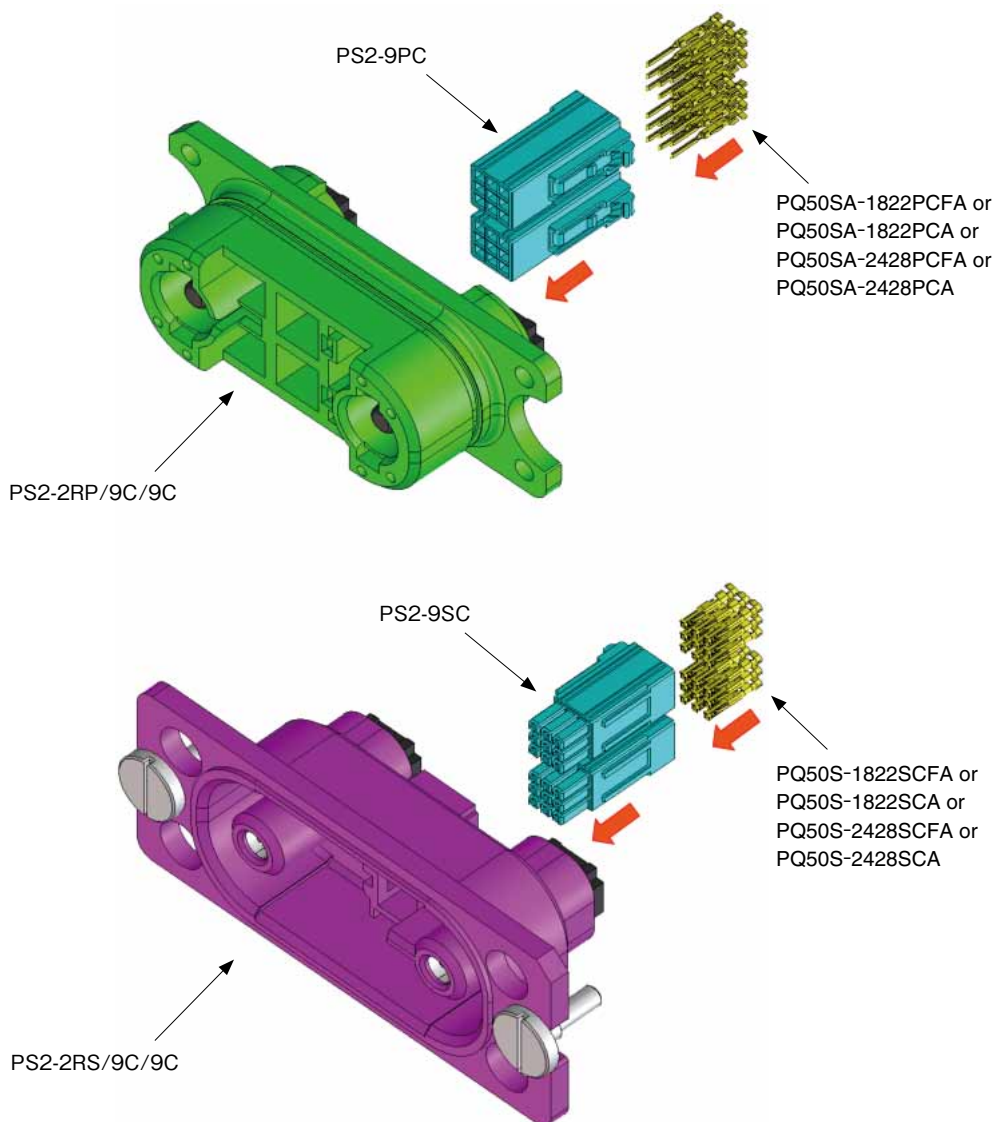
Crimp Contact

PS2 – **1618** **P** **C** **F** **A**
 ① ⑨ ④ ⑩ ⑪ ⑫

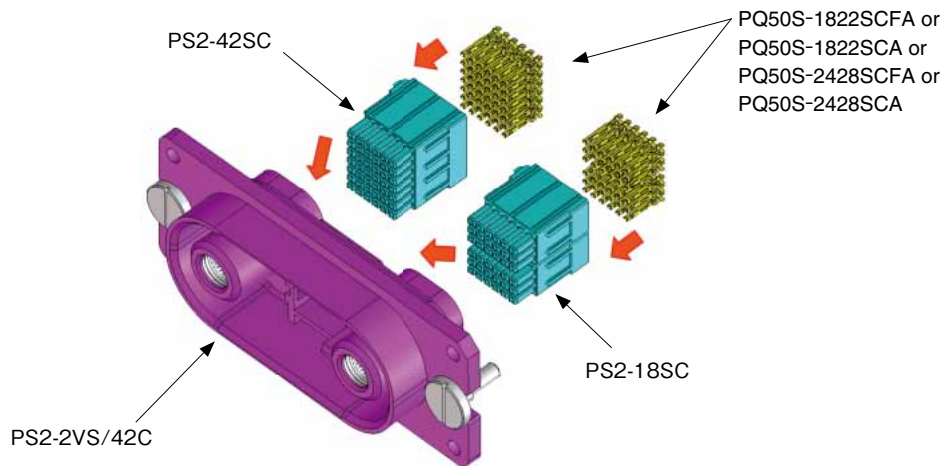
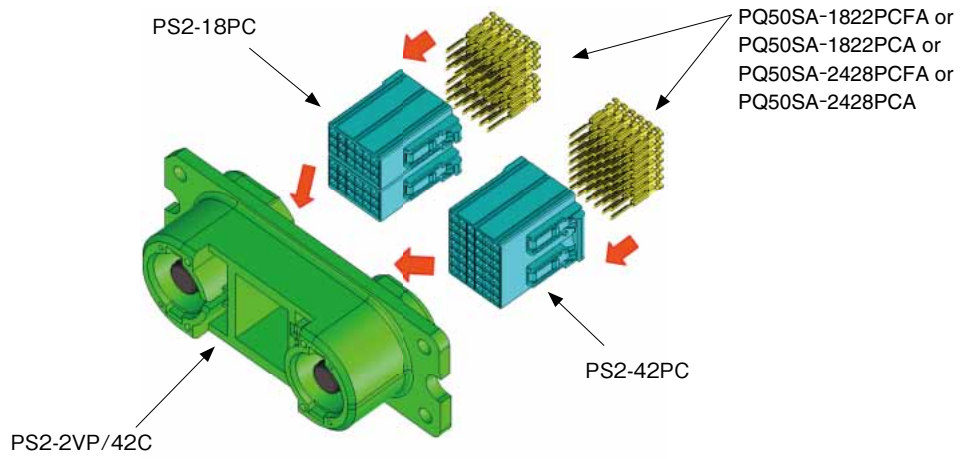
| | |
|---|---|
| ① | Series name |
| ② | No. of power contacts |
| ③ | R : 100A V : 200A W : 300A |
| ④ | P : Male S : Female |
| ⑤ | Signal contact block 1 |
