



Recodeal Interconnect System Co.,Ltd.

# Product Manual

EV&HEV Interconnect system solution  
V8.0





# Recodeal Interconnect System Co.,Ltd.

Suzhou Recodeal Interconnection System Co.,Ltd. was founded in January 2006 with a registered capital of 81 million yuan. It is located at 998 Songjia Road, Wusongjiang Science and Technology Industrial Park, Wuzhong District, Suzhou. The company is a national high-tech enterprise that develops, produces and sells connection systems, microwave components and other products.

Recodeal specializes in the design and manufacture of connection systems, microwave components and other products, and the industry ranks among the best. The products are widely used in data communication, new energy vehicles, industrial control, medical equipment, rail transportation and other fields, serving global customers.

Recodeal's main industrial chain includes mold design and manufacturing, precision stamping, injection molding, mechanical processing, etc., and most of the products are automatically assembled. The company has ISO 9001 quality management system, IATF 16949 quality management system, IRIS quality management system, ISO45001 occupational health and safety management system, ISO14001 environmental management system, integration management system of intellectualization and intellectual property management system.



# 01 The solution of high voltage power connector.....15-80

High voltage plastic connector.....16-49



High voltage Metal connector.....52-80



# 02 Manual service Disconnecter(MSD) solution.....81-98



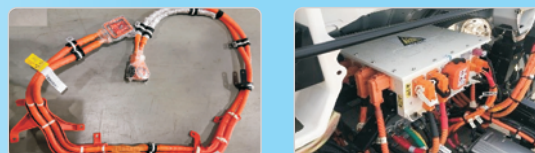
# 03 The solution of signal connector .....99-102



# 04 The solution of charging coupler .....103-114



# 05 The solution of EV high voltage harness.....115-116



# 06 The solution of high voltage power distribution system.....117-118



## High voltage plastic connector





Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>2/3POS High voltage plastic connector with shield .</b> Main applying to battery heating PTC、OBC、PDU、Compressor	30A	1000	2、3	2.5--4	option	option	Plastic	Ip68/IP6K9K	16
	<b>REX High voltage lower current connector with shield</b> Main applying to battery heating PTC、OBC、PDU、Compressor	28A	1000	1、2	2.5	option	N/A	Plastic	IP68/IP6K9K	18
	<b>REM II (2/3/4)High voltage plastic connector with shield .</b> Main applying to battery heating PTC、OBC、PDU、Compressor	40A	1000	2、3、4	2.5--6	option	option	Plastic	IP68/IP6K9K	20
	<b>REM III High voltage plastic connector with shield .</b> Main applying to battery heating PTC、OBC、PDU、Compressor	40A	1000	2	2.5--6	option	option	Plastic	IP68/IP6K9K	24
	<b>Multi-Pos HV Plastic shell connector with shield(REM)</b> Main applying to battery heating PTC、OBC、PDU、Compressor	40A	1000	2、3、4	2.5--6	option	option	Plastic	IP68/IP6K9K	*
	<b>2/4 POS Plastic shell connector with shield(RE L )</b> Main applying to battery heating PTC、OBC、PDU、Compressor	60A	1000	2、4	2.5--10	option	option	Plastic	IP68/IP6K9K	25
	<b>3 POS Plastic shell connector (RE L 1 )</b> Main applying to battery heating PTC、OBC、PDU、Compressor	40A	1000	3	2.5--6	N/A	option	Plastic	IP68/IP6K9K	27
	<b>4 POS Plastic shell connector with shield(RE L2)</b> Main applying to battery heating PTC、OBC、PDU、Compressor	40A	1000	4	2.5--6	option	option	Plastic	IP68/IP6K9K	28

## High voltage plastic connector




Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>6 POS Plastic shell connector with shield(RE L3)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	1000	6	2.5--6	option	option	Plastic	IP68/ IP6K9K	29
	<b>2pos High Current plastic shell connector with shield(REN)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.	120A	1000	2	16--25	option	option	Plastic	IP68/ IP6K9K	*
	<b>2pos High Current plastic shell connector with shield(REN1)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.	120A	1000	2	16--25	option	option	Plastic	IP68/ IP6K9K	30
	<b>2pos High Current plastic shell connector with shield(REK)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.	120A	1000	2	6--25	N/A	option	Plastic	IP68/ IP6K9K	*
	<b>Single POS Plastic shell connector (REA)</b> Applying in battery positive/ negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection	250A	1000	1	25--70	N/A	N/A	Plastic	N/A	31
	<b>Single POS Plastic shell connector (REA1)</b> Applying in battery positive/ negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection	350A	1000	1	25--120	N/A	N/A	Plastic	IP68/ IP6K9K	33
	<b>Single POS High current Plastic shell connector (REF)</b> Applying in battery positive/ negative to PDU、PDU to motor controller,DC charging outlet to battery. Battery box connection	250A	1000	1	25--70	N/A	N/A	Plastic	IP68/ IP6K9K	*
	<b>Single POS Plastic shell connector (REB)</b> Applying in battery positive/ negative to PDU、PDU to motor controller,DC charging outlet to battery. Battery box connection	300A	1000	1	25--70	option	option	Plastic	IP68/ IP6K9K	35



## High voltage plastic connector

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>2/3 POS High voltage plastic shell connector with shield (REG)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection	200A	1000	2、3	25--50	option	option	Plastic	IP68/IP6K9K	37
	<b>2 POS High voltage plastic shell connector with shield (REG)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection	250A	1000	2	25--70	option	option	Plastic	IP68/IP6K9K	44
	<b>1-3POS plastic shell connector (RIPT)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection	250A	1000	1、2、3	25--50	option	N/A	Plastic	IP68/IP6K9K	49
	<b>Cross wall Terminal</b> Applying in battery PDU、PDU to motor controller.	250A	1000	1	N/A	N/A	N/A	Plastic	N/A	*

## High voltage Metal connector

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>2-3POS low voltage curve connector with shield</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	25A	1000	2、3	2.5--4	option	option	Metal	IP68	52
	<b>2POS 40A metal shell connector with shield.(RQH)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	1000	2	2.5--6	option	option	Metal	IP68	53
	<b>3POS 40A metal shell connector with shield.(RQH)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	1000	3	2.5--6	option	option	Metal	IP68	54

## High voltage Metal connector

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>3POS 40A metal shell connector with shield.(RQB C-4)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	1000	3	2.5--6	option	option	Metal	IP68	55
	<b>2POS 40A metal shell connector with shield.(RQB C-5)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	60A	1000	2	2.5--10	option	option	Metal	IP68	58
	<b>Multi POS push-pull metal shell circular connector.(RQB)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	750	Refer to portfilio	0.75--6	N/A	Part with HIVL	Metal	IP68	*
	<b>push-pull metal shell circular connector(RQG)</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	800	2	2.5--6	option	option	Metal	IP68	*
	<b>8POS High voltage metal shell connector</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	16A	1000	8	2.5	option	N/A	Metal	IP68	*
	<b>4 POS High voltage current</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	60A	1000	4	2.5--10	N/A	N/A	Metal	IP68	*
	<b>5POS High voltage current</b> Main applying to battery heating PTC、OBC、PDU、Compressor.	40A	1000	5	1.5--6	N/A	N/A	Metal	IP68	*
	<b>1POS HV/C Push-Pull metal shell circular connector(RQF)</b> Applying in battery positive/negative to PDU、PDU to motor controller,DC charging outlet to battery.Battery box connection.	250A	1000	1	35--70	option	option	Metal	IP68	61

## Manual service Disconnecter Solution


Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>1POS High voltage current metal shell circular connector(RQD)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	250A	1000	1	16--70	option	N/A	Metal	IP68	64
	<b>Low-cost HV Metal connector (REQ4)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	250A	1000	1	25--70	option	option	Metal	IP68	69
	<b>2pos HV/C Metal shell connector with shield.(REG2)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	300A	1000	2	25--95	option	option	Metal	IP68	71
	<b>2pos Metal shell connector(RIPTII)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	300A	1000	2	25--70	option	N/A	Metal	IP68	73
	<b>3POS cross cylinder Metal shell connector(RET)</b> Applying in PDU to motor controller quick connection	250A	1000	3	N/A	option	N/A	Metal	IP68	74
	<b>2pos HV super current Metal shell connector with shield(REX)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	350A	1000	2	70--120	option	option	Metal	IP68	75
	<b>1pos high current push-pull metal shell connector(RQAll)</b> Applying in battery positive/negative to PDU. PDU to motor controller,DC charging outlet to battery.Battery box connection.	400A	1000	1	70--135	option	option	Metal	IP68	77
	<b>Swap connector</b> Applying in replace battery.	300A	750	15	50--70	option	option	Metal	IP68	79

## High voltage Metal connector

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>Manual service Disconnect ( MSD )</b> Fuse current: 200A--630A Fuse Voltage: 690V AC Current Rating:250A	220A	500	2	N/A	N/A	option	Plastic	IP68	*
	<b>Manual service Disconnect ( MSD1 )</b> Fuse current: 200A--630A ( 750V DC ) ,200A--400A(1000V DC); Fuse Voltage: 750V DC/1000V DC; current Rating:250A	250A	750/ 1000	2	N/A	N/A	option	Plastic	IP68	81
	<b>Manual service Disconnect ( MSD1A )</b> With out Fuse; Current Rating:500A; Same size with MSD1	500A	1000	2	N/A	N/A	option	Plastic	IP68	*
	<b>Manual service Disconnect ( MSD2 )</b> Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A	250A	750	2	N/A	N/A	option	Plastic	IP68	83
	<b>Manual service Disconnect ( MSD3 )</b> Fuse current: 200A--400A Fuse Voltage: 500V DC Current Rating:200A	200A	500	2	N/A	N/A	option	Plastic	IP68	86
	<b>Manual service Disconnect ( MSD4 )</b> Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A	250A	750	2	N/A	N/A	option	Plastic	IP68	89
	<b>Manual service Disconnect ( MSD5 )</b> Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A	250A	750	2	N/A	N/A	option	Plastic	IP68	91
	<b>Manual service Disconnect ( MSD7 )</b> Fuse current: Voltage750V.DC 200A--400A; Voltage500V.DC 500A Current Rating:250A	250A	750	2	N/A	N/A	option	Plastic	IP68	94



## Manual service Disconnecter Solution

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>Manual service Disconnecter (MSD9)</b> Fuse current: Voltage500V.DC80A --450A; Current Rating: 200A	200A	500	2	N/A	N/A	option	Plastic	IP68	97

## Signal Transmission System Solution

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>5POS Bayonet circular connector</b> Applying to battery management system and other EV signal control system.	13A	400	5	0.5--1.5	N/A	N/A	Metal	IP67	*
	<b>6POS Push-Pull circular connector</b> Applying to battery management system and other EV signal control system.	10A	300	6	0.5--1	N/A	N/A	Metal	IP67	*
	<b>7POS Bayonet circular connector</b> Applying to battery management system and other EV signal control system.	7A	400	7	0.5--0.75	N/A	N/A	Metal	IP67	*
	<b>8POS Bayonet circular connector</b> Applying to battery management system and other EV signal control system.	13A	400	8	0.5--1.5	N/A	N/A	Metal	IP67	*
	<b>8POS Bayonet circular connector (Tiny)</b> Applying to battery management system and other EV signal control system.	7A	400	8	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>8POS Push-Pull circular connector</b> Applying to battery management system and other EV signal control system.	7A	400	8	0.5-0.75	N/A	N/A	Metal	IP67	*



## Signal Transmission System Solution

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>8POS Circular Signal Plastic shell connector</b> Applying to battery management system and other EV signal control system.	13A	400	8	0.5--1.5	N/A	N/A	Metal	IP67	99
	<b>10POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	10	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>12POS Push-Pull Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	12	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>12POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	13A	400	12	0.5-1.5	N/A	N/A	Metal	IP67	*
	<b>12POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	12	0.5-1.5	N/A	N/A	Metal	IP67	*
	<b>12/18POS Circular Signal Plastic shell connector</b> Applying to battery management system and other EV signal control system.	7A	400	12	0.35-0.75	N/A	N/A	Plastic	IP68	100
	<b>19POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	19	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>19POS Push-Pull Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	19	0.35-0.5	N/A	N/A	Metal	IP67	*



## Signal Transmission System Solution

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>26POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	13A	400	26	0.5--1.5	N/A	N/A	Metal	IP67	*
	<b>32POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	32	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>32POS Circular Signal Plastic shell connector</b> Applying to battery management system and other EV signal control system.	13A	400	26Signal Terminal 6 Power Terminal	Signal 0.35-0.8 Power 0.5-1.5	N/A	N/A	Plastic	IP68	101
	<b>37POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	37	0.5-0.75	N/A	N/A	Metal	IP67	*
	<b>46POS Bayonet Circular Signal connector</b> Applying to battery management system and other EV signal control system.	7A	400	46	0.5-0.75	N/A	N/A	Metal	IP67	*

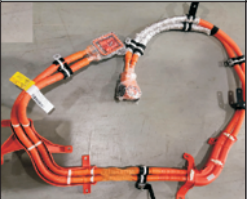
## Charging Connector system

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>AC Charging Gun</b> Include AC Plug and Socket, Main Applying to connect Electric net and OBC.	10A/ 16A/ 32A/ 63A	450	7	Option	N/A	N/A	Plastic	IP66	103
	<b>DC Charging Gun</b> Include DC Plug and Socket, Main Applying to connect Electric net and OBC.	125A/ 250A	750	9	Option	N/A	N/A	Plastic	IP66	109

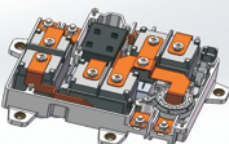
### Charging Connector system

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	IP level	Page
	<b>European standard AC/DC integrated charging Coupler</b> Meeting IEC 62196-1, IEC 62196-2, IEC 62196-3 standard fast and slow charging functions, Maximum charge current up to 300A.	32A (AC)/300A (DC)	1000	9	Option	N/A	N/A	Plastic	IP66	111
	<b>GB/T AC/DC integrated charging Coupler</b> Meeting GB/T20234.1,GB/T20234.2, GB/T20234.3 standard fast and slow charging functions, Maximum charge current up to 300A.	32A (AC)/300A (DC)	1000	16	Option	N/A	N/A	Plastic	IP66	113

### EV High voltage Harness Solution

Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	Page
	<b>EV High Voltage Harness</b> Applying to battery management system PDU signal and other EV signal control system	option	option	option	option	N/A	N/A	option	115

### High voltage PDU Solution

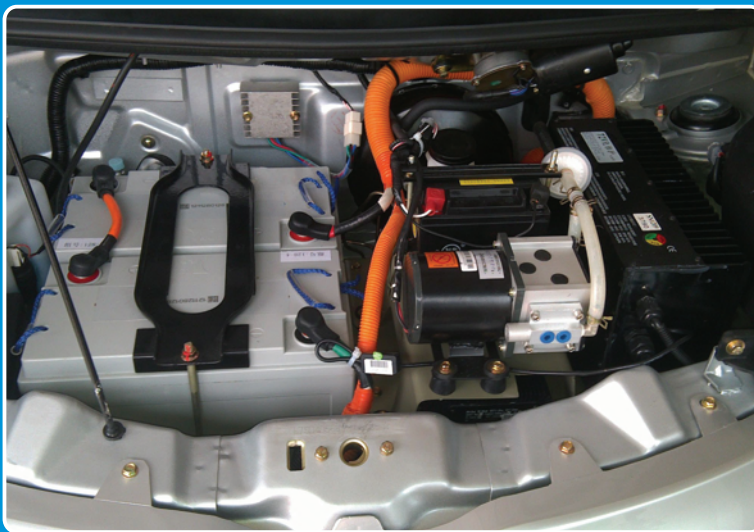
Picture	Discription&application	Current Rating	Volatge Rating (DC)	No. of contact	Cable Section (mm <sup>2</sup> )	Shielding	HVIL	Shell Material	Page
	<b>Power Distribution Unit ( PDU )</b> Customized according to customer requirements	N/A	N/A	N/A	N/A	option	option	Metal	117

Note:

If need more infomation about product(mark with \*),Please contact us.

# The solution of high voltage power connector

High voltage connectors are used on almost all high voltage devices in electric vehicles, Above 100 V, voltage Generally ranging from 300 V—1000V, Current A—450A,10 The number of cores is generally 1-6, General requirements with shielding and interlocking features, Mainly used for power transmission. High voltage and small current connectors within 40 A, To 2-6 cores in the majority; High voltage and high current connectors above 80A, To 1-3 core in the majority. According to the shell material: high pressure metal connector, To 1-2 cores in the majority; High - pressure plastic connectors, To 1-6 core in the majority. Rui can provide the overall high voltage connector solution for the electric vehicle field. Highvoltage metal connectors such as: RQD、RQB、RQF、REX series; High-voltage connectors such as plastic: REG、REG1、REMII、REL、RED series; For energy storage project connectors such as: REA、REA1 and so on series.



## 2/3POS High Voltage plastic connector with shield(RED)

### Describe

- 2/3 POS
- Plastic shell
- Locking handle and
- Secondary locking structure
- High protection degree:
- IP6K9K、IP68
- 6 anti-misplug key position.
- Cable section: 2.5mm<sup>2</sup>--4mm<sup>2</sup>



### Application

- Current Rating: 22A=2.5mm<sup>2</sup>  
25A=3mm<sup>2</sup>  
30A=4mm<sup>2</sup>
- Voltage Rating: 1000V DC
- Shielding: Option
- HVIL: Option
- Working Temperture: -40℃--  
+140℃

### Ordering information

RED-TM2PAH-2.5-A

Extensive character

Cable section:2.5、3、4(mm)

H: H: HVIL(Non-HVIL unmarked)

Anti-misplug key position: A、B、D、E、

P: Shielding

Power contact number: 2、3

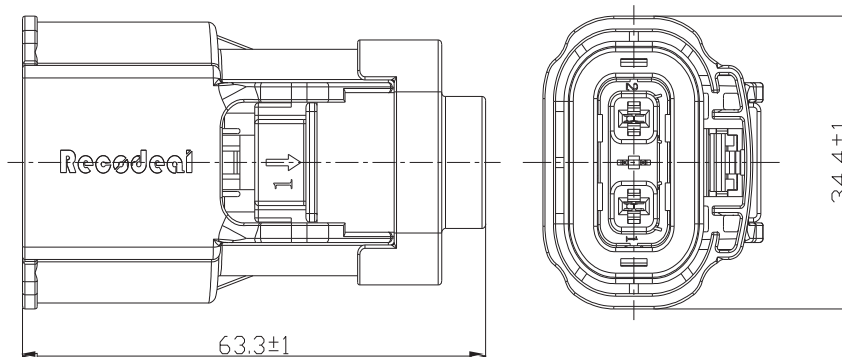
T:Plug; ; Z: Flange installation socket

RED:Product Serial

Note: connector type plug generated according to naming rules does not contain power terminal, socket does not contain power & interlocking terminal. Three-core connectors do not have high-voltage interlocking, three-core connector plug can not adapt to 3 mm<sup>2</sup> and 4 mm<sup>2</sup> shielded wire.

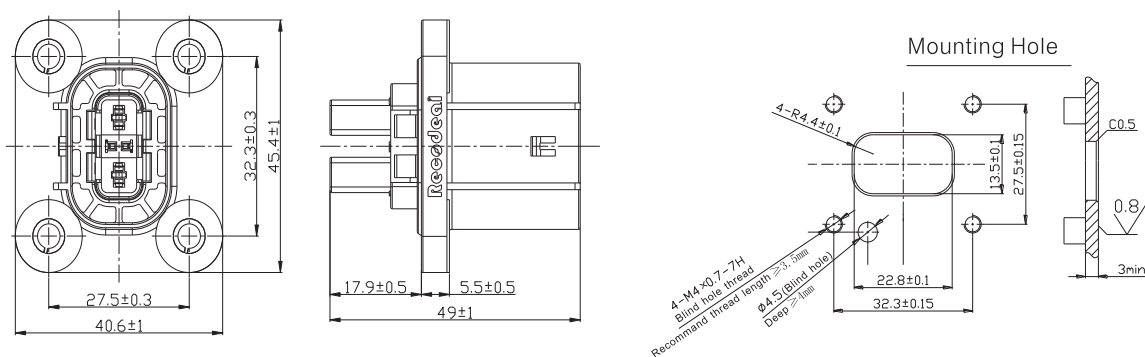
### Size

#### 2POS Plug

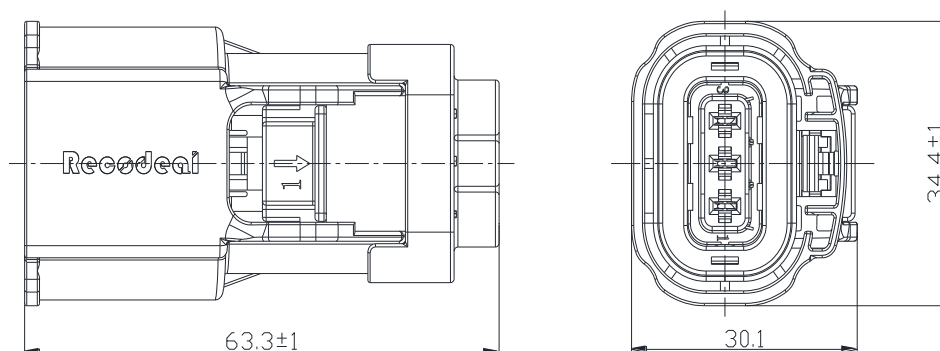




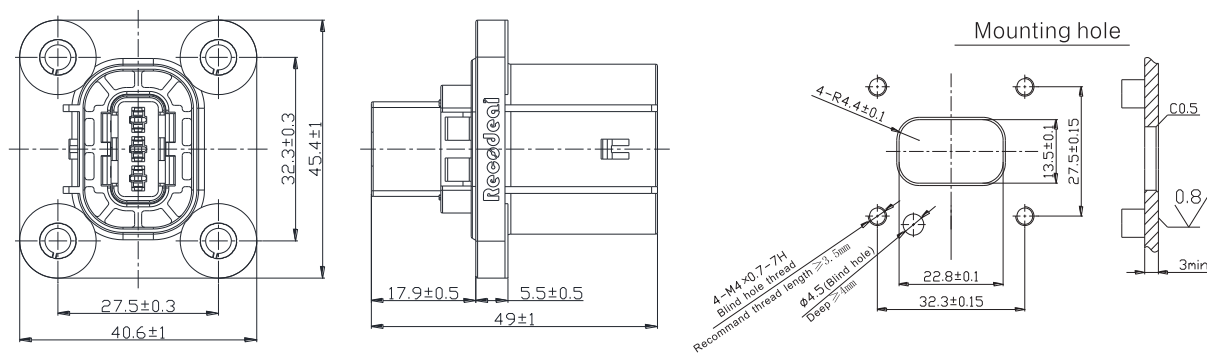
## 2POS Flange installation socket



## 3POS Plug



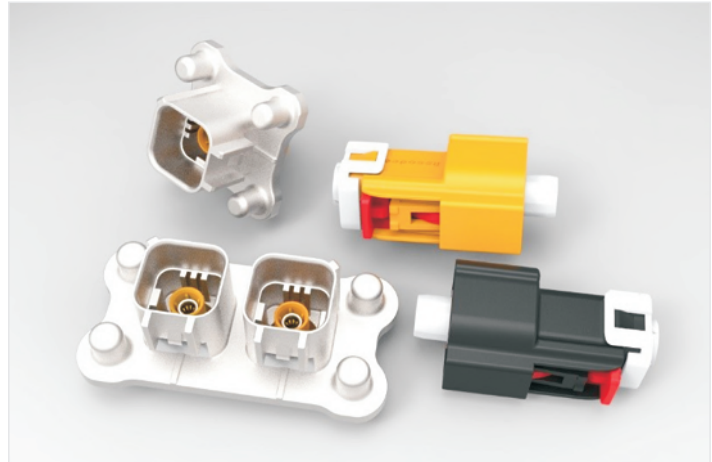
## 3POS Flange installation socket



## 1/2POS High Voltage Low Current Connector with Shield(REX)

### Describe

- 1/2POS
- Plug is plastic and socket is aluminium alloy shell.
- Locking handle and Secondary locking structure
- High protection degree: IP6K9K、IP68
- 2 anti-misplug key position
- Cable section: 2.5mm<sup>2</sup>
- Shield

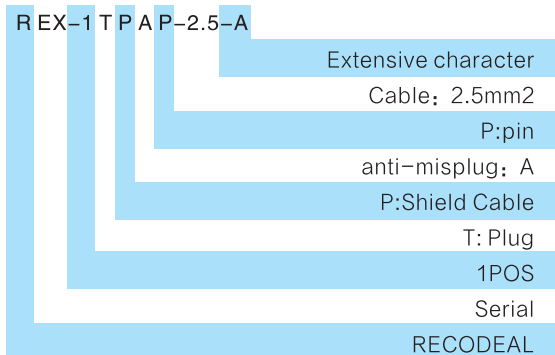


### Application

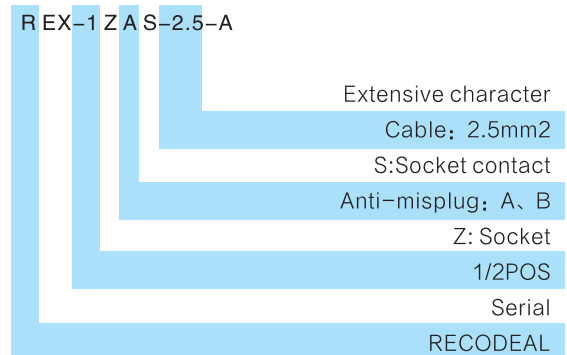
- Current Rating: 28A
- Voltage Rating: 1000V DC;
- Shielding: Option
- Working temperature: 40°C-- +140°C

### Ordering information

#### Plug



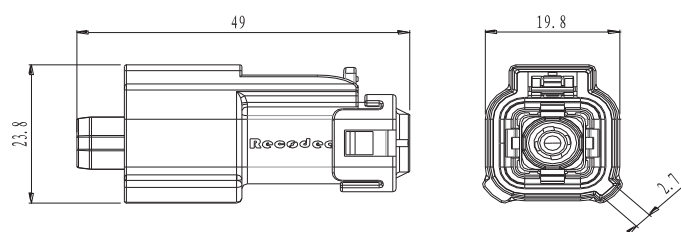
#### Socket



Note: Plug&Socket exclude Terminal

### Size

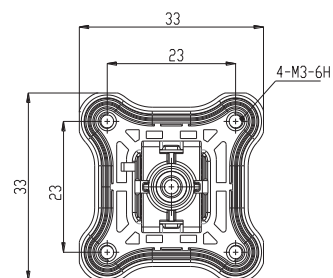
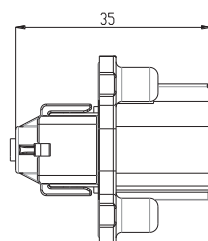
#### PLUG



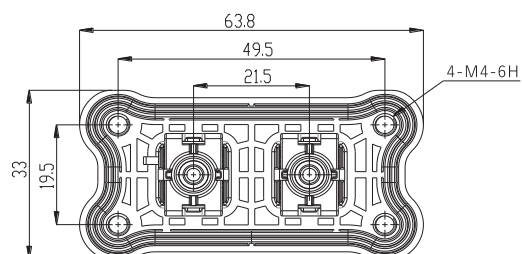
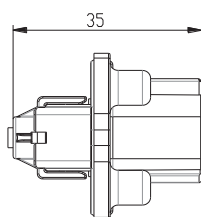


## SOCKET

1POS:

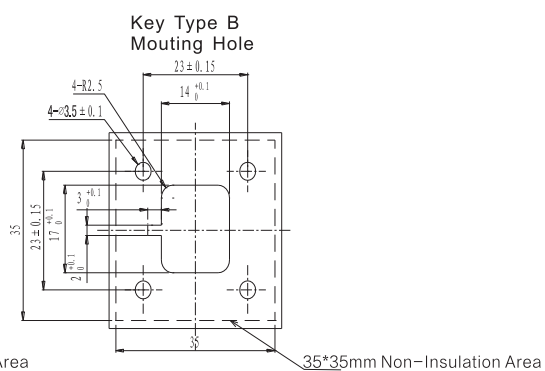
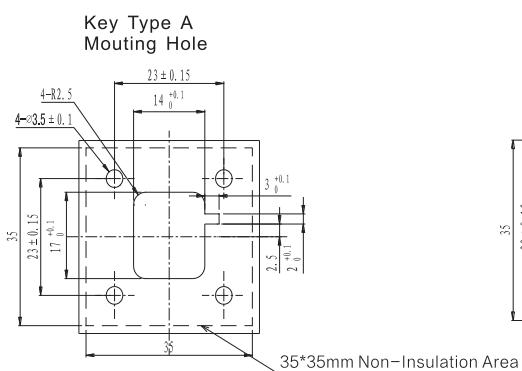


2POS:

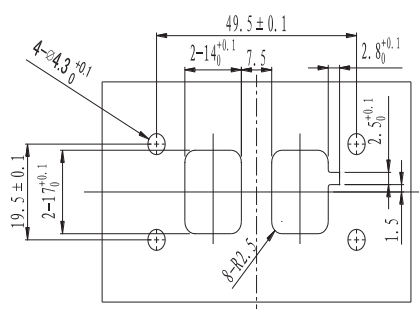


## Mounting Hole

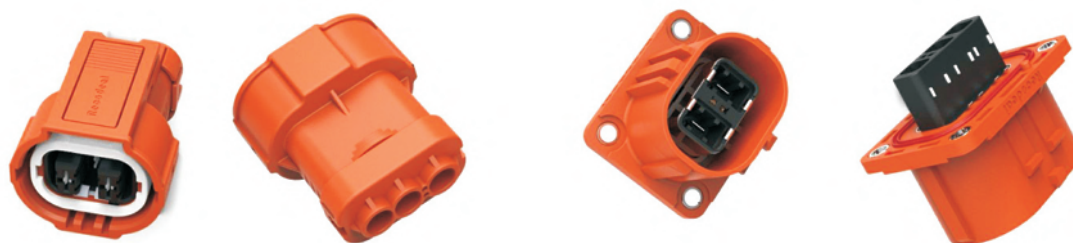
1POS



2POS



## HVIL Plastic Shell Connector with Shield ( REM II )



### Material Model

No.	Product Description	Model No.	Keywords
1	2 POS Plug(REM II )	REM II -T2PAH-2.5-A	Plug、2 POS、Shield、Key position:A、HVIL、2.5mm <sup>2</sup>
2	2 POS Jack(REM II )	REM II -Z2PAH-2.5-A	Flange Jack、2 POS、Shield、Key position:A、HVIL、2.5mm <sup>2</sup>
3	3 POS Plug(REM II )	REM II -T3PAH-2.5-A	Plug、3 POS、Shield、Key position:A、HVIL、2.5mm <sup>2</sup>
4	3 POS Jack(REM II )	REM II -Z3PAH-2.5-A	Flange Jack、3 POS、Shield、Key position:A、HVIL、2.5mm <sup>2</sup>

Note:

1. There are many types of the REM II ,please choose your proper type according to the following ordering Information. At the end of the extensive character are A.
2. You would better use non-shielded cable to cost down, if the flange Jack is assembled in the outside of the metal case.

### Features/Application

- This series of connectors are mainly applied in electric vehicle, providing stable high voltage, small current transmission among systems.
- The outer shell is molded in engineering plastics with excellent flame-retardant and high temperature resistant ability, it also can meet the demand of the RoHS. Comparing to same sized metal connectors, it has lower cost and lighter weight.
- This series of connectors have locking catch structure and secondary locking system. The connector requires smaller installation space.
- Current rating range 16A~40A, supporting cable section from 2.5mm<sup>2</sup> to 6.0mm<sup>2</sup> to meet various electrical performance.
- Both plug and jack have electric shock protection function.
- Assembly manufacturing service as required.
- Excellent sealing performance, can meet IP67 when mated.
- This series of connectors can be interchanged with the original REM plugs.
- The feature of shield and HVIL (High Voltage Inter-lock) are optional.

## Technical Specification

### Electrical Property

Current rating: 16A(For2.5mm<sup>2</sup>cable);  
25A(For4mm<sup>2</sup>cable);  
40A(For6mm<sup>2</sup>cable);

Voltage rating:700V DC

Withstand voltage:3000V AC 1 min

Insulation resistance: 3000MΩ

Shielding:optional

HVIL:optionnal

Cable range:

cable range	Cable cover size
2.5mm <sup>2</sup> non-shielded cable	Φ3.3mm ~ Φ4.1mm
4mm <sup>2</sup> non-shielded cable	Φ4.0mm ~ Φ4.8mm
6mm <sup>2</sup> non-shielded cable	Φ4.6mm ~ Φ5.4mm
2.5mm <sup>2</sup> shielded cable	Φ5.3mm ~ Φ6.1mm
4mm <sup>2</sup> shielded cable	Φ6.1mm ~ Φ6.9mm
6mm <sup>2</sup> shielded cable	Φ6.1mm ~ Φ6.9mm

### Mechanical Property

Mating cycle:>50 times

Vibration: 10~80 Hz,amplitude 0.75

81~500Hz,20g

500~2000Hz,18g

### Environmental Property

Working temperature: -40° ~+130°

Relative humidity:≤95%(40° )

Sealing: IP67 in mated condition

Flame retardant: UL94 V-0

### Material

Shell:thermoplastic flame-retardant

Contact:copper alloy nickle plated

Seal:rubber or elastomer

## Ordering Information

REM II - T 2 P A H - 2.5 - A

Extensive character

Cable section(mm<sup>2</sup>) :2.5mm<sup>2</sup>,4mm<sup>2</sup>,6mm<sup>2</sup>

H:HVIL(Non-HVIL unmarked)

Key position:A,B,C

P:shielding, (Non-shielding unmarked)

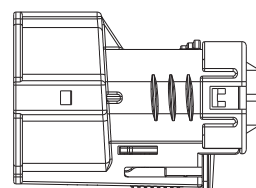
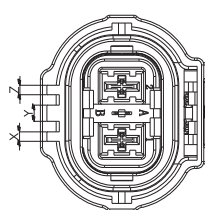
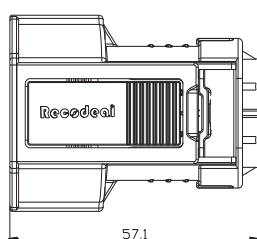
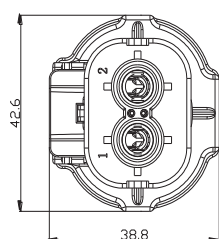
Number of pins:2 Pos. 3Pos

T:Plug; Z:Flange Jack

REM II :Serial code

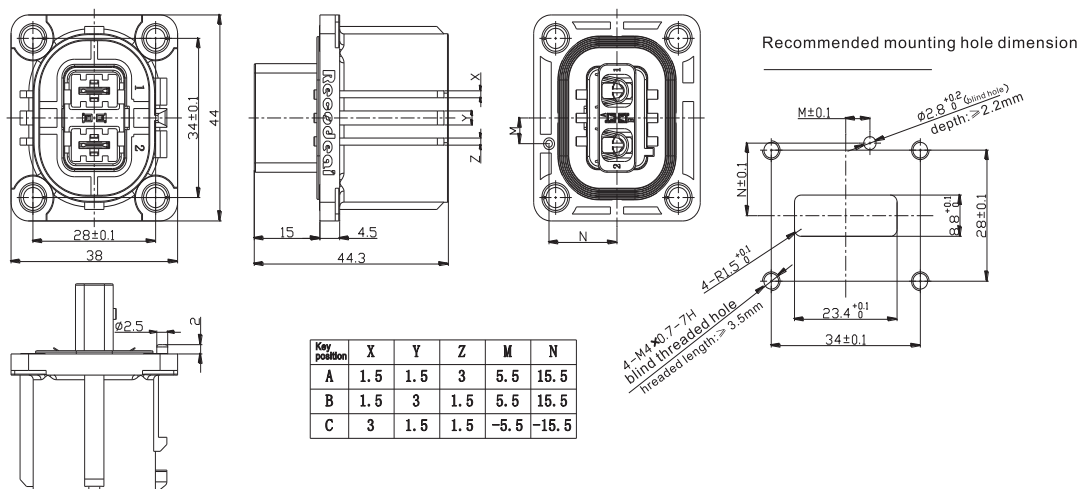
## Size

### 2 POS Plug

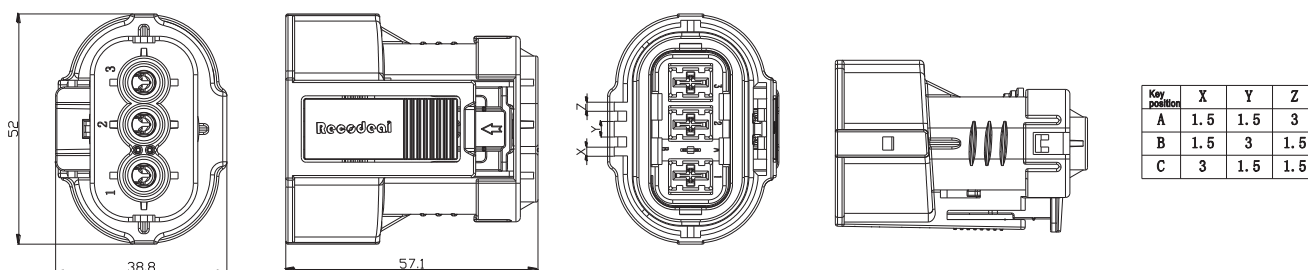


Key position	X	Y	Z
A	1.5	1.5	3
B	1.5	3	1.5
C	3	1.5	1.5

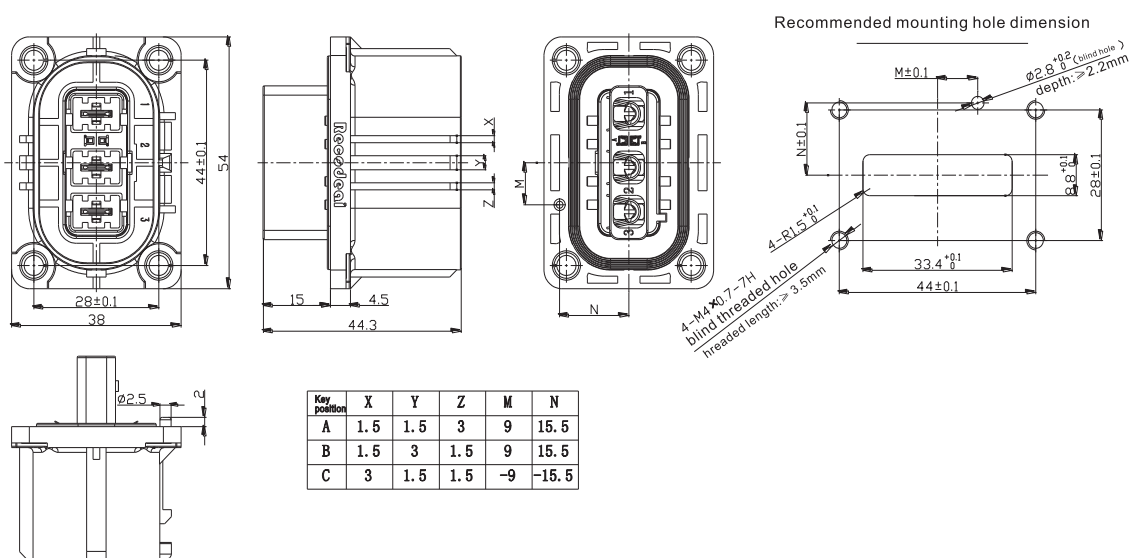
## 2 POS Flange Jack



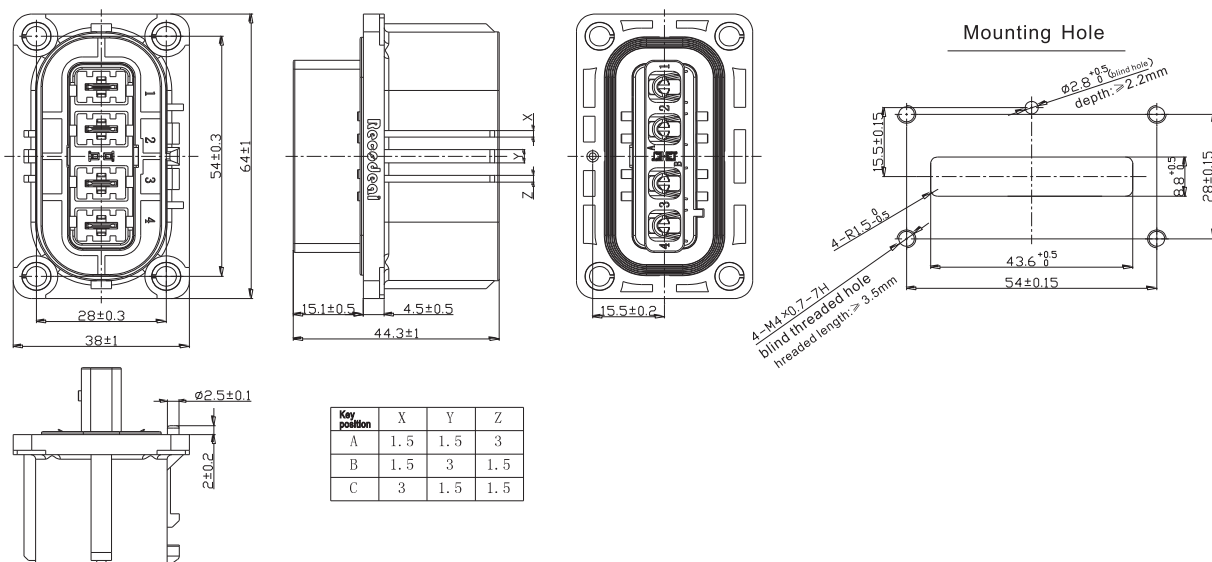
## 3 POS Plug



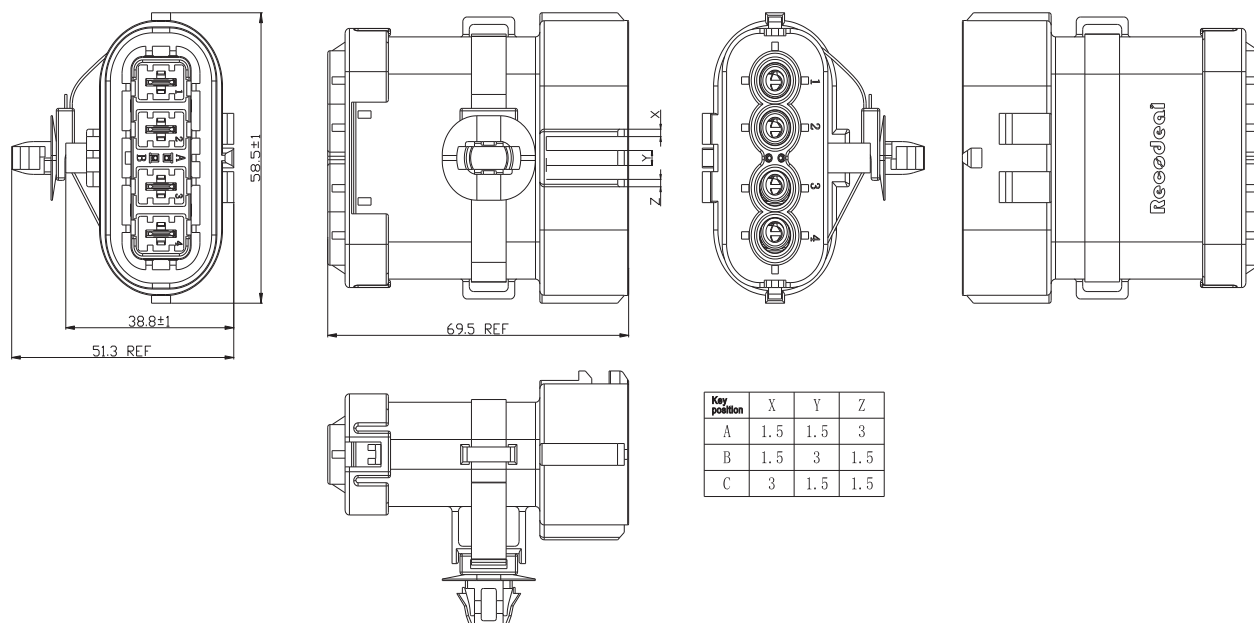
## 3 POS Flange Jack



## 4POS FLANGE SOCKET



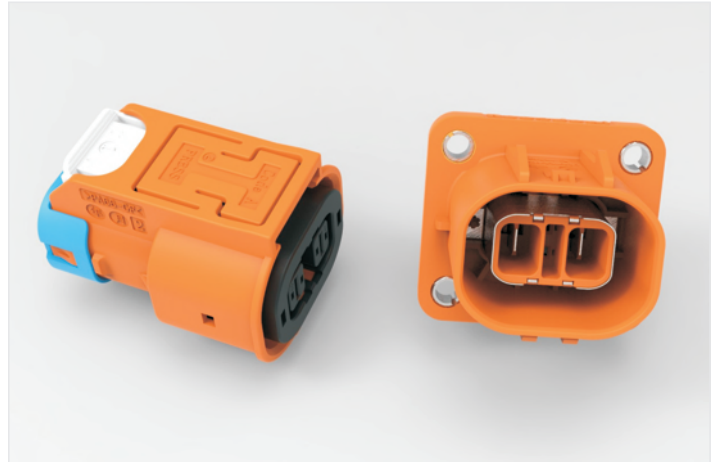
## 4 POS PLUG



## 2POS High Voltage Plastic Shell Connector With Shield(REM III)

### Describe

- 2POS
- Plastic Shell
- Locking handle and
- Secondary locking structure
- False-proof design ( IPXXB )
- IP Degree: IP6K9K、IP68
- Cable Size:2.5mm



