

High Current Connector

PS3 Series



General

The PS3 series is a high current plug-in connector that features a unique plug-in design that provides enhanced safety measurements, and reduced production costs related to its installation and the maintenance of high current units.

Features

1. Power contact supports up to 150 Amps with 50 mm sq. wire.
2. The unique blade contacts help to create a slim design and allows it to be utilized in a standard 1U rack size (44.5 mm × 482.6 mm).

3. Special screws are used in the receptacle to allow the floating (± 2.0 mm) in X Y axial directions.

Connector floating is allowed by using flexible wire without missing flexibility in short distant wiring between 1U connection.

4. The cable connection to the power contact is made by means of a screw to a JIS round crimp contact.

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

6. A special dust cap is available and can be used with both the plug and receptacle.

7. The plug and receptacle have been UL, C-UL and TÜV certified.

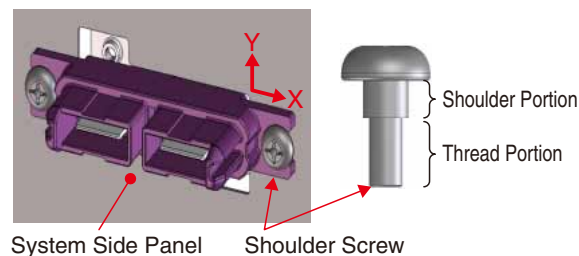


Fig. 1

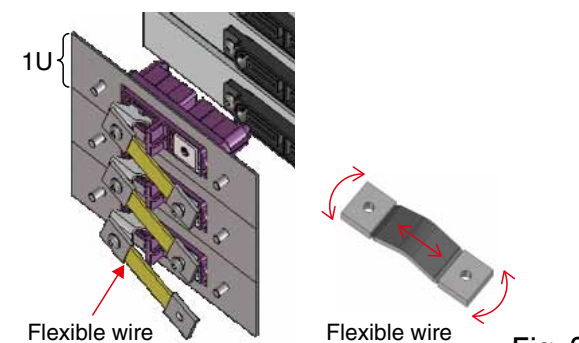


Fig. 2

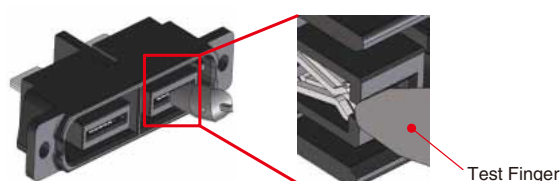


Fig. 3

Product Specifications

Ratings	Rated Current	150A/1pin (*1)	Rated Voltage	AC、DC 500V (*1)
	Applicable Cable	14 to 50 sq (WL1、WL2 *1 *2)	Op. Temp. Range	-40 to +105°C (including temperature rise due to electric current)
			Stor. Temp. Range	-40°C~ +60°C

*1: UL, C-UL and TÜV certifications have been obtained while changing conditions such as rated current and voltage multiple times.
For details, see the "Conditions on Safety Standards (UL, C-UL, TÜV)" on page 6.
*2: Select your cables based on the current capacity needed for your application.
Flexible wires are recommended to provide flexibility to the receptacles (system side).

Materials, Treatment

Receptacle

Parts	Materials	Color/Treatment	Remarks
Insulator	PBT resin	Black	UL94V-0
Contact	Copper alloy	Silver plating	————
Contact Retention plate A	PBT resin	Black	UL94V-0
Contact Retention plate B	PBT resin	Black	UL94V-0
Floating screw	Steel	Nickel plating	————

Plug

Parts	Materials	Color/Treatment	Remarks
Insulator	PBT resin	Black	UL94V-0
Contact	Copper alloy	Silver plating	————
Contact Retention plate C	PBT resin	Black	UL94V-0

Dust Cap

Parts	Materials	Color/Treatment	Remarks
Insulator	Silicon rubber	Blue	UL94HB

Product Number Structure

Refer to the chart below for determining specific part number characteristics.
Please select connectors listed in this catalog when placing orders and be sure to check the latest delivery specifications at the time of ordering the product.