| ⑥ | Signal contact block 2 |
| ⑦ | No. of signal contacts |
| ⑧ | PC : Male crimp case SC : Female crimp case |
| ⑨ | Applicable wires of signal contact 16-18 AWG |
| ⑩ | Crimp contact |
| ⑪ | F : Reel contacts None: Loose piece contacts |
| ⑫ | Gold plating |

Functional Diagram

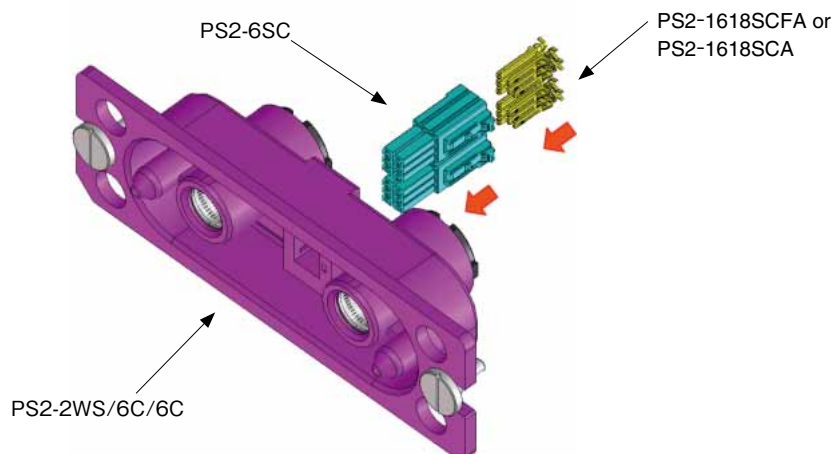
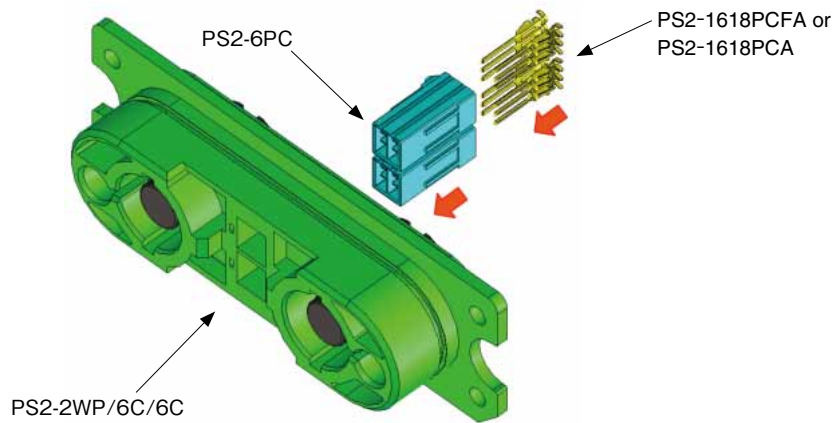
100A type



