

PS3F Series

High Current Rack and Panel Connector



High-Current



Floating



Finger Protect



Overview

High current rack and panel connector

Contributes to operators' safety in installing while reducing installation man-hours.

Front access is best suited to the systems with no space at the back side.

Supports IP2X finger protection.

Harness operation is possible with multi-purpose tools.

Features

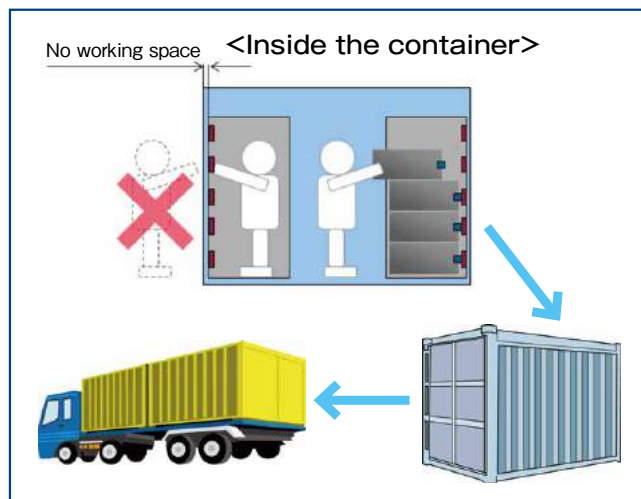
1. Supports High Current

Power contact supports rated current up to 100A.

(Derating curve, ambient temp 25°C : 125A)

2. Front access is best suited to the systems without space at the back side

Front access on system rack side allows maintenance from mating side (front side of the component), and is best suited for installing components in places without space at the back side.



3. Floating Amount : $\pm 2.5\text{mm}$

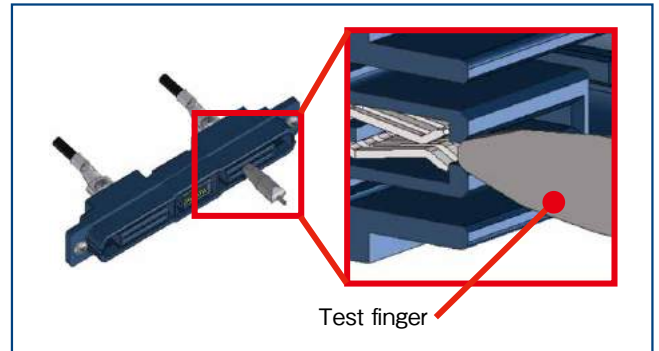
Floating design of the receptacle requires a rotation of $\pm 2.5\text{mm}$ by the floating screws in X and Y directions.

4. The signal section uses the Hirose GT8E connector.

The signal line uses the connector with proven records in automobile markets (GT8E).

5. Supports IP2X finger protection

Finger protection of the plug provides safety operation for field operators when it is used on the battery side.



6. UL, C-UL and TÜV Certified

Both the plug and the receptacle meet safety standards (UL, C-UL and TÜV standards).

7. Harness operation is possible with multi-purpose tools

Harness operations includes screwing the plug with a torque wrench etc. and crimping of the receptacle. All of these operations can be carried out with multi-purpose tools. (Torque wrench : JIS B 4652, crimp : JIS C 9711)

Application

Power supply devices such as batteries and UPS etc.

Product Specifications

Rated Current (Note1)	Power	Power (Derating Curve at Ambient Temperature of 25℃)	Signal	Operating Temperature	-40 to +105℃
	100A	125A	1A	Storage Temperature Range	-40 to +60℃
Rated Voltage (Note1)	Power	Signal			
	1000V AC	250V AC			

Applicable Cable	Power : 22sq (WL1,WL2)(Note1), 3 AWG Signal : 20 to 22AWG
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Note 1 : UL, C-UL and TÜV certifications have been certified while changing conditions such as rated current and voltage multiple times.
For details, see the "Conditions on Safety Standards (UL, C-UL, TÜV)"

Materials / Finish

● Receptacle

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black	UL94V-0
Power Male Contact	Copper Alloy	Silver Plating	-
Signal Male Contact	Copper Alloy	Contacting Part : Gold Plating GT8E section : Tin Plating	-
Case A	PBT	Black	UL94V-0
Case B	PBT	Black	UL94V-0
Floating Screw	Steel	Nickel Plating	-