1. Connector product name

PS3 - 2 U S

1

2

3

4

2. Dust cap product name

PS3 - 2 U - DC

1

2

3

5

1 Series name symbol
2 No. of power contacts
3 Current capacity of power contact U : 150A
4 Power contact shapes P: Male contact S: Female contact
5 Dust cap

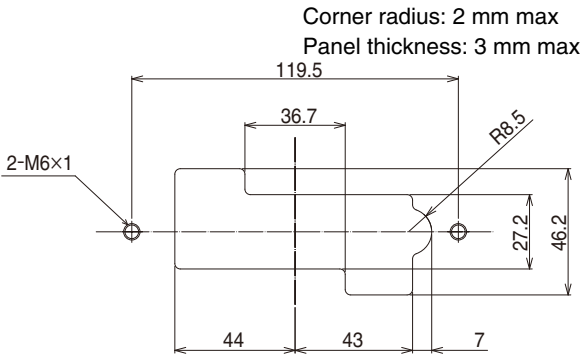
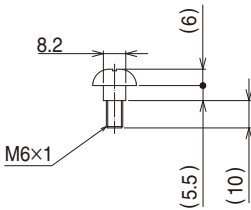
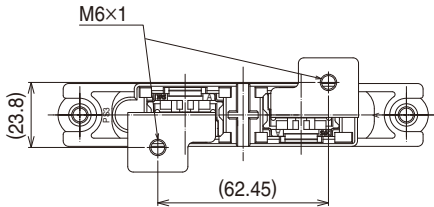
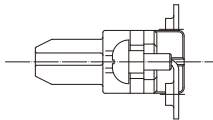
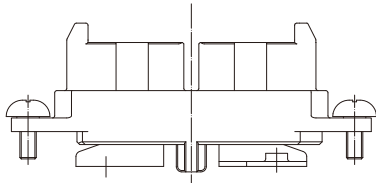
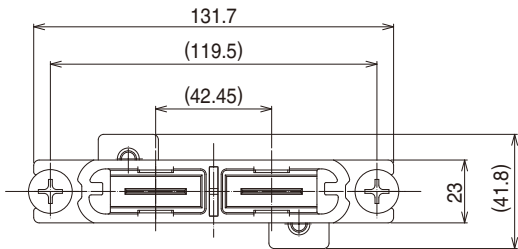
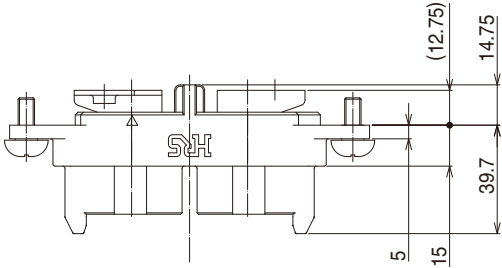
■Receptacle

●PS3-2UP

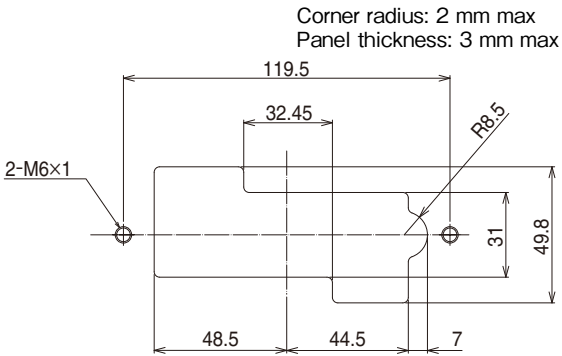


Part Nunber	HRS No.	RoHS
PS3-2UP	CL236-1042-2	○

Each package contains 40 pieces. Please order in full package quantities.