●200A type



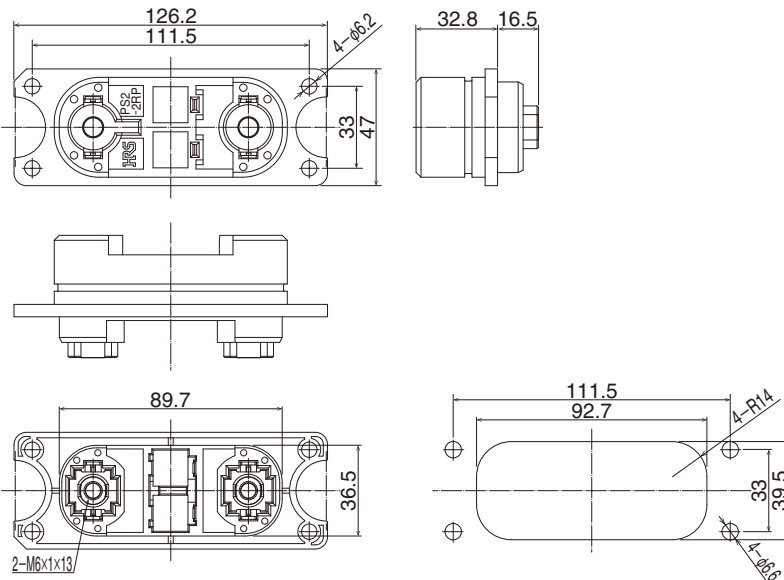
●300A type



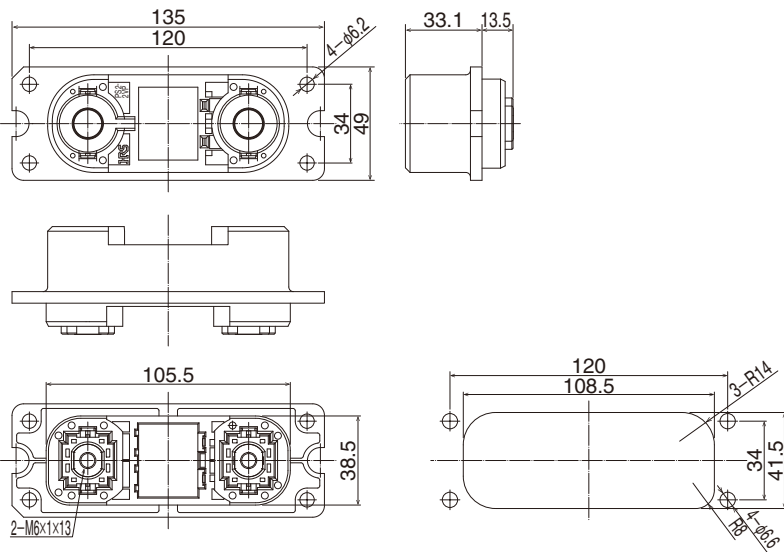
Plug

| Current | Part No. | HRS No. | Sales Unit | RoHS |
|---------|---------------|---------------|------------|------|
| 100A | PS2-2RP/9C/9C | 236-1036-0 00 | Each | ○ |
| 200A | PS2-2VP/42C | 236-1060-4 00 | | ○ |
| 300A | PS2-2WP/6C/6C | 236-1032-9 00 | | ○ |