### Application

- Current Rating: 16A=2.5mm  
25A=4mm  
40A=6mm
- Voltage Rating: 1000V DC
- Shielding: Option
- HVIL: Option
- Working Temperature: -40°C-- +140°C

### Ordering information

REM III-Z 2 P A H -2.5-B

Cable:2.5、4、6

H:HVIL (Non-HVIL unmarked)

Anti-mistake key positions: A、B、C、D

P:Shielding

Contact number: 2

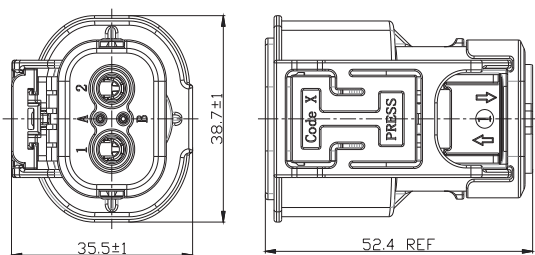
T:Plug; Z: Socket

REM III:Product series

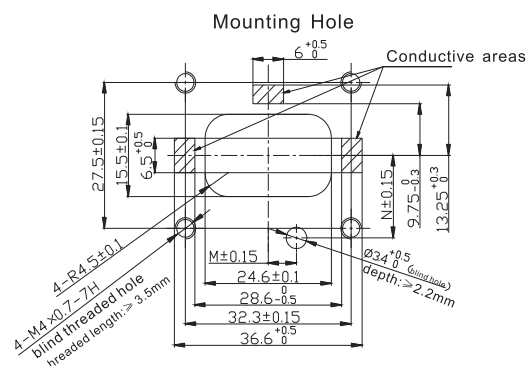
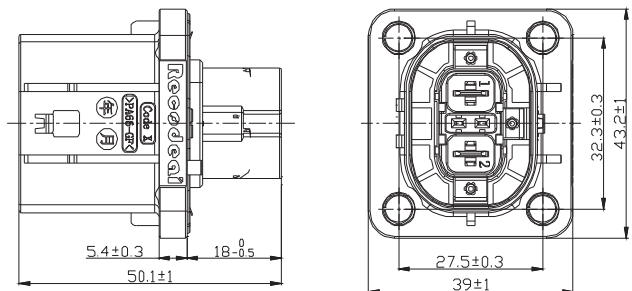
Plug and Socket exclude matching Power Terminal and HVIL which should be purchased separately.

### Size

#### Plug



#### Socket



## 2/4POS High Voltage Plastic Shell Connector With Shield(REL)

### Describe

- 2/4POS
- Plastic Shell
- Secondary locking structure
- False proof design
- High protection degree: IP6K9K、IP68
- 4 Anti-misplug
- Cable Section: 2.5mm<sup>2</sup>
- PTC、OBC、PDU



### Application

- Current Rating: 16A=2.5mm  
25A=4mm  
40A=6mm  
60A=10mm
- Shield: Option
- HVIL: Option
- Temperature Range: -40°C--+140°C

### Ordering information

REL-T 4 P A H -6 -A

Design Extension Number

Cable 2.5/4/6/10 ( 10mm only use for 2 POS )

H:HVIL

Key position: N、A、B、C

P:Shield

POS: 2、4

T:PLUG; Z: Socket

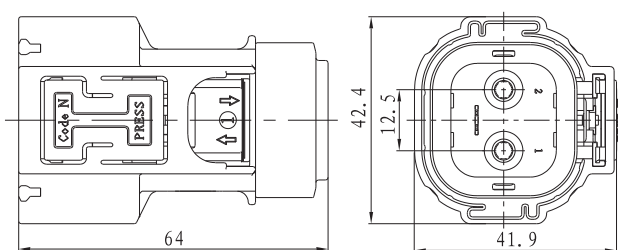
REL:Product Serial No

The connector type plug generated according to the naming rules does not contain power terminals, and the socket does not contain power & interlocking terminals.

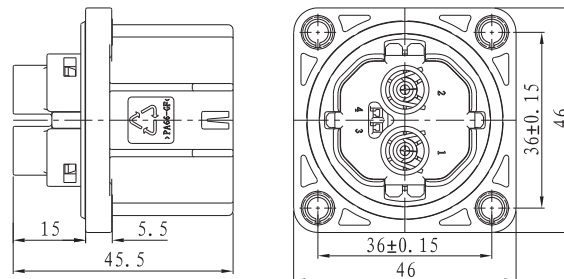
### Size

#### 2POS

PLUG

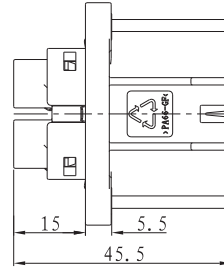
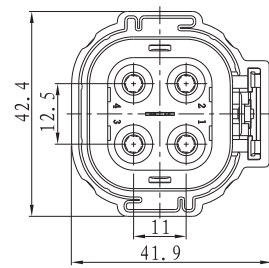
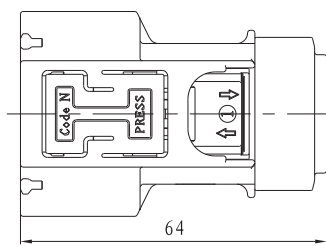


SOCKET

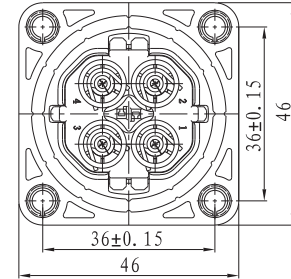


SIZE of 2POS

PLUG

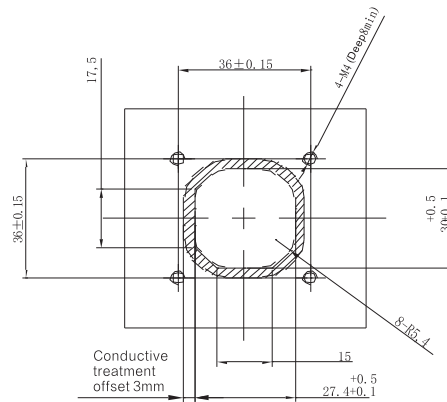


Socket

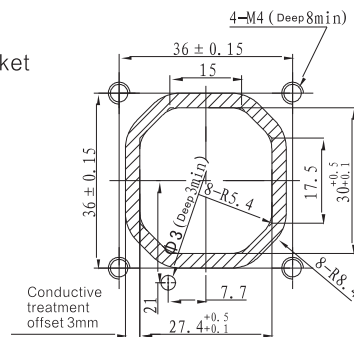


Install hole size

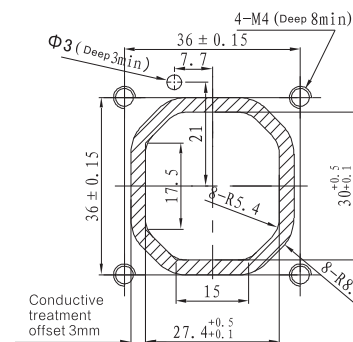
hole size of non-misfit socket



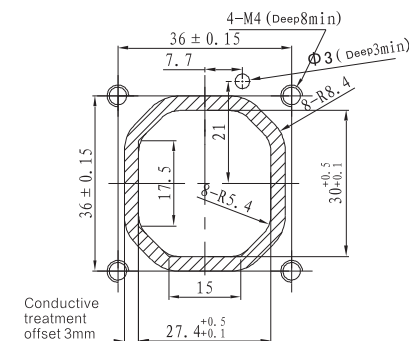
Hole size of anti-misfit socket



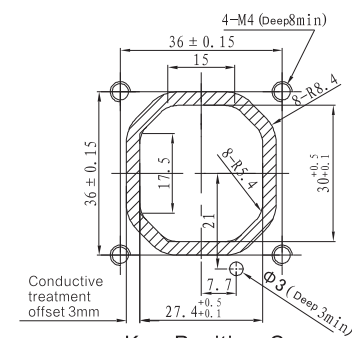
Key Position N



Key Position A



Key Position B



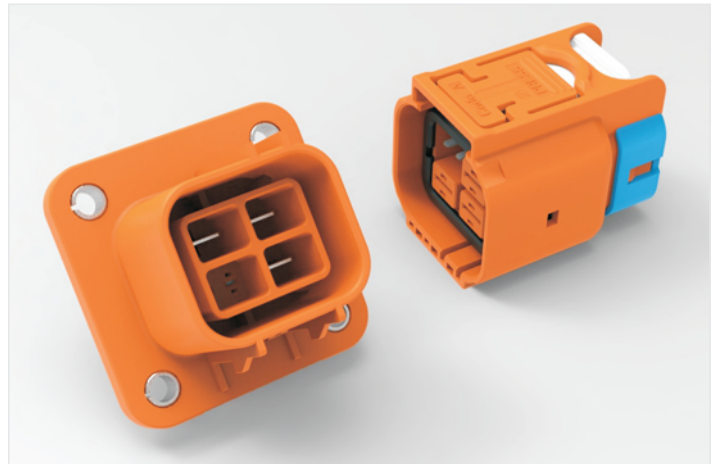
Key Position C



## 3POS High Voltage Plastic Shell Connector (REL1)

### Describe

- 3POS
- Plastic shell
- Secondary locking structure
- False proof design
- High protection degree: IP6K9K、IP68
- 4 Anti-misplug
- Cable Section: 2.5mm<sup>2</sup>
- PTC、OBC、PDU



### Application

- Current Rating: 16A=2.5mm<sup>2</sup>  
25A=4mm<sup>2</sup>  
40A=6mm<sup>2</sup>
- Voltage rating: 1000V DC
- Shield: N
- HVIL: Option
- Temperature Range: -40°C--+140°C

### Ordering information

REL1-Z3AH-6-B

Design Extension Number

Cable: 2.5/4/6

H:HVIL

Key Position: A、B、C、D

POS:3

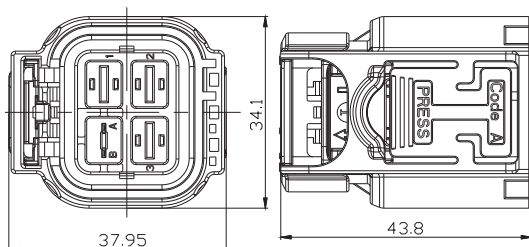
T:plug; Z: socket

REL1:product serial No

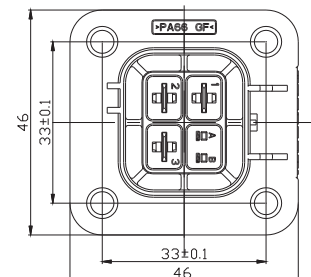
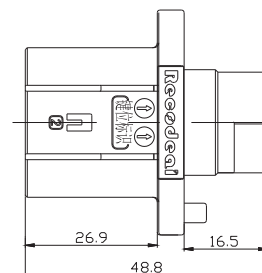
The connector type plug generated according to the naming rules does not contain power terminals, and the socket does not contain power & interlocking terminals.

### Size

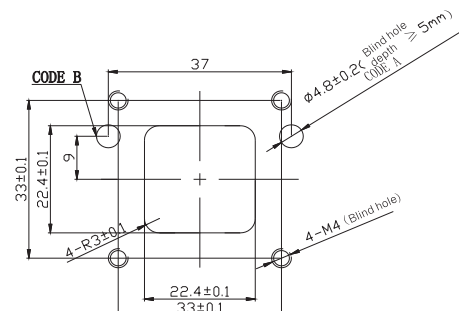
PLUG



Flange installation socket.



Recommended hole size for socket



## 4POS High Voltage Plastic Shell Connector With Shield ( REL2)

## Describe

- 4POS
- Plastic shell
- With secondary locking, delayed unlocking
- Anti-mis-touch design(IPXXB)
- High Protection Degree:
- 4 Anti-mistake key positions
- Cable Section: 2.5mm<sup>2</sup>—6mm<sup>2</sup>
- Integrated Mask Interlocking Function
- For battery heating, compressor, PTC、OBC、PDU equipment



## Application

- Current rating: 16A=2.5mm  
25A=4mm  
40A=6mm
- voltage rating : 1000V DC
- Shield: Option
- HVIL: Option
- temperature range:  $-40^{\circ}\text{C}$  --  $+140^{\circ}\text{C}$

## Ordering information

REL2-T4PAH-2.5-B

Design Extension Number

Cable: 2.5/4/6

H:HVIL

Key position: A、B、C、D

P: Shield

POS:4

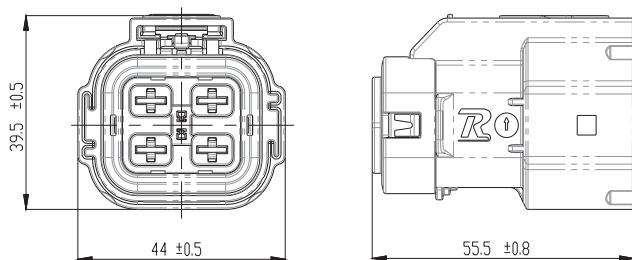
T:Plug; Z: Socket

Serial No.

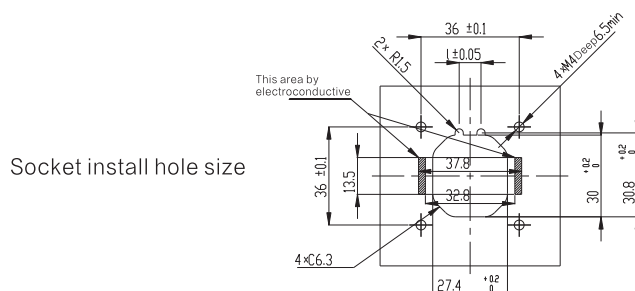
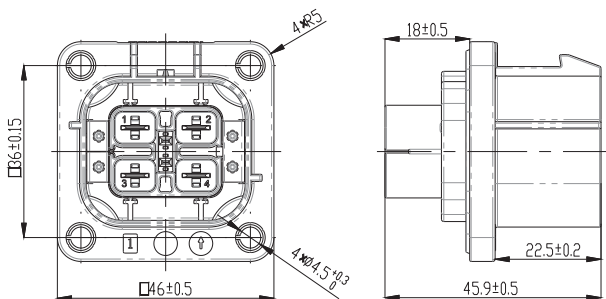
Note: Plug does not contain power terminals, socket does not contain power and interlocking terminals

## Size

PLUG



## Flange Socekt



Key	L	Note
A	8 mm	
B	10.6mm	

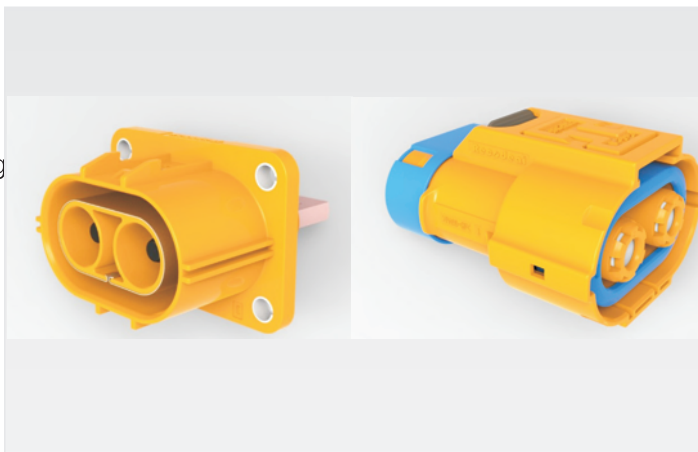
Note: panel roughness is not less than 0.4,  
flatness is not less than 0.2.



## 4POS High Voltage Plastic Shell Connector With Shield(REN1)

### Describe

- 2POS
- Plastic shell
- With secondary locking, delayed unlocking
- Anti-mis-touch design(IPXXB)
- High protection Degree: IP6K9K、IP684
- Anti-mistake key positions
- Cable Section: 16mm<sup>2</sup>--25mm<sup>2</sup>
- Integrated Mask Interlocking Function For battery heating, OBC、PDU equipment



### Application

- Current Rating: 80A=16mm<sup>2</sup>  
125A=25mm<sup>2</sup>
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature range: -40°C--+140°C

### Ordering information

#### PLUG

REN1-2 T A H -16 P -B

Design Extension Number

P:Shield

Cable:16/25

H:HVIL (non-HVIL)unmarked

Key positions:A、B、C、D

T:Plug

POS:2

Product Series

#### SOCKET

REN1-2 Z P A TH0.3 -16 -B

Design Extension Number

Cable:16/25

H:HVIL (non-HVIL)unmarked0.3: Default swing length for high voltage interlock (adjustable)

T: equal length milling flat thread hole

terminal; T1/T2 to be determined

Key positions:A、B、C、D

P:Shield

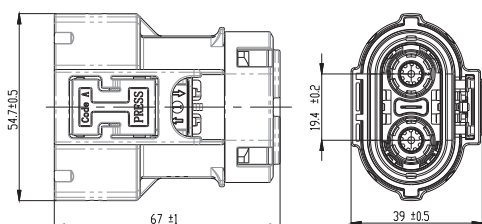
Z:Socket

Product Series

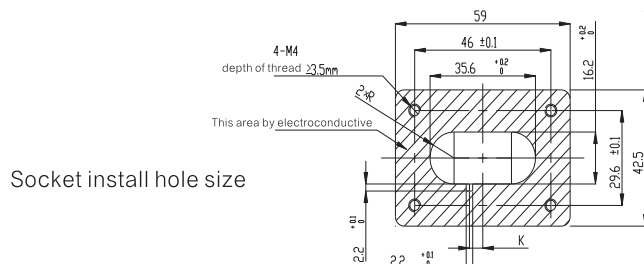
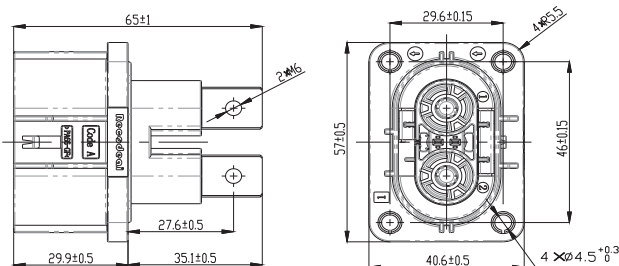
Remarks: socket does not contain interlocking terminals

### Size

#### PLUG



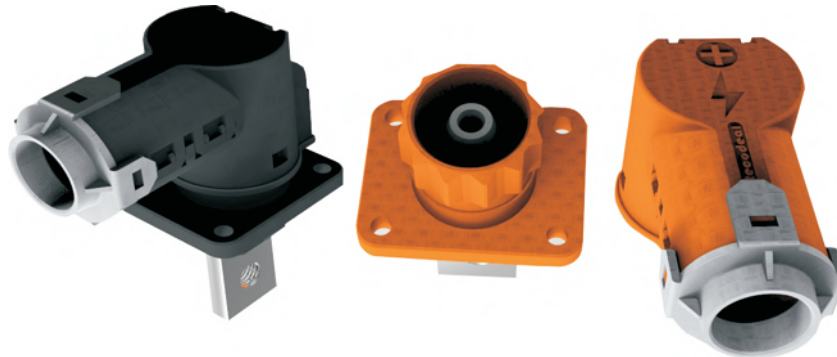
#### Socket(Suitable for equal length milling flat threaded hole)



Socket install hole size

Key	Size K	Noted
A	4.5	
B	9	

# 1POS Energy Storage Plastic Shell Connector (REA)



## Features/Application

- This series connectors utilized for EV industry, offering stable high voltage, high current transmission among equipments.
- The cable can be easily assembled with connectors after cable was crimped with contact.
- REA connector provides lower cost comparing to majority of HV connectors, and more reliable connection.
- Electrode can be fit to through hole and threaded hole, easy for mounting.
- This series of Plug can be rotated relative to Jack, which is very convenient for customer wiring

## Technical Specification

### Electrical Property

Contact resistance:  $\leq 0.3m\Omega$   
 Current Rating: 250A (For 50mm<sup>2</sup>, 70mm<sup>2</sup>)  
 Insulation resistance:  $\geq 5000M\Omega$   
 Withstand voltage: 3000V AC 1Min

### Mechanical Property

Mating cycle: >50times  
 Vibration: 10~80Hz, amplitude 0.75  
     81~500Hz, 20g  
     500~2000Hz, 18g

### Environmental Property

Working temperature: -30 ° C ~ +125° C  
 Relative humidity: 95% (40 ° C)  
 Flame retardant grade: UL94 V-0

### Material

Shell: aluminum alloy/zinc alloy  
 Contact : copper alloy silver plated  
 Seal: rubber or elastomer

## Ordering Information

### Plug

RE A -T AH -50 -A

Extensive character

Cable range:50

AH:Key position A:black,  
NR:Key position A:orange

Plug

Serial

RECODEAL

### Jack

R EA -Z AH D1 -A

Extensive character

D1: Through-hole; D2: Thread-hole

AH:Key position A:black,  
NR:Key position A:orange

Jack

Serial

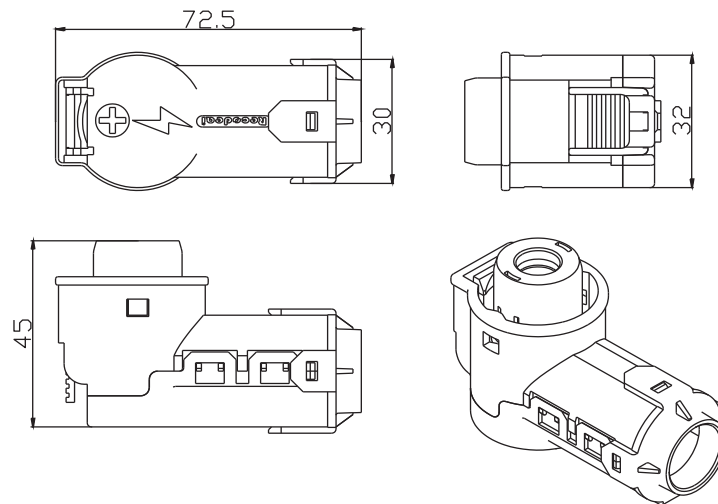
RECODEAL

Eg:REA-TAH-50-A means: REA series connectors, plug, shell(key position A) black, cable section for 50mm<sup>2</sup>.

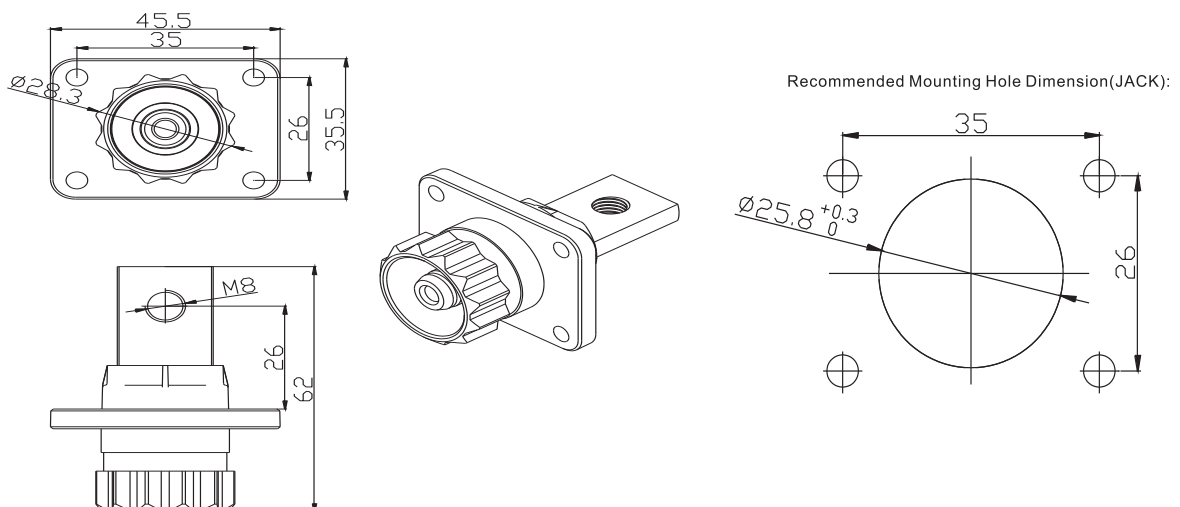
Eg:REA-ZAHD1-A means: REA series connectors, jack, black shell, the tail of the terminal is the through-hole.

## Size

### Plug



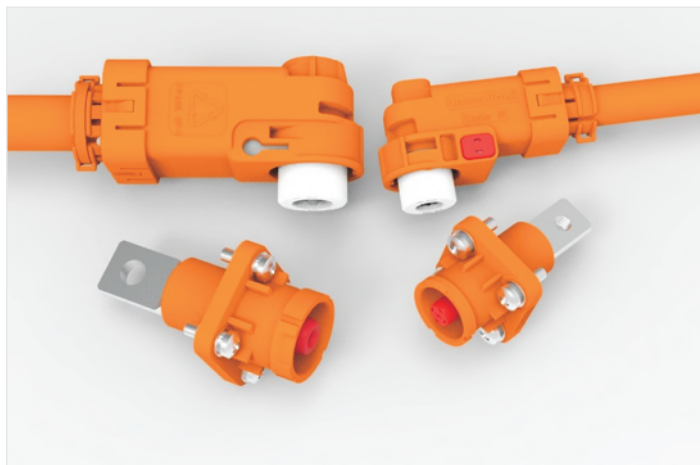
### Jack



## 1POS High current plastic shell connector(REA1)

### Describe

- 1POS
  - Plastic shell
  - Protection Degree: IP68
  - 4 Anti-mistake key positions
  - Cable Section: 25mm<sup>2</sup>--120mm<sup>2</sup>
  - Non-Shield Non-HVIL
  - The plug socket can rotate 360 degrees after the plug is in place
- Mainly used in energy storage systems



### Application

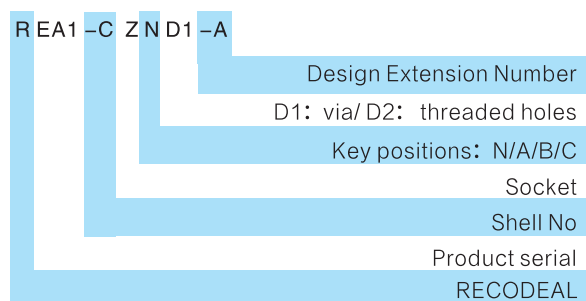
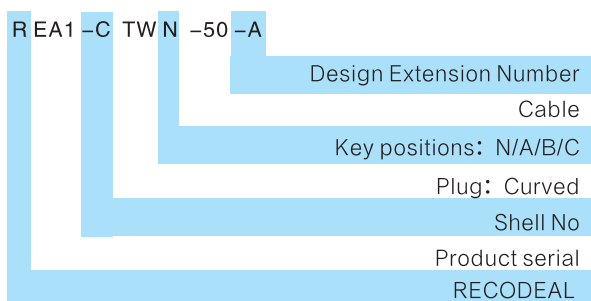
- Current rating:

Shell	NoContact	Cable	Rating
C	8mm	25mm <sup>2</sup>	125A
		35mm <sup>2</sup>	150A
		50mm <sup>2</sup>	200A
D	12mm	70mm <sup>2</sup>	250A
		95mm <sup>2</sup>	300A
		120mm <sup>2</sup>	350A

- Voltage Rating: 1000V DC
- Shield: Non
- HVIL: Non
- Temperature Range: -40°C--+140°C

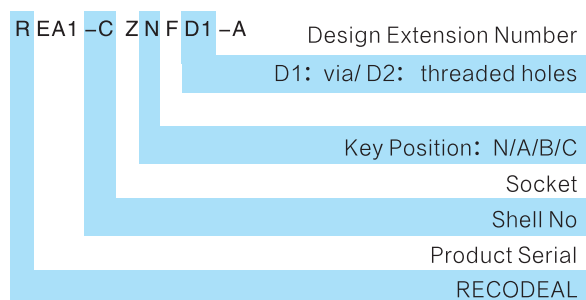
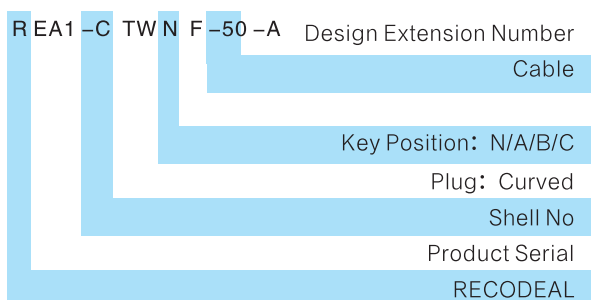
### Ordering information

#### Waterproof



Note: N/A key housing is orange, B/C key housing is black

#### Non-waterproofing

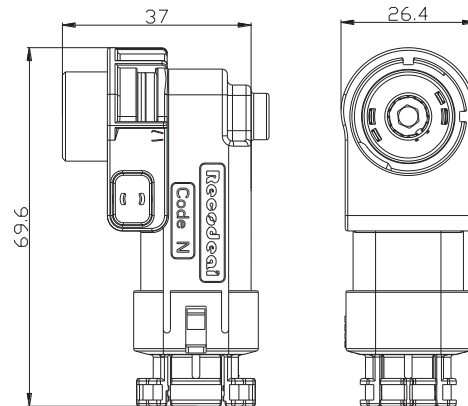


Note: N/A key housing is orange, B/C key housing is black

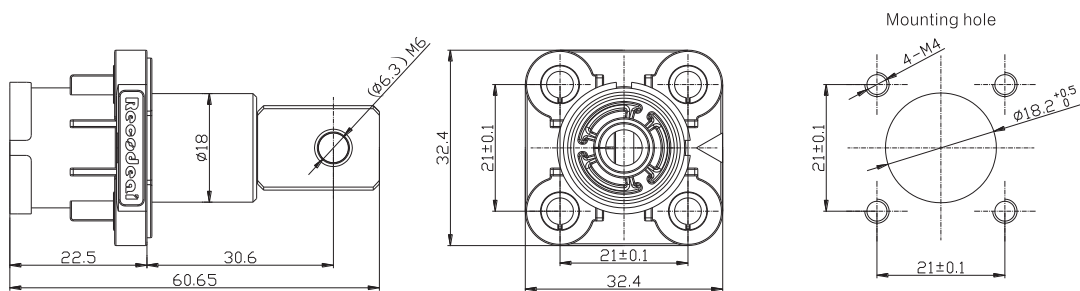


## Size

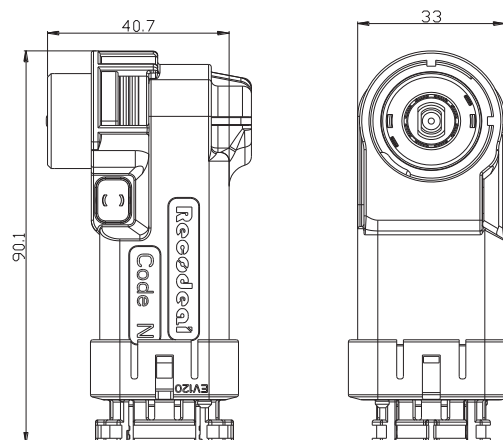
### 8mm JACK(C Shell)



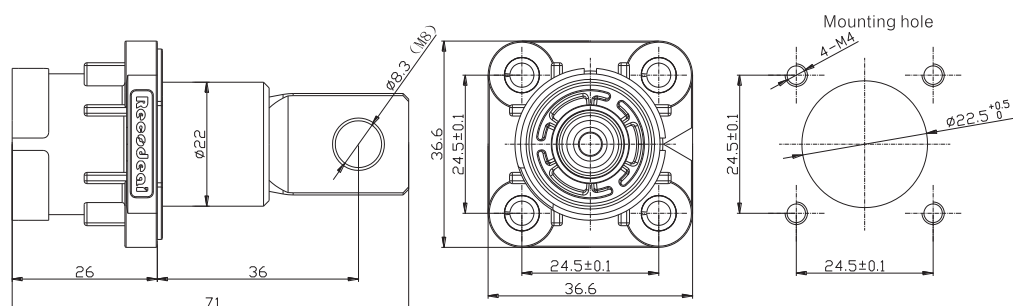
### 8mm JACK(C Shell)



### 12mm PLUG(D Shell)



### 12mm JACK(D Shell)





# 1POS Energy Storage Plastic Shell Connector (REB)



## Features/Application

- This series connectors utilized for EV industry, offering stable high voltage, high current transmission among equipments.
- Outer shell is molded in thermoplastics with excellent flame-retardant and high temperature resistant ability. And compared with same size metal connectors, it has lighter weight, small size and easy installation.
- Locking connect and secondary locking structure. This connector requires smaller operation space, especially for those application environment with limited space.
- Current rating range 120A~300A, contact diameter 11mm, supporting cable from 25mm<sup>2</sup> ~70mm<sup>2</sup> (section) to meet various electrical performance.
- 8 anti-misplug key positions avoiding mistakes when same series connectors are applied on same devices.
- With 2 type of cable ways: straight and side, meet different request from clients.
- Both plug and jack have protection against electric shock.
- IP68 in mated condition.
- Assembly manufacturing service as required.
- HVIL (High Voltage Interlock) and shielding feature is optional.

## Technical Specification

### Electrical Property

Current rating:

Contact	Cable range	Current rating
Φ 11mm	25mm <sup>2</sup>	120A
	35mm <sup>2</sup>	180A
	50mm <sup>2</sup>	250A
	70mm <sup>2</sup>	300A

Voltage rating: 750V DC

Withstand voltage: 3750V AC

Insulation resistance: 3000MΩ

Shielding: optional

HVIL: optional

### Mechanical Property

Mechanical Property

Mating cycle: >500times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

### Environmental Property

Working temperature: -40 °C ~ +130 °C

Relative humidity: 95% (40 °C)

Sealing: IP68 in mated condition

Flame retardant grade: UL94 V-0

Salt spray: 48h(5% NaCl)

### Material

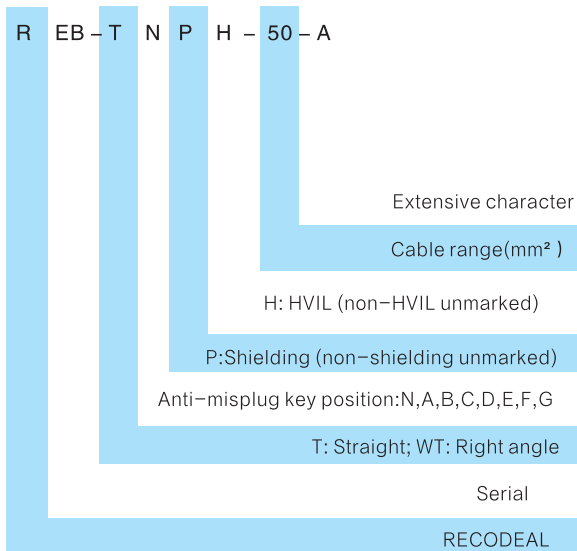
Shell: aluminum alloy/zinc alloy

Contact: copper alloy silver plated

Seal: rubber or elastomer

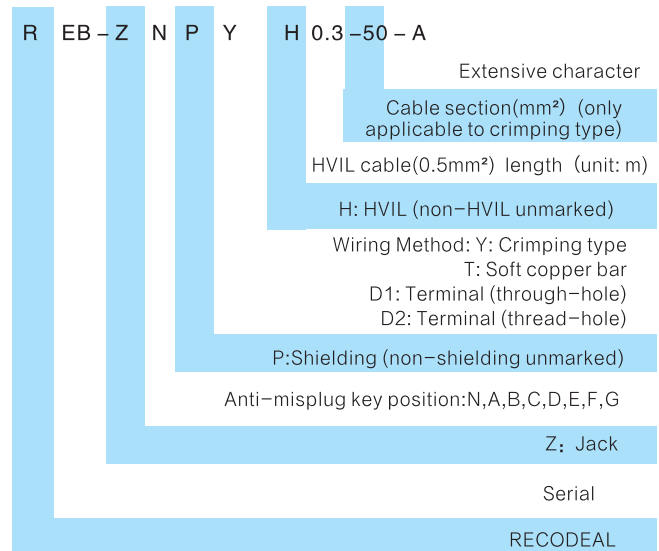
## Ordering Information

### Plug



Eg: REB-WT-AP-70-A means: REB series connectors, right angle plug, type of cable way: side, shielding (key position A), cable section for 70mm<sup>2</sup>.