Recommended panel 1



Recommended panel 2

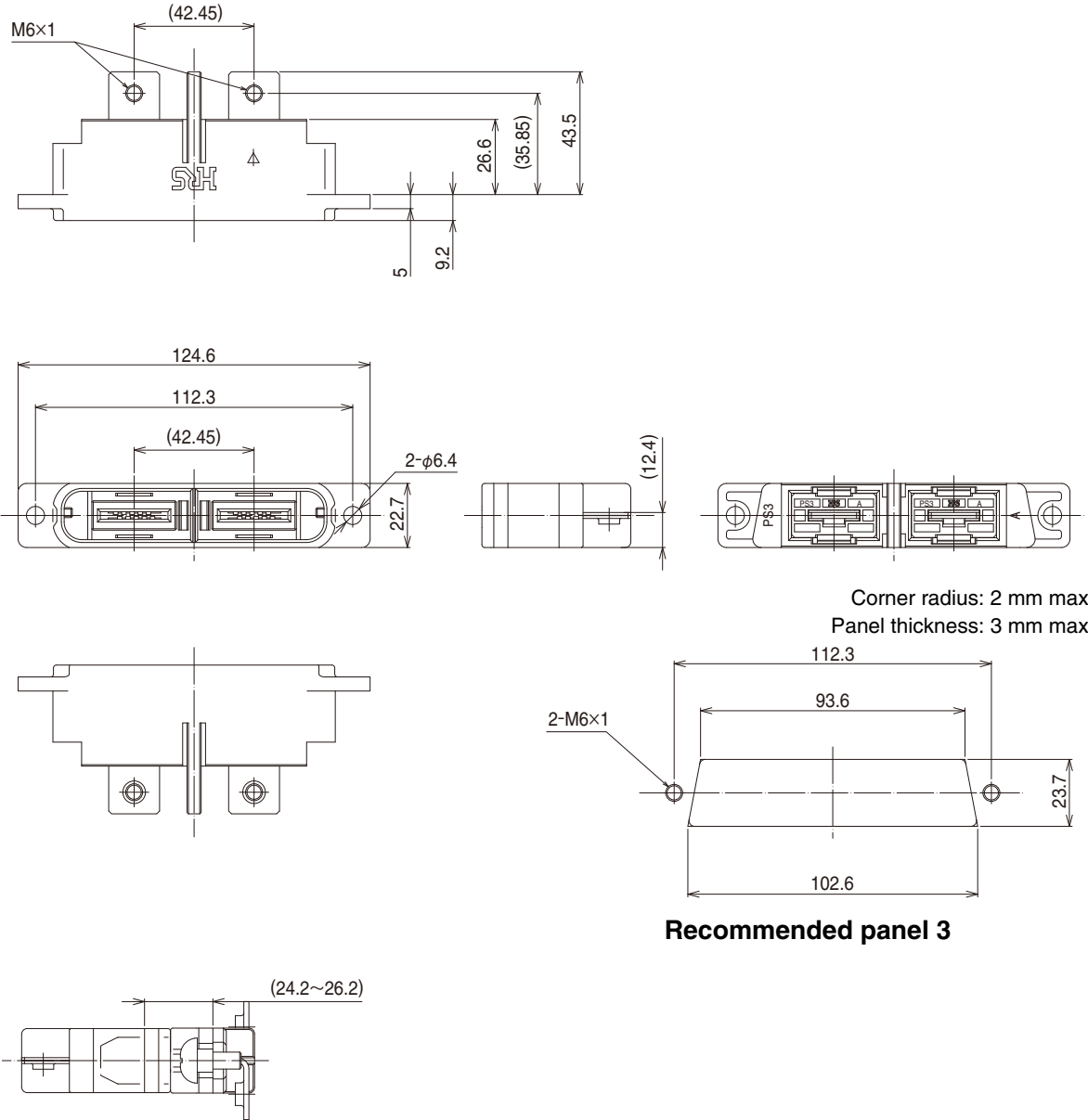
Plug

PS3-2US



Part Number	HRS No.	RoHS
PS3-2US	CL236-1041-0	○

Each package contains 40 pieces. Please order in full package quantities.



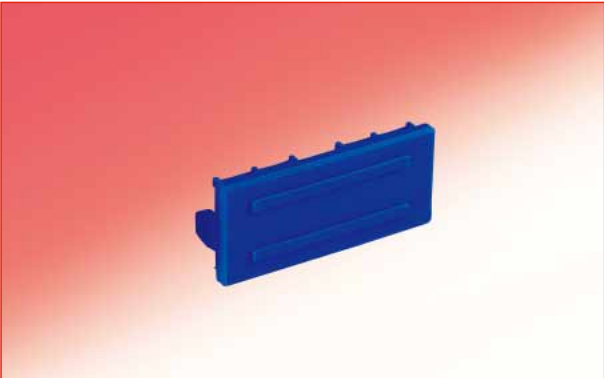
Corner radius: 2 mm max
Panel thickness: 3 mm max