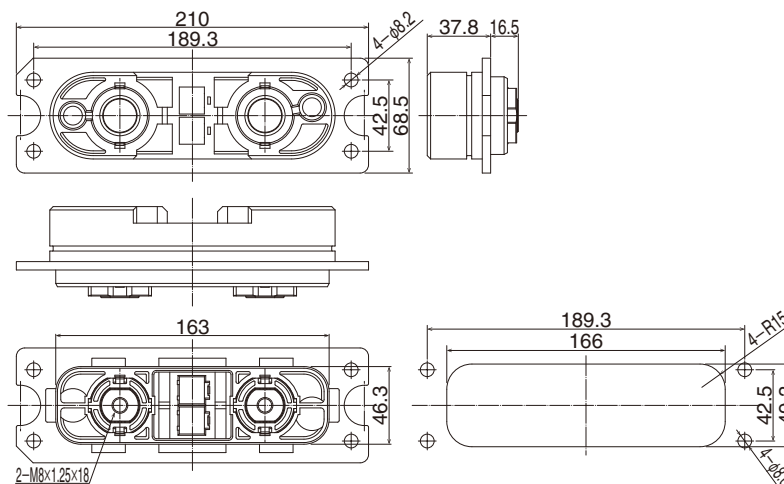
◇100A



◇200A



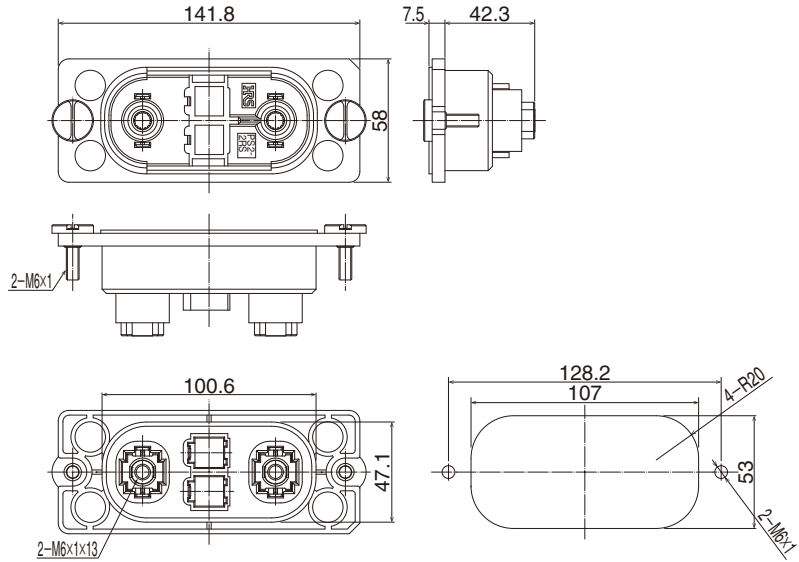
◇300A



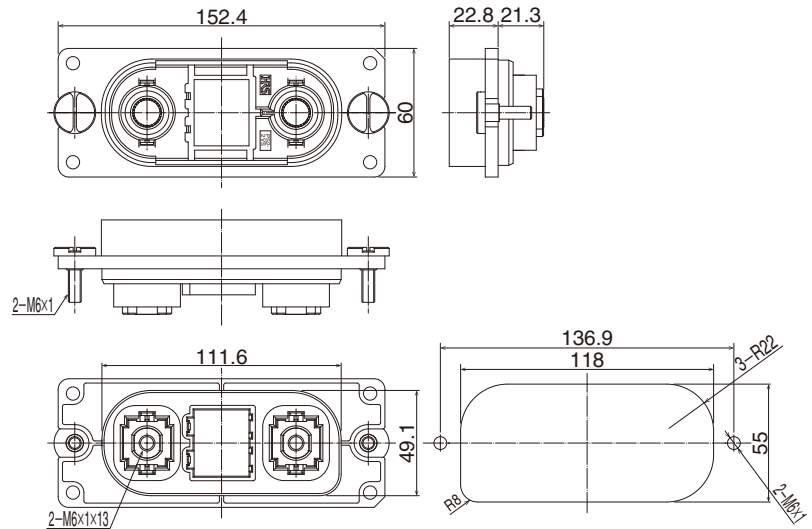
Receptacle

| Current | Part No. | HRS No. | Sales Unit | RoHS |
|---------|---------------|---------------|------------|------|
| 100A | PS2-2RS/9C/9C | 236-1037-2 00 | Each | ○ |
| 200A | PS2-2VS/42C | 236-1046-3 00 | | ○ |
| 300A | PS2-2WS/6C/6C | 236-1033-1 00 | | ○ |