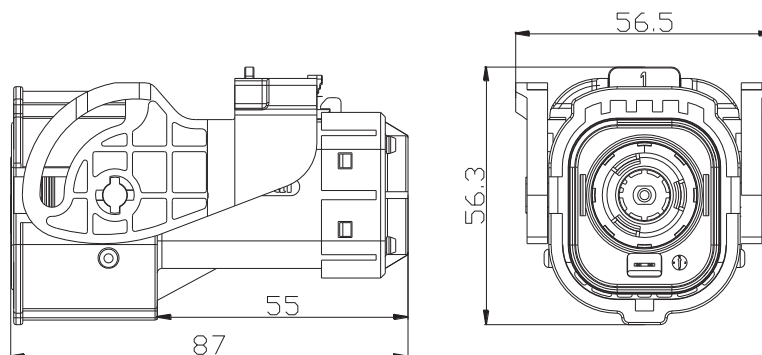
### Jack



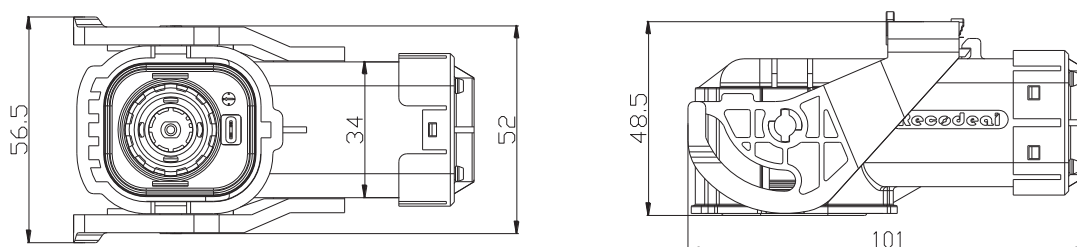
Eg: REB-ZNPD1H0.5-A means: REB series jack, Shielding (key position N), wiring method: through-hole, HVIL, The length of HVIL cable: 0.5m

## Size

### Plug(Straight)



### Plug(Right angle)



## Multi POS High Current Plastic Shell Connector with Shield (REG)



### Features/Application

- REG series connectors provide stable high voltage power transmission among EV/HEV systems.
- Outer shell is molded in thermoplastics with excellent flame-retardant and high temperature resistant ability. This REG series has many options (2 POS, 3 POS, straight, right angle), and comparing same sized metal connectors, it has lighter weight, small size and easy installation.
- Locking handle and secondary locking structure. This connector requires smaller operation space, especially for those application environment with limited space.
- Current rating range 80A~200A, contact diameter 8mm, supporting cable from 25mm<sup>2</sup>~50mm<sup>2</sup> (section) to meet various electrical performance.
- Multi anti-misplug key position avoiding mistakes when same series connectors are applied on same devices.
- Both plug and jack have protection against electric shock.
- IP67 in mated condition.
- Assembly manufacturing service as required.
- HVIL (High Voltage Interlock) feature is optional. 360 degree shielding optional.

### Technical Specification

#### Electrical Property

Current rating:

Contact	Cable Range	Current Rating	Cable type
Φ8mm	16mm <sup>2</sup>	80A	Shield or Non-shield is optiona
	25mm <sup>2</sup>	120A	
	35mm <sup>2</sup>	180A	
	50mm <sup>2</sup>	200A	

Voltage rating: 750V DC

Withstand voltage: 3000V AC 1min

Insulation resistance: 5000M Ω

Shielding: optional

HVIL: Yes

#### Mechanical Property

Mating cycle: >750 times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

#### Environmental Property

Working temperature: -35°C~+125°C

Relative humidity: 95%(40°C)

IP68B in mated condition, plug and jack meet IPXXB separately

Flame retardant grade: UL94 V-0

#### Material

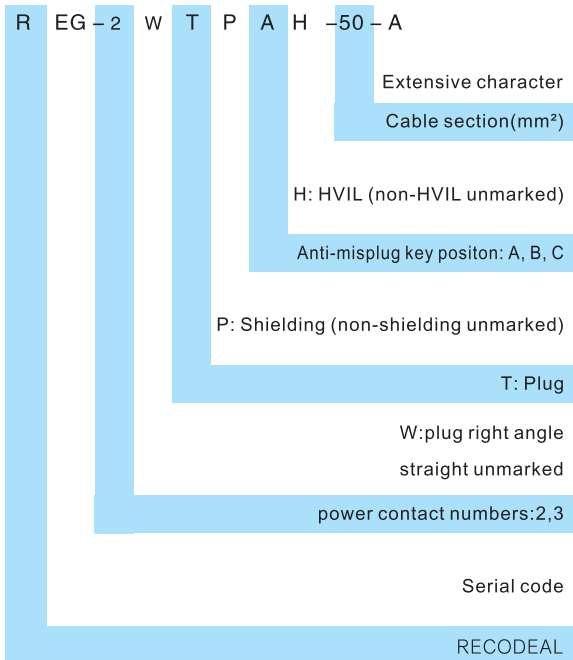
Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

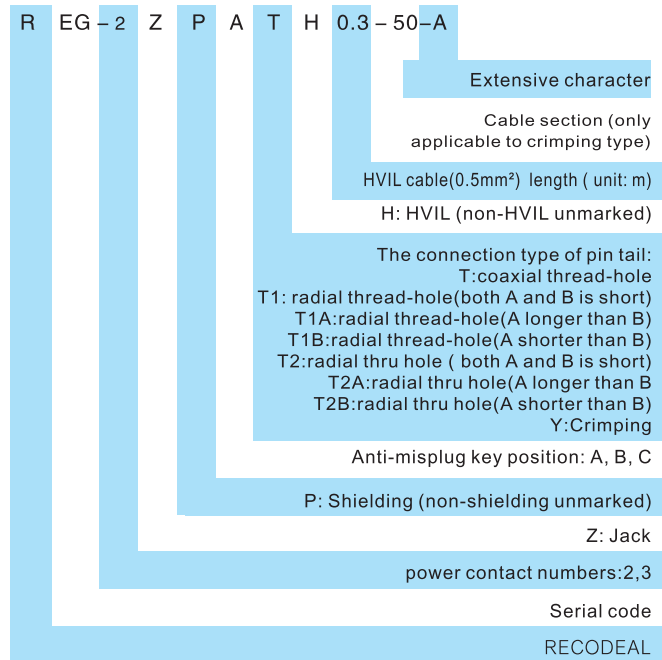
Seal: rubber or elastomer

## Ordering Information

### Plug



### Jack



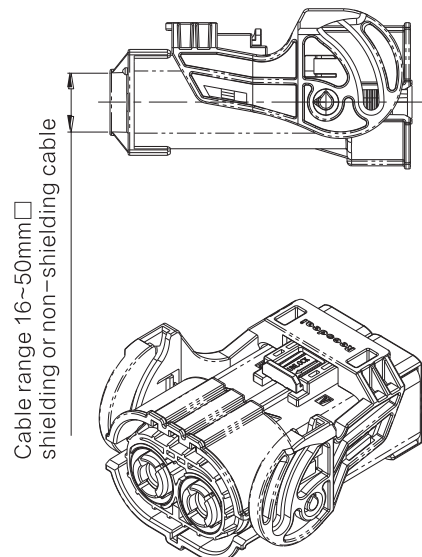
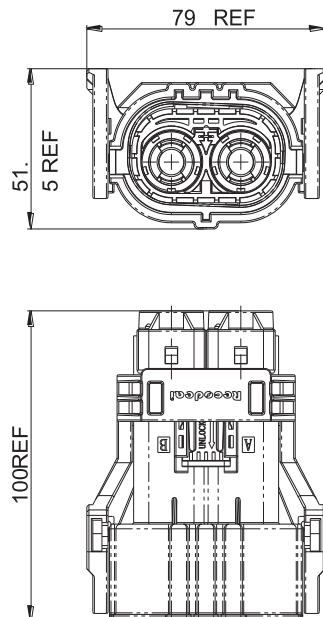
NOTE:The plug type is empty plug without wiring. If you need to purchase wiring components, you can contact our company technical department and give the model of wiring harness components before confirming the details of components. The 16mm<sup>2</sup> wiring is unconventional, it needs to book in advance.

Note:

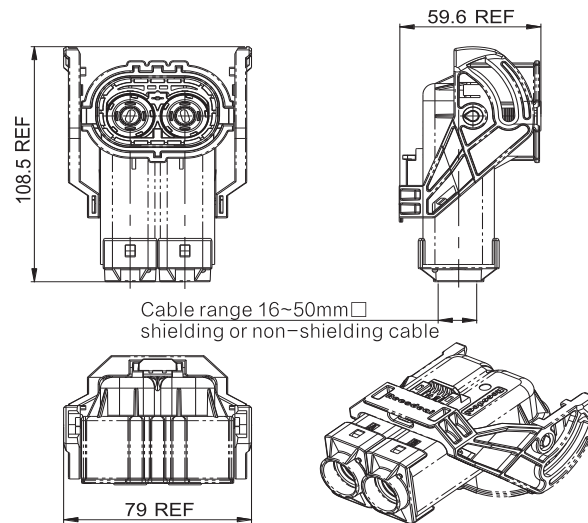
- 1.The mode of termination for plug assemble with pin in the tail is "T1A", "T1B", "T2A", "T2B", "T3A", "T3B", and "A", "B" means connector's hole site. Termination mode with "A" means long pin in A hole site, termination mode with "B" means long pin in B hole site, if without A or B means short pin. The radial thread hole pin only flattens on one side. The pin is assembled in the socket and then milling flat. T1 and T3 are just the opposite.
2. A new three-core socket with the same size as TaiKe plug-in is added. The letter Z in the socket can be replaced by Z1.

## Size

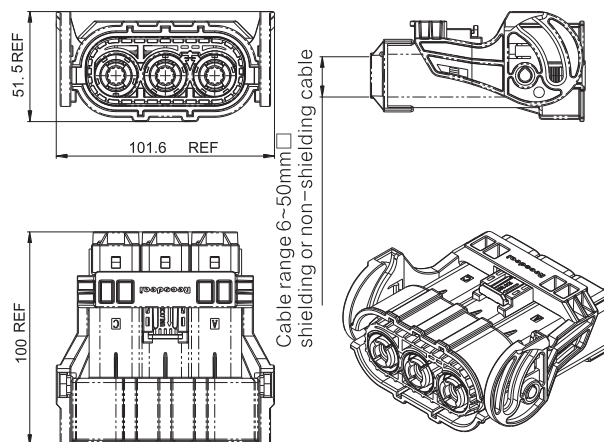
2 POS straight plug



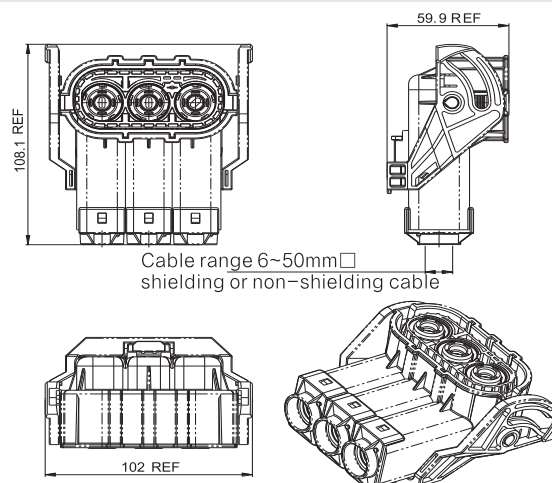
## 2 POS right angle



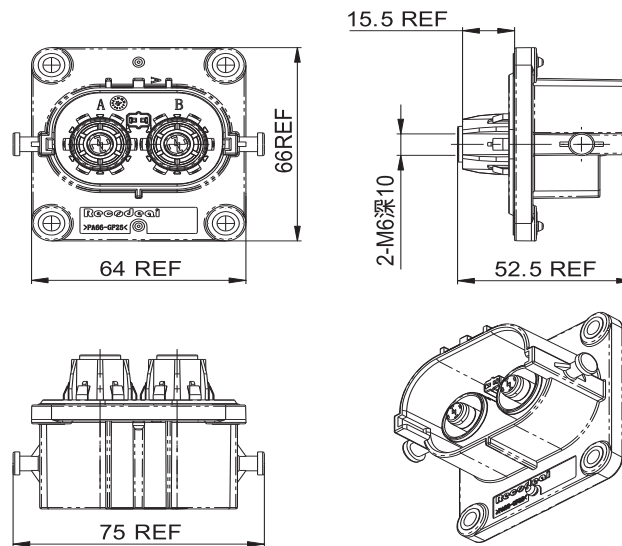
## 3 POS straight plug



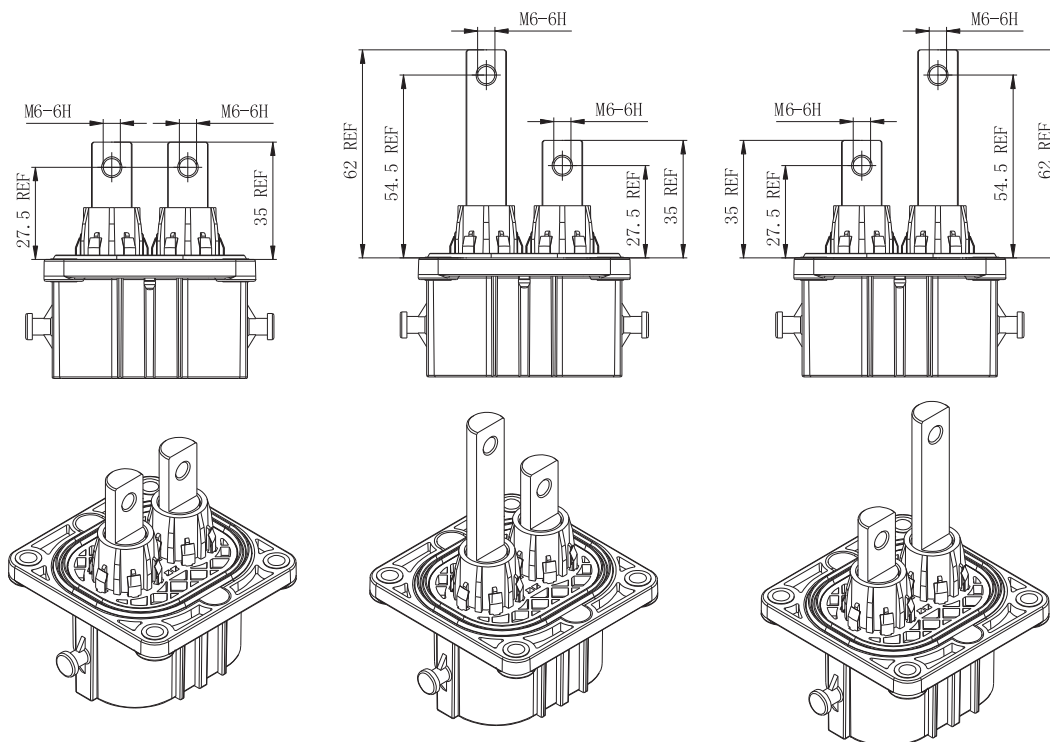
## 3 POS right angle



2 POS Plug(copper bar with coaxial thread holeT)

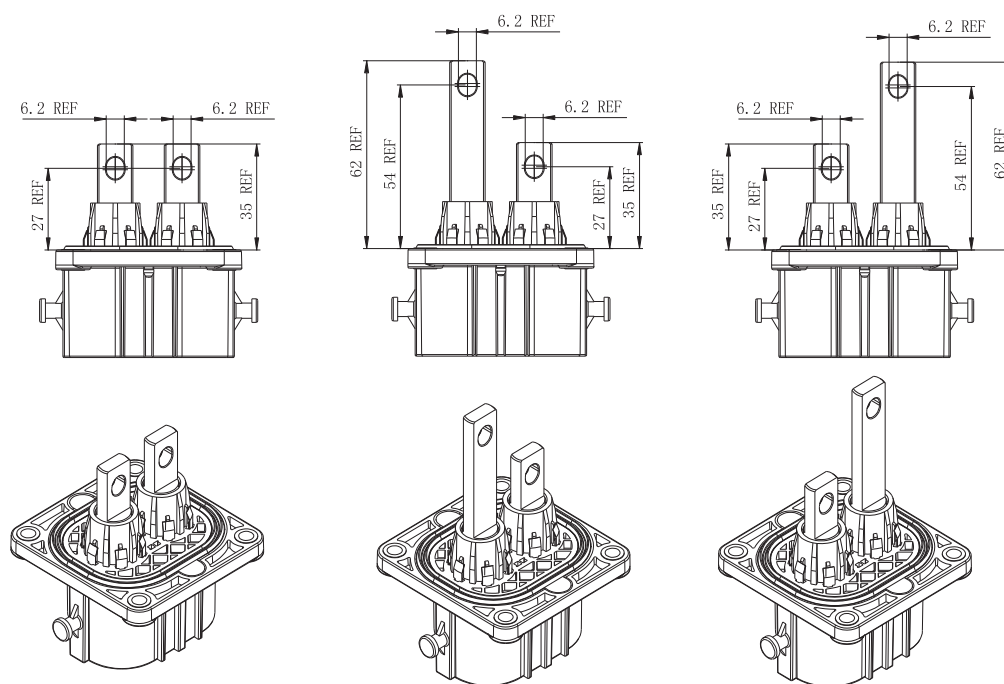


2 POS Plug(copper bar with radial thread hole T1,T1A,T2B, from left to right)

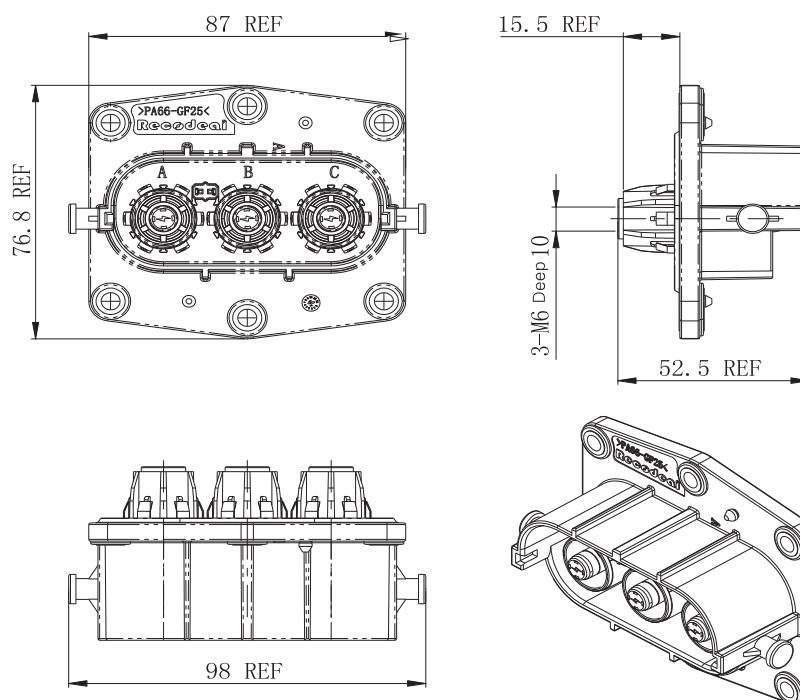


NOTE: When the end pin of the socket is T3、T3A、T3B, the pin on the corresponding socket in the picture above is opposite.

## 2 POS Plug(copper bar with radial thru hole T2,T2A,T2B, from left to right)

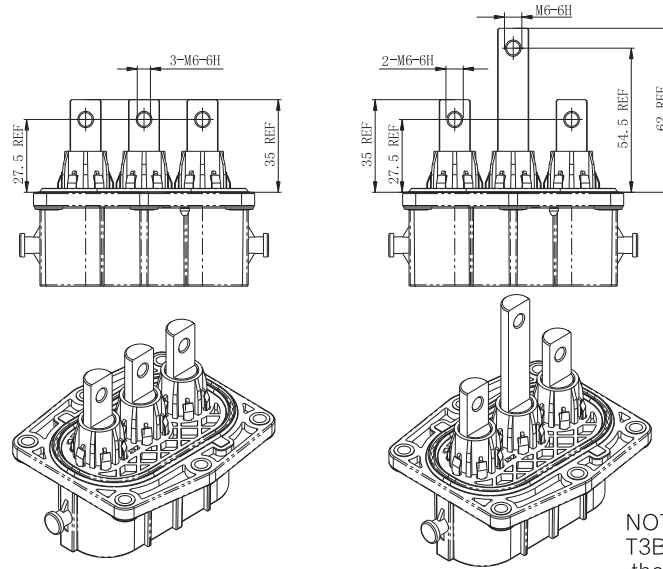


## 3 POS Plug(copper with coaxial thread hole T)



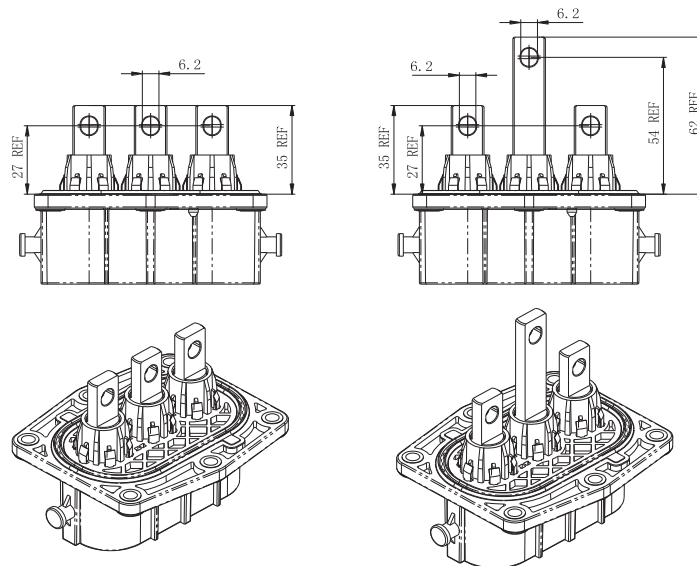


3 POS Jack(copper with radial thru hole T1, T1B, from left to right)



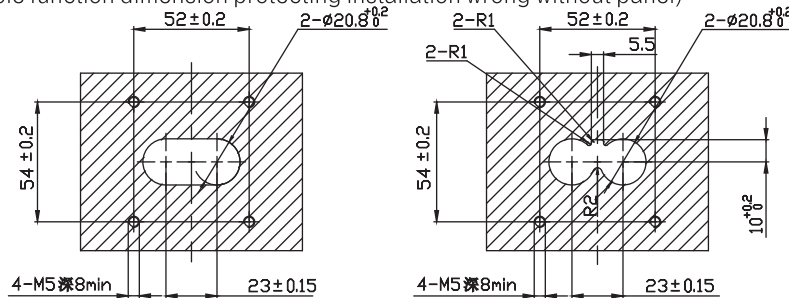
NOTE: When the end pin of the socket is T3, T3B, the pin on the corresponding socket in the picture above is opposite.

3 POS Jack(copper with radial thru hole T2, T2B, from left to right)



Mounting hole dimension

2 Pos Jack ( Mounting hole function dimension protecting installation wrong without panel)



Conventional shielding requirement mounting hole (left)

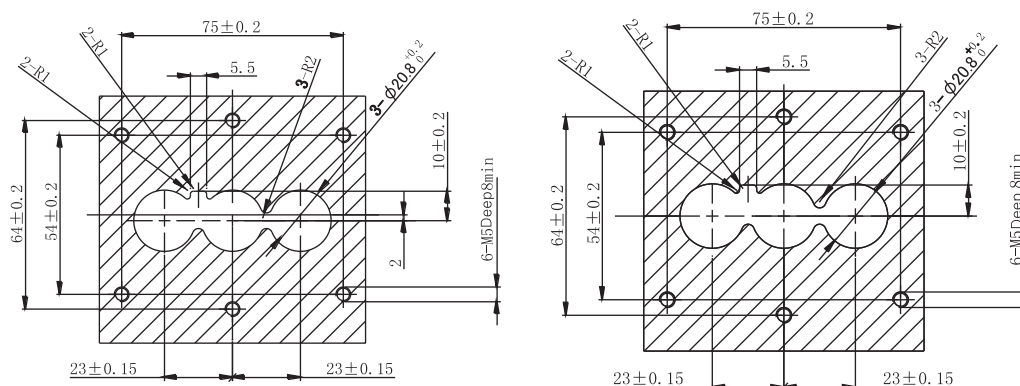
Shielding enhancement requirement mounting hole (right)

NOTE:

1. If you need socket with panel protecting installation wrong, see another technical specification for mounting hole dimension.
2. When you need to install the socket clashboard, the 2 Pos Jack must be mounted according to conventional shielding requirement(left) hole dimension.



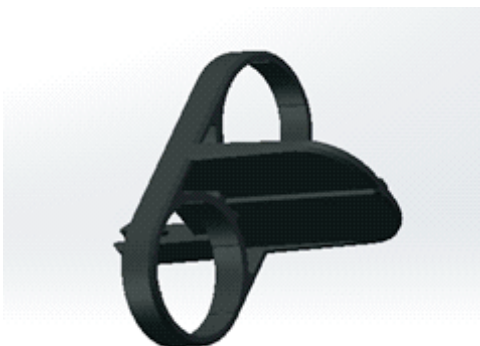
## 3 Pos Jack Z(left)、3 Pos Jack Z1(right)



## NOTE:

1. In order to ensure the protective performance, the thread holes on the installation panel should be waterproof blind holes and the flatness of the panel should not be less than 0.2 as required in the figure.
2. The socket Z1 is fully compatible with the hole dimension corresponding plug-in of Tyco.

## Purchase Parts (Order Separately)



Socket Clapboard (2 Pos)

Socket Clapboard (2 Pos): For the socket separating two pin, increase the insulation space. If you need to purchase, you need to order it separately. Parts order number: 8.074.015R.

NOTE: If there is no special remark, the optional parts will be supplied by default when they are assembled with sockets. Three-core products have not been developed yet. Three-Pos products have not been developed yet.

# Multi POS High Current Plastic Shell Connector with Shield (REG1)



## Features/Application

- REG1 series connectors provide stable high voltage power transmission among EV/HEV systems.
- Outer shell is molded in thermoplastics with excellent flame-retardant and high temperature resistant ability. This REG1 series has many options (straight and right angle), and comparing same sized metal connectors, it has lighter weight, small size and easy installation.
- Locking handle and secondary locking structure. This connector requires smaller operation space, especially for those application environment with limited space.
- Current rating range 125A-250A, contact specification  $\Phi 9.1\text{mm}$ , supporting cable from  $25\text{mm}^2 \sim 70\text{mm}^2$  (section) to meet various electrical performance. Multi anti-misplug key position avoiding mistakes when same series connectors are applied on same devices.

## Technical Specification

### Electrical Property

Current rating:

Contact	Cable Range	Current Rating	Cable type	Shielding Line Diameter	Non-Shielding Line Diameter
$\Phi 9.1\text{mm}$	$25\text{mm}^2$	120A	Shield or Non-Shield is optional	$\phi 12.2 \pm 0.3$	$\phi 11.1 \pm 0.3$
	$35\text{mm}^2$	180A	Shield or Non-Shield is optional	$\phi 14.5 \pm 0.3$	$\phi 12.2 \pm 0.3$
	$50\text{mm}^2$	220A	Shield or Non-Shield is optional	$\phi 15.9 \pm 0.3$	$\phi 14.5 \pm 0.3$
	$70\text{mm}^2$	250A	Shield or Non-Shield is optional	$\phi 18.5 \pm 0.3$	$\phi 15.9 \pm 0.3$

Voltage Rating: 1000V DC  
 Withstand Voltage: 5000V AC  
 Insulation Resistance:  $5000\text{m}\Omega/1000\text{V DC}$   
 Shielding: optional  
 HIVL: YES (HVIL is normal, Non-HVIL is optional)

### Environmental Property

Working Temperature:  $-40^\circ\text{C} \sim +125^\circ\text{C}$   
 Relative Humidity: 95%( $40^\circ\text{C}$ )  
 Salt spray: 500h(NaCl 5%)  
 Sealing: IP68B in mated condition, plug and jack meet IPXXB separately  
 Flame Retardant Grade: UL94-V0

### Mechanical Property

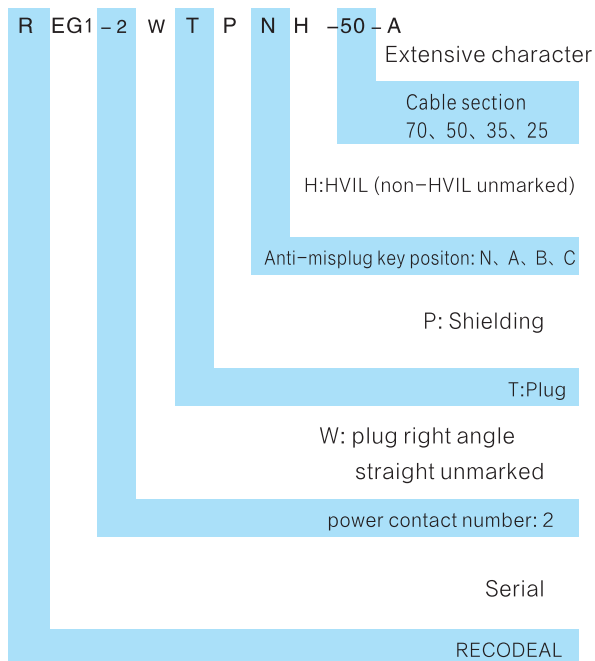
Mating Cycle:  $\geq 100$  times  
 Vibration: 10~80Hz, amplitude 0.75  
                   81~500Hz, 20g  
                   500~2000Hz, 18g

### Material

Shell: thermoplastic flame-retardant  
 Contact: copper alloy silver plated  
 Seal: rubber or elastomer

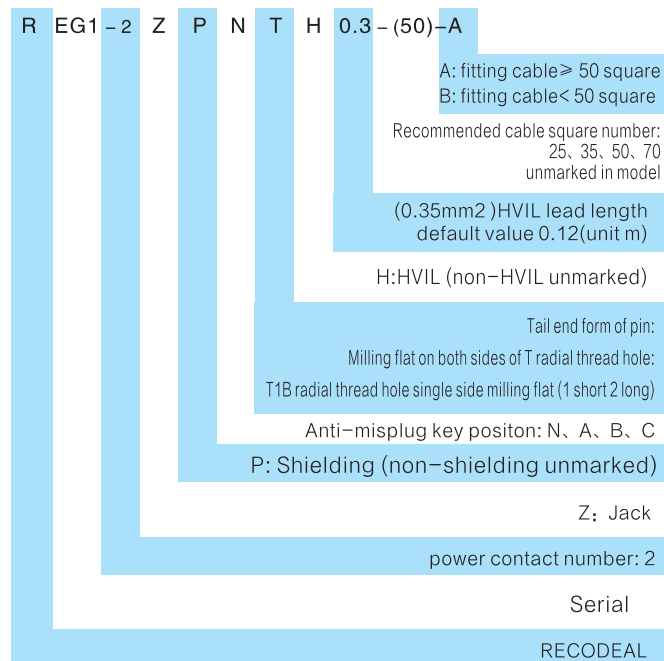
## Ordering Information

## Plug



NOTE: Plug type is empty plug type without wiring. If you need to purchase wiring components, contact our company technical department before confirming the details of components so as to give the material number of wiring harness components.

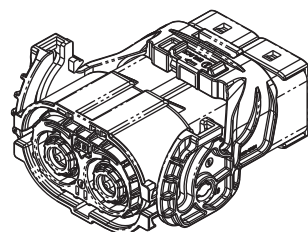
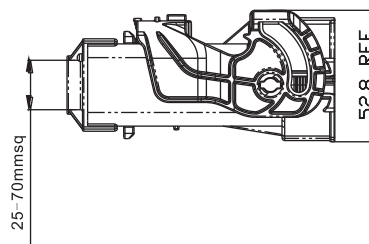
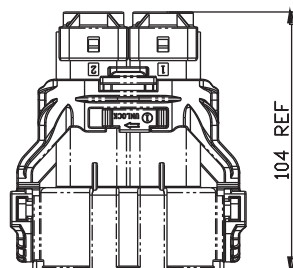
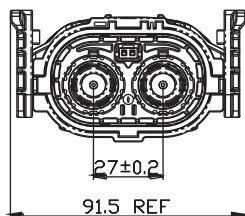
## Jack



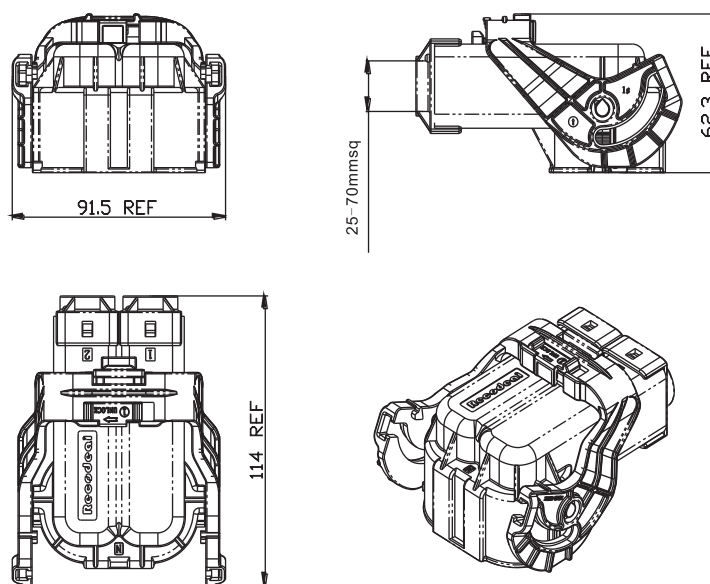
NOTE: Model (50) is not included in the model. In the tail end connection mode of the pin on the socket, T means that the pin on the socket of the connector is in the form of two-sided milling flat (Fig. 3). T1B means that the pin for position 1 is a short pin, while the 2 pin is a long pin, which is flattened on the side (Fig. 4).

## Size

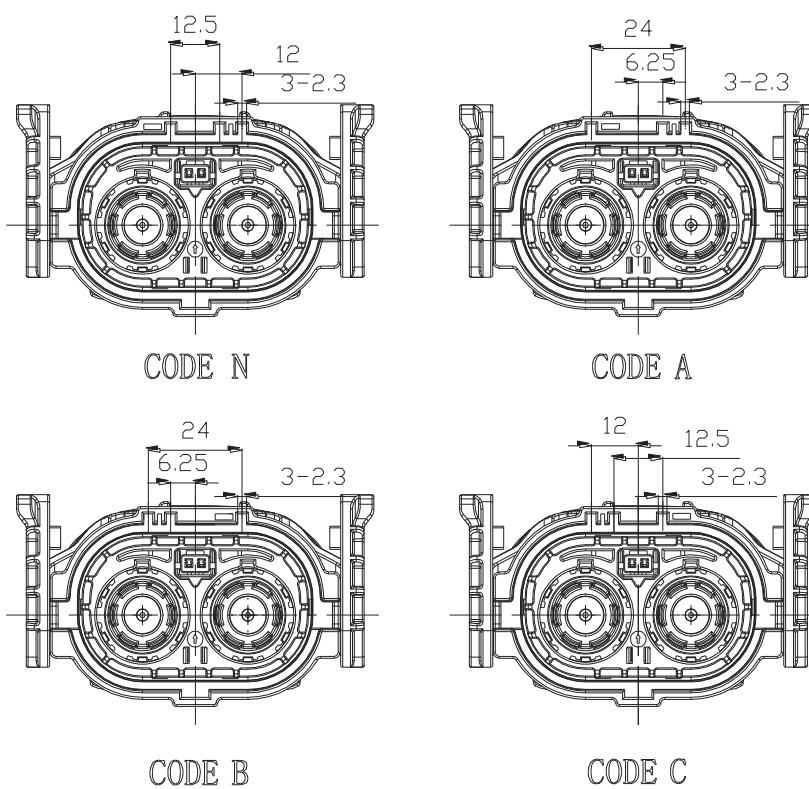
## 2 POS Straight Plug



2 POS right angle plug



Instruction according to the key position of the plug.



## 2 Pos jack T

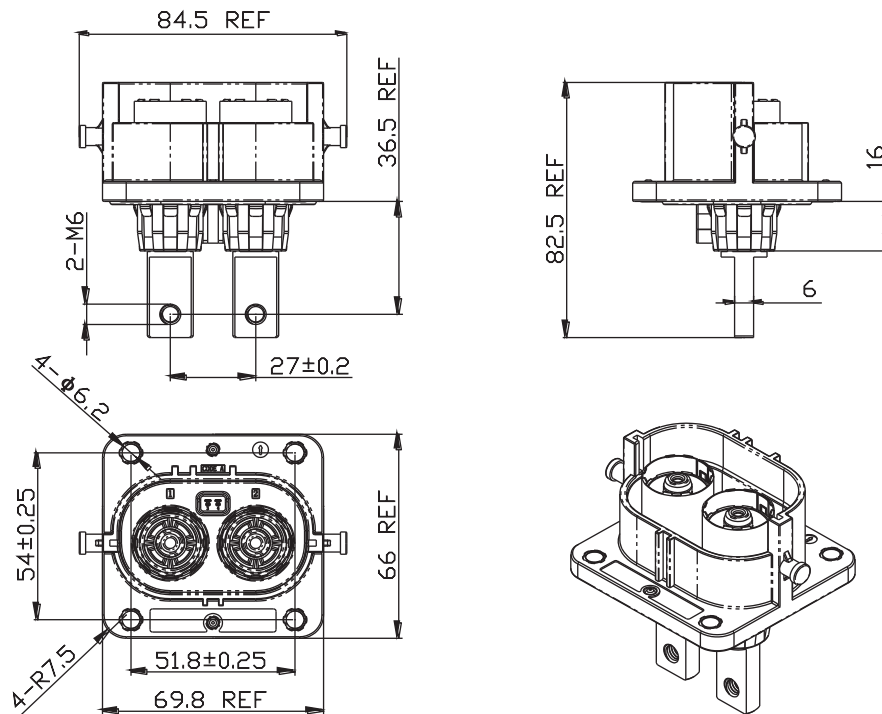


图3

## 2 Pos jack T1B

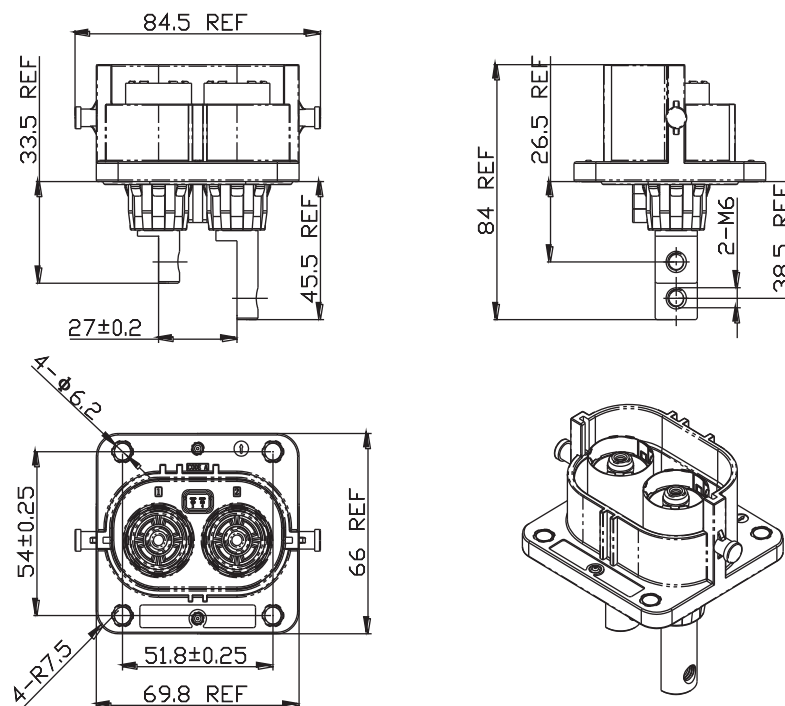
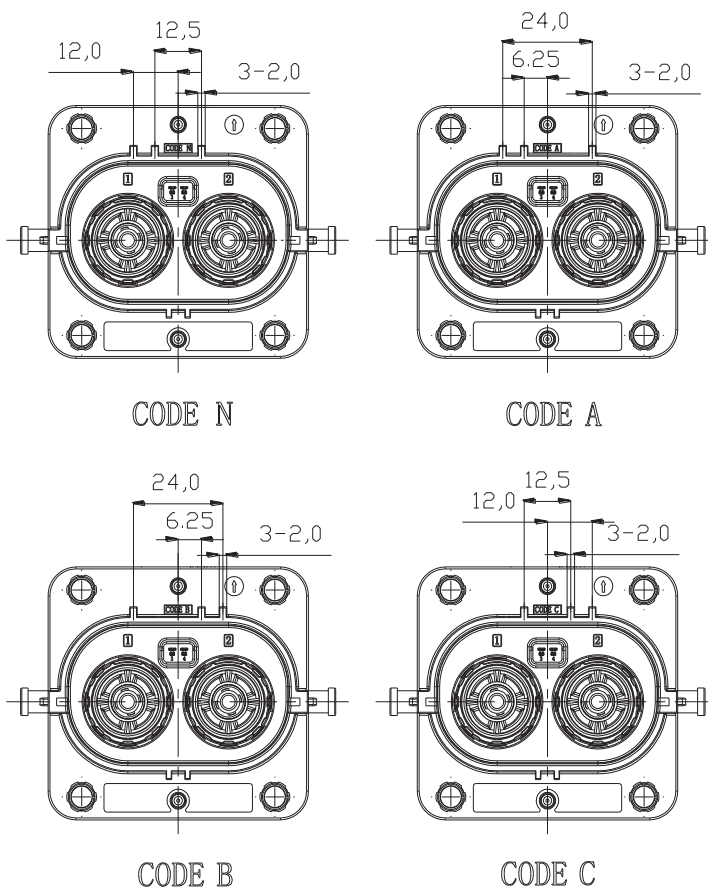


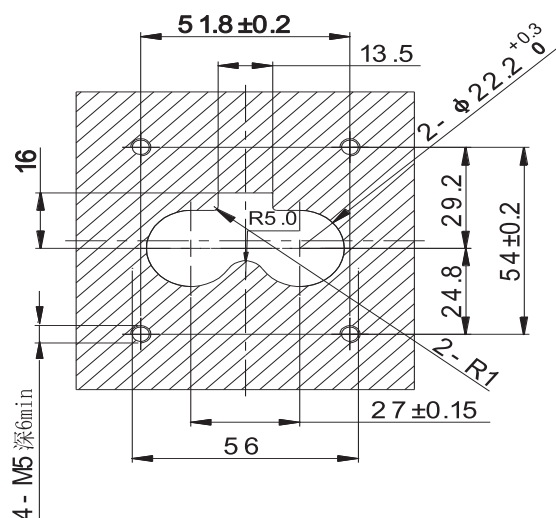
图4

Instruction according to the key position of the socket.



