High Current Single Pos. Cable Connector

PS3C, PS3CS Series

PS3C Series

PS3CS Series

Please note that PS3C Series and PS3CS Series do not mate with each other.

■Overview

High current single pos. cable connector
Space-saving design with right angle plugs
Highly flexible cable wiring
Incorrect insertion prevention shape
Supports IP2X finger protection requirements
Harness operation is possible with multi-purpose tools.

■Features

1. Allows a high current flow

Rated current is supported up to 150 Amps.
(Derating curve, ambient temp 25℃)

2. Space-saving and highly flexible wiring

As the plug can be mated by rotating 180 degrees, cable wiring is highly flexible, and supports various placement of the housing.
In addition, right angle plug reduces the housing protrusion, and contributes to minimizing the size of the housing.

3. Incorrect insertion prevention shape

Guide key and color coding prevents mis-mating between plus and minus electrode.

4. Supports IP2X finger protection.

Safety ensured by finger protection design for both the plug and receptacle.

5. UL, C-UL and TÜV-certified

PS3C Series meets safety standards (UL, C-UL, TÜV standards). PS3CS will also be certified.

6. Two variations are available.

As PS3C Series connectors use commercially available crimp contacts, to accommodate a wide variety of cable sizes.
PS3CS Series connectors are limited to a cable size of 28 to 42sq, these are smaller than PS3C connectors.

7. Harness operation is possible with multi-purpose tools.

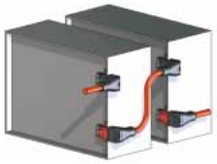
Harness operations include screwing the receptacle with a torque wrench etc. and screwing or crimping of the plug. All of these operations can be carried out with multi-purpose tools.
(Torque wrench : JIS B 4652, crimp : JIS C 9711)

■Usage

Power supply devices such as batteries and UPS etc.

Space-saving and highly flexible wiring

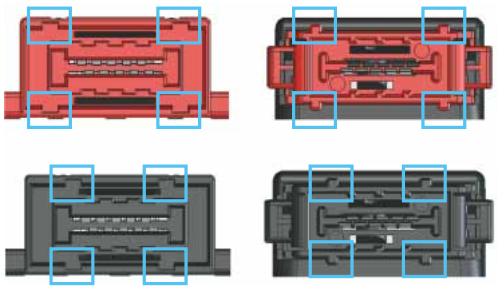
The plug can be mated rotating 180 degrees.



Battery : Vertical placement

Battery : Flat placement

Incorrect insertion prevention shape



Two variations are available.

PS3C Series
Supports various cable sizes
(Applicable cable : 14 to 50sq)
5 to 1/0 AWG

PS3CS Series
Similar to PS3C connectors except for the smaller size
(Applicable cable : 28 to 42sq)
2 to 1 AWG

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■Product Specifications

PS3C Series

Ratings	Rated Current	150A/1pin（Note 1）, 210A/1pin (Note 2)	Rated Voltage	AC/DC 1000V (Note 1)
	Applicable Cable	14 to 50sq（WL1,WL2） （Note 1） 5 to 1/0 AWG	Op. Temp. Range	-40 to +105℃ (including temperature rise due to electric current)
			Stor. Temp. Range	–40 to +60℃

PS3CS Series

Ratings	Rated Current	125A/1pin（38sq）（Note 1）	Rated Voltage	AC/DC 1000V (Note 1)
	Applicable Cable	28 to 42sq（WL1,WL2） （Note 1） 2 to 1 AWG	Op. Temp. Range	-40 to +105℃ (including temperature rise due to electric current)
			Stor. Temp. Range	–40 to +60℃

Note 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 8.

Note 2 : The value of the current is from the readings of derating curve at ambient temperature of 25℃.

■Materials / Finish

PS3C Series

●Receptacle

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black or Red	UL94V-0
Power female contact	Copper alloy	Silver plating	————
Contact Retention plate C	PBT	Black	UL94V-0

●Plug

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black or Red	UL94V-0
Power male contact	Copper alloy	Silver plating	————
Contact Retention plate A	PBT	Black	UL94V-0

●Plug cover

Parts	Materials	Color/Finish	Remarks
Cover A	PBT	Black or Red	UL94V-0
Cover B	PBT	Black or Red	UL94V-0
Tapping screw	Steel	Nickel	————

●Tapping screw

Parts	Materials	Color/Finish	Remarks
Tapping screw	Steel	Nickel	————

Note : It is meant for use in repair operation when the same tapping screw attached to the plug cover is lost.