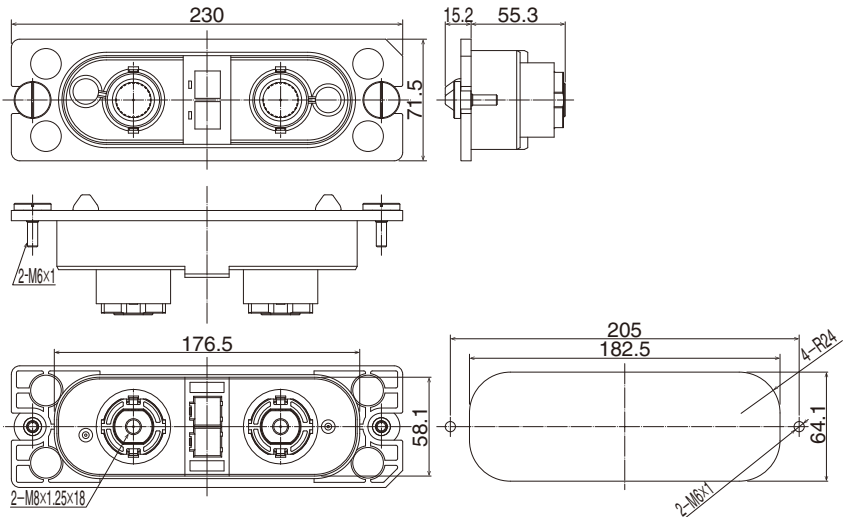
◇100A



◇200A



◇300A



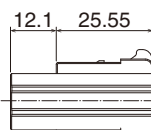
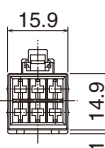
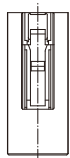
Crimp Contact Housing

| Part No. | HRS No. | Sales Unit | RoHS |
|----------|---------------|------------|------|
| PS2-6PC | 236-1034-4 00 | 100 pieces | ○ |
| PS2-6SC | 236-1035-7 00 | | ○ |
| PS2-9PC | 236-1038-5 00 | | ○ |
| PS2-9SC | 236-1039-8 00 | | ○ |

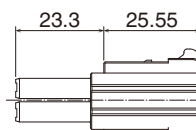
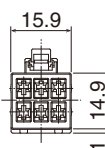
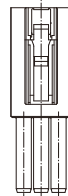
| Part No. | HRS No. | Sales Unit | RoHS |
|----------|---------------|------------|------|
| PS2-18PC | 236-1049-1 00 | 50 pieces | ○ |
| PS2-18SC | 236-1050-0 00 | | ○ |
| PS2-42PC | 236-1047-6 00 | | ○ |
| PS2-42SC | 236-1048-9 00 | | ○ |



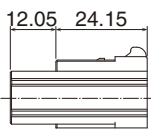
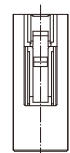
●PS2-6PC



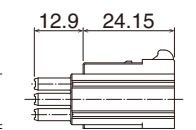
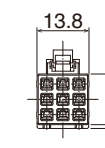
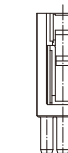
●PS2-6SC



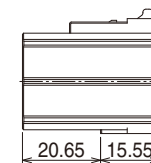
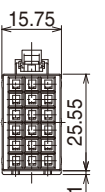
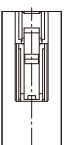
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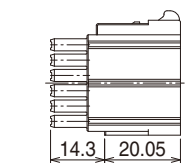
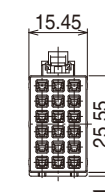
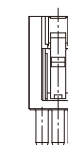
●PS2-9SC



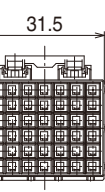
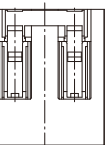
●PS2-18PC



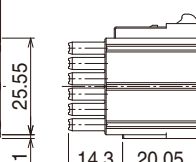
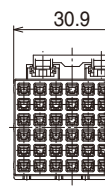
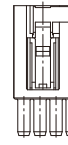
●PS2-18SC



●PS2-42PC



●PS2-42SC

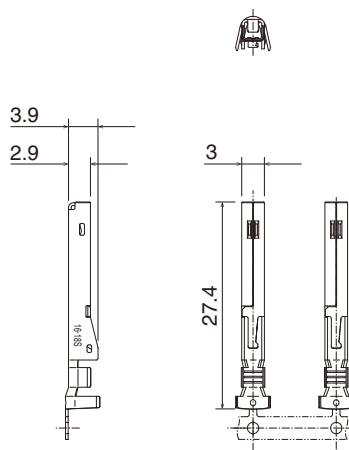
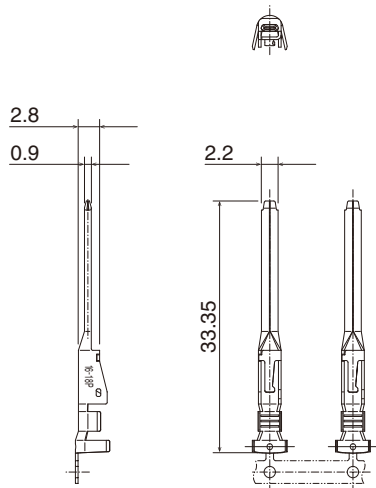