● Plug

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black	UL94V-0
Power Female Contact	Copper Alloy	Silver Plating	-
Signal Female Contact	Copper Alloy	Contacting Part : Gold Plating GT8E section : Tin Plating	-
Contact Retention Plate C	PBT	Black	UL94V-0

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

PS3F

1

-

2

2

R

3

S

4

/

12

5

S

4

/

12

5

S

4

Power Male Contact

PS3F

1

-

R

3

P

4

C

6

(22)

7

Power Male Contact Cover

PS3F

1

-

P

4

C

6

-

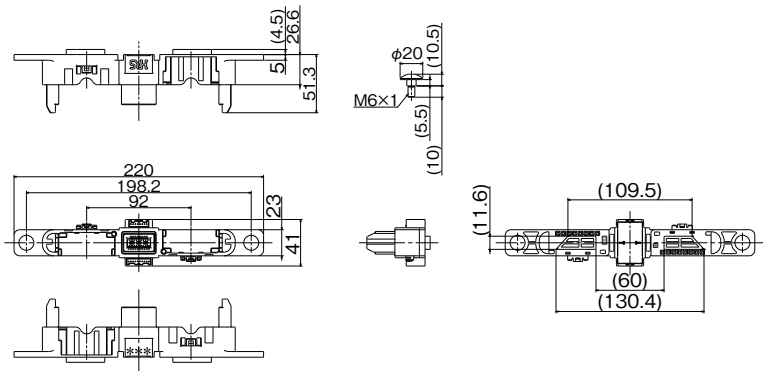
HOLDER

8

1 Series Name	PS3F	5 No. of Signal Contacts	
2 No. of Power Contacts		6 Power Contact Shapes	C : Crimp Contacts
3 Current Capacity of Power Contact	R : 100A	7 Applicable Wire	22sq
4 Contact Gender	P : Male Contact S : Female Contact	8 Shape of Case	HOLDER : Mating Case

Receptacle

● Main Receptacle Body : PS3F-2R/8P/10P

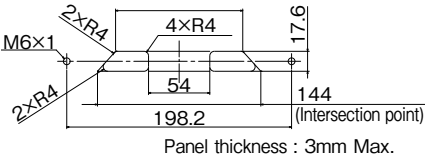


Part No.	HRS No.	Purchase Unit
PS3F-2R/8P/10P(10)	CL0236-1056-7-10	32pcs per box
PS3F-2R/8P/10P(11)	CL0236-1056-7-11	1pc per bag