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PS3CS Series

●Receptacle

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black or Red	UL94V-0
Power female contact	Copper alloy	Silver plating	————
Contact Retention plate C	PBT	Black	UL94V-0
Metal color	Steel	————	————

●Plug

Parts	Materials	Color/Finish	Remarks
Insulator	PBT	Black or Red	UL94V-0
Power male contact	Copper alloy	Silver plating	————
Contact Retention plate A	PBT	Black	UL94V-0

●Plug cover

Parts	Materials	Color/Finish	Remarks
Cover A	PBT	Black or Red	UL94V-0
Cover B	PBT	Black or Red	UL94V-0
P-tight screw	Steel	Nickel	————

●P-tight screw

Parts	Materials	Color/Finish	Remarks
Tapping screw	Steel	Nickel	————

Note : It is meant for use in repair operation when the same P-tight screw attached to the plug cover is lost.

■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.

1. Connector product name

PS3C S – A – 1 U S
❶ ❷ ❸ ❹ ❺ ❻

2. Plug cover

PS3C – 1 U P – CV L
❶ ❹ ❺ ❻ ❼ ❽

3. Screw

PS3C – 1 U P – TS
❶ ❹ ❺ ❻ ❾

❶ Series name : PS3C	❻ Power contact shapes : Male contact Female contact
❷ Shape of PS3C Series : S : Small size type	
❸ Shape of mating key : A : A key B : B key	❼ Shape of case : CV : Cover
	❽ Shape of cover : L : L-shape type
❹ No. of power contacts	❾ Shape of screw : TS : Tapping screw PS : P-tight screw
❺ Current capacity of power contact : U : 150A	

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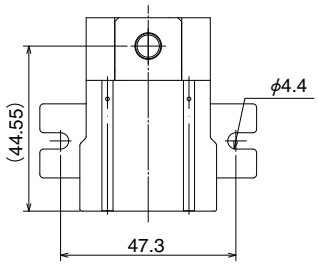
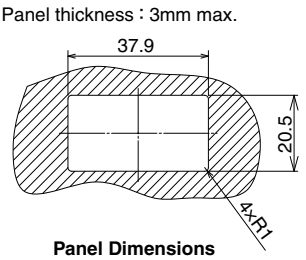
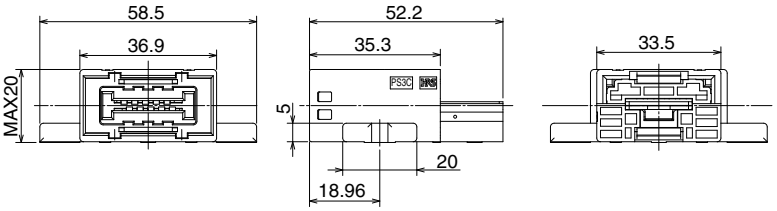
■PS3C Series

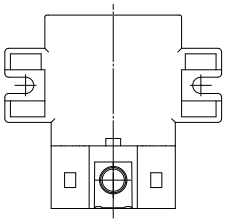
●Receptacle





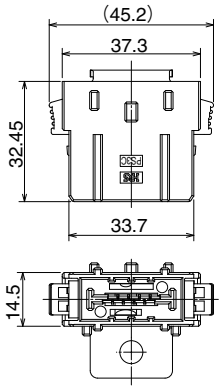
Panel Dimensions

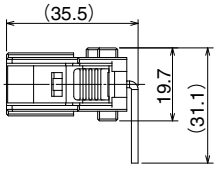


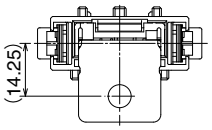


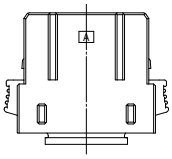
Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3C-A-1US	236-1062-0 00	○	Black	1pcs.
PS3C-B-1US	236-1063-2 00		Red	1pcs.

●Plug









Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3C-A-1UP	236-1064-5 00	○	Black	1pcs.
PS3C-B-1UP	236-1065-8 00		Red	1pcs.