Recommended panel 3

Distance between panels

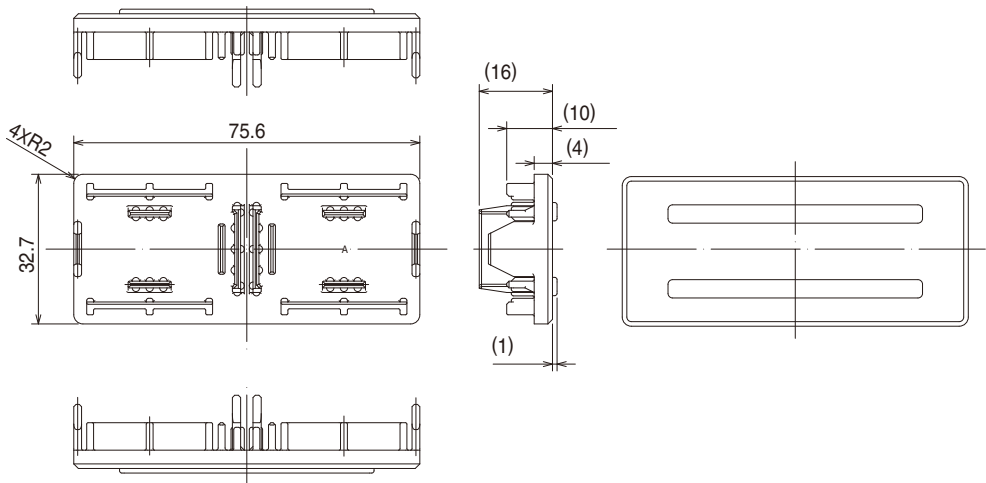
Dust cap

PS3-2U-DC



Part Number	HRS No.	RoHS
PS3-2U-DC	CL236-1054-1	<input type="radio"/>

This dust cap can be used on both the receptacle and plug.
Each package contains 40 pieces. Please order in full package quantities.



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◆ Usage Precautions

- M6 screws are used to attach to the panels. The recommended amount of torque used to tighten the screws should be 2.5 to 5.2 Nm.
 - The recommended amount of torque used to tighten the screws to the power contacts should be 2.5 to 5.2 Nm.
 - Power contacts are silver plated and may react with the sulfide in the atmosphere.
This might cause the color to change to a dark brown.
- The power contacts do not support hot-pluggable, so it cannot be used to shut off the power.

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

The PS3 series has received safety certifications from the UL, C-UL, and TÜV under the conditions provided in Table 1 and Table 2. Conditions for safety standards vary depending on submitted applications of current and voltage ratings. See Table 1 and Table 2.

Table 1. Conditions for UL and C-UL

	Condition ①	Condition ②
Rated Voltage (AC/DC)	600V	
Rated Current	100A	150A
Cable	14 to 22 sq (*1)	38 to 50 sq (*1)
Creepage Distance (*2)	MIN:3.2mm	
Clearance (*2)	MIN:3.2mm	

Table 2. Conditions for TÜV

	Condition I	Condition II	Condition III
Rated Voltage (AC/DC)	800V	600V	1000V
Rated Current	100 A (cable 14 to 22 sq *1) 125 A (cable 38 sq *1) 150 A (cable 50 sq *1)		
Overvoltage Category	II	III	
Contamination Level	3		
Creepage Distance (*2)	MIN:12.6mm	MIN:12.6mm	MIN:16mm
Clearance (*2)	MIN:6mm	MIN:6mm	MIN:8mm
Insulation System	Basic insulation (Panel should be grounded)		
Recommended Panel for PS3-2UP Side	Recommended Panel 1	Recommended Panel 1	Recommended Panel 2(*3)
Recommended Panel for PS3-2US Side	Recommended Panel 3		

- *1: Use the screw and crimp contact combination recommended below. The use of other screws and crimp contacts can affect clearance and creepage distance.
If you choose to use a different screw/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 screw: JIS B 1188 spring lock washer + cross recessed head screw with captive flat washer M6×12
 - Recommended crimp contacts
 - Cable 14 sq: JIS C 2805 R14-6
 - Cable 22 sq: JIS C 2805 R22-6
 - Cable 38 sq: NICHIFU R38-6S
 - Cable 50 sq: NICHIFU R60-6S
- *2: Subjects of clearance and creepage distance are as follows.
- Between crimp contacts
 - Between power contact and panel
 - Between crimp contact and panel
 - Between screw (attached to power contact) and panel
- *3: In case of recommended panel 2, reverse attachment of receptacle is possible. Please be careful in panel attachment.



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