◆ Crimp Contact

| Parts No. | HRS No. | Packaging | RoHS |
|-----------------|---------------|---------------|------|
| PS2-1618PCFA | 236-1028-1 00 | 3,500pcs/reel | ○ |
| PS2-1618PCA | 236-1051-3 00 | 100pcs/pack | |
| PS2-1618SCFA | 236-1029-4 00 | 3,500pcs/reel | |
| PS2-1618SCA | 236-1052-6 00 | 100pcs/pack | |
| PQ50SA-1822PCFA | 236-2029-0 00 | 6,000pcs/reel | |
| PQ50SA-1822PCA | 236-2048-4 00 | 100pcs/pack | |
| PQ50SA-2428PCFA | 236-2030-9 00 | 6,000pcs/reel | |
| PQ50SA-2428PCA | 236-2049-7 00 | 100pcs/pack | |
| PQ50S-1822SCFA | 236-2026-1 00 | 6,000pcs/reel | |
| PQ50S-1822SCA | 236-2050-6 00 | 100pcs/pack | |
| PQ50S-2428SCFA | 236-2028-7 00 | 6,000pcs/reel | |
| PQ50S-2428SCA | 236-2051-9 00 | 100pcs/pack | |

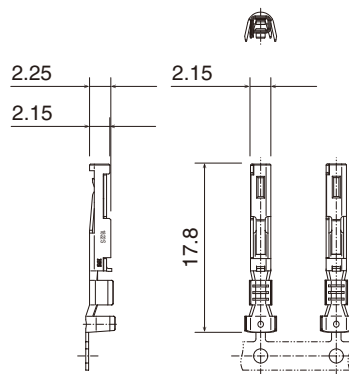
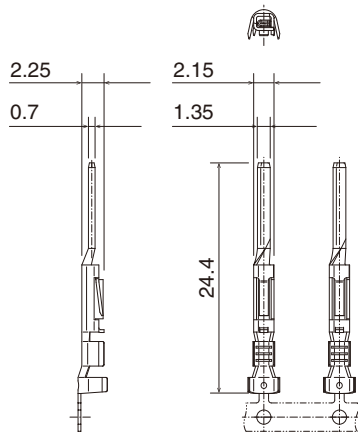
● PS2-1618PCFA

● PS2-1618SCFA



● PQ50SA-1822PCFA PQ50SA-2428PCFA

● PQ50S-1822SCFA PQ50S-2428SCFA



◆ Manual Crimp Tools

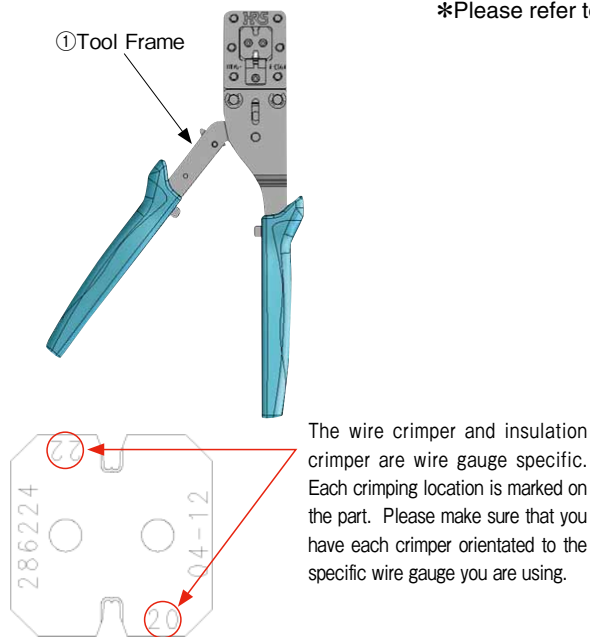
| Target product | ① Tool Frame Upper row : Part No. / Lower row : HRS No. | ※ Die set | | Applicable contacts | Applicable cables |
|------------------------|--|------------------|-------------------|----------------------------|-------------------|
| | | Part No. | HRS No. | | |
| 100A type 200A type | HT702 250-1001-1 | PQ50S-1820(1007) | 250-1010-2 | PQ50S-1822SCA | 18 AWG |
| | | PQ50S-2022(1007) | 250-1011-5 | | 20 AWG |
| | | PQ50S-2022(1007) | 250-1011-5 | | 22 AWG |
| | | PQ50SA-1822PCA | PQ50SA-1820(1007) | 250-1012-8 | 18 AWG |
| | | | PQ50SA-2022(1007) | 250-1013-0 | 20 AWG |
| | | | PQ50SA-2022(1007) | 250-1013-0 | 22 AWG |
| | | PQ50S-2428SCA | PQ50S-2428(1007) | 250-1029-0 | 24 AWG |
| | | | PQ50S-2428(1007) | 250-1029-0 | 26 AWG 28 AWG |
| PQ50SA-2428PCA | PQ50SA-2428(1007) | 250-1030-0 | 24 AWG | | |
| | PQ50SA-2428(1007) | 250-1030-0 | 26 AWG 28 AWG | | |
| 300A type | | PS2-1618(3385) | 250-1014-3 | PS2-1618PCA PS2-1618SCA | 18 AWG |