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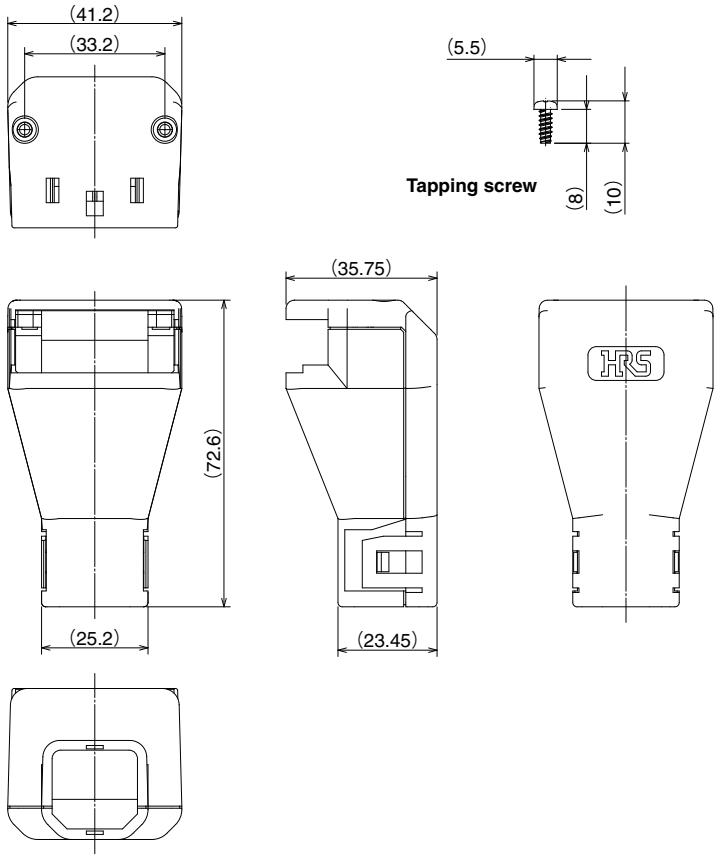
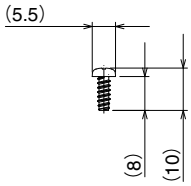
●Plug cover



Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3C-1UP-CVL	236-1066-0 00	○	Black	1pcs.
PS3C-1UP-CVL(01)	236-1066-0 01		Red	1pcs.

●Tapping screw



Part No.	HRS No.	RoHS
PS3C-1UP-TS	236-1068-0 00	○

It is meant for use in repair operation when the same tapping screw attached to the plug cover is lost.
Sold by the box (60 pieces in one box)

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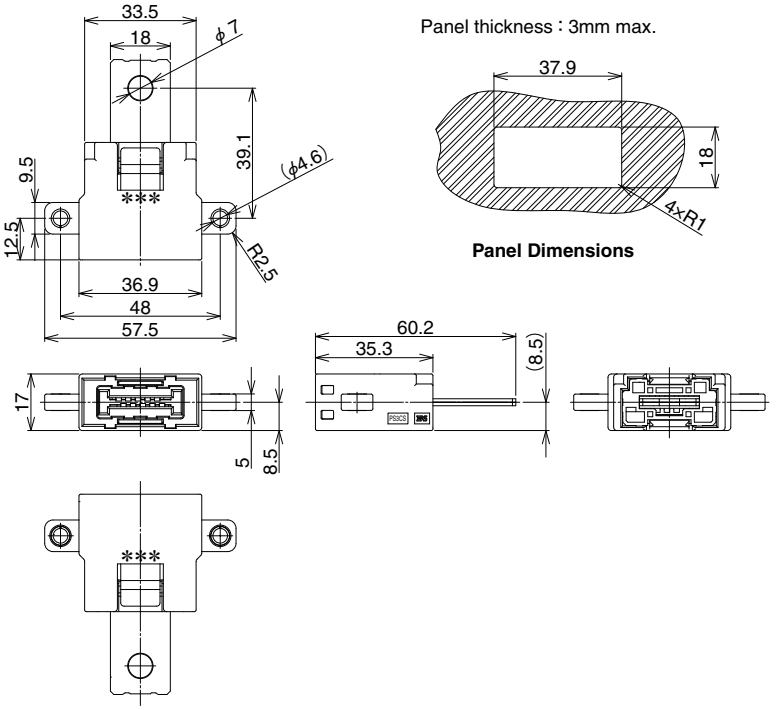
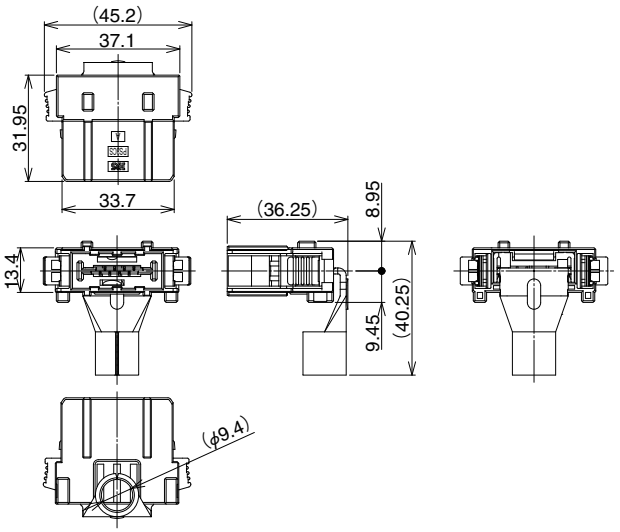
■PS3CS Series

●Receptacle



Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3CS-A-1US (10)	236-1074-0 10	○	Black	1pcs.
PS3CS-B-1US (10)	236-1075-0 10		Red	1pcs.

●Plug



Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3CS-A-1UP	236-1076-0 00	○	Black	1pcs.
PS3CS-B-1UP	236-1077-0 00		Red	1pcs.