### Mounting hole dimension

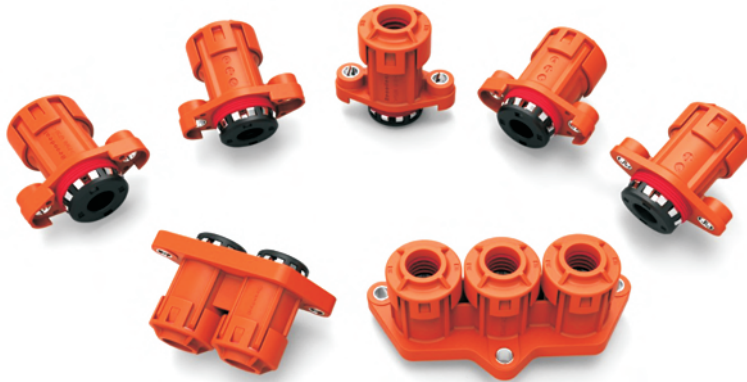
2 Pos Jack(mounting hole dimension when make mistake without panel)



#### NOTE

1. In order to ensure IP68 protective performance, the roughness of the panel should not be less than 1.6mm, flatness 0.4mm, and the recommended panel thickness should not be less than 3mm.
2. The hole of 4-M5 thread should be blind.

# 1POS/2POS/3POS Plastic Shell Connector(RIPT)



## Features/Application

- RIPT series connectors are mainly utilized in EV industry offering stable high voltage, high current transmission among systems.
- This product can also be made into cable assemblies according to client needs, making it convenient for clients to use.
- Excellent sealing performance, meet the requirement of air tightness of less than 200 P under 50 KP pressure and IP68 waterproofing requirement of no water after 48 hours in 1 meter water depth.

## Technical Specification

### Electrical Property

Current rating:

120A/25mm<sup>2</sup>

200A/35mm<sup>2</sup>

250A/50mm<sup>2</sup>

Voltage Rating: 700V DC

Withstand Voltage:  $\geq 4000V$  DC 1min No breakdown

Insulation Resistance:  $\geq 5000m\Omega$

Fitting cable: 25mm<sup>2</sup> shielding wire (Cable diameter range  $\Phi 13.2 \sim \Phi 13.8$ )

35mm<sup>2</sup> shielding wire (Cable diameter range  $\Phi 14.0 \sim \Phi 14.7$ )

50mm<sup>2</sup> shielding wire (Cable diameter range  $\Phi 17.15 \sim \Phi 17.85$ )

### Mechanical Property

Mating Cycle:  $\geq 50$  times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

### Environmental Property

Working Temperature:  $-40^{\circ}C \sim +125^{\circ}C$

Relative Humidity: 95%(40°C)

Sealing: IP68(48h, 1 meter depth)

tightness less than 200 P under 50 Kp pressure

### Material

Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: rubber or elastomer



## Ordering Information

R IPT -1 -35 P B -A

Extensive character

Key: A,B,C,D; No marked: No key

P: Shield ; No marked: non-shield

Cable section:25、 35、 50

Pos:1,2,3

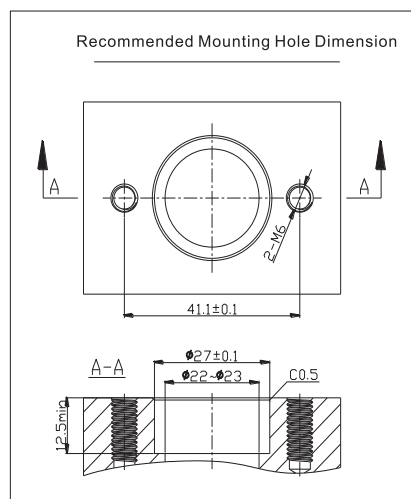
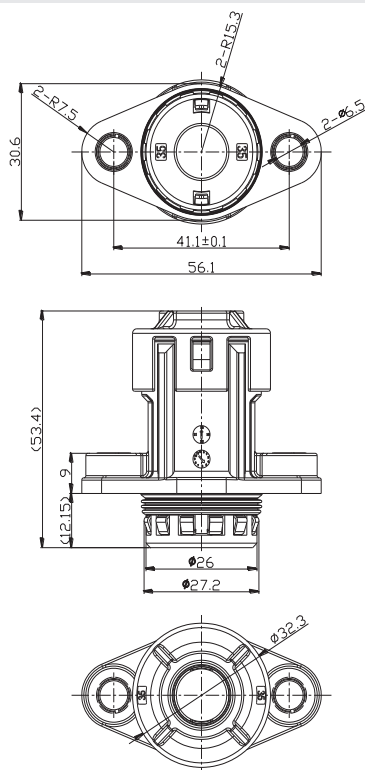
IPT: Serial code

RECODEAL

For example: RIPT-1-50PB-A means : made by RECODEAL、 IPT series、 1 pos、 fitting 50mm、 shielding cable、 shielding、 B key、 extensive character A. It has no protection when making mistake with 2-Pos and 3-Pos. RIPT-3-35P-A means 3-Pos fitting 35mm shielding wire.

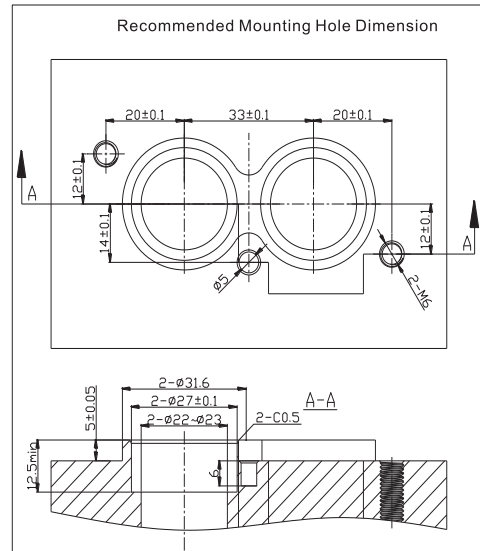
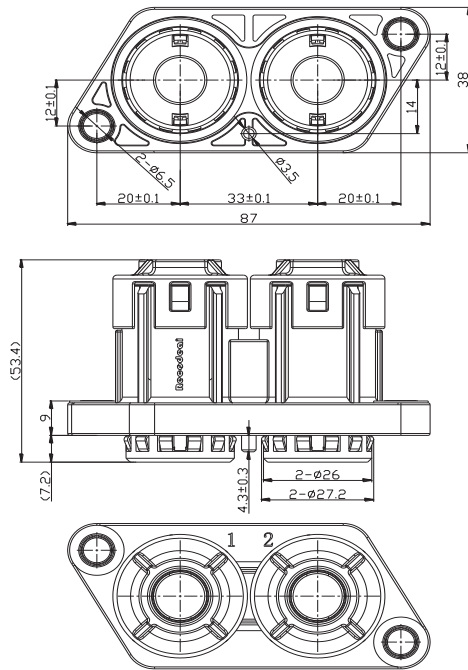
## Size

### 1-Pos plastic connector (No key)

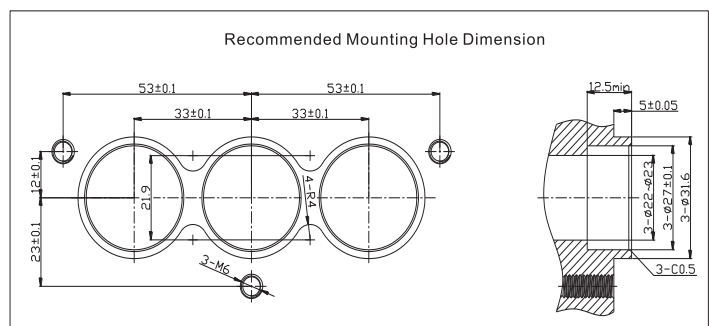
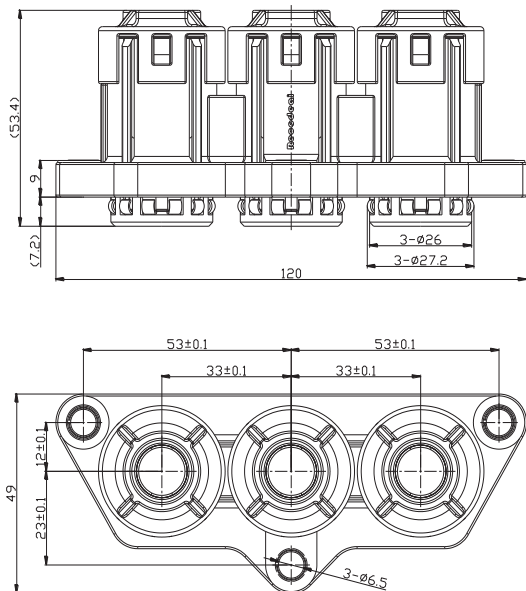


1-Pos IPT other keys(A/B/C/D) size and mounting size can be seen in product specification or provided by RECODEAL.

## 2-Pos plastic connector



## 3-Pos plastic connector



## 2-3POS low voltage Right angle connector with shield

### Describe

- 2POS,3POS
- Metal Shell
- Push-pull fast locking structure
- High Protection Degree: IP68
- 6 Anti-mistake key position
- Cable Section: 2.5mm<sup>2</sup>--4mm<sup>2</sup>
- Integrated Shield Interlocking Function
- For battery heating, compressor, PTC、
- OBC、PDU equipment



### Application

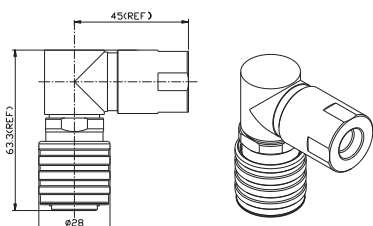
- Current Rating: 16A=2.5mm<sup>2</sup>  
25A=4mm<sup>2</sup>
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature Range: -40°C--+140°C

### Name of material

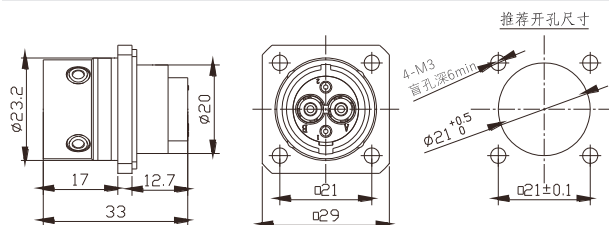
No	Product name	Product Model	Key Position	Cable Section	Cable sheath diameter
1	2Pos rightangleconnectorPlug	RQB-B-4SP5-NR-A	N	2×1.5mm <sup>2</sup> Shielding Outcover	Φ8.5±0.3
2	2Pos rightangleconnectorPlug	RQB-B-4SP5-AH-A	A		
3	2Pos rightangleconnectorPlug	RQB-B-4SP5-NR-B	N	2×2.5mm <sup>2</sup> Shielding Outcover	Φ11±0.4
4	2Pos rightangleconnectorPlug	RQB-B-4SP5-AH-B	A		
5	2Pos rightangleconnectorPlug	RQB-B-4SP5-NR-C	N	2×4mm <sup>2</sup> Shielding Outcover	Φ11.5±0.4
6	2Pos rightangleconnectorPlug	RQB-B-4SP5-AH-C	A		
7	2Pos connector socket	RQB-B-4PR1-AH-D	A		
1	3Pos rightangleconnectorPlug	RQB-B-2SP5-NR-A	N	3×1.5mm <sup>2</sup> Shielding Outcover	Φ10.2±0.3
2	3Pos rightangleconnectorPlug	RQB-B-2SP5-AH-A	A		
3	3Pos rightangleconnectorPlug	RQB-B-2SP5-NR-B	N	3×2.5mm <sup>2</sup> Shielding Outcover	Φ11.5±0.3
4	3Pos rightangleconnectorPlug	RQB-B-2SP5-AH-B	A		
5	3Pos rightangleconnectorPlug	RQB-B-2SP5-NR-C	N	3×4mm <sup>2</sup> Shielding Outcover	Φ13.3±0.4
6	3Pos rightangleconnectorPlug	RQB-B-2SP5-AH-C	A		

### SIZE

#### PLUG



#### SOCKET



# RQH 2POS Metal shell connector with shield

## Describe

- 2POS
- Metal shell
- Push-pull fast locking structure
- Anti-mis-touch design IPXXB
- High Protection Degree:
- 4Anti-mistake key positions
- Cable Section: 2.5mm<sup>2</sup>--6mm<sup>2</sup>
- Integrated Mask Interlocking Function
- For battery heating, compressor, PTC、OBC、PDU equipment



## Application

- Current Rating 16A=2.5mm<sup>2</sup>  
25A=4mm<sup>2</sup>  
40A=6mm<sup>2</sup>
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature range: -40°C--+140°C

## Naming Rules

### PLUG

RQH-C-1PT1H-AH-2.5-A

Design Extension Number

Cable Key

Key position and ribbon color:  
NR:N key position red; AH:  
A key position black; BY:B  
key position yellow;  
CB:C key position blue;  
DG:D key position green;

HVIL

T1:Loose plug T2:Straight plug

P:Shield

Product Serial

### Socket

RQH-C-1Z1H-AH-2.5-A

Design Extension Number

Cable Key

position and ribbon color: NR: N key  
position red; AH: A key bit black; BY: B  
key position yellow; CB: C key position  
blue; DG: D key green;

HVIL

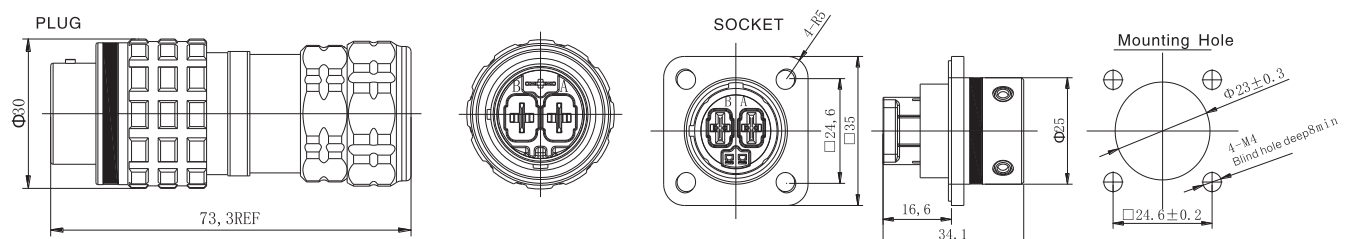
Z1: Socket

Product Serial

Note 1: the model generated according to the naming rules does not contain terminals, which need to be ordered separately.

Note 2: if RQH-C-1PT2H-NR-6-A means shielded, interlocking, suitable for integral plug, N key position red, 6 square wire 2 core connector;

## SIZE



# RQH High Voltage Metal shell connector with Shield

## Describe

- 3POS
- Metal shell
- Push-pull fast locking structure
- Anti-mis-touch design IPXXB
- High Protection Degree: IP6K9K、IP68
- 4 Anti-mistake key position
- Cable Section: 2.5mm<sup>2</sup>--6mm<sup>2</sup>
- Integrated Mask Interlocking Function
- For battery heating, compressor, PTC、OBC、PDU equipment



## Application

- Current Rating: 16A=2.5mm<sup>2</sup>  
25A=4mm<sup>2</sup>  
40A=6mm<sup>2</sup>
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature Range: -40℃--+140℃

## Naming rules

### Plug

RQH-D-1 P T1 H-AH-2.5-A

Design Extension Number

Cable

Key position and ribbon color: NR: N key position red;  
AH: A key position black; BY: B key position yellow;  
CB: C key position blue; DG: D key position green;

HVIL

T1: loose plug, T2: Straight plug

P:Shield

Product Serial

### Socket

RQH-D-1 Z1 H-AH-2.5-A

Design Extension Number

Cable

Key position and ribbon color:NR: N key position red;  
AH: A key position black; BY: B key position yellow;CB:  
C key position blue; DG: D key position green;

HVIL

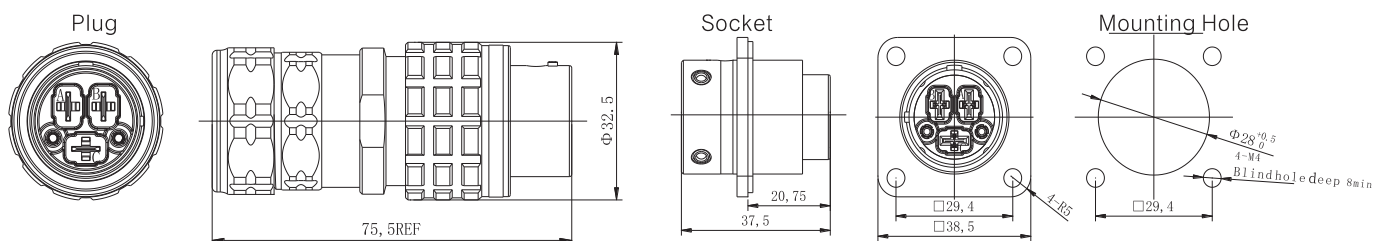
Z1: Socket

Product Serial

Note 1: the model generated according to the naming rules does not contain terminals, which need to be ordered separately.

Note 2: if RQH-D-1Z1H-NR-4-A indicates interlocking N key position red ,4 square wire 2 core socket.

## SIZE



## 3+2 POS Push-pull Metal Shell Circular Connector (RQB)



### Features/Application

- Multi-POS Push-pull RQB series connectors applying in EV or industry field, providing stable power or signal transmission. Plug and Jack are designed with rapid push-pull lock system, it can reach self-locking, connectors require small installation space, especially applying for installation limited space.
- Excellent sealing performance, IP67 in mated condition.
- Assembly manufacturing service as required.

### Product Model

Plug/Pin

No.	Model And Description	Key Position	Key Color	Cable Range
1	RQB-C-4PP1-NR-E	N	red	3*6mm <sup>2</sup> shielded cable Outer dia: φ15.5±0.3
2	RQB-C-4PP1-AH-E	A	black	
3	RQB-C-4PP1-BY-E	B	yellow	
4	RQB-C-4PP1-CB-E	C	blue	
5	RQB-C-4PP1-DG-E	D	green	
1	RQB-C-4PP1-NR-F	N	red	3*4mm <sup>2</sup> shielded cable Outer dia: φ14±0.3
2	RQB-C-4PP1-AH-F	A	black	
3	RQB-C-4PP1-BY-F	B	yellow	
4	RQB-C-4PP1-CB-F	C	blue	
5	RQB-C-4PP1-DG-F	D	green	
1	RQB-C-4PP1-NR-G	N	red	3*2.5mm <sup>2</sup> shielded cable Outer dia: φ12±0.25
2	RQB-C-4PP1-AH-G	A	black	
3	RQB-C-4PP1-BY-G	B	yellow	
4	RQB-C-4PP1-CB-G	C	blue	
5	RQB-C-4PP1-DG-G	D	green	
1	RQB-C-4PP2-NR-E	N	red	6mm <sup>2</sup> Non-shielded cable
2	RQB-C-4PP2-AH-E	A	black	
3	RQB-C-4PP2-BY-E	B	yellow	
4	RQB-C-4PP2-CB-E	C	blue	
5	RQB-C-4PP2-DG-E	D	green	



No.	Model And Description	Key Position	Key Color	Cable Range
1	RQB-C-4PP2-NR-F	N	red	2.5~4mm <sup>2</sup> Non-shielded cable
2	RQB-C-4PP2-AH-F	A	black	
3	RQB-C-4PP2-BY-F	B	yellow	
4	RQB-C-4PP2-CB-F	C	blue	
5	RQB-C-4PP2-DG-F	D	green	

#### Jack

No.	Model And Description	Key Position	Key Color	Cable Range
1	RQB-C-4SR1-NR-E	N	red	6mm <sup>2</sup> cable
2	RQB-C-4SR1-AH-E	A	black	
3	RQB-C-4SR1-BY-E	B	yellow	
4	RQB-C-4SR1-CB-E	C	blue	
5	RQB-C-4SR1-DG-E	D	green	
1	RQB-C-4SR1-NR-F	N	red	2.5~4mm <sup>2</sup> cable
2	RQB-C-4SR1-AH-F	A	black	
3	RQB-C-4SR1-BY-F	B	yellow	
4	RQB-C-4SR1-CB-F	C	blue	
5	RQB-C-4SR1-DG-F	D	green	

### Technical Specification

#### Electrical Property

Current rating

Contact Diameter	Cable Range	Current Rating	Remarks
1mm	0.3~0.75mm <sup>2</sup>	7A	HVIL Terminal
3mm	2.5mm <sup>2</sup>	16A	Main Terminal
	4mm <sup>2</sup>	25A	
	6mm <sup>2</sup>	40A	

Voltage rating:750V DC

Withstand voltage: 3000V AC 1min

Insulation resistance:3000MΩ(1000V DC 15s)

HVIL:Contain(HVIL short in plug)

#### Environmental Property

Working temperature: -30°C~+125°C

Relative humidity: 95%(40°C)

Sealing: IP67 in mated condition

Flame retardant grade: UL94 V-0

#### Mechanical Property

Mating cycle: >750 times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

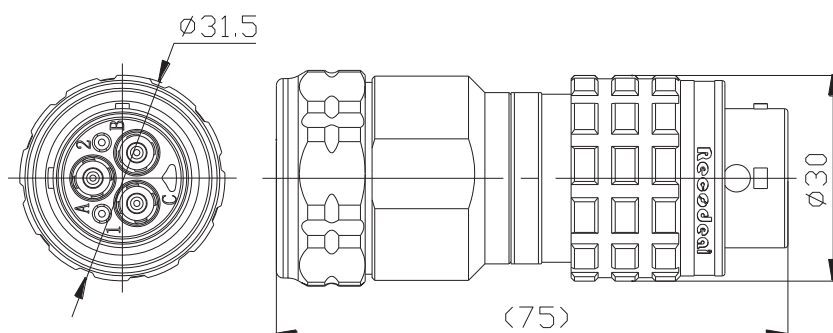
#### Material

Shell: aluminum alloy/zinc alloy

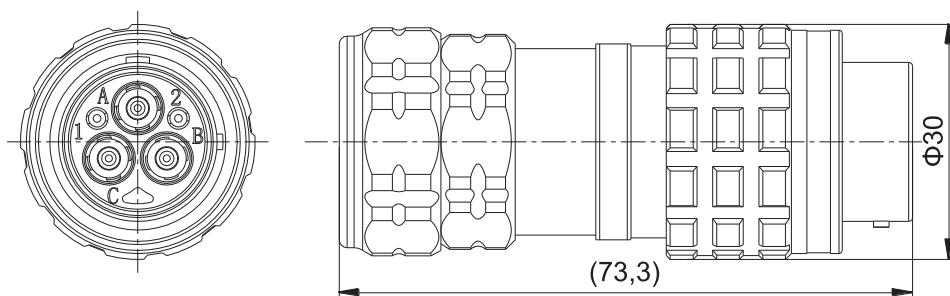
Contact: Copper alloy gold plated(power)&silver plated(HVIL)

Seal: rubber or elastomer

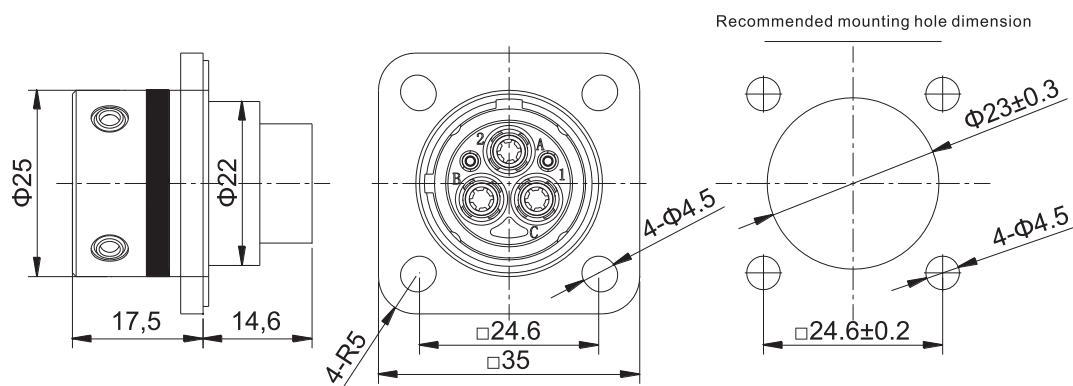
## Size

Plug(For 3\*6mm<sup>2</sup> shielded cable)


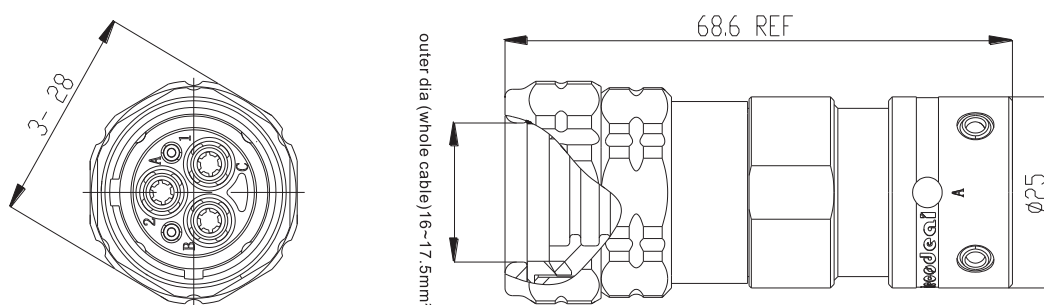
Plug



Jack Flange Type(R1)



Jack Floating Type(R3)



## 2+2 POS Push-pull Metal Shell Circular Connector (RQB)



### Features/Application

- Multi-POS Push-pull RQB series connectors applying in EV or industry field, providing stable power or signal transmission.
- Plug and Jack are designed with rapid push-pull lock system, it can reach self-locking, connectors require small installation space, especially applying for installation limited space.
- Excellent sealing performance, IP67 in mated condition.
- Assembly manufacturing service as required.

### Product Model

#### 1 . Plug/Pin

No.	Description	Model	Key Position	Key Color	Cable Range
1	2+2 POS Plug	RQB-C-5PP1-NR-A	N	red	2*6mm <sup>2</sup> shielded cable Outer dia: φ 12.5±0.25
2	2+2 POS Plug	RQB-C-5PP1-AH-A	A	black	
3	2+2 POS Plug	RQB-C-5PP1-BY-A	B	yellow	
4	2+2 POS Plug	RQB-C-5PP1-CB-A	C	blue	
5	2+2 POS Plug	RQB-C-5PP1-DG-A	D	green	
1	2+2 POS Plug	RQB-C-5PP1-NR-B	N	red	2*2.5、2*4mm <sup>2</sup> shielded cable Outer dia: φ11.5~φ12±0.25
2	2+2 POS Plug	RQB-C-5PP1-AH-B	A	black	
3	2+2 POS Plug	RQB-C-5PP1-BY-B	B	yellow	
4	2+2 POS Plug	RQB-C-5PP1-CB-B	C	blue	
5	2+2 POS Plug	RQB-C-5PP1-DG-B	D	green	
1	2+2 POS Plug	RQB-C-5PP1-NR-C	N	red	2*10mm <sup>2</sup> shielded cable Outer dia: φ17±0.3
2	2+2 POS Plug	RQB-C-5PP1-AH-C	A	black	
3	2+2 POS Plug	RQB-C-5PP1-BY-C	B	yellow	
4	2+2 POS Plug	RQB-C-5PP1-CB-C	C	blue	
5	2+2 POS Plug	RQB-C-5PP1-DG-C	D	green	
1	2+2 POS Plug	RQB-C-5PP2-NR-A	N	red	6mm <sup>2</sup> Non-shielded cable
2	2+2 POS Plug	RQB-C-5PP2-AH-A	A	black	
3	2+2 POS Plug	RQB-C-5PP2-BY-A	B	yellow	
4	2+2 POS Plug	RQB-C-5PP2-CB-A	C	blue	
5	2+2 POS Plug	RQB-C-5PP2-DG-A	D	green	

No.	Description	Model	Key Position	Key Color	Cable Range
1	2+2 POS Plug	RQB-C-5PP2-NR-B	N	red	2.5~4mm <sup>2</sup> Non-shielded cable
2	2+2 POS Plug	RQB-C-5PP2-AH-B	A	black	
3	2+2 POS Plug	RQB-C-5PP2-BY-B	B	yellow	
4	2+2 POS Plug	RQB-C-5PP2-CB-B	C	blue	
5	2+2 POS Plug	RQB-C-5PP2-DG-B	D	green	
1	2+2 POS Plug	RQB-C-5PP2-NR-C	N	red	10mm <sup>2</sup> Non-shielded cable
2	2+2 POS Plug	RQB-C-5PP2-AH-C	A	black	
3	2+2 POS Plug	RQB-C-5PP2-BY-C	B	yellow	
4	2+2 POS Plug	RQB-C-5PP2-CB-C	C	blue	
5	2+2 POS Plug	RQB-C-5PP2-DG-C	D	green	

## 2 . Jack

No.	Description	Model	Key Position	Key Color	Cable Range
1	2+2 POS Jack	RQB-C-5SR1-NR-A	N	red	6mm <sup>2</sup> cable
2	2+2 POS Jack	RQB-C-5SR1-AH-A	A	black	
3	2+2 POS Jack	RQB-C-5SR1-BY-A	B	yellow	
4	2+2 POS Jack	RQB-C-5SR1-CB-A	C	blue	
5	2+2 POS Jack	RQB-C-5SR1-DG-A	D	green	
1	2+2 POS Jack	RQB-C-5SR1-NR-B	N	red	2.5~4mm <sup>2</sup> cable
2	2+2 POS Jack	RQB-C-5SR1-AH-B	A	black	
3	2+2 POS Jack	RQB-C-5SR1-BY-B	B	yellow	
4	2+2 POS Jack	RQB-C-5SR1-CB-B	C	blue	
5	2+2 POS Jack	RQB-C-5SR1-DG-B	D	green	
1	2+2 POS Jack	RQB-C-5SR1-NR-C	N	red	10mm <sup>2</sup> cable
2	2+2 POS Jack	RQB-C-5SR1-AH-C	A	black	
3	2+2 POS Jack	RQB-C-5SR1-BY-C	B	yellow	
4	2+2 POS Jack	RQB-C-5SR1-CB-C	C	blue	
5	2+2 POS Jack	RQB-C-5SR1-DG-C	D	green	

## Technical Specification

## Electrical Property

Current rating:

Contact Diameter	Cable Range	Current Rating	Remarks
1.6mm	0.3~0.75mm <sup>2</sup>	7A	HVIL Terminal
3.5mm	2.5mm <sup>2</sup>	16A	Main Terminal
	4mm <sup>2</sup>	25A	
	6mm <sup>2</sup>	40A	
	10mm <sup>2</sup>	60A	

Voltage rating:750V DC

Withstand voltage: 3000V AC 1min

Insulation resistance:3000MΩ(1000V DC 15s)

HVIL:Contain(HVIL short in plug)

## Environmental Property

Working temperature: -30℃~+125℃

Relative humidity: 95%(40℃)

Sealing: IP67 in mated condition

Flame retardant grade: UL94 V-0

## Mechanical Property

Mating cycle: &gt;500 times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

## Material

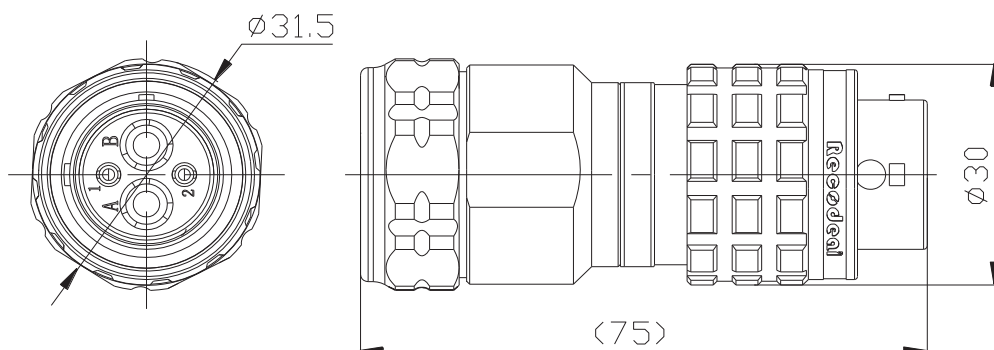
Shell: aluminum alloy/zinc alloy

Contact: Copper alloy gold plated(power)&amp;silver plated(HVIL)

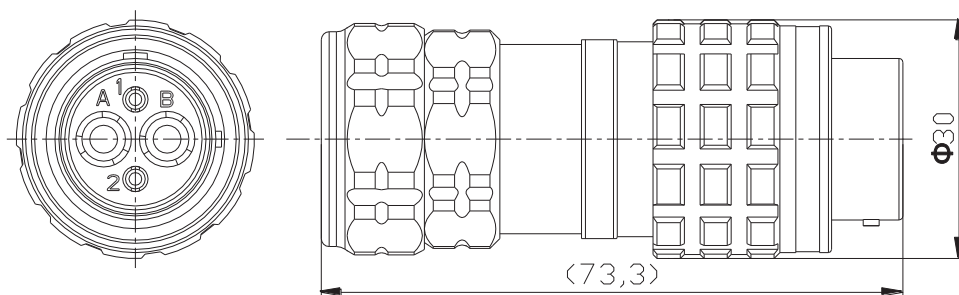
Seal: rubber or elastomer

## Size

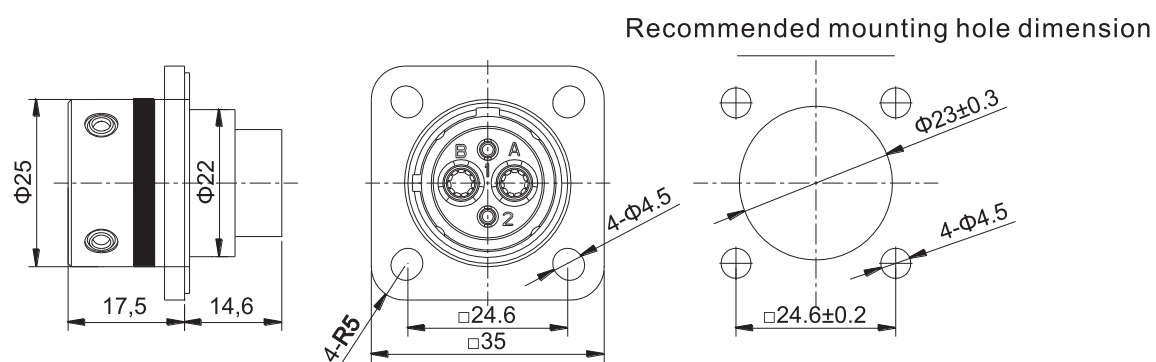
Plug(For 2\*10mm<sup>2</sup> shielded cable)



Plug(other)



Jack

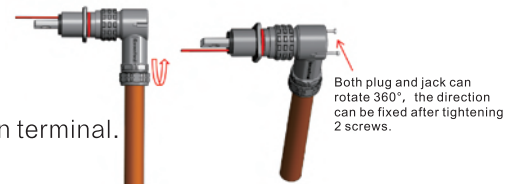


# 1POS High Current Push-pull Metal Shell Connector (RQF-D)



## Features/Application

- RQF series connectors provide stable high voltage, high current transmission among EV/HEV systems.
- Plug and Jack are designed with rapid push-pull lock system, it can reach self-locking, connectors require small installation space, especially applying for installation limited space.
- Current rating 180A~250A, with 2 type of cable ways: straight and side, meet different request from clients.
- Six anti-misplug key for option, different color distinguish different key, to avoid visually and installation mistakes, also it has the main key mark on the surface, provide convenience to customers.
- Both plug and jack have electric shock protection function.
- Excellent sealing performance, IP68 in mated condition.
- 360 degrees shielding function, which is optional.
- This series of connectors with HVIL, can indicate the on or off of the main terminal.
- Assembly manufacturing service as required.
- The right angel plug can rotate 360° and appear in any direction, the direction can be fixed after determining the direction as required.



## Technical Specification

### Electrical Property

Current rating: 180~270A  
 Cable range: 35mm<sup>2</sup>, 50mm<sup>2</sup>, 70mm<sup>2</sup>  
 Contact:  $\Phi 10$ mm  
 Voltage rating: 1000V DC  
 Contact resistance: 5m $\Omega$   
 Withstand voltage: 1500V(AC)  
 Insulation resistance: 5000M $\Omega$   
 Shielding: optional  
 HVIL: optional

### Environmental Property

Working temperature: -40 °C~ +125°C  
 Relative humidity: 95% (40°C)  
 Sealing: IP68 in mated condition  
 Flame retardant grade: UL94 V-0  
 Salt spray: 48h(5% NaCl)

### Mechanical Property

Mechanical Property  
 Mating cycle: >500times  
 Vibration: 10~80Hz, Amplitude 0.75  
 81~500Hz, 20g  
 500~2000Hz, 18g

### Material

Shell: aluminum alloy/zinc alloy nickel plated  
 Insulator: thermoplastic flame-retardant  
 Contact: copper alloy gold plated  
 Seal: silicone rubber



## Ordering Information

### Plug

RQF -D P PW H -NR -50 - A

Extensive character

Cable range:35, 50, 70

NR:Key N red ;BY:Key B yellow;  
DG:Key D green;AH:Key A black;  
CB:Key C Blue;EO:Key E Orange

H:HVIL(Non-HVIL unmarked)

P: Straight; PW: Right angle

P: Shielding (non-shielding unmarked)

Shell: D

High Current Push-pull Metal Shell Connector (RQF)

### Jack

RQF -D R D1 H0.3 -NR - A

Extensive character

NR:Key N red ;BY:Key B yellow;  
DG:Key D green;AH:Key A black;  
CB:Key C Blue;EO:Key E Orange

H0.3:HVIL,0.3m reserved  
(Non-HVIL unmarked)

Wiring Method:  
D1: Terminal (through-hole);  
D2: Terminal (thread-hole)

Jack

Shell: D

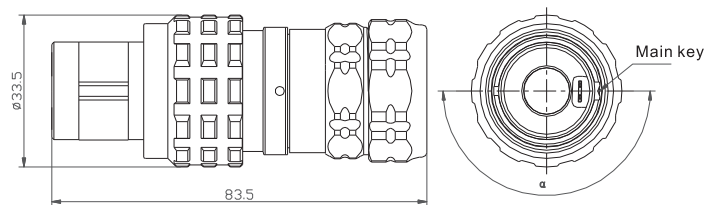
High Current Push-pull Metal Shell Connector (RQF)

## Size

Note: The following outlined dimensions are available as standard dimensions at Recodeal.  
The connectors can be customized.