Manual Crimp Tools

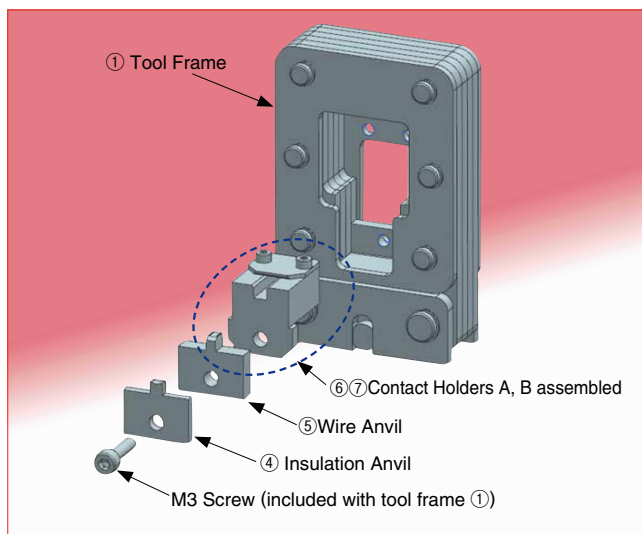
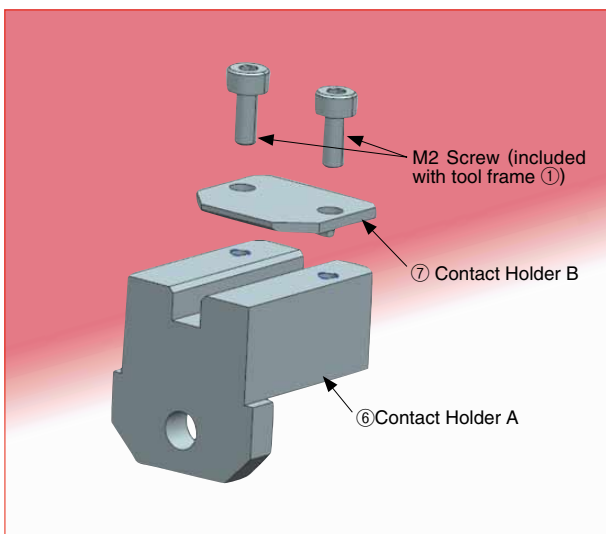
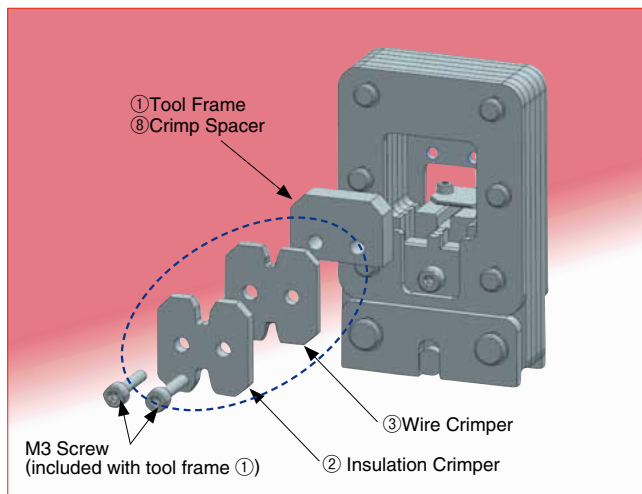
The Hirose hand tool for the PS2 series features replaceable die sets and parts. This allows you the ability to use one Hirose tool body and switch between the two Hirose die sets to crimp either of the PS2 terminals.