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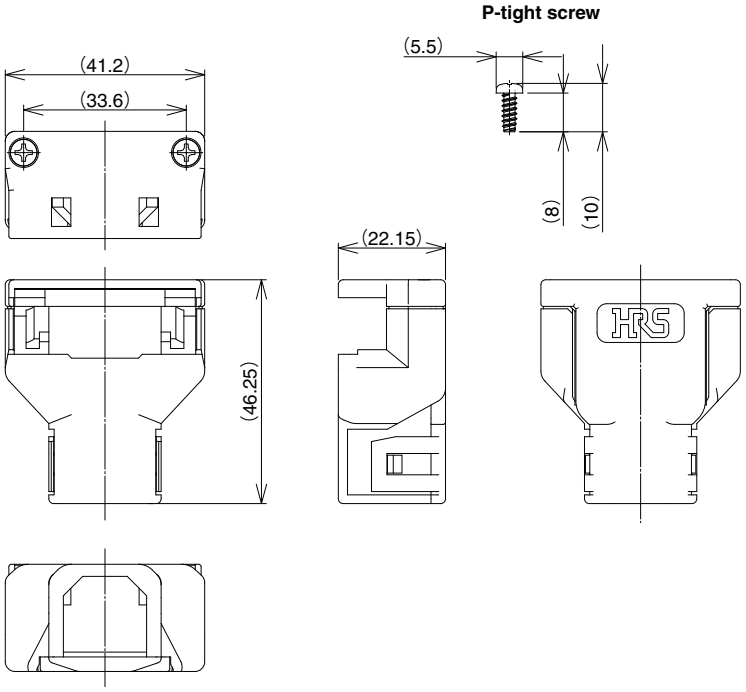
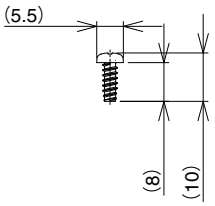
●Plug cover



Part No.	HRS No.	RoHS	Insulator color	Packaging
PS3CS-1UP-CVL	236-1078-0 00	○	Black	1pcs.
PS3CS-1UP-CVL (01)	236-1078-0 01		Red	1pcs.

●P-tight screw



Part No.	HRS No.	RoHS
PS3CS-1UP-PS	236-1081-0 00	○

It is meant for use in repair operation when the same P-tight screw attached to the plug cover is lost.
Sold by the box (48 pieces in one box)

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◆Usage Precautions

・M4 screw is used to assemble the receptacle with the housing.
・The recommended amount of torque used to tighten the screws should be 1.2 to 2.1 N·m.
PS3CS Plug
・The recommended fastening torque of the screw attached the power female contact on the Receptacle 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 PS3CS Plug 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-pluggable, so it cannot be used to shut off the power.
・As PS3C Series and PS3CS Series do not mate with each other, please use them only with the products of the same Series.

◆Safety Standards Certifications (UL, C-UL, TÜV) (PS3C only)

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.
Conditions for safety standards vary depending on submitted applications of current and voltage ratings. See Table 1 and Table 2.
(Conditions for PS3CS Series are now being adjusted.)

Table 1. Conditions for UL and C-UL

	Condition ①	Condition ②
Rated Voltage (AC/DC)	600V	
Rated Current	100A	150A
Cable	14 to 22sq (Note 1), 5 to 3 AWG	38 to 50sq (Note 1), 1 to 1/0 AWG
Creepage Distance (Note 2)	MIN : 3.2mm	
Clearance (Note 2)	MIN : 3.2mm	

Table 2. Conditions for TÜV

	Condition I	Condition II	Condition III
Rated Voltage (AC/DC)	800V	600V	1000V
Rated Current	100A (cable 14 to 22sq) (Note 1), 5 to 3 AWG 125A (cable 38sq) (Note 1), 1 AWG 150A (cable 50sq) (Note 1), 1/0 AWG		
Overvoltage Category	II	III	
Contamination Level	3		
Creepage Distance (Note 2)	MIN : 12.6mm	MIN : 12.6mm	MIN : 16mm
Clearance (Note 2)	MIN : 6mm	MIN : 6mm	MIN : 8mm
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
Cable 14sq : JIS C 2805 R14-6
Cable 22sq : JIS C 2805 R22-6
Cable 38sq : NICHIFU R38-6S
Cable 50sq : NICHIFU R60-6S
Note 2 : Subjects of clearance and creepage distance are as follows.
・Between the power contacts of plus and minus electrodes.
・Between the crimp contacts of plus and minus electrodes.
・Between power contact and panel
・Between screw (attached to power contact) and panel

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HRS

HIROSE ELECTRIC CO.,LTD.
2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
TEL: +81-45-620-3526 Fax: +81-45-591-3726
http://www.hirose.com
http://www.hirose-connectors.com

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