### Plug

#### Plug straight

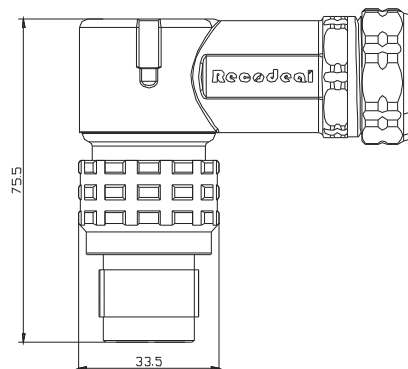
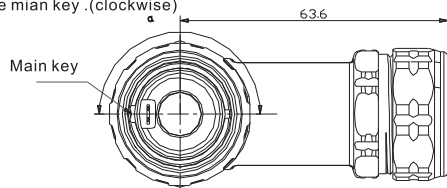


The key position strats from the mian key .(clockwise)

Contact	Cable Range	Current Rating	The Position Of α (Build Position Corner)					
Φ10mm	35mm²	180A	N	A	B	C	D	E
	50mm²	200A						
	70mm²	250A	180°	90°	160°	190°	270°	330°

#### Plug right angle

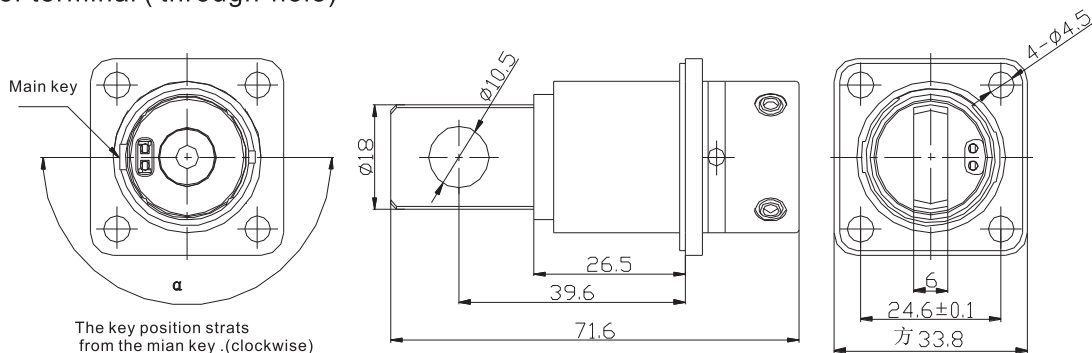
The key position strats from the mian key .(clockwise)



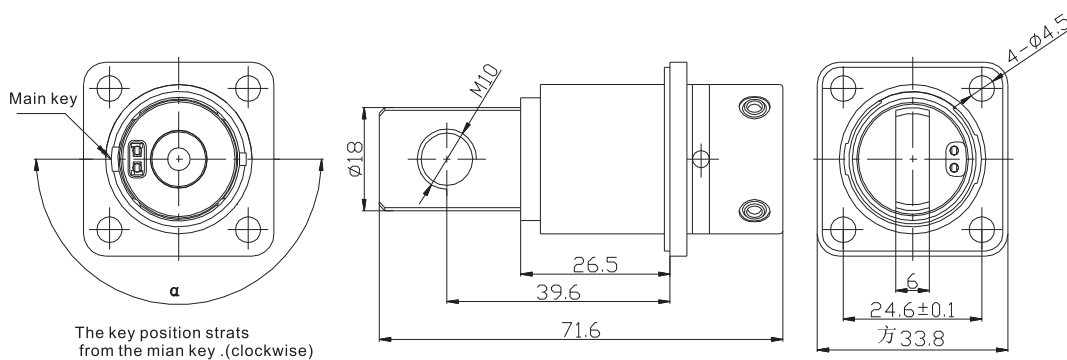
Contact	Cable Range	Current Rating	The Position Of α (Build Position Corner)					
Φ10mm	35mm²	180A	N	A	B	C	D	E
	50mm²	200A						
	70mm²	250A	180°	90°	160°	190°	270°	330°

## Jack

Jack:for terminal ( through-hole)



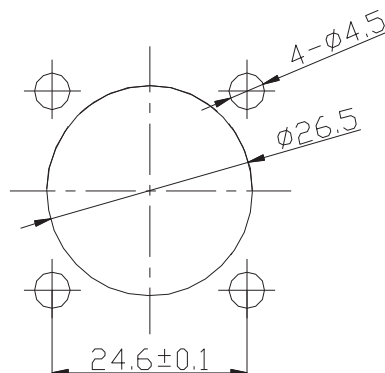
Jack:for terminal (thread-hole)



Contact	Cable Range	Current Rating	The Position Of α (Build Position Corner)					
Φ10mm	35mm <sup>2</sup>	180A	N	A	B	C	D	E
	50mm <sup>2</sup>	200A						
	70mm <sup>2</sup>	250A	180°	90°	160°	190°	270°	330°

- 1.Thickness of mounting plate: $t \leq 1.0\text{mm}$  , recommended mounting screw:M4 × (9+t),the tightening torque:(2.5~3.5N · M);
- 2.The recommended tightening torque of M10:14N · M(Jackcopper,Mounting plate:thermoplastic);
- 3.The recommended tightening torque of Φ10:22N · M(Jack:copper,Mounting plate:thermoplastic).

## Recommended Mounting Hole Dimension



# 1POS High Current Push-pull Metal Shell Connector (RQD)



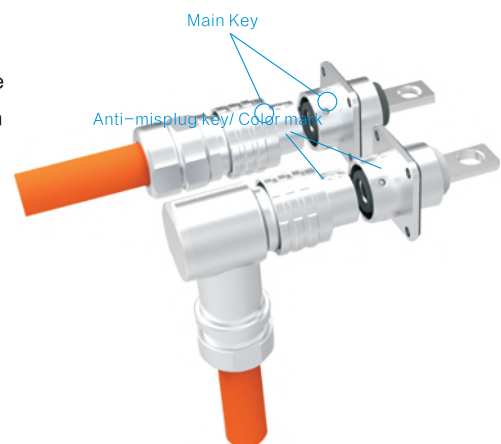
## Features/Application

- RQD series connectors provide stable high voltage, high current transmission among EV/HEV systems.
- Plug and Jack are designed with rapid push-pull lock system, it can reach self-locking, connectors require small installation space, especially applying for installation limited space.
- Current rating 30A~350A, with 5 different shell colors, (A,B,C,D,E) with 2 type of cable ways :straight and side, meet different request from clients.
- Five anti-misplug key for option, different color distinguish different key, to avoid visually and installation mistakes, also it has the main key mark on the surface, provide convenience to customers.
- Both plug and jack have electric shock protection function.
- Excellent sealing performance, IP67 in mated condition.
- 360 degree shielding function, which is optional.
- Assembly manufacturing service as required.
- Normally, RQD series is 1 POS design, can be customized if multiple POS are required.
- Can be customized according to client's requirement.

## Instructions

The connectors provide visual anti-misplug ability from the outer shell color. It avoids mistakes especially when the same series connectors are used on same equipment. The main key is significantly marked on the shell for users to plug in quickly.

The connectors prevent the users from installation mistakes by its anti-misplug keys. When the users hold the end of plug and push it into jack, the locking sleeve will move back slightly with the steel balls works inside. When the plug and jack are pushed to the right place, the locking sleeve will automatically move forward to compress the steel balls with the spring mechanism and be locked with audible positive "click". The self-locking design would avoid "unlock" situation. Easy to separate or de-mating by pulling the locking sleeve at opposite direction.



## Technical Specification

## Electrical Property

Current rating:

Shell	Contact	Cable Range	Current rating
A	Φ3.6mm	6mm <sup>2</sup>	40A
		10mm <sup>2</sup>	60A
B	Φ6mm	16mm <sup>2</sup>	80A
		25mm <sup>2</sup>	130A
C	Φ8mm	35mm <sup>2</sup>	180A
		50mm <sup>2</sup>	220A
D	Φ10mm	50mm <sup>2</sup>	240A
		70mm <sup>2</sup>	270A
E	Φ12mm	95mm <sup>2</sup>	300A
		120mm <sup>2</sup>	350A

Voltage rating: 700V DC

Withstand voltage: 3000V AC

Resistance: 5000MΩ

Shielding: optional

## Mechanical Property

Mating cycle: ≥500times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

## Environmental Property

Environmental Property

Working temperature: -40 °C~ +125°C

Relative humidity: 95% (40°C)

Salt spray: 48h (Up to 1000h as required)

Sealing: IP68 under mated condition

Flame retardant grade: UL94 V-0

## Material

Material

Shell: aluminum alloy/zinc alloy

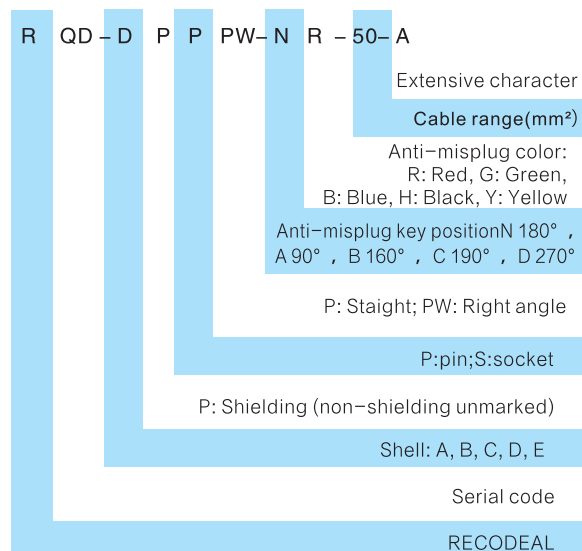
Insulator: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: rubber or elastomer

## Ordering Information

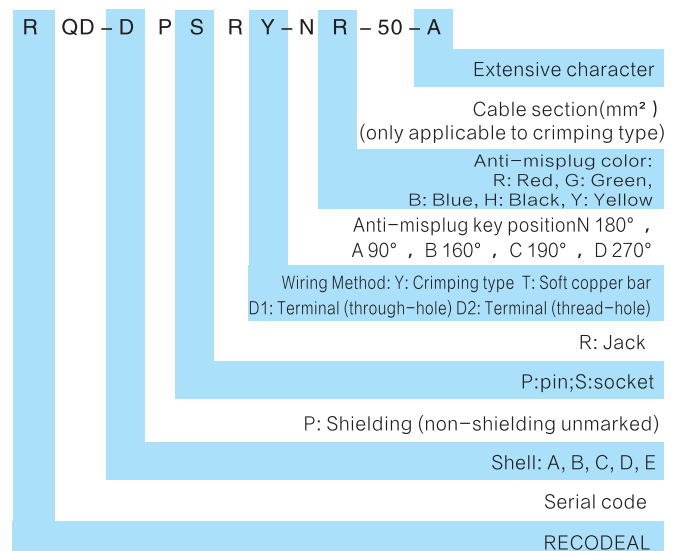
## Plug



Note: Plug assemble with pins

eg: RQD-CPPPW-AH-35-A means: RQD series plug, Shell C connect 35 mm<sup>2</sup> shield cable, right angle plug, A position black.

## Jack



Note: Plug assemble with socket

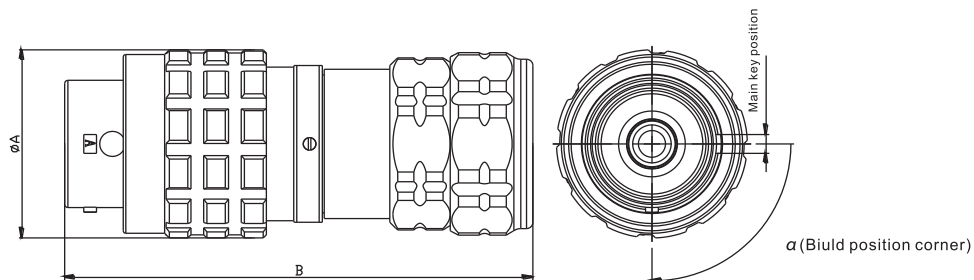
eg: RQD-CPPPW-AH-35-A means: RQD series plug, Shell C A position black, plug trail is open end.

## Size

Note: The following outlined dimensions are available as standard dimensions at Recodeal.

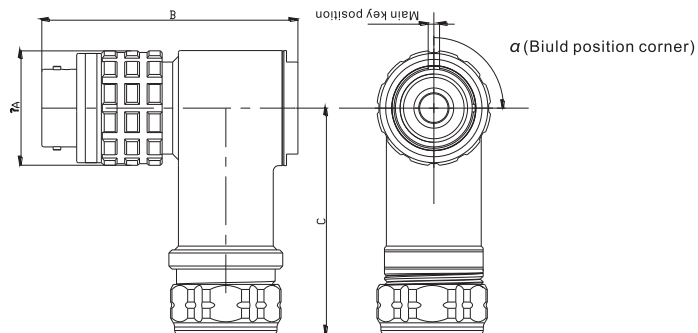
### Plug

Plug straight



Shell	Contact	Cable Range	Current Rating	A	B	B(shielding)
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	60	60
		10mm <sup>2</sup>	60A			
B	Φ6mm	16mm <sup>2</sup>	80A	28	62	62
		25mm <sup>2</sup>	120A			
C	Φ8mm	35mm <sup>2</sup>	180A	30	73.5	73.5
		50mm <sup>2</sup>	200A			
D	Φ10mm	50mm <sup>2</sup>	200A	32.5	75.5	75.5
		70mm <sup>2</sup>	250A			
E	Φ12mm	95mm <sup>2</sup>	300A	35	71	76
		120mm <sup>2</sup>	350A			

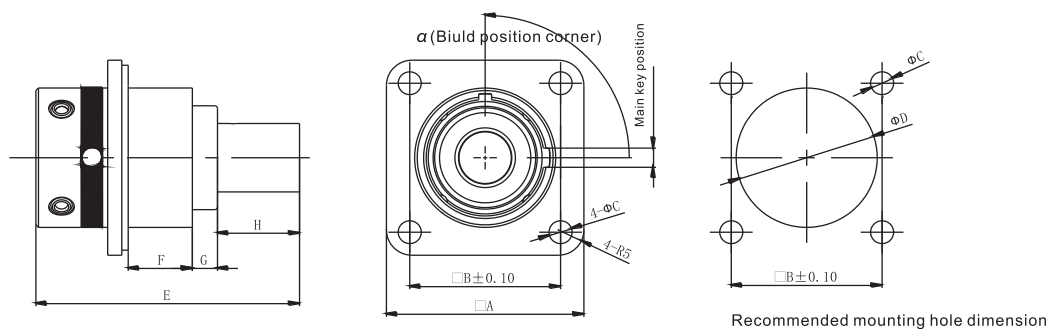
Plug right angle



Shell	Contact	Cable Range	Current Rating	A	B	C	C(shielding)
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	56	54	54
		10mm <sup>2</sup>	60A				
B	Φ6mm	16mm <sup>2</sup>	80A	28	61	( 56 )	( 56 )
		25mm <sup>2</sup>	120A				
C	Φ8mm	35mm <sup>2</sup>	180A	30	67.5	59	61.5
		50mm <sup>2</sup>	200A				
D	Φ10mm	50mm <sup>2</sup>	200A	32.5	74	61.5	64.5
		70mm <sup>2</sup>	250A				
E	Φ12mm	95mm <sup>2</sup>	300A	35	77	63	66
		120mm <sup>2</sup>	350A				

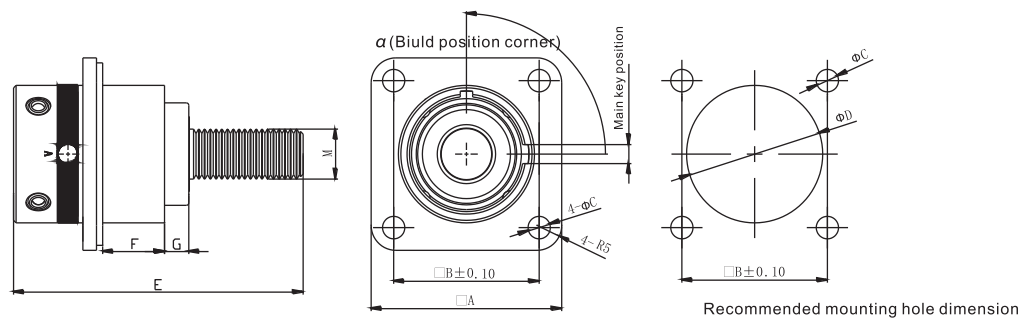
## Jack

Jack: crimping type



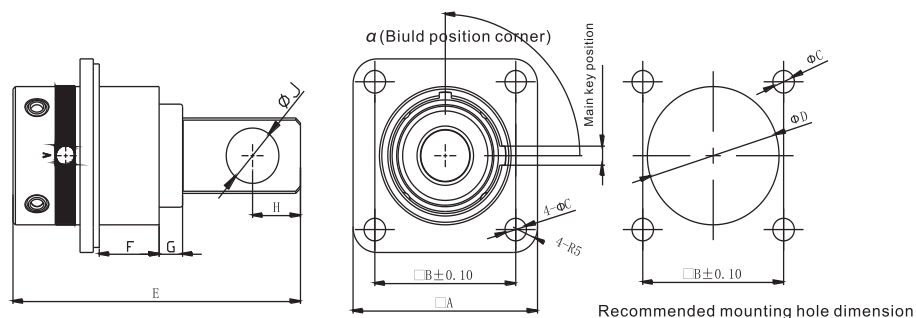
Shell	Contact	Cable Range	Current Rating	A	B	C	D	E	F	G	H
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	18	3.2	19	35	4.5	2	15
		10mm <sup>2</sup>	60A								
B	Φ6mm	16mm <sup>2</sup>	80A	31	22-23	4.2	20	38.6	5	2	12.5
		25mm <sup>2</sup>	120A								
C	Φ8mm	35mm <sup>2</sup>	180A	35	24	4.5	23	43.6	6.9	4	15.4
		50mm <sup>2</sup>	200A								
D	Φ10mm	50mm <sup>2</sup>	220A	38.5	29.4	4.5	28.5	51.4	13	5	16
		70mm <sup>2</sup>	250A								
E	Φ12mm	95mm <sup>2</sup>	300A	41	34	4.5	34	56	12.5	5	18.5
		120mm <sup>2</sup>	350A								

Jack: for copper bar



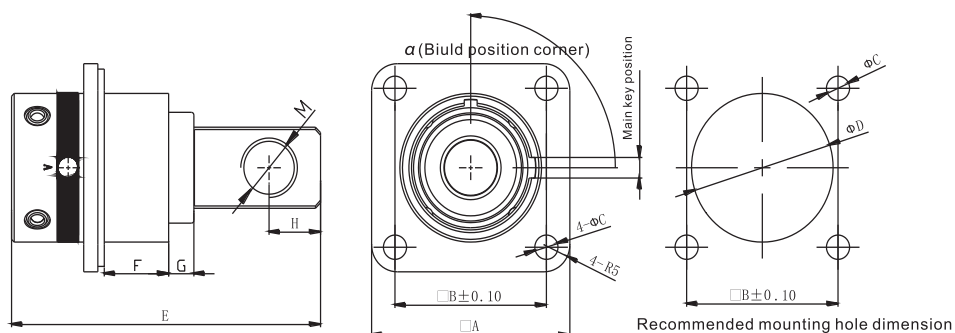
Shell	Contact	Cable Range	Current Rating	A	B	C	D	E	F	G	M
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	18	3.2	19	35	4.5	2	M5
		10mm <sup>2</sup>	60A								
B	Φ6mm	16mm <sup>2</sup>	80A	31	22-23	4.2	20	40	5	2	M6
		25mm <sup>2</sup>	120A								
C	Φ8mm	35mm <sup>2</sup>	180A	35	24	4.5	23	43.1	6.9	4	M8
		50mm <sup>2</sup>	200A								
D	Φ10mm	50mm <sup>2</sup>	200A	38.5	29.4	4.5	28.5	58.5	13	5	M10
		70mm <sup>2</sup>	250A								
E	Φ12mm	95mm <sup>2</sup>	300A	41	34	4.5	34	56	12.5	5	M12
		120mm <sup>2</sup>	350A								

Jack:for terminal(through-hole)



Shell	Contact	Cable Range	Current Rating	A	B	C	D	E	F	G	H	J
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	18	3.2	19	35	4.5	2	6	4.5
		10mm <sup>2</sup>	60A									
B	Φ6mm	16mm <sup>2</sup>	80A	31	22-23	4.2	20	40	5	2	5.5	6.5
		25mm <sup>2</sup>	120A									
C	Φ8mm	35mm <sup>2</sup>	180A	35	24	4.5	23	47.6	6.9	4	7	8.5
		50mm <sup>2</sup>	200A									
D	Φ10mm	50mm <sup>2</sup>	200A	38.5	29.4	4.5	28.5	60	13	5	10	10.5
		70mm <sup>2</sup>	250A									
E	Φ12mm	95mm <sup>2</sup>	300A	41	34	4.5	34	56	12.5	5	12	12.5
		120mm <sup>2</sup>	350A									

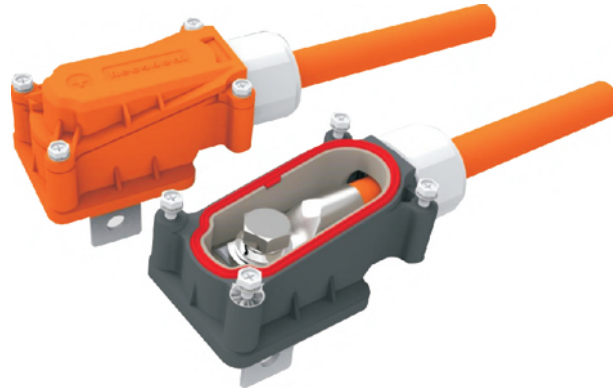
Jack:for terminal(thread-hole)



Shell	Contact	Cable Range	Current Rating	A	B	C	D	E	F	G	H	M
A	Φ3.6mm	6mm <sup>2</sup>	40A	24	18	3.2	19	35	4.5	2	6	M4
		10mm <sup>2</sup>	60A									
B	Φ6mm	16mm <sup>2</sup>	80A	31	22-23	4.2	20	40	5	2	5.5	M6
		25mm <sup>2</sup>	120A									
C	Φ8mm	35mm <sup>2</sup>	180A	35	24	4.5	23	47.6	6.9	4	7	M8
		50mm <sup>2</sup>	200A									
D	Φ10mm	50mm <sup>2</sup>	200A	38.5	29.4	4.5	28.5	60	13	5	10	M10
		70mm <sup>2</sup>	250A									
E	Φ12mm	95mm <sup>2</sup>	300A	41	34	4.5	34	56	12.5	5	12	M12
		120mm <sup>2</sup>	350A									



# Low-cost High Voltage Metal Shell Connector (REQ4)



## Features/Application

- This series connectors utilized for EV industry, offering stable high voltage, high current transmission among equipments.
- Positive and negative connectors are differentiated by color, Positive shell is orange, negative is black.
- Sealing grade can reach IP68 under mated condition.
- The cable can be easily assembled with connectors after cable was crimped.
- REQ4 connector doesn't use direct mating between male and female, instead it uses copper bars to connect both male and female contacts, which provides lower cost comparing to majority of HV connectors, and more reliable connection.
- The product has shielding properties.
- HVIL (High Voltage Interlock) is optional.

## Technical Specification

### Electrical Property

Voltage rating: 1000V DC  
 Contact resistance:  $\leq 3\text{m}\Omega$   
 Withstand voltage:  $\geq 3000\text{V AC 1Min}$   
 Insulation resistance:  $\geq 3000\text{M}\Omega$  ( $\leq 40^\circ\text{C}$ ,  $\leq 50\% \text{ RH}$ )  
 $\geq 300\text{M}\Omega$  ( $> 95\% \text{ RH}$ )

### Mechanical Property

Mating cycle: 20 times

### Environmental Property

Working temperature:  $-40^\circ\text{C} \sim +125^\circ\text{C}$   
 Relative humidity:  $\leq 95\% (40^\circ\text{C})$   
 Sealing: IP67 (Depth of water: 1m, 48h, water tight)  
 Single jack: waterproof (IP67) or aleak

### Material

Meeting the RoHS  
 Shell: aluminum alloy  
 Contact: copper alloy  
 Seal: rubber

## Ordering Information

### Non-HVIL

REQ4-50P-OR-A

Extensive character

OR: orange; BK: black

P: Shield; Non-shield unmarked

Cable range: 35/50/70

Serial

RECODEAL

### HVIL

REQ4-50PH0.3-OR-A

Extensive character

OR: orange; BK: black

H: HVIL; Non-HVIL unmarked

P: Shield; Non-shield unmarked

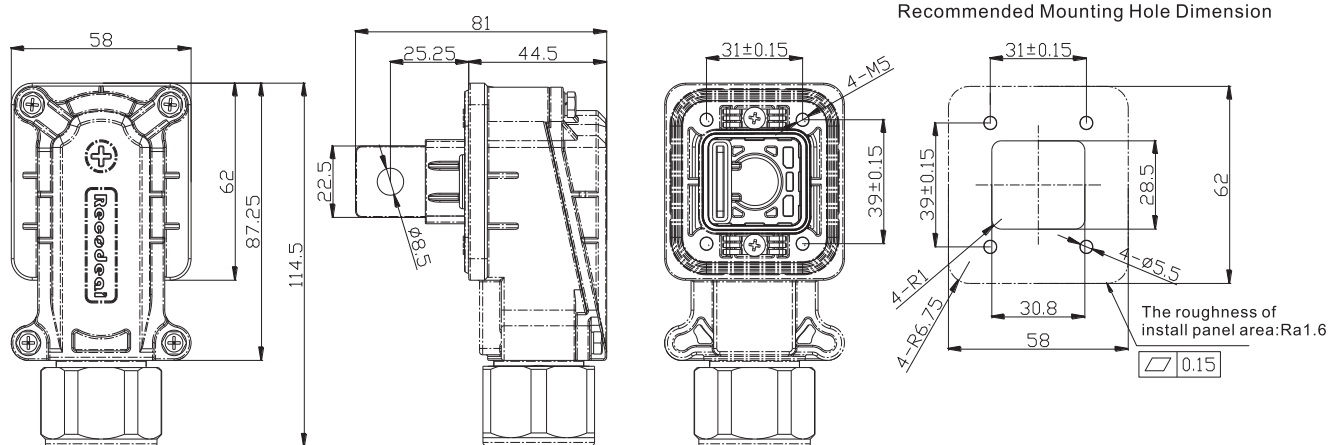
Cable range: 35/50/70

Serial

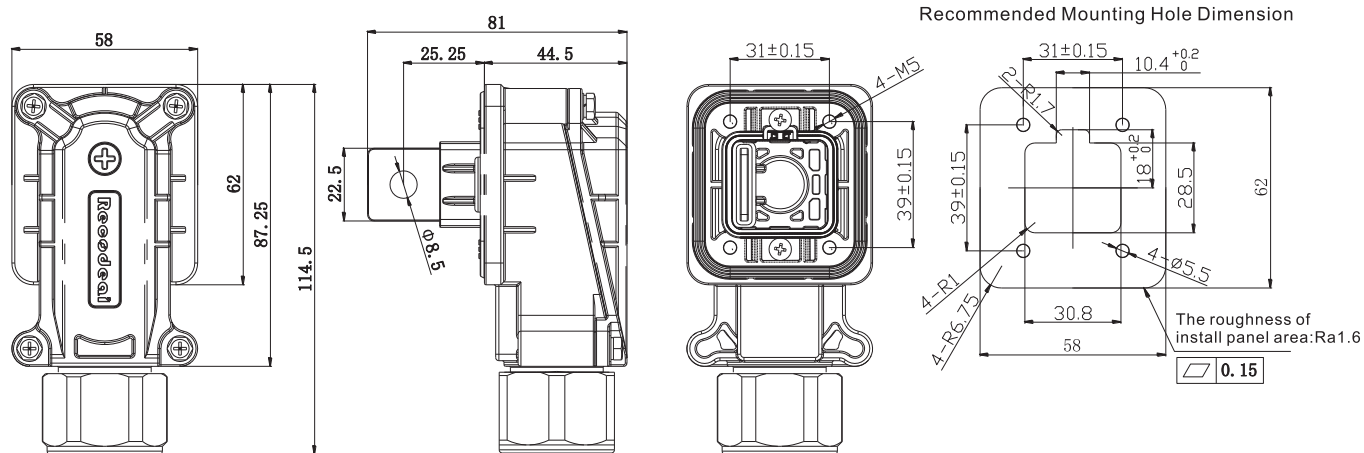
RECODEAL

## Size

### Non-HVIL



### HVIL



Note:

- 1.The product divides positive and negative type.
- 2.The mounting hole of the jack:M5,thickness of mounting plate: $t \leq 0.8\text{mm}$ , panel flatness:0.2,oughness of install panel area: $\leq \text{Ra}1.6$ .
- 3.The recommended tightening torque of M10:16N · M ~ 18N · M;The recommended tightening torque of M8:12N · M ~ 14N · M;The recommended tightening torque of M5:3.5N · M ~ 4.5N · M;The recommended tightening torque of M4:2N · M ~ 2.5N · M.
- 4.The code of terminal、 shield inner tube、 shield tube,all of the above need to ordered separately.

Name	35 <sup>2</sup>	50 <sup>2</sup>	70 <sup>2</sup>
Terminal(XX-10)	7.731.479	7.731.180051.06	7.731.180052.06
Shield inner tube	7.070.180139.01	7.070.180133.01	7.070.180134.01
Shield tube	7.070.180140.01	7.070.180135.01	7.070.193001.01

5.The length of the lead-out is 150mm

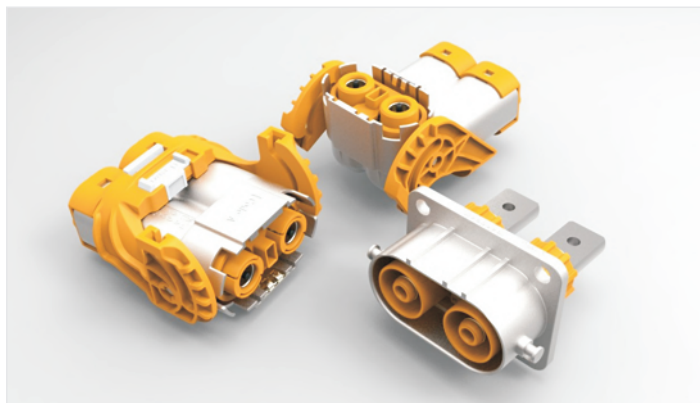
HVIL terminal:terminal8240-0447/SWS plastic shell:6098-7898/SWS

Recommended terminal:terminal8230-5271/SWS plastic shell:6098-7892/SWS

## Multi 2POS High Current Metal shell connector with shield(REG2)

## Describe

- 2POS
- Metal shell
- Locking handle and
- Secondary locking structure
- False-proof design ( IPXXB )
- Sealing: IP6K9K、IP68
- Supporting cable: 25mm<sup>2</sup>--95mm<sup>2</sup>



## Application

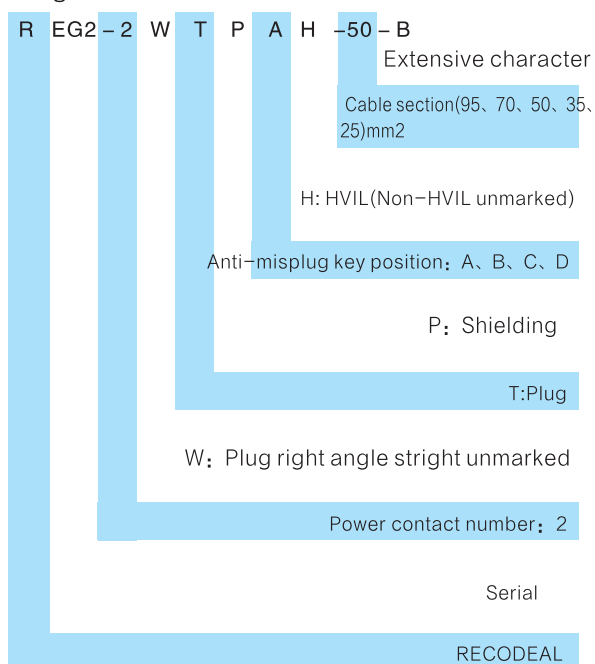
## ■ Current Rating

Contact	Cable range	current rating	Cable type	Diameter of the insulation layer in the cable	External diameter of cable	Remark
Φ 10mm	25mm <sup>2</sup>	120A	Shield or Non-Shield is optional	Φ8.2mm~Φ8.8mm	Φ 11.6mm~Φ 12.2mm	/
	35mm <sup>2</sup>	180A	Shield or Non-Shield is optional	Φ9.8mm~Φ 10.5mm	Φ 13.8mm~Φ 14.4mm	/
	50mm <sup>2</sup>	220A	Shield or Non-Shield is optional	Φ 11.5mm~Φ 12.2mm	Φ 15.2mm~Φ 15.8mm	/
	70mm <sup>2</sup>	250A	Shield or Non-Shield is optional	Φ 14mm~Φ 15.5mm	Φ 19.2mm~Φ 20mm	/
	95mm <sup>2</sup>	280A	Shield or Non-Shield is optional	Φ 16.2mm~Φ 18mm	Φ 21.5mm~Φ 22.5mm	/
0.6X1.2	(0.35/0.5)mm <sup>2</sup>	3A	Non-shield	/	Φ 1.4mm~Φ 2.0mm	HIVL

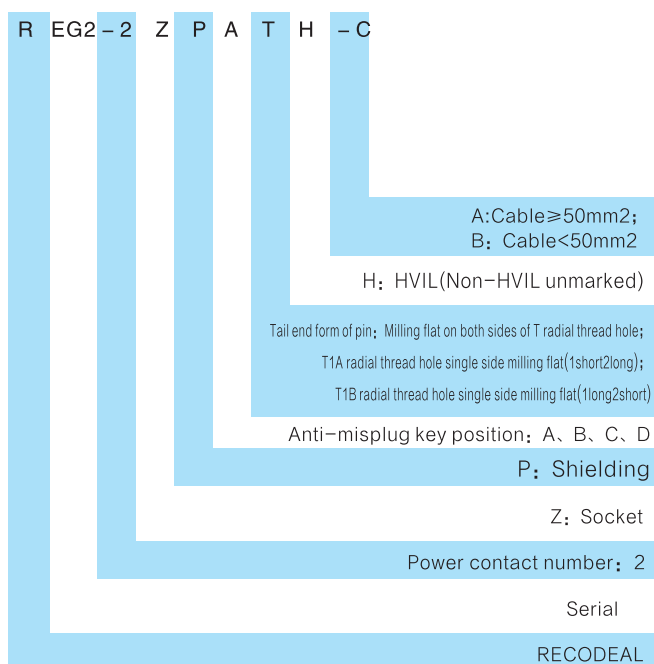
- Current Rating: 1000V DC;
  - Shielding: optional
  - HIVL: YES(HIVL is normal)
  - Non HIVL is optional
- Working Temperture: -40℃--+140℃

## Ordering information

## Plug

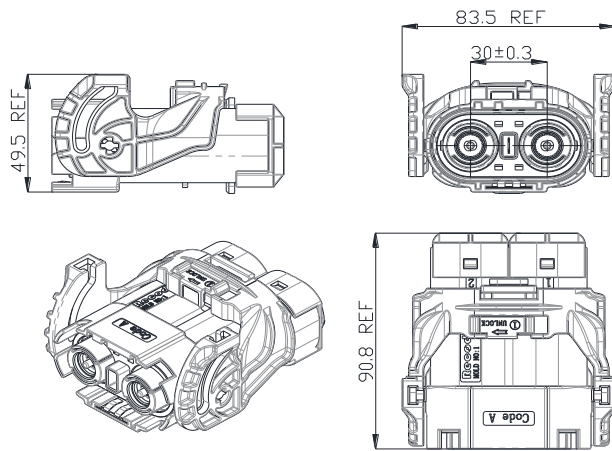


## Socket

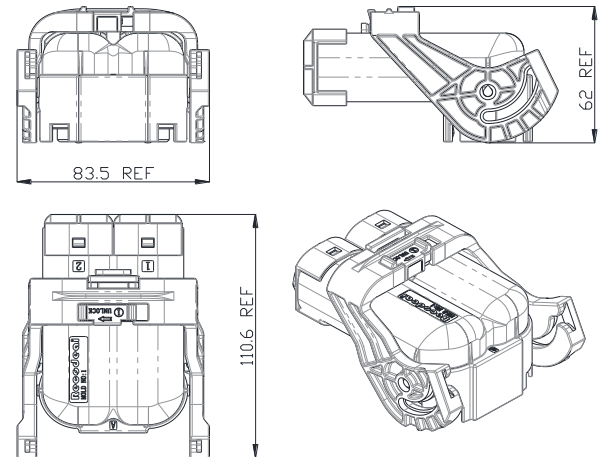
Fitting Cable ≥ 50mm<sup>2</sup> Socket

size

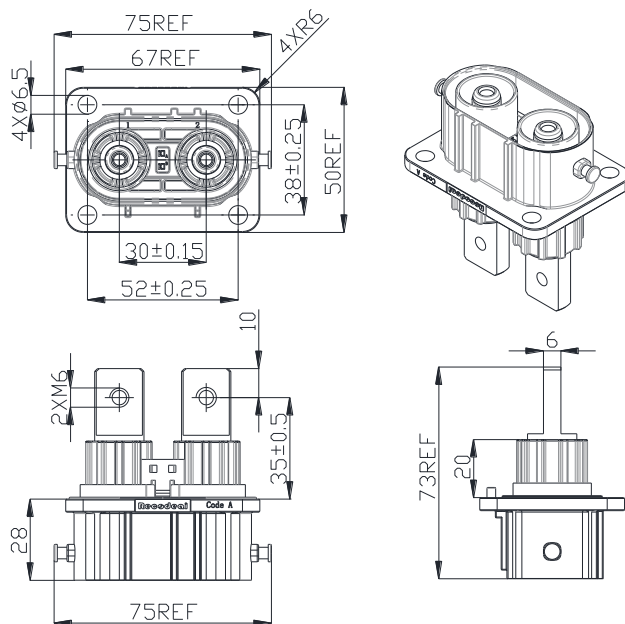
2POS Straight socket



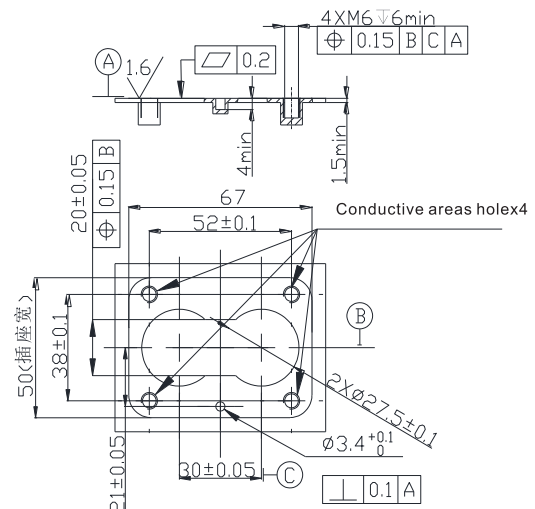
2POS Right angle Plug



2POS Straight socket



Mounting hole dimension(A key position)



## Metal shell connector (RIPTII)

### Describe

- 2POS
- Metal shell
- High Protection Degree: IP6K9K、IP68
- Cable Section: 25mm<sup>2</sup>--70mm<sup>2</sup>
- After the cable is loaded, the cable will not move up and down, nor will it rotate, so the fixing effect is good
- Mainly used for battery, MCU、, PDU and other equipment

### Application

- Current Rating: 120A=25mm  
200A=35mm  
250A=50mm  
300A=70mm
- Voltage Rating: 1000V DC
- Shield: Option
- Temperature: -40°C--+140°C



### Naming rules

RIPTII-2-70P-A

Extension serial number

P: Shield

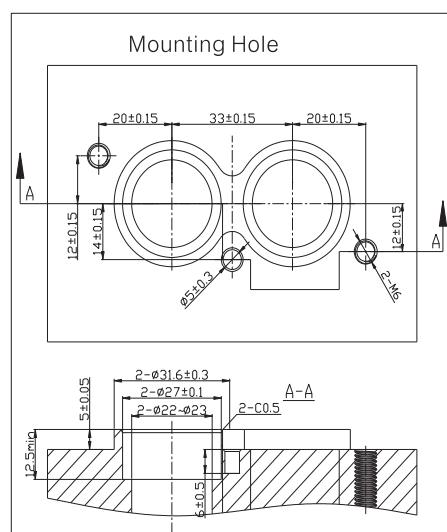
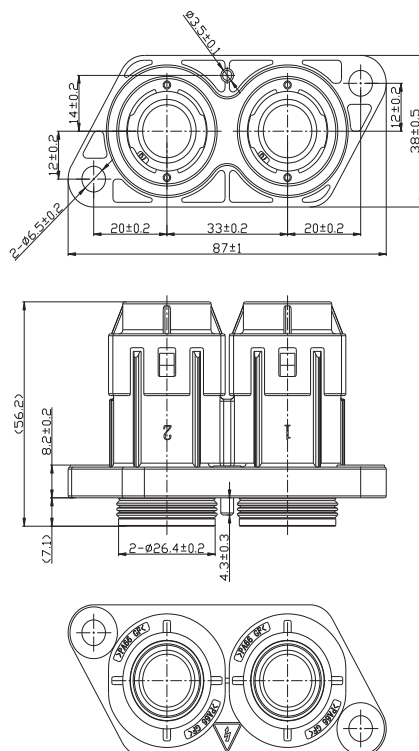
Cable: 25、35、50、70

POS: 2

IPT II:Product Serial

RIPT II -2-50P-A" means: Recodeal manufacture, IPT II series, two-core, suitable for 50 mm<sup>2</sup> shielded cable, with shielding, expansion model is A.