Due to wear, neglect or loss, replacement parts are also available for the Hirose die sets. Please see the chart at the bottom of page seven for these part numbers. Please be careful to select the correct replacement part based on the terminal and wire size you are trying to crimp. If you have any concern on the correct part to purchase, a Hirose sales representative will be glad to assist in selecting the correct part.

*Please refer to the bottom of page 8 and 9 for product numbers and descriptions.



| Part No. | HRS No. |
|----------|---------------|
| HT702 | 250-1001-1 00 |



Automatic Crimper

Please call us.

| Target product | Upper row : Part No. / Lower row : HRS No. | | | | | | | |
|------------------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | ② IC Insulation Crimper | ③ WC (Wire Crimper) | ④ IA (Insulation Anvil) | ⑤ WA (Wire Anvil) | ⑥ Contact Holder A | ⑥ Contact Holder B | ⑦ Contact Holder C | ⑧ Crimper Spacer |
| 100A type 200A type | 286219 [250-1010-2(61)] | 286223 [250-1010-2(62)] | 286225 [250-1010-2(63)] | 286226 [250-1010-2(64)] | 286233 [250-1010-2(65)] | 286234 [250-1010-2(66)] | | 285996 [250-1010-2(67)] |
| | 286220 [250-1011-5(61)] | 286224 [250-1011-5(62)] | 286225 [250-1011-5(63)] | 286226 [250-1011-5(64)] | 286233 [250-1011-5(65)] | 286234 [250-1011-5(66)] | | 285996 [250-1011-5(67)] |
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| | 286220 [250-1013-0(61)] | 286224 [250-1013-0(62)] | 286225 [250-1013-0(63)] | 286226 [250-1013-0(64)] | 286233 [250-1013-0(65)] | | 286235 [250-1013-0(66)] | 285996 [250-1013-0(67)] |
| | 286876 [250-1029-0(61)] | 286877 [250-1029-0(62)] | 286231 [250-1029-0(63)] | 286232 [250-1029-0(64)] | 286233 [250-1029-0(65)] | 286234 [250-1029-0(66)] | | 285996 [250-1029-0(67)] |
| | 286876 [250-1030-0(61)] | 286877 [250-1030-0(62)] | 286231 [250-1030-0(63)] | 286232 [250-1030-0(64)] | 286233 [250-1030-0(65)] | | 286235 [250-1030-0(66)] | 285996 [250-1030-0(67)] |
| 300A type | 286256 [250-1014-3(61)] | 285991 [250-1014-3(62)] | 285992 [250-1014-3(63)] | 285993 [250-1014-3(64)] | 286257 [250-1014-3(65)] | 286258 [250-1014-3(66)] | | 285996 [250-1014-3(67)] |

◆ Safety Standards Certifications (UL, C-UL, TÜV)

The PS3C, PS3CS series has received safety certifications from the UL, C-UL, and TÜV under the conditions provided in Table 1 and Table 2.

Table 1. Conditions for UL and C-UL

| | 100A Type Condition | 200A Type Condition |
|----------------------------|----------------------|------------------------|
| Rated Voltage (AC/DC) | 600V | |
| Rated Current | 100A | 200A |
| Cable | 38sq, 2 AWG (Note 1) | 80sq, 2/0 AWG (Note 1) |
| Creepage Distance (Note 2) | MIN : 3.2mm | |
| Clearance (Note 2) | MIN : 3.2mm | |

Table 2. Conditions for TÜV

| | 100A Type Condition | 200A Type Condition |
|----------------------------|---|---------------------|
| Rated Voltage (AC/DC) | 1000V | |
| Rated Current | 100A | 200A |
| Cable | 38sq, 2 AWG | 80sq, 2/0 AWG |
| Overvoltage Category | III | |
| Contamination Level | 3 | |
| Creepage Distance (Note 2) | MIN : 16mm | |
| Clearance (Note 2) | MIN : 8mm | |
| Insulation System | Basic insulation (Panel should be grounded) | |

Note 1 : Use the crimp contact combination recommended below. The use of other crimp contacts can affect clearance and creepage distance.

If you choose to use a different contact combination, be sure to check the measurements for clearance and creepage. Make sure that these conditions will meet the UL, C-UL and TÜV.

- Recommended crimp contacts
- Cable 38sq : NICHIFU R38-6
- Cable 80sq : NICHIFU R80-8

Note 2 : Subjects of clearance and creepage distance are as follows.

- Between the power contacts.
- Between the signal contacts.
- Between power contact and signal contact.
- Between power contact and panel.
- Between signal contact and panel.

MEMO :

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