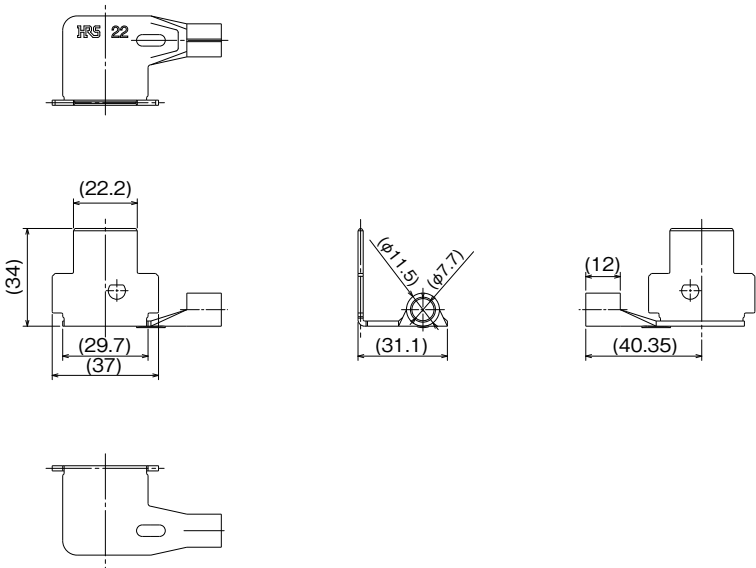
■ Specified Dimension Between Panels



■ Panel Cut-Out Dimensions

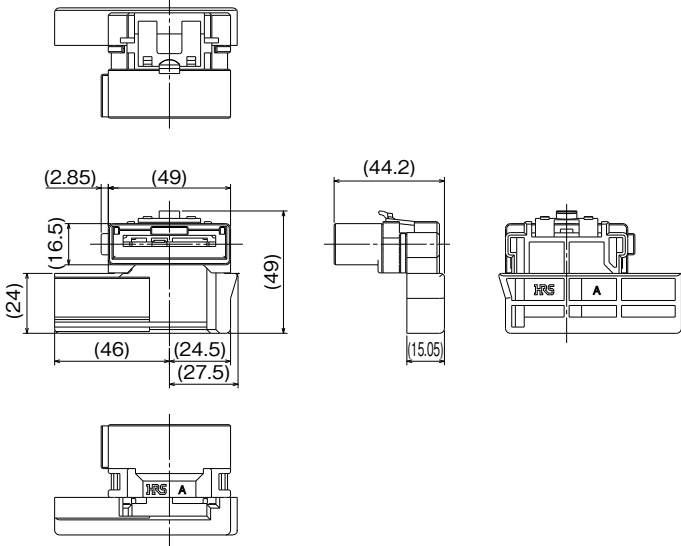


● Power Male Contact for Receptacles : PS3F-RPC(22)



Part No.	HRS No.	Purchase Unit
PS3F-RPC(22)	CL0236-1057-0-00	64pcs per box
PS3F-RPC(22)(01)	CL0236-1057-0-01	1pc per bag

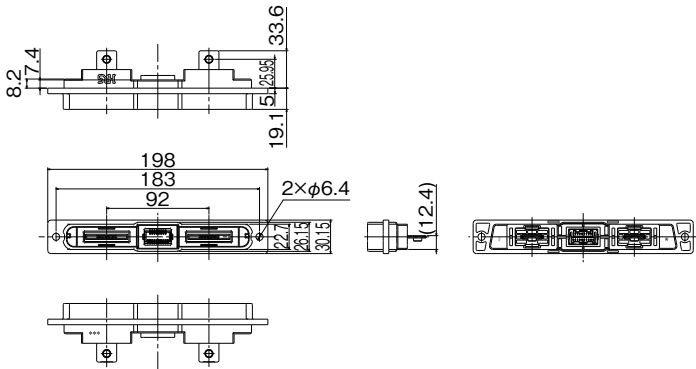
● Power Male Contact Cover : PS3F-PC-HOLDER



Part No.	HRS No.	Purchase Unit
PS3F-PC-HOLDER(10)	CL0236-1058-2-10	64pcs per bag
PS3F-PC-HOLDER(11)	CL0236-1058-2-11	1pc per bag

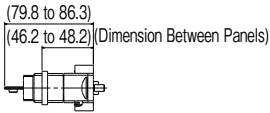
Plug

● PS3F-2RS/8S/10S

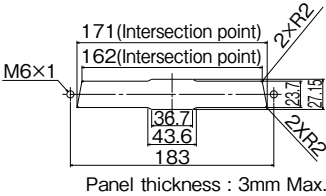


Part No.	HRS No.	Purchase Unit
PS3F-2RS/8S/10S(10)	CL0236-1055-4-10	32pcs per box
PS3F-2RS/8S/10S(11)	CL0236-1055-4-11	1pc per bag

■ Specified Dimension Between Panels



■ Panel Cut-Out Dimensions



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 N·m.
- The recommended fastening torque of the screw attached to the power supply female contact on the plug side is 2.5 to 5.2 N·m.
Please use multi-purpose tools including torque wrench etc. (JIS B 4652) for screw-fastening.
In addition, please use multi-purpose tools (JIS C 9711) for crimping the power male contact on the receptacle side.
- 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 swap, so it cannot be used to shut off the power.

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

The PS3F 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

Rated Voltage (AC/DC)	Power : 600V Signal : 50V
Rated Current	Power : 100A Signal : 1A
Cable	Power : 22sq (Note 1), 3 AWG Signal : 22 AWG
Creepage Distance (Note 2)	3.2mm Min.
Clearance (Note 2)	3.2mm Min.

● Table 2. Conditions for TÜV

Rated Voltage (AC/DC)	Power : 1000V Signal : 50V
Rated Current	Power : 100A Signal : 1A
Cable	Power : 22sq (Note 1), 3 AWG Signal : 22 AWG
Overvoltage Category	III
Contamination Level	3
Creepage Distance (Note 2)	16mm Min.
Clearance (Note 2)	8mm Min.
Insulation System	Basic insulation (Panel should be grounded)

Note 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

22sq Cable : JIS C 2805 R22-6

Note 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

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.