### SIZE



# RET Metal /Plastic Shell connector with Shield

## Describe

- 3POS
- Metal/Plastic shell
- High protection Degree: IP6K9K、IP68
- Mainly used for battery, MCU、, PDU and other equipment

## Application

- Current Rating: 200A—250A
- Voltage Rating: 1000V DC
- Shield: Type code 1 with shield,others without
- Temperture Range: -40℃--+140



## Naming Rules

RET-13PM-Y-A

Design expansion No

Pin non-pressurized unmarked

M: sealed, unsealed not marked

P:Shield

Number of power contacts

Product Serial Code: 1,2,3.....

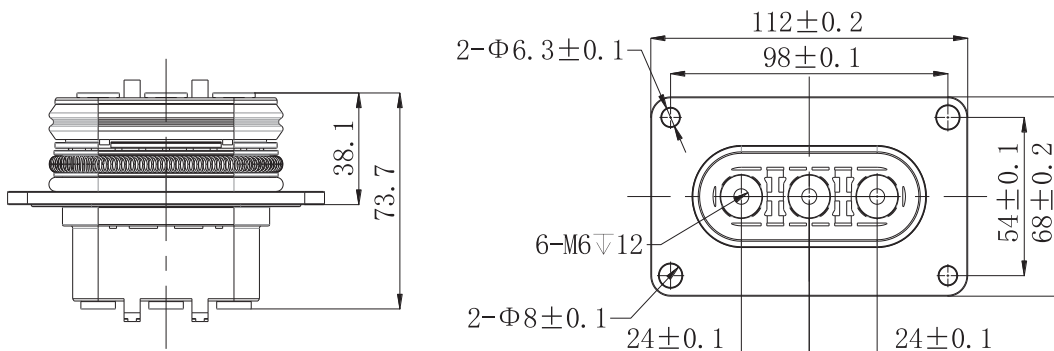
RECODEAL

## Product Serial Code

Product Serial Code	P/N	Current Rating	Shield	Protection Degree
1	RET-13PM-A	210	Y	IP68

## SIZE

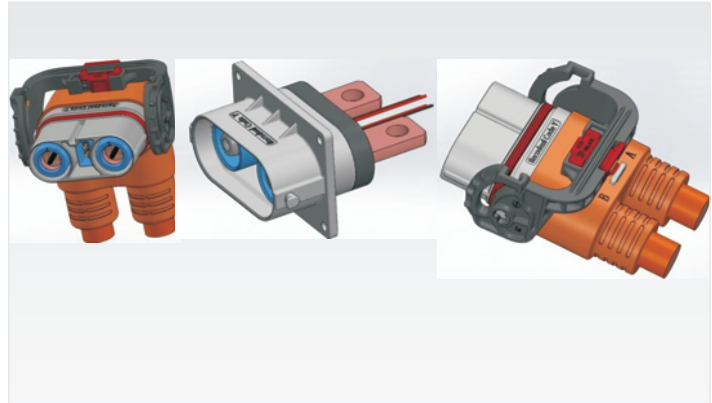
### Product Serial Code-Shape Size Chart



# High voltage super current connector with shield REX

## Describe

- 2POS
- Metal shell
- Hand locking structure
- Anti-mis-touch design ( IPXXB )
- High protection Degree: IP6K9K、IP68
- 2 Anti-mistake key positions
- Cable Section: 70mm<sup>2</sup>--120mm<sup>2</sup>
- Integrated Mask Interlocking Function
- The socket integrates the function of temperature probe
- For battery pack, MCU、PDU equipment



## Application

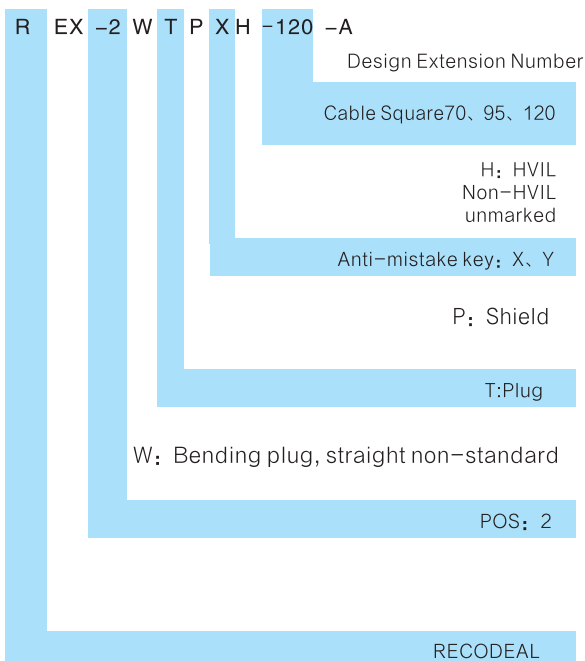
- Current Rating

Contact Specifications	Cable Square	Current Rating	Cable Type	Outer diameter of Shield Cable	Outer diameter of Non-Shield Cable
φ 12	70mm <sup>2</sup>	2*250A	Shield and Non-Shield	φ 19.5±0.5	φ 15.5±0.3
φ 12	95mm <sup>2</sup>	2*300A	Shield and Non-Shield	φ 22.5±0.5	φ 18.7±0.5
φ 12	120mm <sup>2</sup>	2*400A	Shield and Non-Shield	φ 24.9±0.5	φ 20.5±0.5

- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Non
- Temperature: -40℃--+140℃

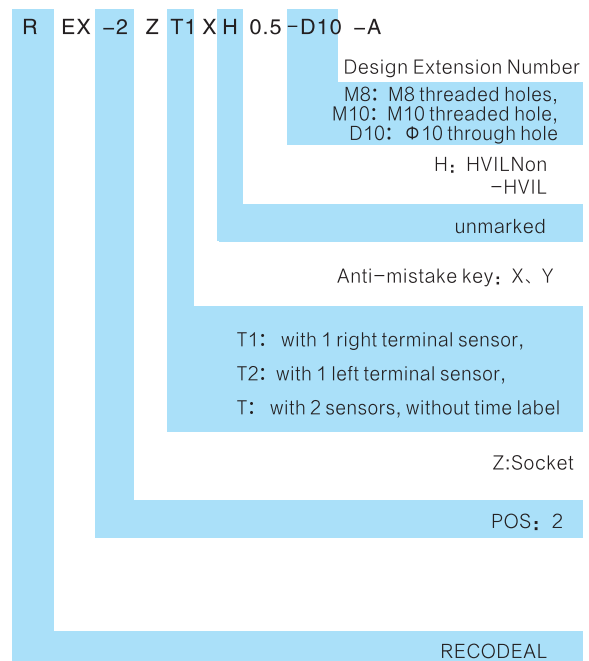
## Naming Rules

### PLUG



Note: the plug model is an unconnected empty plug model. If you need to buy it in the form of wiring assembly, you need to contact our technical contact to confirm the details of the assembly to give the material number of the outgoing bundle assembly.

### Socket

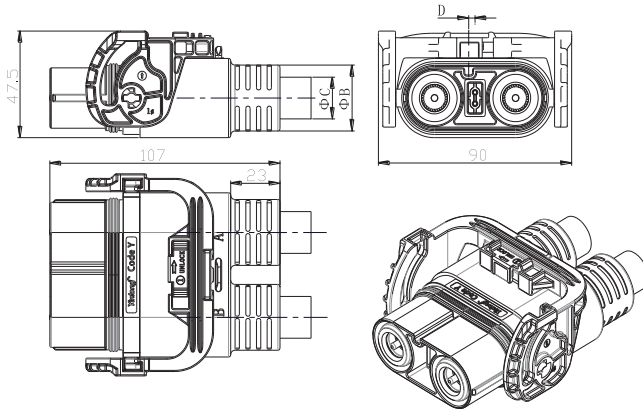


Note: For example: REX-2ZT1XH0.3-D10-A means two core with a sensor T1、X key position insulation cap color orange, with high voltage interlocking and pin bronze hole for Φ10( through hole) connector socket;

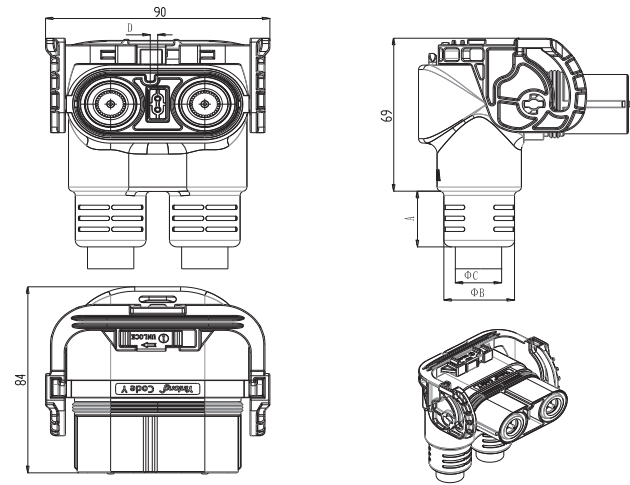


## SIZE

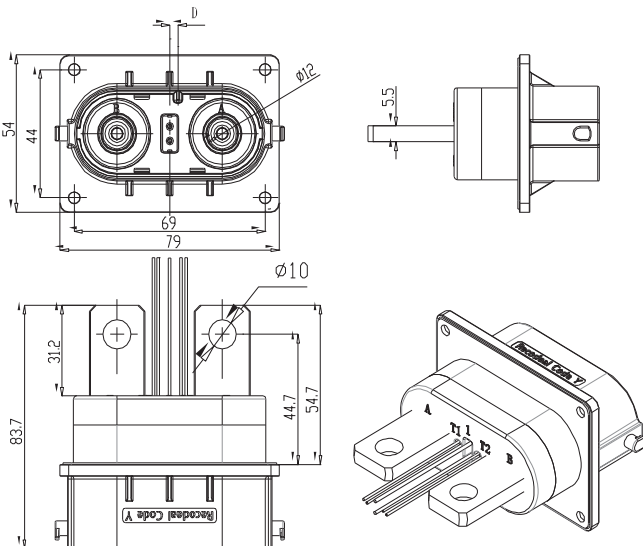
### 2POSstraight plug



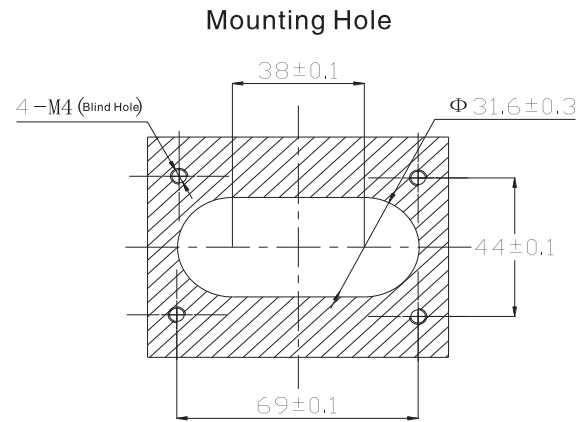
### 2pos curved plug



### 2POS Socket



### Install hole size



# High Current Push-pull Metal Connector RQAll

## Describe

- 1POS
- Metal Shell
- Hand locking structure
- Anti-mis-touch design ( IPXXB )
- High Protection Degree: IP6K9K、IP68
- 2 Anti-Mistake Key Positions
- Cable Section : 95mm<sup>2</sup>--135mm<sup>2</sup>
- Integrated Mask Interlocking Function
- A socket that integrates the function of a temperature probe and is mainly used for battery pack and MCU、PDU equipment



## Application

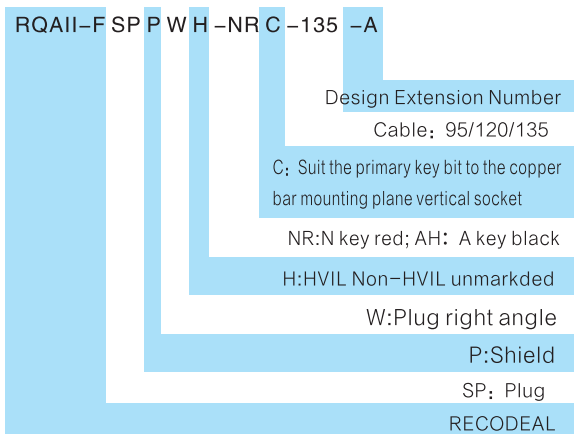
- Current Rating

Contact Specifications	Cable	Current Rating	Cable Type
φ 15	95mm <sup>2</sup>	300	Shield and Non-Shield
φ 15	120mm <sup>2</sup>	350	Shield and Non-Shield
φ 15	135mm <sup>2</sup>	400	Shield and Non-Shield

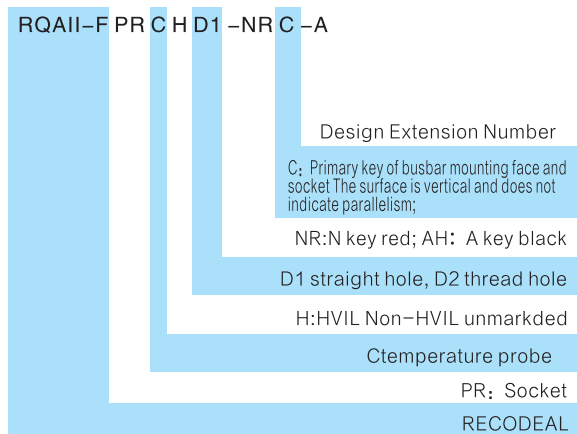
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Non
- Temperature Range: -40°C--+140°C

## Naming Rules

### Plug



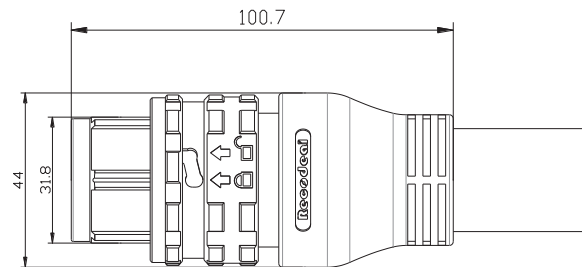
### Socket



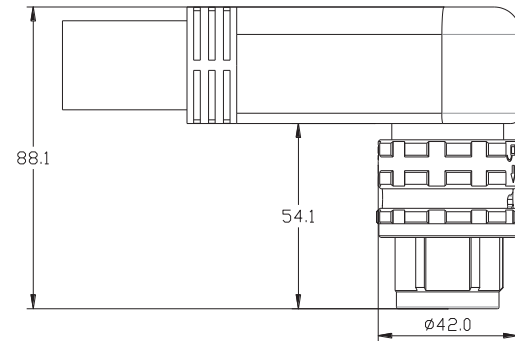
Note: the plug must be connected by Recodeal and does not support the customer's own Cable

## SIZE

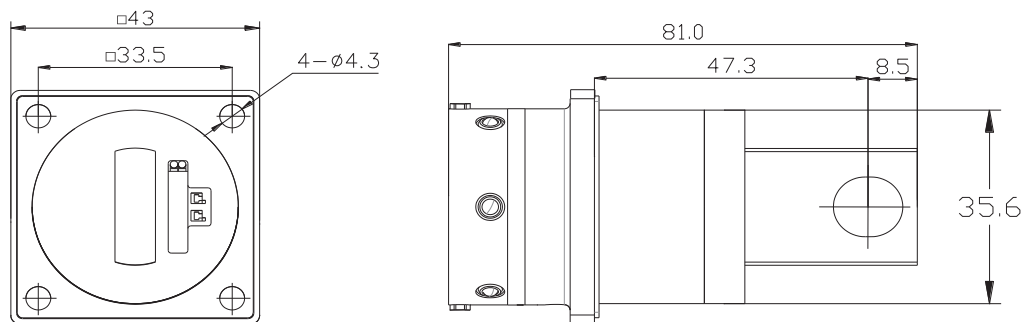
### Straight Plug



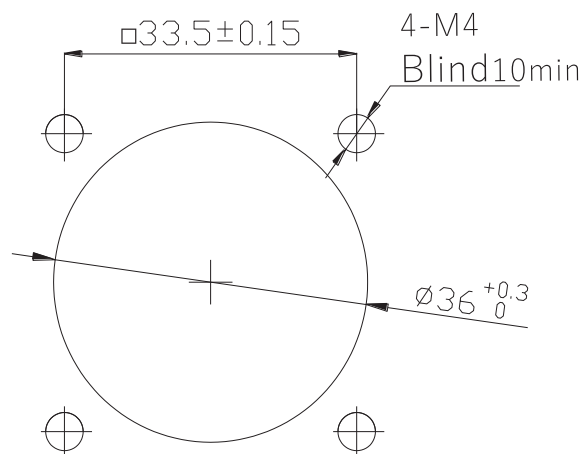
### Right angle plug



### Socket



### Installation of hole size



# Battery swap Connector PFSC-TQA-BS1270/PFSC-TQA-CP1270

## Describe

- Floation: X,Yway:  $\pm 5\text{mm}$ ; Zway:  $0\text{--}10\text{mm}$
  - High voltage terminal 2; grounding terminal 1; signal terminal 10; low voltage auxiliary power supply 2
  - More than 5000 plug-in life
  - High Protection Degree: IP67
  - Compatible with Battery Shielding
- Main use For battery pack, PDU equipment

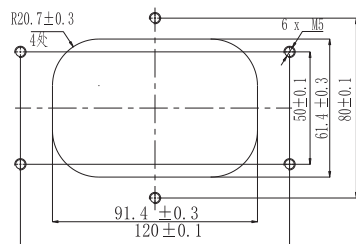


## Application

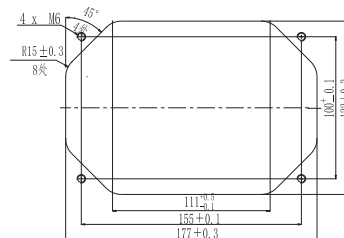
- Current Rating: 300A
- Voltage Rating: 750V DC
- Shield: Option
- HVIL: Option
- Temperature:  $-40^{\circ}\text{C}\text{--}+125^{\circ}\text{C}$

## Hole SIZE

### Battery end panel hole size

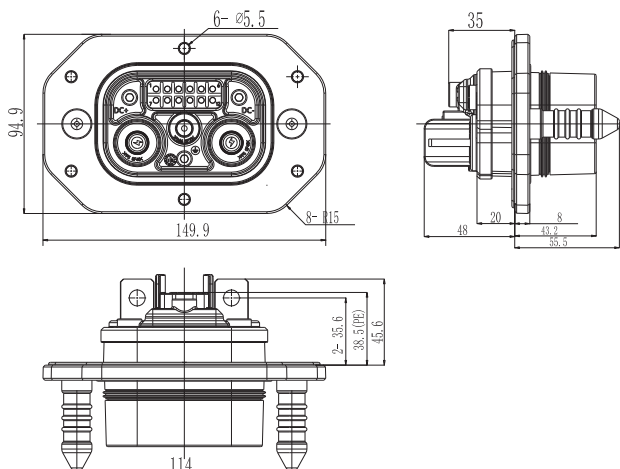


### Car end panel hole size

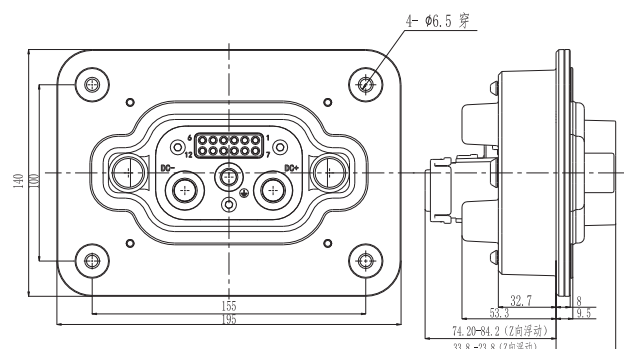


## Dimensions of connector

### Dimensions of Battery



### Dimensions of Car

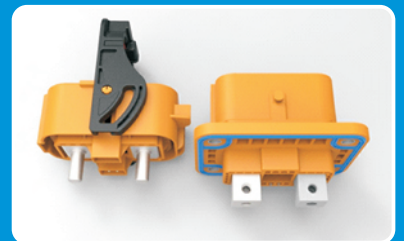
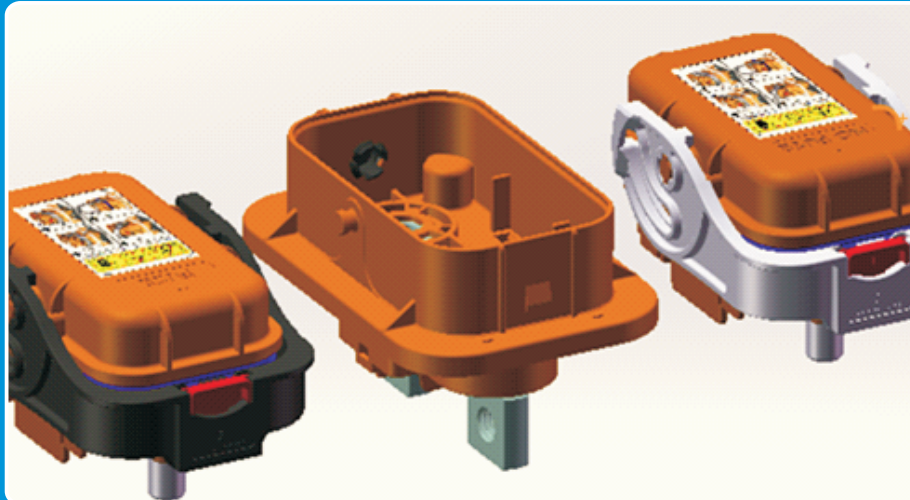


# Manual Service Disconnect solution

MSD(Manual Service Disconnect)It is mainly used in the main circuit of electric vehicle. When the electric vehicle needs maintenance, it provides a safe and reliable power cut guarantee for the maintenance. At the same time, the fuse will be integrated inside to play the role of short circuit protection

RECODEAL design and production MSD are mainly divided into two categories;

- 1)、 passenger cars and logistics vehicles MSD, such MSD generally require a voltage below 500 V DC, rated working current 200 A, fuse current 200 Require small space volume, relatively low cost. For this, there are MSD7、 MSD3、 MSD5 and other options.
- 2)、 buses and special vehicles MSD, such MSD generally require a voltage higher than 600 V DC, rated working current 200 fuse current generally requires 200 A—630A. This kind of MSD belt fuse volume is large, so the whole MSD volume is also relatively large, the cost is relatively high. For this, there are MSD1、 MSD2、 MSD4、 MSD9 and other options.



## Manual Service Disconnect (MSD1)



### Features/Application

- Recodeal MSD1 provides stable high voltage power transmission for EV/HEV systems. The fuses inside MSD1 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD1 is straight type connectors comprising of plug and jack. The jack is joint with cable.
- Back and front installation of Jack for option.
- Operating current is 400A the contact elements are comprised of a pair of power contact ( $\phi 11$ ) and two pairs of signal contact ( $\phi 1$ ). Power contact is designed with crown spring inside which would maintain a reliable connection and longer mating cycle.
- The connectors have rotatable locking handle and secondary locking structure.

### Technical Specification

#### Environmental Property

Working temperature:  $-40^{\circ}\text{C} \sim +130^{\circ}\text{C}$

Relative humidity: 95%( $40^{\circ}\text{C}$ )

Vibration: 10~55Hz, amplitude 0.75mm

Mechanical shocks:  $980\text{m/s}^2$

Handle lock after retention :  $\geq 200\text{N}$

#### Electrical Property

Contact resistance: total power contact resistance  $\leq 1.5\text{m}\Omega$   
 (fuse resistance  $\leq 0.35\text{m}\Omega$ );  
 signal contact resistance  $\leq 10\text{m}\Omega$

Current rating: 250A (300A in 10 mins)

Voltage rating: 1250V AC

Withstand voltage: 3500V AC 1 min (normal status)

Insulation resistance : 3500M $\Omega$  (normal status), 100M $\Omega$ (damp heat)

#### Mechanical Property

Mating cycle: 750 times

Single contact separation force: 15N~30N (power contact)

Sealing: IP67 B in mated condition

#### Material

Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: silicon rubber

## Ordering Information

### Plug

RC-MSD1-400-H-A

Extensive character

H: HVIL (non-HVIL unmarked)

Fuse specification(A)

Serial code

R: RECODEAL

### Jack

RC-MSD1-H-Z-A

Extensive character

Z : Jack

H: HVIL (non-HVIL unmarked)

Serial code

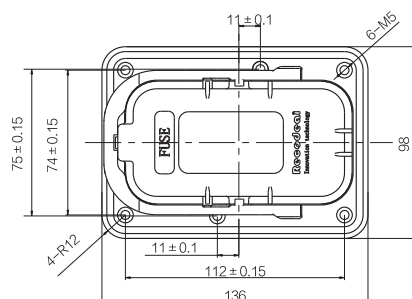
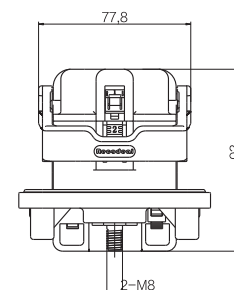
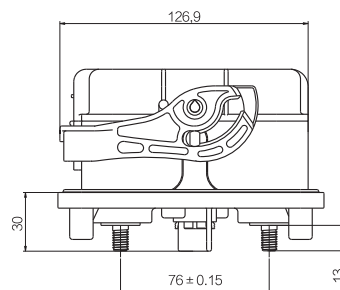
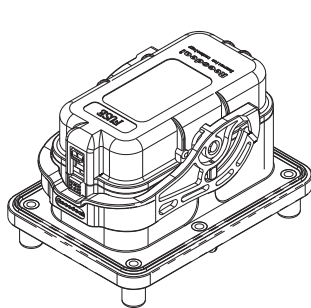
R: RECODEAL

Note:1 RC-EV-MSD1-400-H-A:MSD with 400A fuse. RC-EV-MSD1-H-A:MSD with copper bar inside.

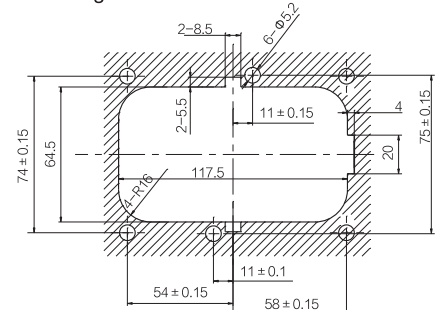
2 Fuse max current rating:400A.

## Size

MSD(dimension for MSD with fuse and copper bar inside are same.)

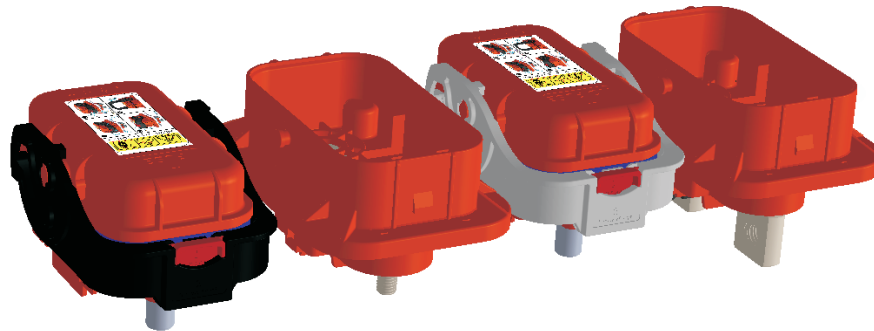


mounting hole dimension





## Manual Service Disconnect (MSD2)



### Features/Application

- Recodeal MSD2 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD2 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD2 is handle type connectors comprising of plug and jack. The jack is joint with cable.
- Front installation of socket for option.
- Operating current 250A and contact elements are comprised of a pair of power contact ( $\phi 11$ ) and a pair of signal contact ( $\phi 1$ ). Multiple brands for option.
- The connectors have rotatable locking handle and secondary lock-unlock structure, it's convenient to operate and save strength.

### Technical Specification

#### Electrical property

contact resistance: total power contact resistance  $\leq 1.5\text{m}\Omega$   
 signal contact resistance  $\leq 10\text{m}\Omega$   
 current rating: 250A (300A in 30 mins)  
 voltage rating: 750V DC  
 voltage Resistance: 3500V DC in 1 min (in normal status except fuse)  
 insulation resistance: 3500M $\Omega$  (normal status), 100 M $\Omega$  (damp heat)

#### Environment Property

Working temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$   
 Relative humidity: 95%(40 $^{\circ}\text{C}$ )  
 Vibration: 10~55GHz, amplitude 0.75mm  
 Mechanical shocks: 980m/s<sup>2</sup>  
 Handle lock after retention:  $\geq 200\text{N}$

#### Mechanical Property

Mating cycle: 500 times  
 Single contact separation force: 15N~30N  
 Sealing: after installation head plug IP68, plug IPXXB separately and Silicone oil resistant option

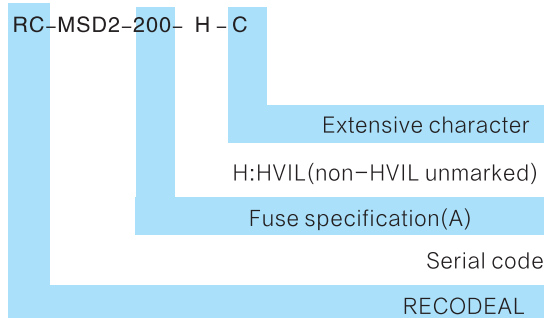
#### Material

Shell: thermoplastic flame-retardant  
 Contact: copper alloy silver plated  
 Seal: silicon rubber

## Ordering Information

The plug and socket are separate as default, if you need whole part connect with "&" between plug and socket P/N;  
RC-MSD2-630-H-C&RC-MSD2-Z-H-D" means: 630A fuse with HVIL Plug and HVIL Jack whole part.

### Plug



NOTE:HVIL plug and non-HVIL socket can't be exchanged.

1.plug Final syllable:

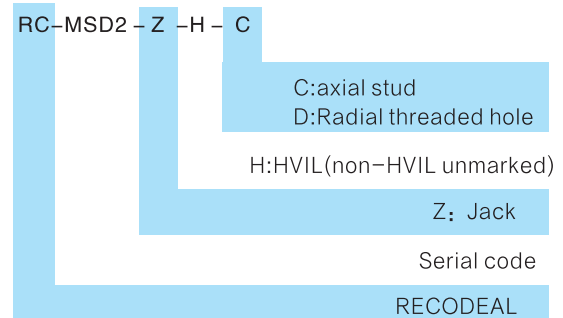
Plug Suffix	instruction	Plug Suffix	instruction
B	ZB type fuse or copper bar	C	M8 axial stud
B1	BS type fuse	D	M10 Radial threaded hole
C	ZB type fuse		
D	AD type fuse		

2."RC-MSD2-630-H-C" means with 630A ZB Type fuse and HVIL MSD2 Plug.

3.RC-MSD2-H-B:Disconnected fuse (copper bar) with HVIL Plug.

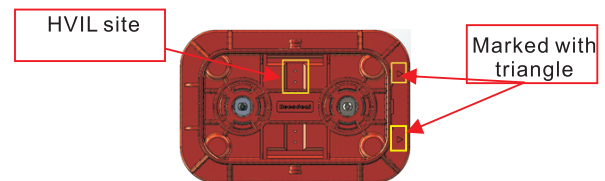
4.RC-MSD2-B:Disconnected fuse (copper bar) with Non-HVIL Plug.

### Jack



NOTE:

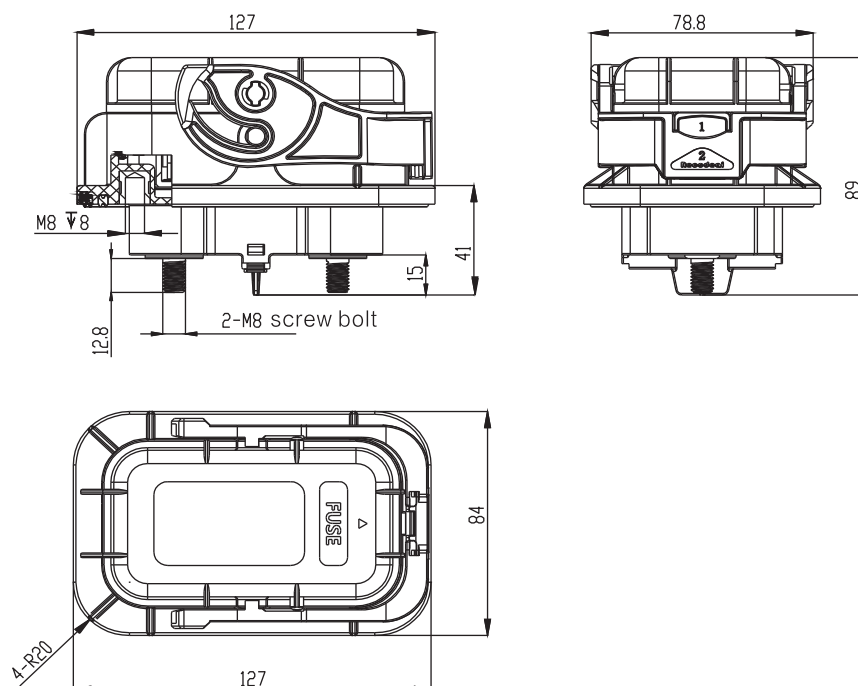
1. Socket non-HVIL with Silicone oil resistant is with plug non-HVIL.
2. RC-MSD2-Z-Ctype means M8 axial stud with non-HVIL plug.
3. RC-MSD2-Z-H-D type means with M10 Radial threaded hole socket.
4. Plug and socket can only meet function when both are HVIL, as the picture below HVIL do like this on the top.



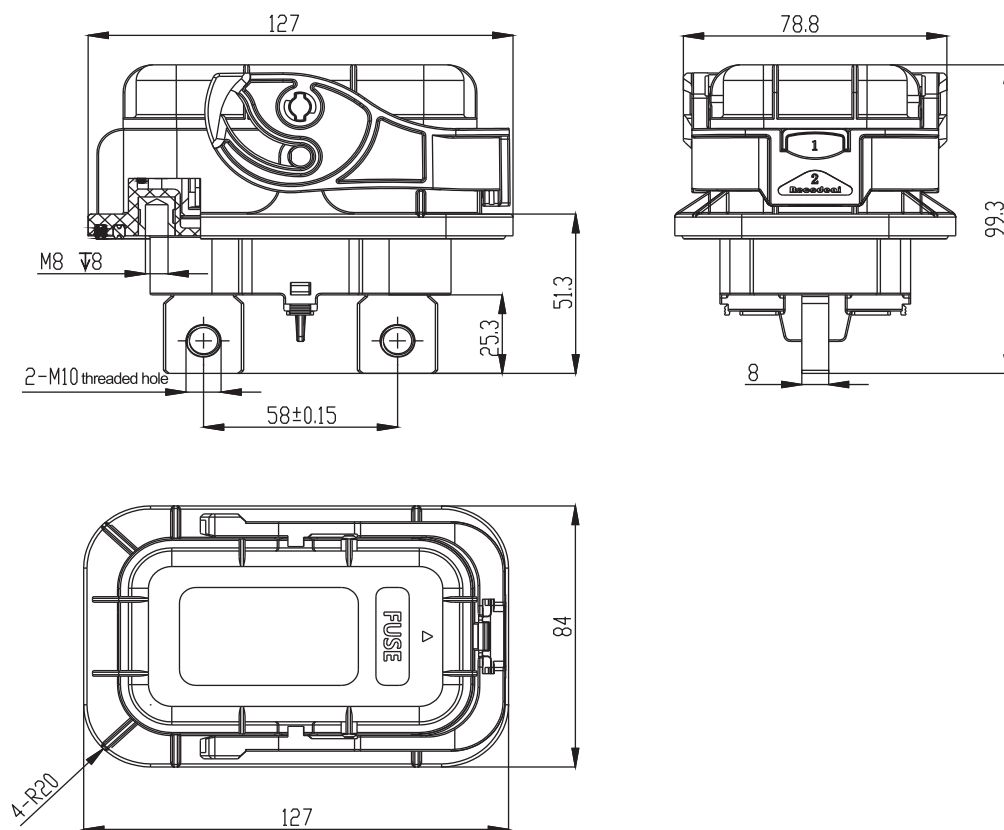
## Size

The shape of fuse and copper are the same.

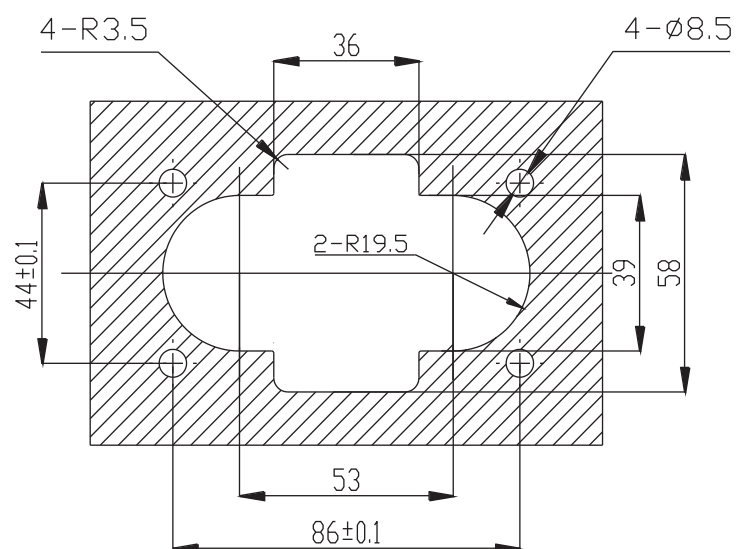
### Manual Service Disconnecter (Socket Jack:M8)



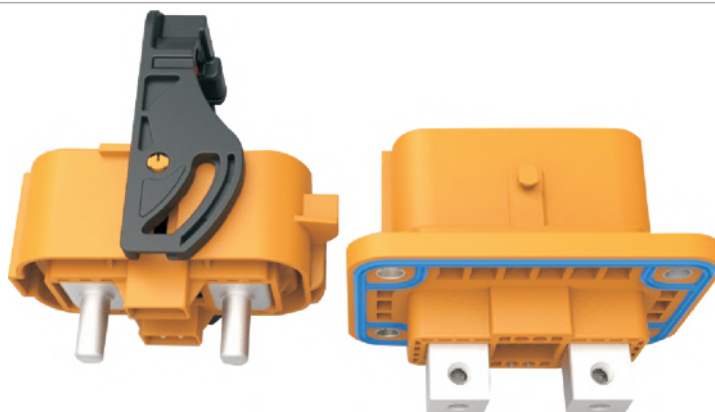
## Manual Service Disconnect (Socket Jack:M10)



## Mounting hole dimension



## Manual Service Disconnecter (MSD3)



### Features/Application

- Recodeal MSD3 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD3 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD3 is consist of plug and jack, plug need not be equipped with cables, sockets are front-installed, plug and jack are locked by assistant handles.
- Current rating 180A and 200A in 30 mins and catch a pair of HVIL.

### Technical Specification

#### Electrical Property

Contact resistance:

Total power contact resistance  $\leq 0.5\text{m}\Omega$  (not including fuse resistance)

Signal contact resistance  $\leq 5\text{m}\Omega$  (not including HVIL resistance)

Current rating: 180A (200A in 30 mins) temperature rise  $< 55\text{K}$

Voltage rating: 500V DC

Voltage Resistance:

3200V DC in 1 min, Leakage current  $< 0.1\text{mA}$  (in normal status except fuse)

Fuse technical specification:

Voltage rating: 500V DC

Current rating: 225A~400A

#### Mechanical Property

Mating cycle: 100 times

Vibration: 10~55GHz, amplitude 0.75mm

Mechanical shocks: 980m/s<sup>2</sup>

plug and socket divorce:  $\leq 75\text{N}$

#### Material

Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: silicon rubber

#### Environment Property

Working temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Relative humidity: 95%(40°C)

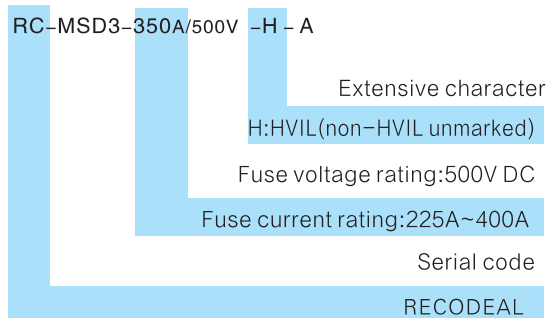
Sealing: IP68 (plug and socket in mated, 1 metre depth, immerse 48h, no leakage);  
plug meet IPXXB separately

## Ordering information

The plug and socket are separate as default, if you need whole part connect with "&".

For example, RC-MSD3-350A/500V-H-A&RC-MSD3-Z-H-A means Equipped with 350A/500V fuse, with HVIL plug and socket whole part.

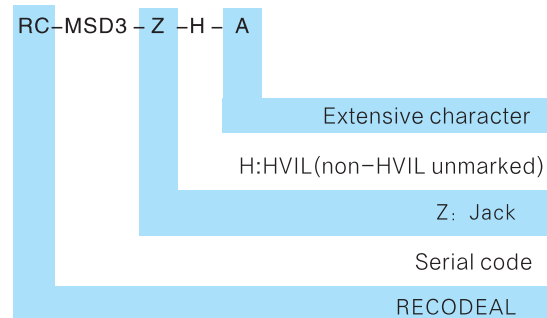
### Plug



NOTE:

- 1.RC-MSD4-350A/500V-H-A means Equipped with 350A/500V fuse, with HVIL MSD3 plug.
- 2.RC-MSD3-A: NON-HVIL without fuse.
- 3.RC-MSD3-H-A: HVIL without fuse.

### Jack

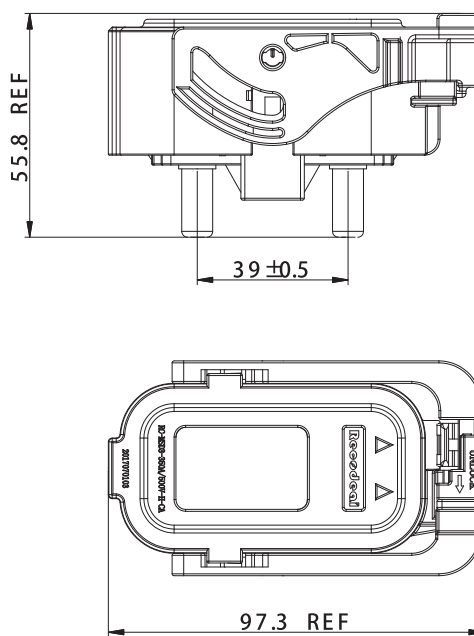
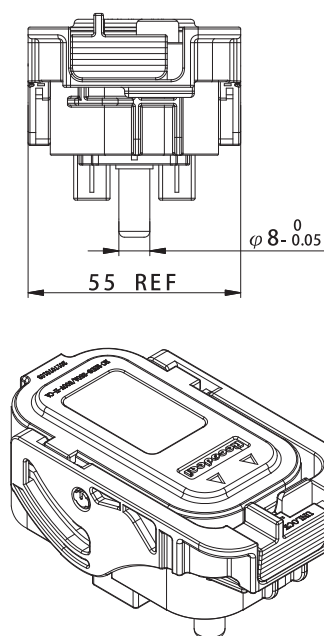


NOTE:

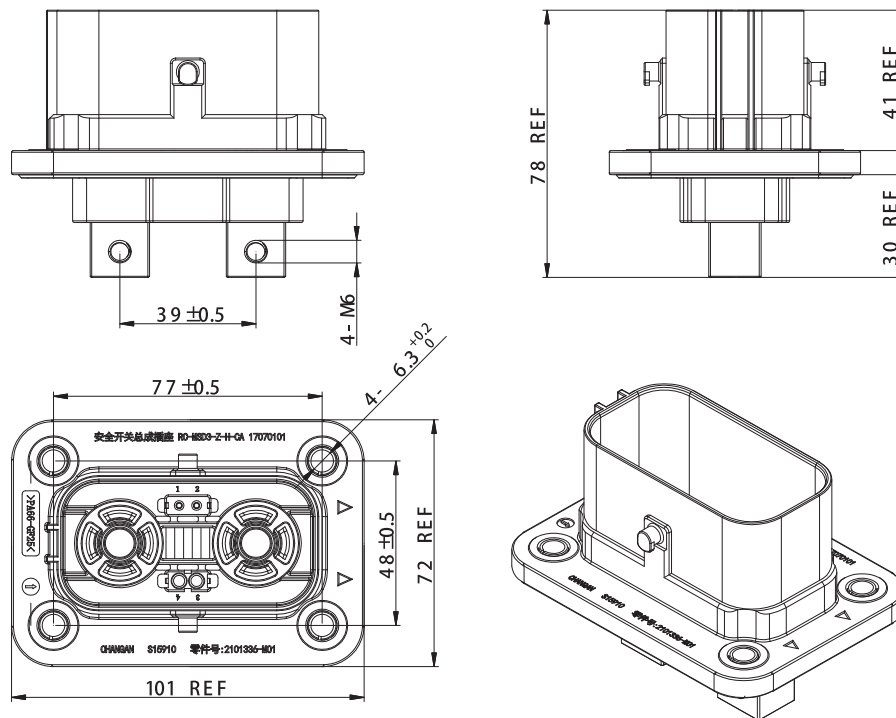
Plug with socket with HVIL together meet function, HVIL is designed together for certain.

## Size

### Plug



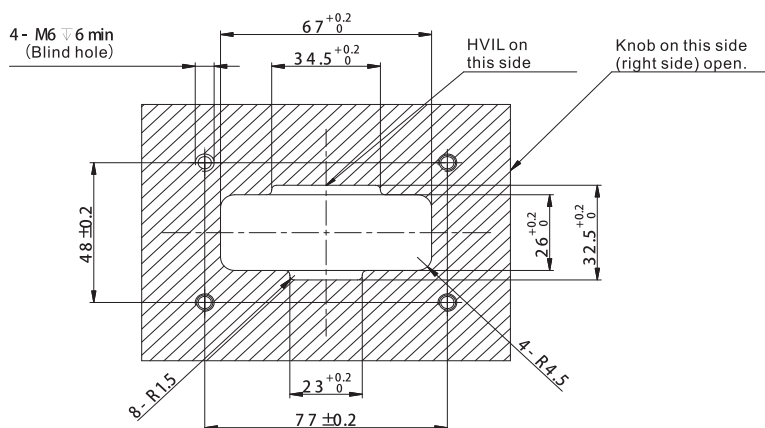
## Jack



### NOTE:

1. The end of thread hole size connected to the tail of socket and Copper platoon or cable is M6, allowing 15mm depth.
2. The direction of locking copper platoon is available in two Perpendicular directions , as seen in 3D drawing.
3. The end of socket connected to the copper platoon M6 is recommended  $10 \pm 1$  N.m.

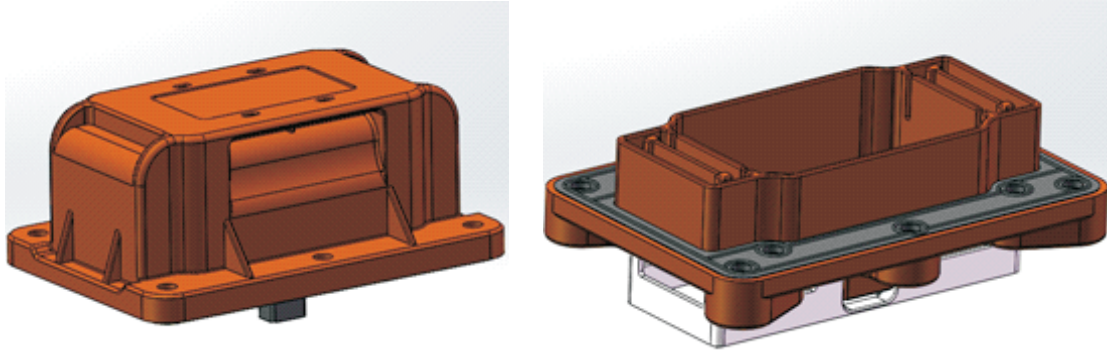
## Mounting hole dimension



### NOTE:

1. To meet protection level, the roughness of the panel should be not less than 1.6, flatness should be not less than 0.2;
2. The way of stalling is done before digging the hole, so the panel M6 nut hole should meet the requirement of waterproof.
3. The product socket and the panel connected to M6 is recommended 9~11 N.m.

## Manual Service Disconnect (MSD4)



### Features/Application

- Recodeal MSD4 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD4 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD4 is connector comprising of plug and jack. The jack is joint with cable. Back installation of socket for option. Plug and socket adopts screw locking.
- Current rating 250A and 300A in 30 mins, catch 2 pairs of HVIL.

### Technical Specification

#### Electrical property

contact resistance:  
 total power contact resistance  $\leq 0.5\text{m}\Omega$  (not including fuse resistance)  
 signal contact resistance  $\leq 5\text{m}\Omega$  (not including HVIL resistance)  
 current rating: 25A (300A in 30 mins) temperature rise  $< 55\text{K}$   
 voltage rating: 750V DC  
 voltage Resistance:  
 3000V DC in 1 min, Leakage current  $< 0.1\text{mA}$  (in normal status except fuse)  
 fuse technical specification:  
 voltage rating: 750V DC  
 current rating: 125A~630A

#### Mechanical Property

Mating cycle: 500 times  
 Vibration: 10~55GHz, amplitude 0.75mm  
 Mechanical shocks:  $980\text{m/s}^2$   
 plug and socket divorce:  $\leq 100\text{N}$

#### Material

Shell: thermoplastic flame-retardant  
 Contact: copper alloy silver plated  
 Seal: silicon rubber

#### Environment Property

Working temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$   
 Relative humidity: 95%(40°C)  
 Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);  
 plug meet IPXXB separately

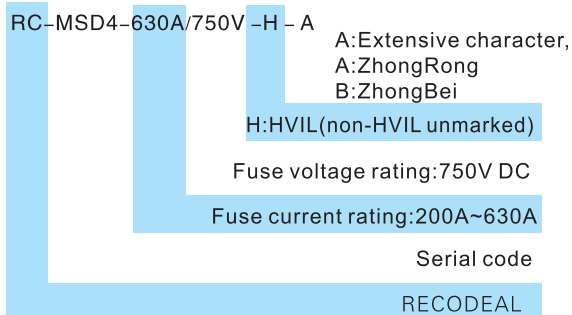


## Ordering information

The plug and socket are separate as default, if you need whole part connected with "&".

For example, RC-MSD4-630A/750V-H-A&RC-MSD4-Z-H-A means Equipped with 630A/750V ZhongRong fuse, with HVIL plug and socket whole part.

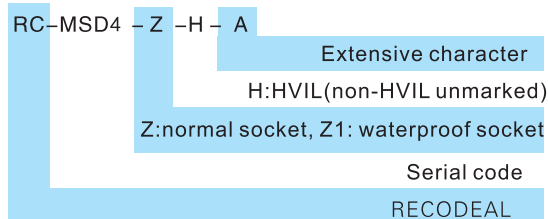
### Plug



Note:

1. Model "RC-MSD4-630A/750V-H-A" means fitting 630A/750V melt brand melting Breaker, MSD4Plug with high pressure interlock;
  2. Model "RC-MSD4-630A/750V-H-B" means fitting 630A/750V Zhongbei brand melting Breaker, MSD4Plug with high pressure interlock;
  2. Plug type without fuses without high voltage interlock: RC-MSD4-A;
  3. Plug type with high voltage interlock without fuse: RC-MSD4-H-A;
  4. Influenced by the temperature rise of the fuse itself, the rated working current of the product and the rated current value of the fuse
- The recommendations are as follows:

### Jack



NOTE:

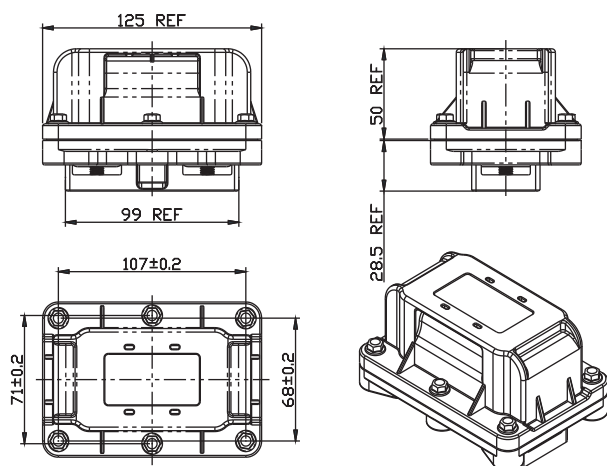
1. Normal socket can't be waterproof alone, waterproof socket meet IP67 level alone, socket has dustproof cover as default.
2. The plug and socket with HVIL together meet function, HVIL is designed together as default.

Item	Rating Current	Fuse rating current	Note
1	250A	630A	This watch is a recommendation consider of a product meeting the case of temperature rise $\geq 55K$ and different rated current valueshow much current can withstand.
2	220~240A	500A	
3	180~220A	400A	
4	150~180A	350A	
5	120~150A	315A	

The selection of the rated current of the fuse needs to be comprehensively evaluated in combination with the following points: the fuse is expected protection mode, line rated working current value, instantaneous current impact value and its impact frequency, wiring specifications, the breaking current is long and long, the time current curve of the fuse, the pre-arc Joule integral value.

## Size

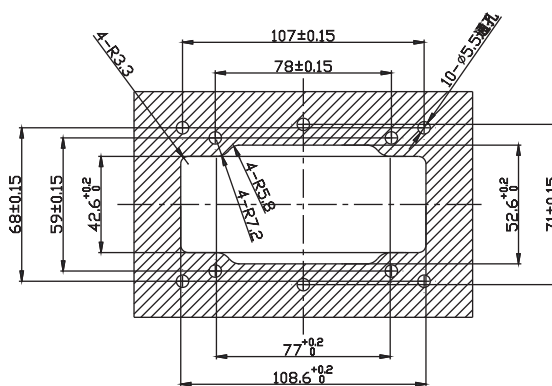
### Plug Jack Mated( plate thick is 0.8mm)



Remarks:

Jack tail lock copper row nut defaults to use M8 hexagon without elastic pad, flat padFlange nut, the national standard is GB/T 6177.1-2000.

### Recommended mounting hole dimension



Remarks: It is recommended to install the panel thickness of 0.8mm~1.5mm.

### Special statement:

This series of Jack (Z1) can meet the IP68 protection level alone, only for extreme cases (Plug is not assembled, Plug and Jack are not locked).

Tightening seal failure, etc.) Blocking External Environment Property continues to cause further damage to the subsystem, but it does not mean that jack can work normally without any further processing or repair after suffering from extreme conditions.

## Manual Service Disconnect (MSD5)



### Product Name

order	product name	Product type	fuse type	fuse current/voltage rating	note
1	MSD	RC-MSD5-250A/750V-A	Round tube	250A/750V.DC	
2	MSD	RC-MSD5-280A/750V-A	Round tube	280A/750V.DC	
3	MSD	RC-MSD5-315A/750V-A	Round tube	315A/750V.DC	
4	MSD	RC-MSD5-350A/750V-A	Round tube	350A/750V.DC	
5	MSD	RC-MSD5-400A/750V-A	Round tube	400A/750V.DC	
6	MSD	RC-MSD5-250A/750V-B	Square style	250A/750V.DC	
7	MSD	RC-MSD5-315A/750V-B	Square style	315A/750V.DC	
8	MSD	RC-MSD5-350A/750V-B	Square style	350A/750V.DC	
9	MSD	RC-MSD5-400A/750V-B	Square style	400A/750V.DC	
10	MSD	RC-MSD5-500A/750V-B	Square style	500A/750V.DC	
11	MSD	RC-MSD5-630A/750V-B	Square style	630A/750V.DC	
12	dustproof	8.074.191021	/	/	purchase alone

#### NOTE:

Protective cover is non-standard part, it can be purchased separately if customer need.

### Features/Application

- Recodeal MSD5 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD4 provides overcurrent and short-circuit protection.
- Recodeal MSD5 installs the fuse outside of the box, it's convenient for equipment maintenance and replacing fuse.
- Back installation for option, adopt screw locking.

## Technical Specification

### Electrical property

contact resistance:  
total power contact resistance  $\leq 0.5\text{m}\Omega$  (not including fuse resistance)  
current rating: 25A (300A in 30 mins) temperature rise  $< 55\text{K}$   
voltage rating: 750V DC  
voltage Resistance:  
4000V DC in 1 min, Leakage current  $< 0.1\text{mA}$  (in normal status except fuse)  
Insulation resistance:  
5000m  $\Omega$  (Normal; test environment temperature  $\leq 40^\circ\text{C}$ , humidity 50%RH)  
300m  $\Omega$  (humidity  $\geq 95\%\text{RH}$ )

### Environment Property

Working temperature:  $-40^\circ\text{C} \sim +125^\circ\text{C}$   
Relative humidity: 95%(40°C)  
Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);

### Mechanical Property

Mating cycle: 100 times  
Vibration: 10~55GHz, amplitude 0.75mm  
Mechanical shocks: 980m/s<sup>2</sup>

### Material

Shell: thermoplastic flame-retardant  
Contact: copper alloy silver plated  
Seal: silicon rubber

## Ordering information

RC-MSD5-350A/750V -A

A: circular tube fuse, B: rectangle fuse

750V: fuse voltage rating

350A: fuse current rating

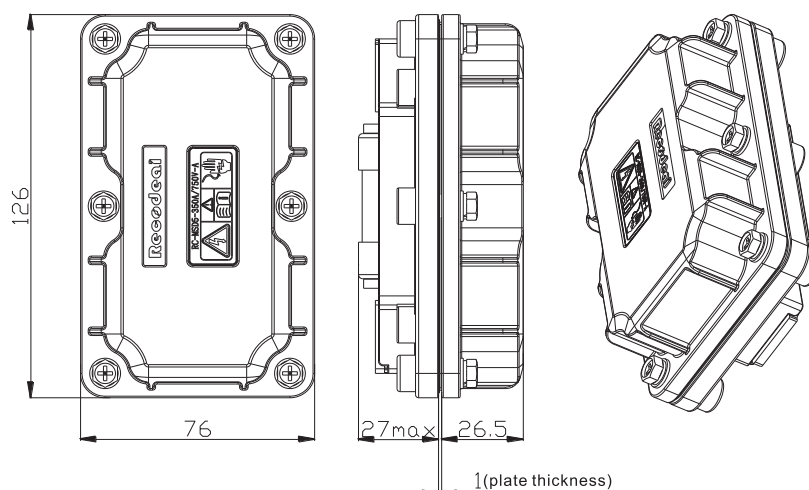
MSD5: Product series

RC: RECODEAL Serial code

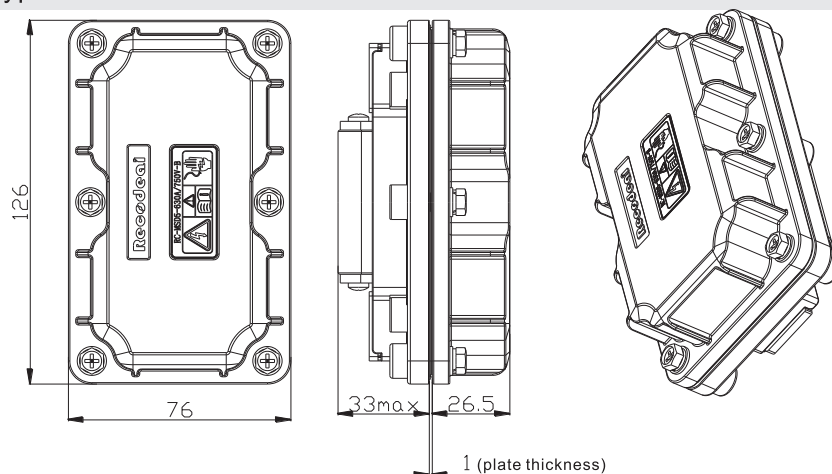
For example, "RC-MSD5-280A/750V-A" means made by RECODEAL, MSD5 fuse current rating 280A、fuse voltage rating 750V DC、circular tube fuse.

## Size

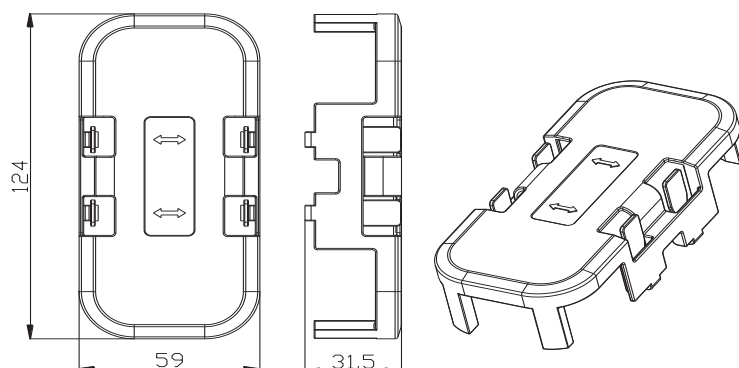
### circular tube fuse type



## Rectangle fuse type

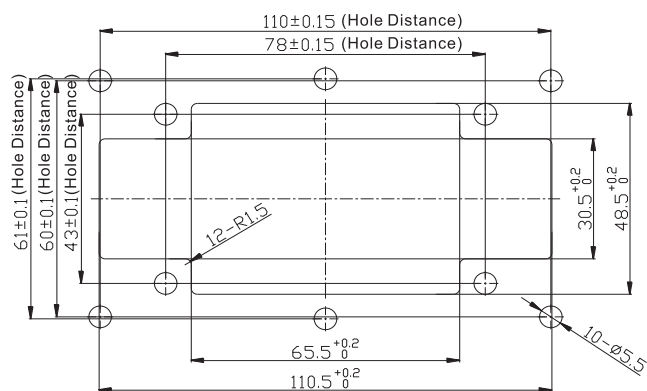


## Dustproof



## Size

## Recommend Mounting Hole Dimension



## NOTE:

1. In order to meet the requirement of protection level, the roughness of panel should be not less than 1.6, flatness should be not less than 0.2.
2. The end of socket and copper platoon or cable connected is recommended M8\*20 type.

# Manual Service Disconnect (MSD7)



## Features/Application

- Recodeal MSD7 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD7 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD7 is connector comprising of plug and jack. The jack is joint with cable. Back installation of socket for option.
- Current rating 250A and 300A in 30 mins, catch one pair of HVIL.
- The connectors have rotatable locking handle and secondary lock-unlock structure, it's convenient to operate and save strength.

## Technical Specification

### Electrical property

contact resistance:

total power contact resistance  $\leq 0.5\text{m}\Omega$  (not including fuse resistance)

signal contact resistance  $\leq 5\text{m}\Omega$  (not including HVIL resistance)

current rating: 25A (300A in 30 mins) end temperature rise  $< 55\text{K}$

voltage rating: 750V DC

voltage Resistance:

3000V DC in 1 min, Leakage current  $< 0.1\text{mA}$  (in normal status except fuse)

fuse technical specification:

Insulation resistance:

5000m $\Omega$  (Normal; test environment temperature  $\leq 40^\circ\text{C}$ , humidity 50%RH)

300m $\Omega$  (humidity  $\geq 95\%$  RH)

fuse Electrical property: voltage rating: 750V DC

current rating: 100A~400A

### Mechanical Property

Mating cycle: 75 times

Vibration: 10~55GHz, amplitude 0.75mm

Mechanical shocks: 980m/s<sup>2</sup>

plug and socket divorce:  $\leq 75\text{N}$

### Material

Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: silicon rubber

### Environment Property

Working temperature:  $-40^\circ\text{C} \sim +85^\circ\text{C}$

Relative humidity: 95%(40 $^\circ\text{C}$ )

Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);

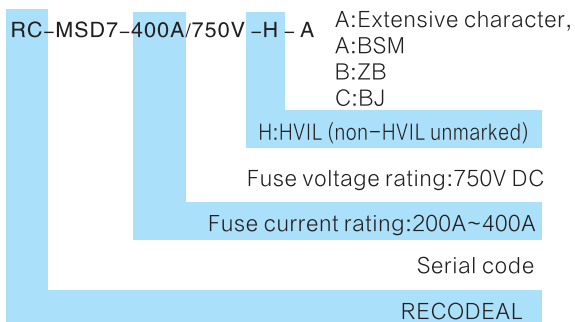
plug meet IPXXB separately

## Ordering information

The plug and socket are separate as default, if you need whole part connected with "&".

For example, RC-MSD7-400A/750V-H-A&RC-MSD7-Z-H-A means Equipped with 400A/750V fuse, with HVIL plug and socket whole part.

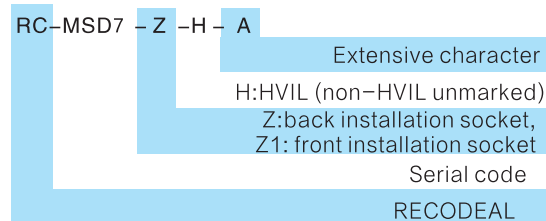
### Plug



- 500A/500V fuse can only choose BJ and fuse voltage rating is 500V DC, 400A fuse and voltage rating 750V can choose BJ, 600V DC can choose ZB, fuse type is optional.
- "RC-MSD7-400A/750V-H-A" means equipped with 400A/750V BSM fuse, with HVIL MSD7 plug.
- Non-hvil without fuse: RC-MSD7-A;
- HVIL without fuse: RC-MSD7-H-A;
- Fuse specification;

125A 750VDC	160A 750VDC	200A 750VDC
250A 750VDC	315A 750VDC	350A 750VDC
400A 750VDC(BY)	400A 600VDC(ZB)	500A 500VDC(BY)

### Jack

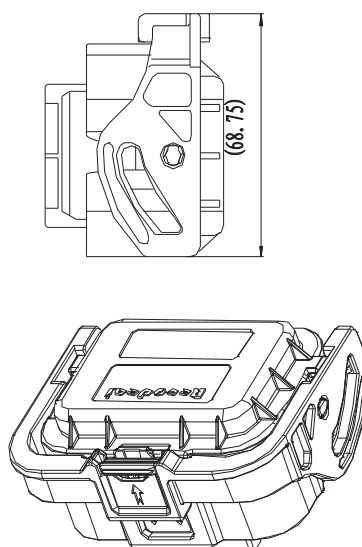
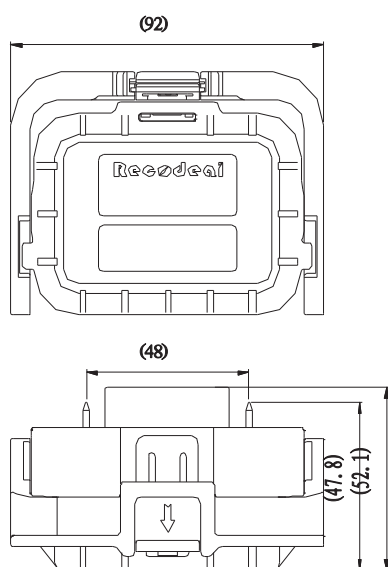


Remarks:

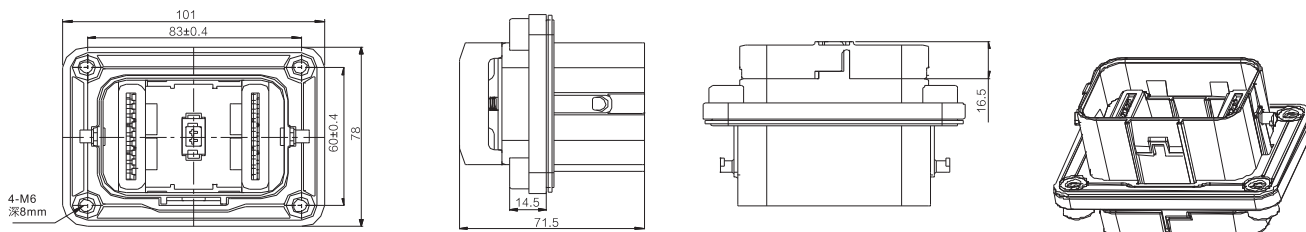
Plug and Jack need to have high voltage interlock at the same time to meet the functional requirements, and the high voltage interlock is 1 set;

## Size

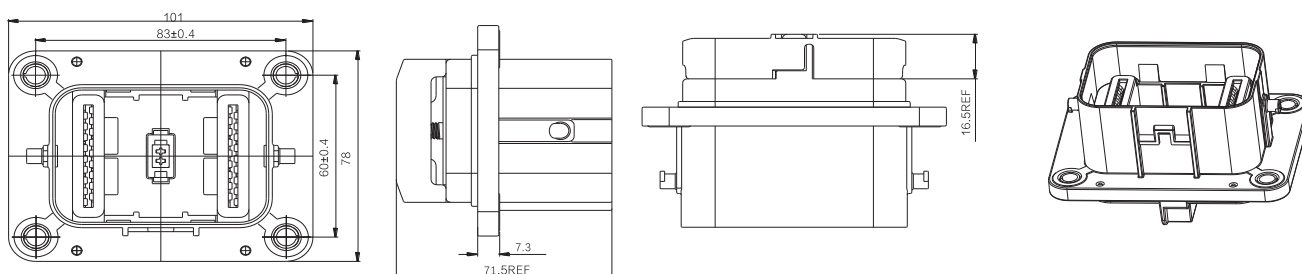
### Plug



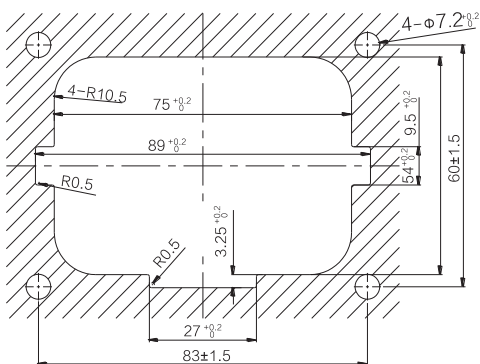
### Back installation socket



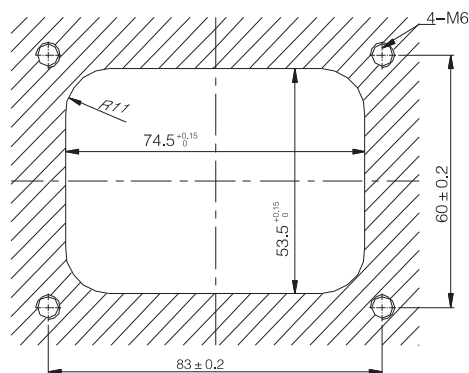
### Front installation socket



### Back installation socket size



### Front installation socket size



#### NOTE:

- 1.To meet protection level, the roughness of the panel should be not less than 1.6, flatness should be not less than 0.2;
- 2.The product socket and the panel connected to M6 is recommended 6~7 N.m.

### Special Instruction:

The product has Equipped fuse and Equipped copper platoon two working states, it has different Current-carrying performance when different state, pay attention when choosing.

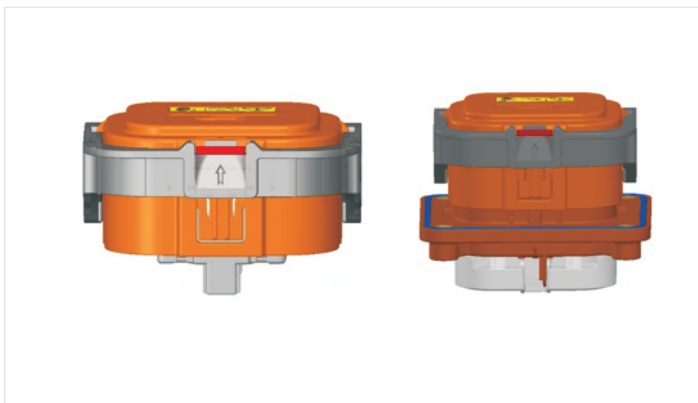
1. Equip fuse  
current rating: 250A Max( specification  $\geq 350A$ , Temperature rise  $\geq 55K$ , specification  $< 350A$  current rating should decrease Accordingly);
2. Equip copper platoon  
current rating: 300A Max



## Manual Service Disconnect (MSD9)

## Describe

- Current Rating: 200A
- Fuse voltage up to 500 V DC
- Fuse current range :40 A—630A 500VDC
- Hand locking structure
- Anti-mis-touch design ( IPXXB )
- High protection degree: IP6K9K、IP68
- Integrated busbar
- Insert slot contact
- For battery pack, PDU equipment



## Application

- Current rating: 200A, 30min over300A
- Rated voltage : 750V DC
- HVIL: Y
- Working temperture: -40℃--+125℃

## Naming rules

## PLUG

RC-MSD9-450A/690V -H - B

Design Extension Number

HVIL(NON-HVIL unmarked

Fuse type:

C:40A~630A V:690V.AC

RECODEAL

## SOCKET

RC-MSD9-Z-H-A

Design Extension Number

HVIL(NON-HVIL unmarked

Z: Socket

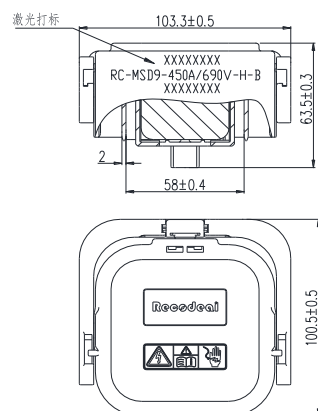
RECODEAL

Note: the plug with Busbar and the plug with different specifications fuse are equipped with the same socket.

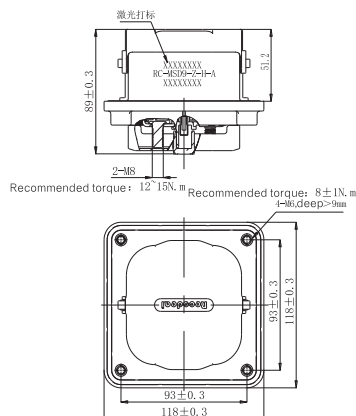
## SIZE

## MSD PLUG

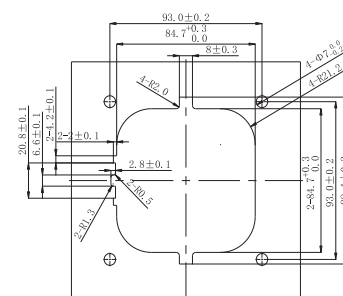
(product size with fuse and copper bar is the same)



## MSD SOCKET



### Installation of hole size



## Signal Transmission System Solution

Signal connectors are used on Battery Management System (BMS), battery equalization system, vehicle controller and other signal control systems for EV/HEV. Recodeal offers our customer with over 100 types of signal connectors to meet different application environments. The typical ones are 5 POS, 8 POS, 9 POS, 12 POS, 14 POS, 19 POS, 26 POS, 46POS circular connectors, with cable section from 0.5mm<sup>2</sup> to 1.5mm<sup>2</sup>. We can also provide assembly manufacturing service for cable assemblies and wire harness for our clients.



## 8POS Plastic Shell Signal Connector

### Describe

- Straight-in lock
  - multiple keys and colors
  - High Protection Degree: IP68
  - Adopt punching terminal, low cost,
  - convenient for customer wiring
- For battery pack, MCU、PDU equipment

### Application

- Current Rating: 7A
- Voltage Rating: 300V DC
- Shield: N
- HVIL: Non
- Temperature: -40℃--+125℃

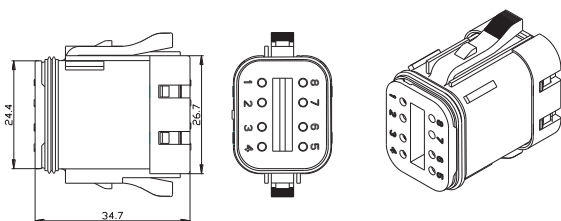


### Name of material

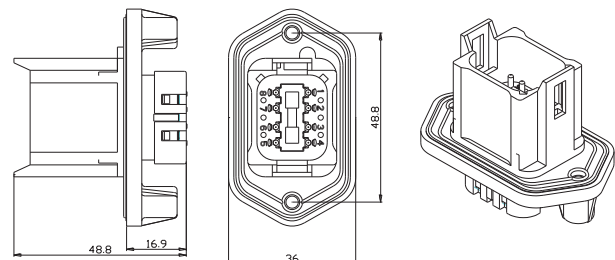
No	Name of material	Drawing No	materia Type	Note
1	Contact part	1062-16-0122S		
2	Plug Cap	RC047-01-00-02		
3	Plug assembly ( N Position Black )	RC047-01-01-00	RS4-K8TY-NH-B	Contains plug housing, sealing ring, sealing body, plug tail cover
4	Plug assembly ( A Position Red )	RC047-01-01-00A	RS4-K8TY-AR-B	
5	Plug assembly ( B Position Black )	RC047-01-01-00B	RS4-K8TY-BH-B	
6	Plug assembly ( C Position Red )	RC047-01-01-00C	RS4-K8TY-CR-B	
7	Pin assembly	1060-12-0122S		
8	socket Cap	RC047-02-00-02		
9	socket assembly ( N Position Black )	RC047-02-02-00	RS4-J8ZY-NH-D	Contains socket housing, sealing body, socket tail cover, gasket
10	socket assembly ( A Position Red )	RC047-02-02-00A	RS4-J8ZY-AR-D	
11	socket assembly ( B Position Black )	RC047-02-02-00B	RS4-J8ZY-BH-D	
12	socket assembly ( C Position Red )	RC047-02-02-00C	RS4-J8ZY-CR-D	

### SIZE

#### PLUG



#### SOCKET ( Installation without outlet box )



# 12/18POS Plastic Shell Signal Connector

## Describe

- Straight-in lock
- multiple keys and colors
- High Protection Degree: IP68
- Adopt punching terminal, low cost,
- convenient for customer wiring
- For battery pack, MCU、PDU
- equipment



## Application

- Current Rating: 7A
- Voltage Rating: 300V DC
- Shield: N
- HVIL: Non
- Temperature: -40℃--+125℃

## Naming Rules

### Plug

RS4-K 18 TY-DW-B

Design Extension Number : B  
DW:D key gray; AH: A black;  
BO: B key orange;

Press plug

POS: 12/18

Plug contact

### Socket

Rs4-J 12 ZY-AH-B

Design Extension Number : B  
DW:D key gray; AH:A black;  
BO:B key orange;

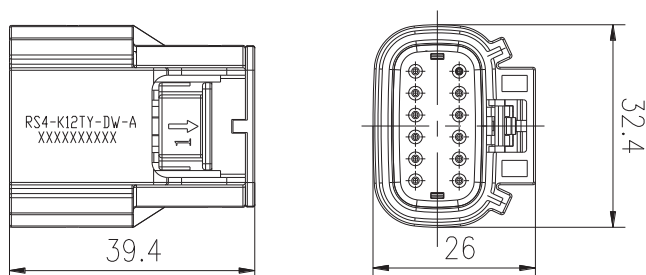
Press plug

POS: 12/18

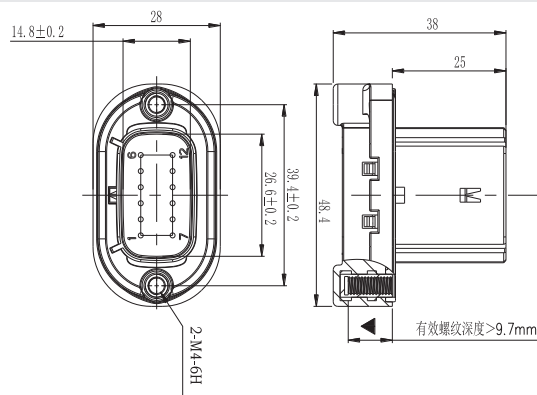
Plug contact

## SIZE

### PLUG



### SOCKET



## 32POS Plastic Shell Signal Connector

### Describe

- Hand locking structure
  - 3 key positions,
  - High Protection: IP68
  - Adopt punching terminal, low cost,
  - convenient for customer wiring
- For battery pack, MCU、PDU equipment



### Application

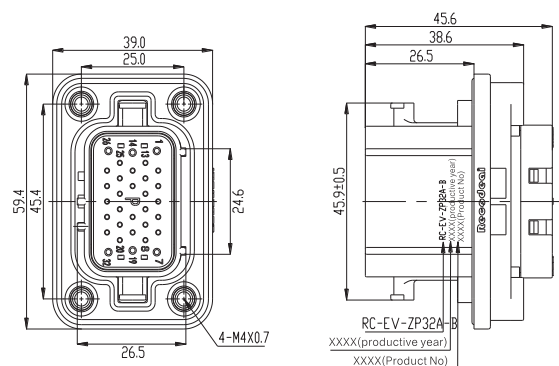
- Current Rating: Big Terminal 7A, Small 5A
- Voltage Rating: 300V DC
- Shield: Non
- HVIL: Non
- Temperature: -40°C-- +125°C

### Name of Material

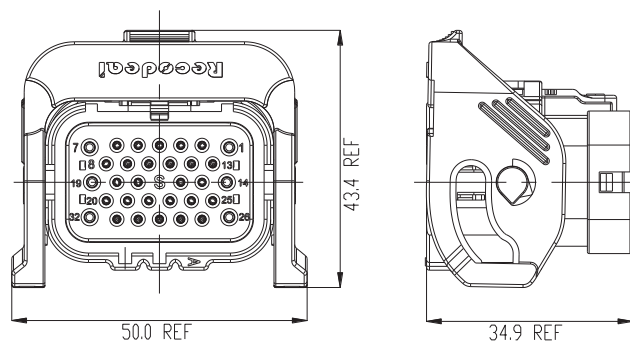
No	Product Name	Product Model	Product Chart	Product Chart	Note
1	32POS Plastic shell plug	RC-EV-TS32A-B	R3.653.605002	Free Plug	No contact, dust cover
2	32POS Plastic shell plug	RC-EV-TS32B-B	R3.653.605003	Free Plug	No contact, dust cover
3	32POS Plastic shell plug	RC-EV-TS32C-B	R3.653.605004	Free Plug	No contact, dust cover
4	32POS Plastic shell plug	RC-EV-ZP32A-B	R3.663.605003	Rectangular flange	No Pin, dust cover
5	32POS Plastic shell plug	RC-EV-ZP32B-B	R3.663.605004	Rectangular flange	No Pin, dust cover
6	32POS Plastic shell plug	RC-EV-ZP32C-B	R3.663.605005	Rectangular flange	No Pin, dust cover

### SIZE

Socket RC-EV-ZP32-B



PLUG RC-EV-TS32-B



# Charging Coupler Solution



The AC charging Coupler of electric vehicle is used to connect the power grid and the on-board charger when the electric vehicle is charged. The AC charging interface developed by Ruikoda connection system Co., Ltd. meets the requirements of national standards and can support 63 A, 400V of AC charging mode. Single contact can match up to 16 mm or above; and good appearance and grip.

The DC charging coupler of electric vehicle is connected with non-vehicle charger (DC charging pile) and battery. The DC charging interface developed by Suzhou Ruikoda connection system Co., Ltd meets the requirements of national standards. Rated current for 125 A and 250 A, rated working voltage up to 750 V, and has a good appearance and grip sense. The Jack meets the 10000 plug-in life requirements of the national standard.

Advantage of Recodeal:

- Extensive customer batch application performance;
- vertically integrated manufacturing chains such as cables, enclosures, terminals, PCB, etc. are Independent R & D
- Manufacturing
- Various specifications and product options;
- Low cost, high reliability solutions

Advantages of technological innovation.



## AC Charging –Gun



### Describe

- Reference Standard:
  - GB/T18487.1–2015 《 Electric Vehicle Conductive ChargingSystem Part 1: General Requirements》
  - GB/T20234.1–2015 《 Electric VehicleConductive Charging Connectors Part 1: General Requirements》
  - GB/T20234.2–2015 《 Electric Vehicle Conductive Charging Connectors Part 2: AC Charging Interface》
- Higher than the national standard protection level requirements, some charging
- Interfaces can reach IP66 above the protection level
- Voltage:500VAC
- Cable Section: 2.5mm<sup>2</sup>--16mm<sup>2</sup>
- Charge current up to 63 A supported
- Mainly used for: charging pile or civil power grid and vehicle charger connection
- variety of charging coupler forms, a variety of colors optional
- Flexible customized

### Charging Mode Parameters

#### Plug

AC charging coupler plug wiring specification and electrical parameters

Charging Mode	Cable specification	Current Rating	Specification for each interface cable(mm <sup>2</sup> )						
			L1	N	PE	L2	L3	CC	CP
Charging Mode2	3*2.5mm <sup>2</sup> +1*0.75mm <sup>2</sup> 3*2.5mm <sup>2</sup>	10A/16A	2.5	2.5	2.5	/	/	0.75	0.75
Charging Mode3	3*2.5mm <sup>2</sup> +1*0.75mm <sup>2</sup>	16A	2.5	2.5	2.5	/	/	0.75	0.75
Charging Mode3	3*6mm <sup>2</sup> +1*0.75mm <sup>2</sup>	32A	6	6	6	/	/	0.75	0.75
Charging Mode3	5*16mm <sup>2</sup> +1*0.75mm <sup>2</sup>	63A	16	16	16	16	16	0.75	0.75

If there are other requirements, please propose, the specific type of charging interface according to customer requirements

#### Coupler

AC charging coupler plug wiring specification and electrical parameters

Charging Mode	Cable specification	Current Rating	Specification for each interface cable(mm <sup>2</sup> )						
			L1	N	PE	L2	L3	CC	CP
Charging Mode2	3*2.5mm <sup>2</sup> +1*0.75mm <sup>2</sup>	16A	2.5	2.5	2.5	/	/	0.75	0.75
Charging Mode3	3*6mm <sup>2</sup> +1*0.75mm <sup>2</sup>	32A	6	6	6	/	/	0.75	0.75
Charging Mode3	5*16mm <sup>2</sup> +1*0.75mm <sup>2</sup>	63A	16	16	16	16	16	0.75	0.75

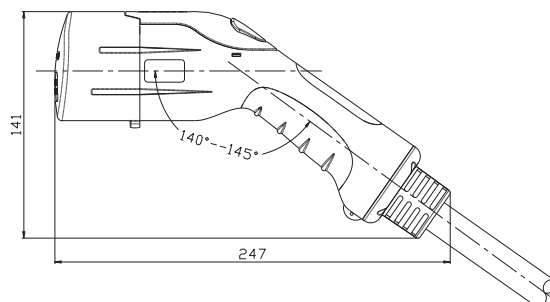
If there are other requirements, please propose, the specific type of charging interface according to customer requirements



## SIZE

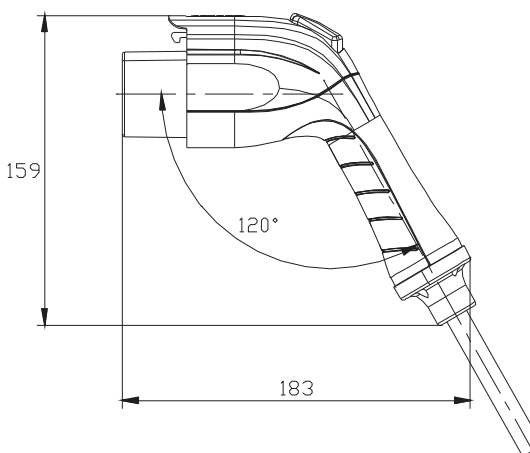
### RAC AC Charging Gun

Function: One generation charging gun, protective Degree IP55, suitable for maximum current 63 A, suitable for domestic charging plug and charging pile charging; Schematic images and dimensions as below.



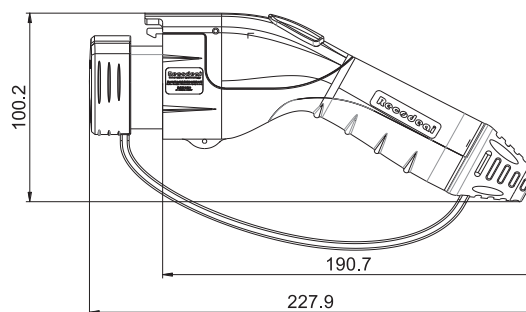
### RAC2 AC Charging Gun

Function: Second generation charging gun, with charging indication function, protective degree IP66, suitable for maximum current 63 A, suitable for domestic charging plug and charging pile charging; Schematic images and dimensions as below.:



### RAC3AC Charging Gun

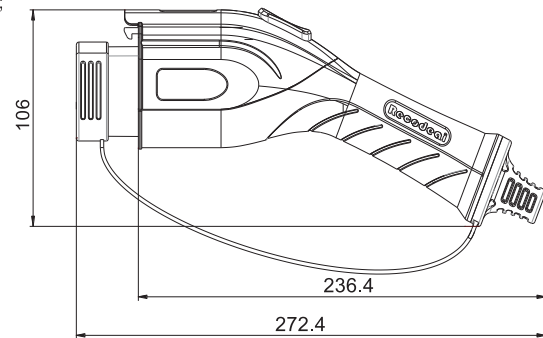
Function: Third generation charging gun, with charging indication function, protection degree IP66 or above, suitable for maximum current 32 A, suitable for domestic charging plug charging; Schematic images and dimensions as below.:



### RAC4 AC Charging Gun

Function: The 4th generation charging gun, the product integrates the circuit board of the control protection device on the cable into the vehicle plug shell to form the integrated charging gun, cancels the original control box shell, the cost is lower than the same type of charging mode 2 charging gun in the market, lightweight, easy to carry, higher protection level, can display charging process status, protection level meets IP67, can adapt to maximum current 16 A, suitable for domestic charging plug charging;

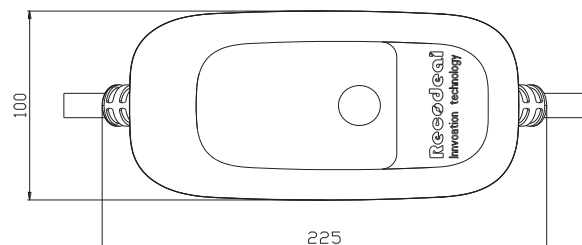
Schematic images and dimensions as below.:



### K2 Charge Control Box

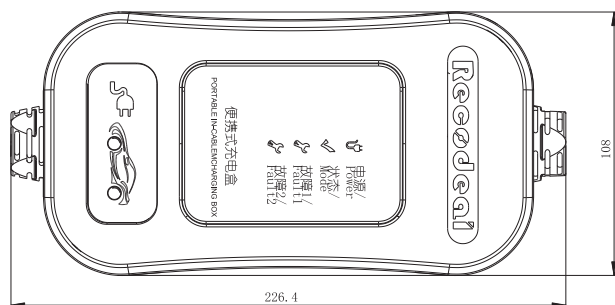
Function: The 2nd generation control box is smaller than the first generation, the protection grade IP66, can adapt to the maximum current 16 A, can display the charging process state, and also has the emergency stop charging button.

Schematic images and dimensions as below.:



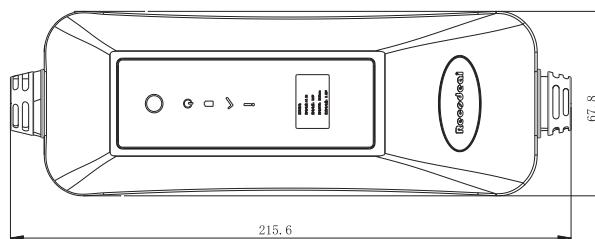
### K3 Charge Control Box

Function: The size of the third generation control box is similar to that of the second generation. The protection grade IP66, can adapt to the maximum current of 32 A, available LED display the charging process status or display it on the LCD screen; Schematic images and dimensions:



### K4 Charge Control Box

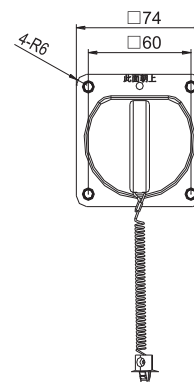
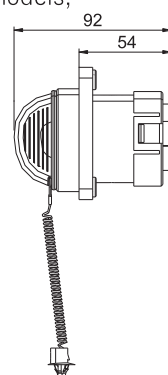
Function: Fourth generation control box shape size is smaller than before, the protection grade IP67, also may choose the digital display indication charge. Schematic images and dimensions:



### Back installation Socket

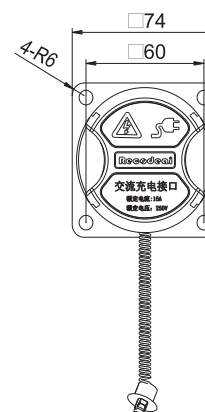
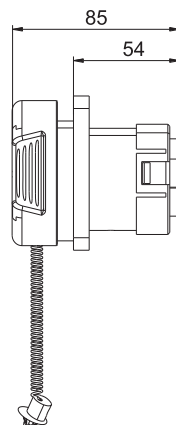
#### Quick-plug Dustproof Cover—1

Function: Then install AC charging socket, embedded M6 nut, installation size in accordance with national standard requirements, Ninon elastic rope buckle fixed in the body hole, dust cover can be quickly plugged, socket back cavity protection grade IP67, Please consult our company for specific models;



#### Quick-plug Dustproof Cover—2

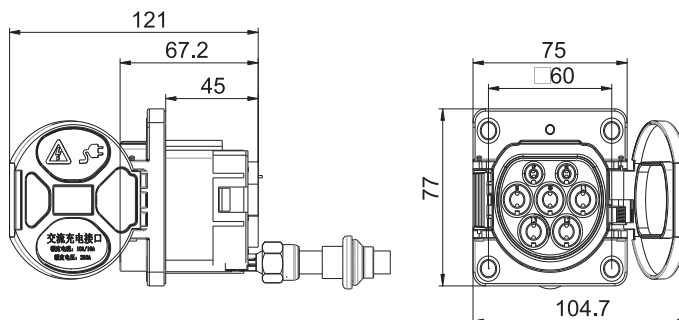
Function: Then install AC charging socket, embedded M6 nut, installation size in accordance with national standard requirements, Ninon elastic rope buckle fixed in the body hole, dust cover can be quickly plugged, socket back cavity protection grade IP67, Please consult our company for specific models;



## Front Installation Socket

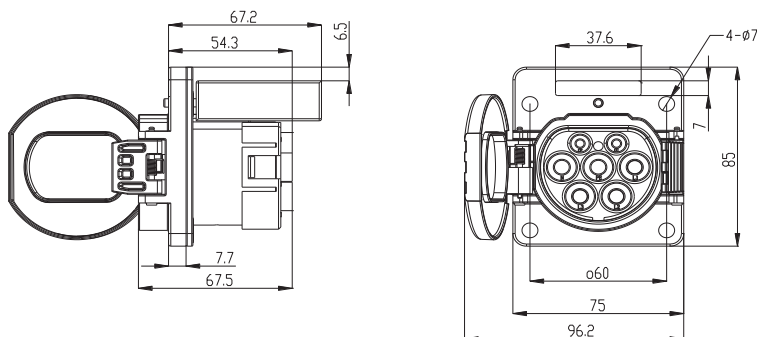
### Socket with drain outlet

Function Description: the front installation of AC charging socket, with damping flip, installation size in accordance with the requirements of national standards, socket rear cavity protection grade IP67, In addition, the front cavity, including the Jack internal unexpected water can be discharged through the drain and drainage pipe, after the water can continue to charge, Please consult our company for specific models;



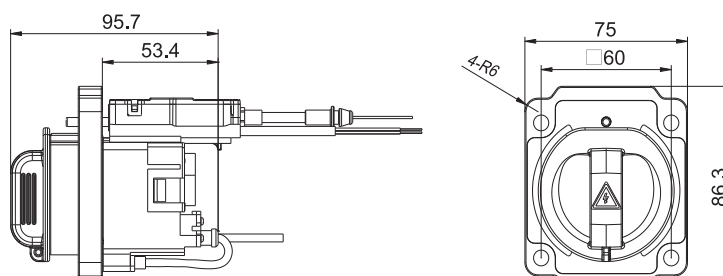
### Socket with indicator light 1

Function: Damping flip socket, socket suitable for front installation, installation size in accordance with national standards, socket rear cavity protection grade IP67, with a separate charging state lamp, through color changes to display different charging state, can be customized according to customer requirements, Please consult our company for specific models;



### Socket with indicator light 2

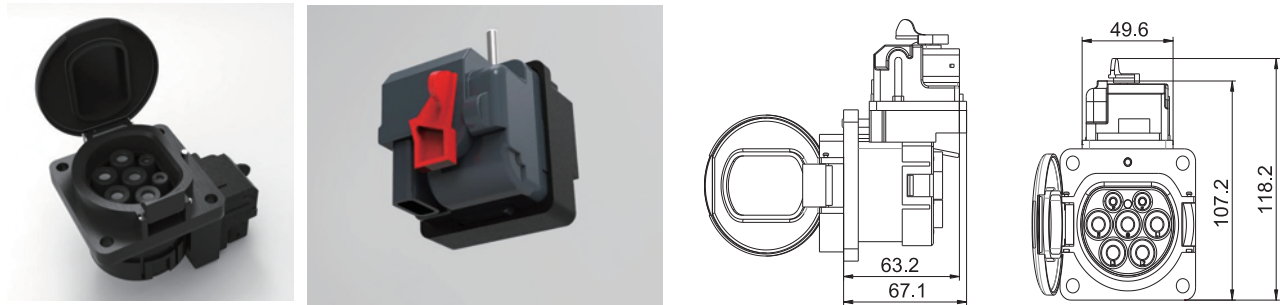
Function: Cover socket, socket is suitable for pre-installation or post-installation, installation size meets the requirements of national standard, socket rear cavity protection grade IP67, flange with half ring charging state lamp, display different charging state through color change, can be customized according to customer requirements, Please consult our company for specific models;



New national standard GB/T20234–2015 mandatory 32 A and 63 AC sockets with electronic locks and temperature sensors, our company developed suitable for Haila motor lock socket, in addition to independent design of motor lock socket

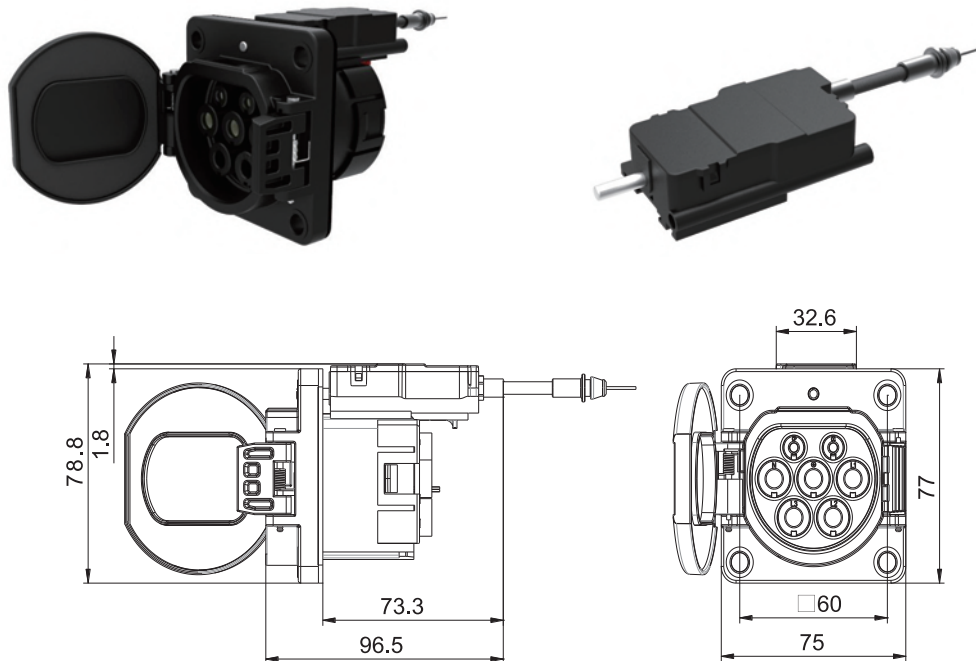
### Motor lock1

Function: Motor lock drive voltage 12 V, In addition, motor lock provides lock in place signal and unlock in place signal, Please consult our company for specific models;



### Motor lock2

Function: Recodeal independently design motor lock, drive voltage 12 V, separate protection grade IP55, lock shaft rod and manual unlock pull rod is not linked, mechanical life :100000 times / back and forth (can be equipped with three-wire or four-wire system), similar motor lock, Suitable for small body installation space,, Please consult our company for specific models;



## DC Charging-Gun



### Describe

- Reference Standard:
  - GB/T 18487.1-2015 《 Electric Vehicle Conductive Charging System Part1: General Requirements 》
  - GB/T 20234.1-2015 《 Electric Vehicle Conductive Charging Connectors Part 1: General Requirements 》
  - GB/T 20234.3-2015 《 Electric Vehicle Conductive Charging Connectors Part 3: DC Charging Interface 》
- Cable Section: 25mm<sup>2</sup>--80mm<sup>2</sup>
- Charge current up to 250 A supported
- Mainly applied to: Connection between DC charging pile and battery pack
- The charging gun head has the function of replacing the pin and reducing the after-sale cost
- Flexible customized products

### Performance parameter

- Current Rating: 80A, 125A, 200A, 250A
- Voltage Rating: 750V DC
- Temperature: -40°C--+85°C

### Charging Mode Parameters

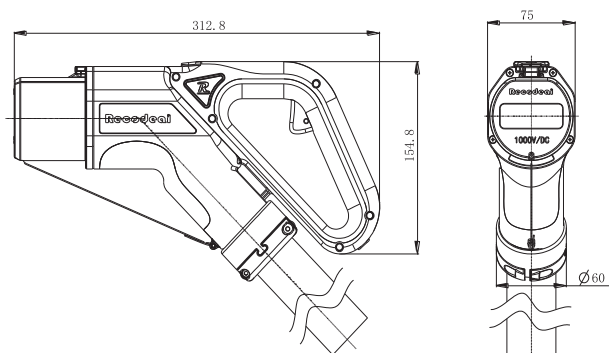
DC charging coupler wiring specification and electrical parameters

Recommended Cable Specifications	Current Rating	Specification for each interface cable(mm <sup>2</sup> )									
		DC+	DC-	PE	S+	S-	Cc1	Cc2	A+	A-	其他
3Cx25mm <sup>2</sup> +2Cx4mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +1Px0.75mm <sup>2</sup> )+4Cx0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup>	80A	25	25	25	0.75	0.75	0.75	0.75	4	4	0.75
2Cx35mm <sup>2</sup> +1Cx25mm <sup>2</sup> +2Cx4mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup>	125A	35	35	25	0.75	0.75	0.75	0.75	4	4	0.75
2Cx50mm <sup>2</sup> +1Cx25mm <sup>2</sup> +2Cx4mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup>	200A	50	50	25	0.75	0.75	0.75	0.75	4	4	0.75
2Cx70mm <sup>2</sup> +1Cx25mm <sup>2</sup> +2Cx4mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +1Px0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup> +4Cx0.75mm <sup>2</sup>	250A	70	70	25	0.75	0.75	0.75	0.75	4	4	0.75

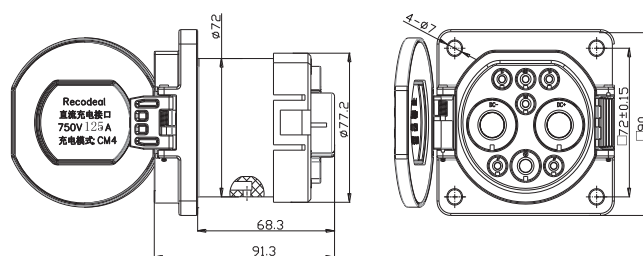


## SIZE

### PLUG

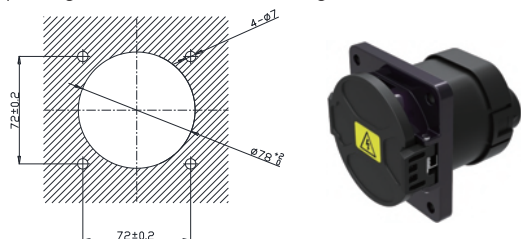


### Socket

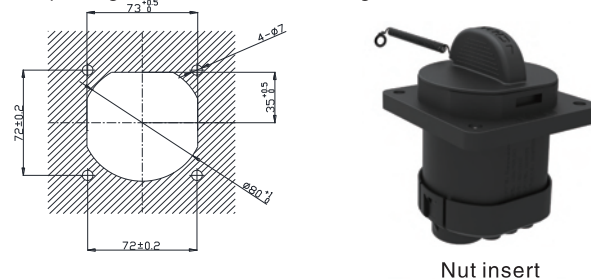


### Recommended hole size

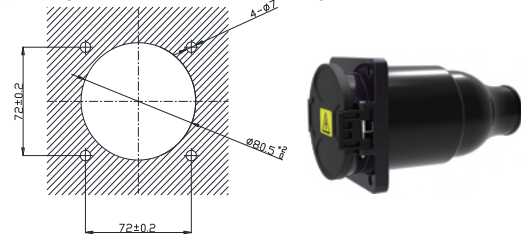
Flange gasket sealing mode socket opening size and schematic diagram



Back installation mode socket opening size and schematic diagram



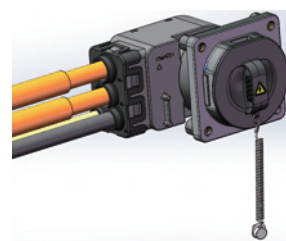
Integral sheath sealing mode socket opening size and schematic diagram



Nut insert



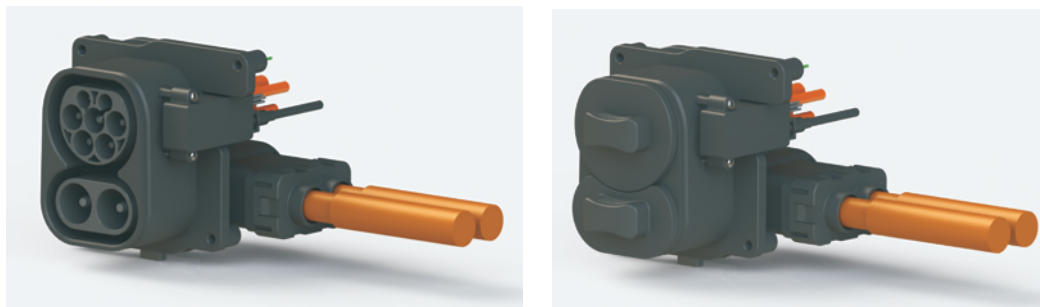
stud insert



Angle socket with pull-out cover



## European standard AC/DC integrated charging Coupler



### Describe

- Meeting IEC 62196-1, IEC 62196-2, IEC 62196-3 standard requirements
- Current: DC: 125A、200A、250A; AC: 16A、32A
- Cable outlet direction: DC: 90° right angle; AC: 180° straight
- Terminal wiring information: DC: 25mm<sup>2</sup>、35mm<sup>2</sup>、50mm<sup>2</sup>、70mm<sup>2</sup>、95mm<sup>2</sup> Unshielded line (LV216) AC: 2.5mm<sup>2</sup>、6mm<sup>2</sup> Unshielded line (LV216)
- Temperature transmitter : DC: DC+, DC-; AC: L1, N
- Drainage structure: With drains, Option tube
- Unit and dual position feedback signals optional
- Installation: Back Installation

### Parameter

#### Electrical specification

- Rated Current and Voltage: CP、PP: 2A 30V  
DC+, DC-: 125A/200A/250A/350A, 1000VDC  
L1、L2、L3、N: 32A, 480VAC
- withstand voltage : ≥2700V (AC) 1min, Leakage current less than 5 mA, No breakdown
- insulation resistance : 1000V DC, ≥200MΩ
- Cable can be welded or pressed by ultrasonic wave

#### mechanical properties

- mechanical life : More than 10000 times

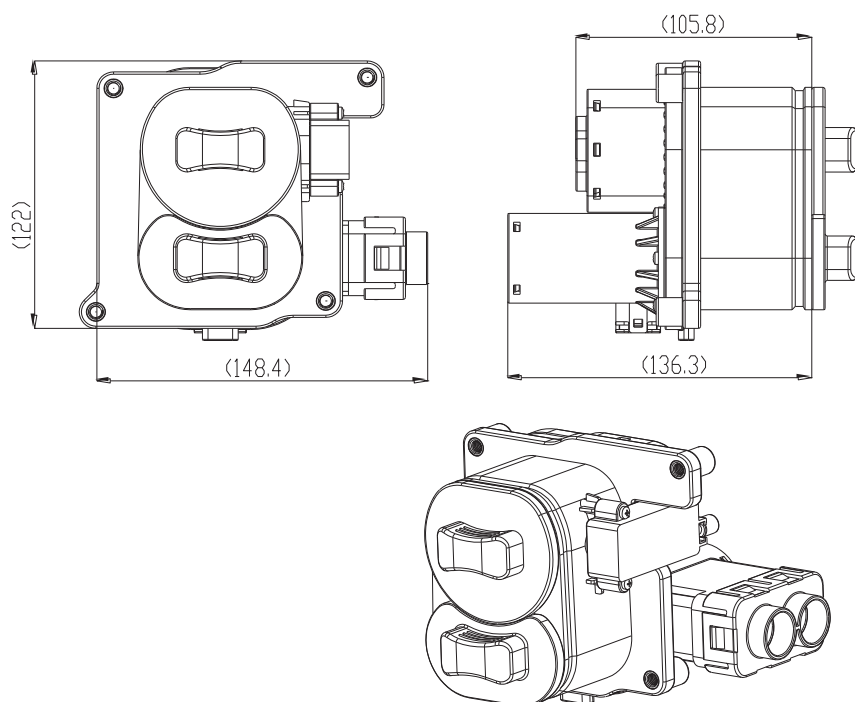
#### work environment

- working temperature : -40°C ~ +85°C
- Dampness : Low than 95% (40°C时)
- IP Level: IP54  
IP55 (Matched)  
IP67 (Tail Cable sealed)
- Flame retardant grade: UL94-V0

#### Raw material

- Shell: Thermoplastic flame
- retardant materials
- Contact part: pinkus metal
- Seal Part: Rubber or elastomers

## SIZE



Note: Customizable development and installation panel size and outlet mode according to customer requirements

## GB/T AC DC integrated charging Coupler



### Describe

- Meeting GB/T20234.1,GB/T20234.2,GB/T20234.3 standard requirements
- Current: DC: 80A、125A、200A、250A; AC: 16A、32A
- Cable outlet direction: DC: 90; AC: 180
- Terminal wiring information: DC: 25mm<sup>2</sup>、35mm<sup>2</sup>、50mm<sup>2</sup>、70mm<sup>2</sup>Unshielded Line ( LV216 )  
AC: 2.5mm<sup>2</sup>、4mm<sup>2</sup>、6mm<sup>2</sup>Unshielded Line ( LV216)
- Temperature transmitter: DC: DC+,DC-; AC: L1,N
- Drainage structure: With drains,, Option tube
- Electronic lock: Motor lock, optional single or double position feedback signal
- Light indicator: LED mode with LED lamp without light control panel: rear installation
- Installation: Back Installation
- Mode of connection : DC+/DC-Support ultrasonic welding and compression connection, the rest of the terminals are crimped

### Parameter

#### Electrical specification

- Rated Current and Voltage: DC+、DC-: 125A/200A/250A/300A,1000VDC  
L1、L2、L3、N: 32A,480VAC
- Withstand voltage:  $\geq 2700V$  ( AC ) 1min, Leakage less than 5 mA, No breakdown
- insulation resistance : 1000V DC, $\geq 200M\Omega$
- Cable can be welded or pressed by ultrasonic wave

#### Mechanical properties

- Using Life: More than10000 times

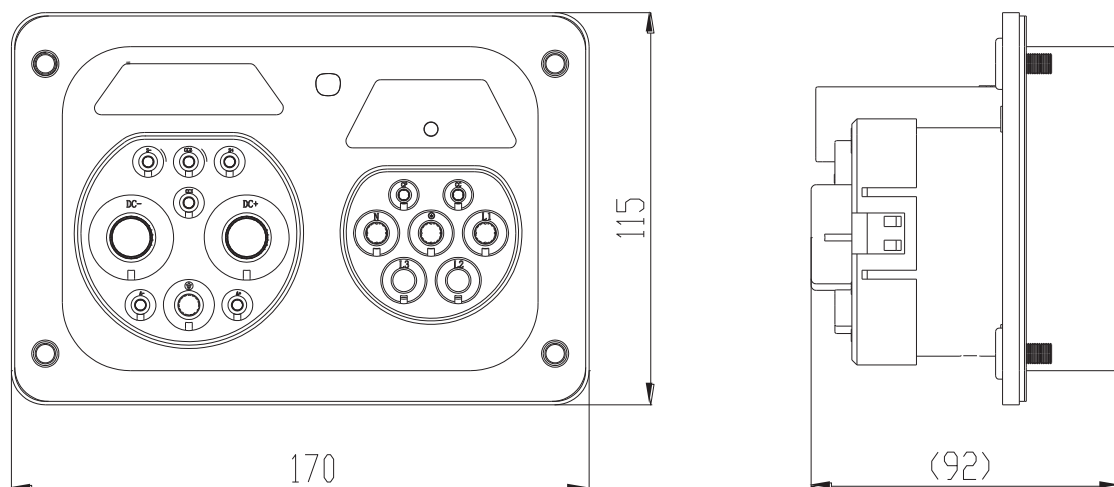
#### Work environment

- working temperature :  $-40^{\circ}C \sim +85^{\circ}C$
- Dampness : Low than 95% (  $40^{\circ}C$ 时 )
- IP Level: IP54  
IP55 ( Matched )  
IP67 ( Tail Cable sealed )
- Flame retardant grade: UL94-V0

#### Raw Material

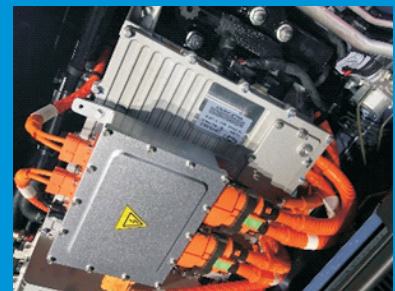
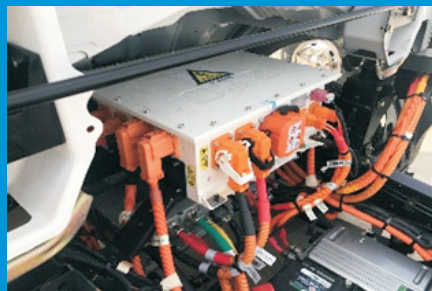
- Shell: Thermoplastic flame
- retardant materials
- Contact part: pinkus metal
- Seal Part: Rubber or elastomers

## SIZE



Note: Can be customized according to customer needs panel and hole size and so on.

# EV High Voltage Wire harness Solution



Electric vehicle high voltage wire harness is mainly used to connect the high voltage equipment of electric vehicle, such as the connection between battery pack and multi-in-one, the connection between AC charging socket and OBC, and so on. It involves the requirements of reliability, safety and other aspects, and is the key part of electric vehicle.

## Characteristic

- Cables used generally require temperature resistance of 125°C and above;
- General voltage requirements 500 V and above;
- General requirements with shielding;
- Above IP67 protection Degree;;

## Advantage of Recodeal

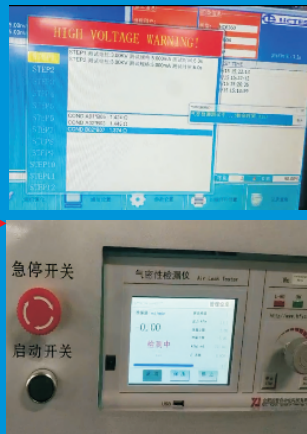
- Self-made high-voltage cable & connector, better cost, better quality, faster delivery
- Many customer reliable mass application cases
- MES line
- Key assembly positions such as crimping are monitored
- Automation or semi-automation of complex processes such as shielding layer combing
- Key test positions such as air tightness, insulation withstand voltage and conduction can be monitored
- Small batch multi-variety support capability



## Production control

### Intelligent Pressing System for High Voltage Cable

- 10T~20 T Intelligent crimping equipment
- Safety Protection of Light Bolt
- Research and development of braiding layer processing system for high voltage cable by on-line realtime
- monitoring and abnormal alarm

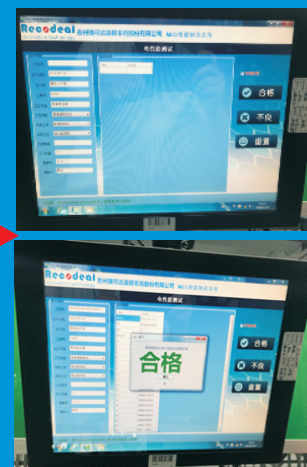


### Intelligent High Voltage Detection Platform

- independent development of intelligent detection platform (has run more than 10 sets. )
- Suitable for high and low voltage wire harness and all charging interface wire harness.
- Electrical machine for electrical performance and airtight testing
- Achieve conduction, insulation, voltage, airtight test synchronization completed
- Safety Protection of Light Bolt
- Automatic testing of MES system connection/scan code
- The first in China can simulate the new national standard charging mode test to achieve overload, overcurrent / duty cycle and other parameters synchronous intelligent testing.

### Intelligent Production (MES System)

- January 2018 officially put into intelligent (MES) production system
- Belong to the first domestic peer.
- Each process sweep code operation.
- Automatic identification/overstation protection
- Test data storage/recording/reading
- Real-time monitoring and feedback of production quality, two-dimensional code traceability system.

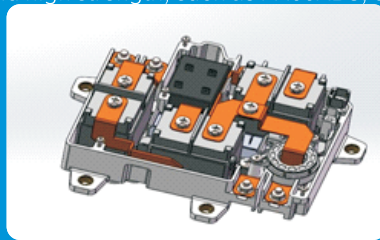


# High Voltage Power Distribution Unit (PDU) Solution

- High voltage power distribution Unit is mainly used for high voltage power distribution of electric vehicles, and the battery electric energy is transmitted to various electric equipment of automobile, such as: air conditioning refrigeration heating, motor, defrosting, steering, battery heating, AC/DC、DC/DC and so on. internally integrated relays, fuses, diodes, power resistors, BMS modules, etc.
- Different solutions can be provided according to customer models and installation locations.

## BDUseries

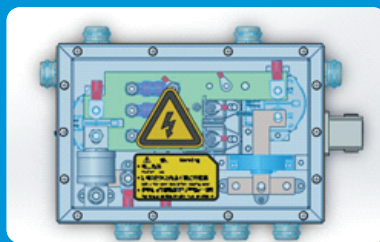
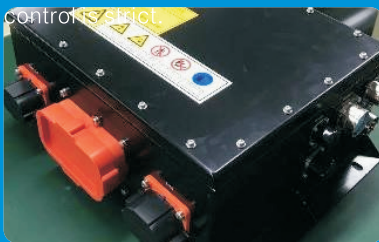
BDU Integrated in the battery box, due to the limitation of battery box space, the general shape is irregular, the shell processing adopts engineering plastics with good impact and high strength, such as PA66ABS, etc.



System rated voltage: 750V  
 System rated power: 50KW  
 Device Voltage:  $\geq 2500V$   
 Relay voltage: 12V  
 working temperature :  $-40^{\circ}C-130^{\circ}C$   
 Protection Degree: (Based on customer requirements)

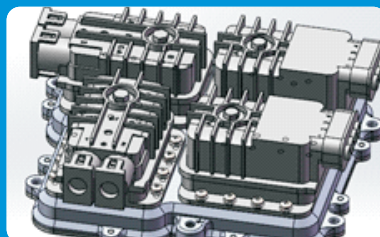
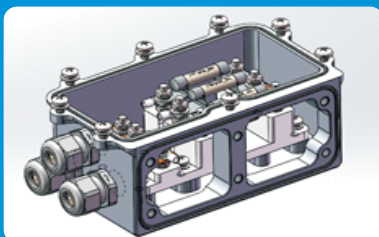
## Microcar Series

The size of the whole car is small, the number of passengers is more than 2, so the weight of the car is not very large, the battery power requirements are not high, suitable for short distance use. Its PDU circuit is relatively simple, the volume requirement is small, and the cost



Voltage Rating: 100V  
 Power rating : 20KW  
 Device Voltage:  $\geq 1000V$   
 Relay voltage: 12V  
 working temperature:  $-40^{\circ}C-130^{\circ}C$   
 Protection Degree: IP67

## Small passenger car series

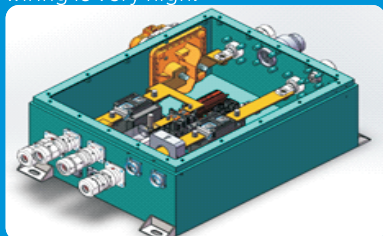


Voltage Rating: Over 400V  
 power rating : 80KW  
 Device Voltage:  $\geq 2500V$   
 Relay voltage: 12V  
 working temperature:  $-40^{\circ}C-125^{\circ}C$   
 Protection Degree: IP67



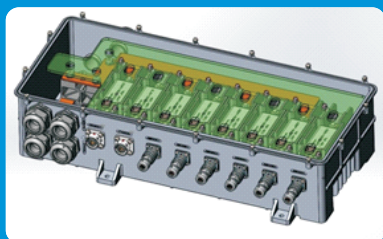
## SUVseries

Most of the SUV models integrate the BMS into the high-voltage box, the internal wiring is complex, and the cleanliness of the internal wiring is very high.



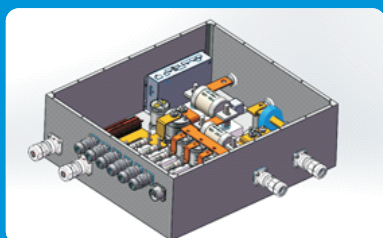
Voltage Rating: 750V  
power rating: 110KW  
Device Voltage:  $\geq 2500V$   
Relay voltage: 24V/12V  
working temperature:  $-40^{\circ}C-130^{\circ}C$   
Protection Degree: IP67

## Bus Series



Voltage Rating: Over 800V  
power rating: 200KW  
Device Voltage:  $\geq 3000V$   
Relay voltage: 24V  
working temperature:  $-40^{\circ}C-130^{\circ}C$   
Protection Degree: IP67

## Mining vehicles, garbage trucks, logistics vehicles and other models



Voltage Rating: 800V or above  
power rating: 280KW  
Device Voltage:  $\geq 3000V$   
Relay voltage: 24V  
working temperature:  $-40^{\circ}C-130^{\circ}C$   
Protection Degree: IP67





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