

# 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 Temperature: -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

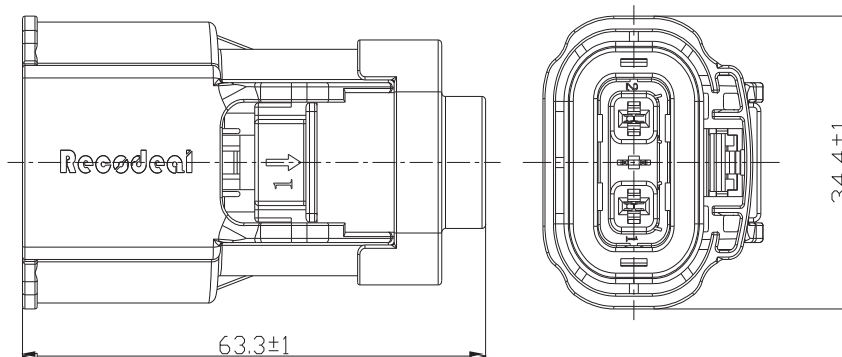
T:Plug; ; Z: Flange installation socket

RED:Product Serial

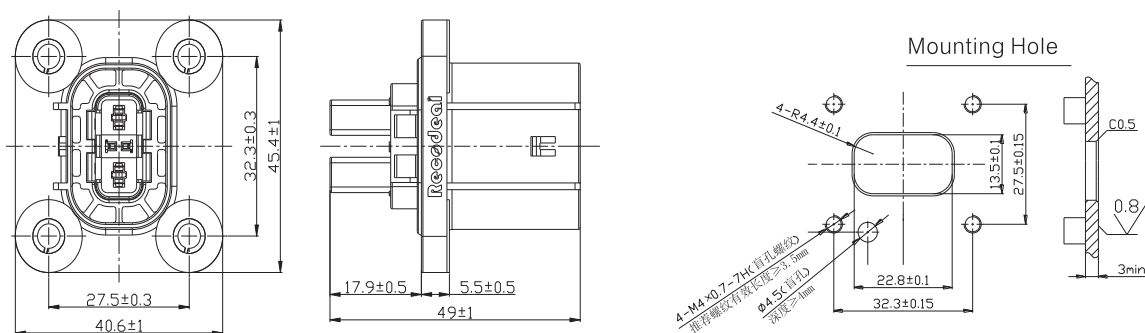
Note: connector type plug generated according to naming rules does not contain power terminal, socket does not contain power & interlocking terminal. Three-core connectors do not have high-voltage interlocking, three-core connector plug can not adapt to 3 mm<sup>2</sup> and 4 mm<sup>2</sup> shielded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

### Size

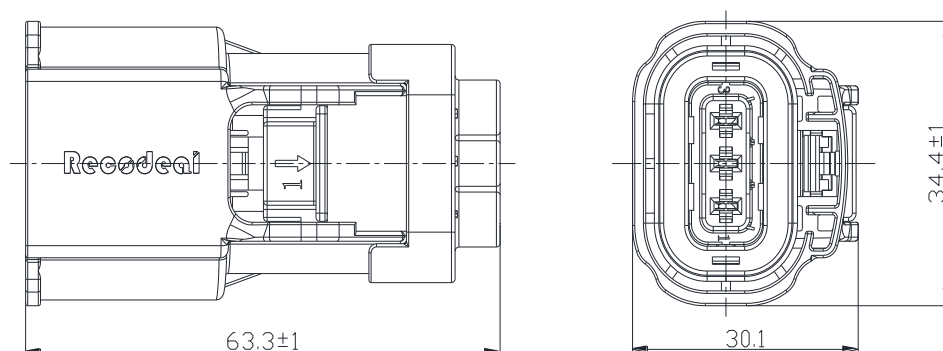
2POS Plug



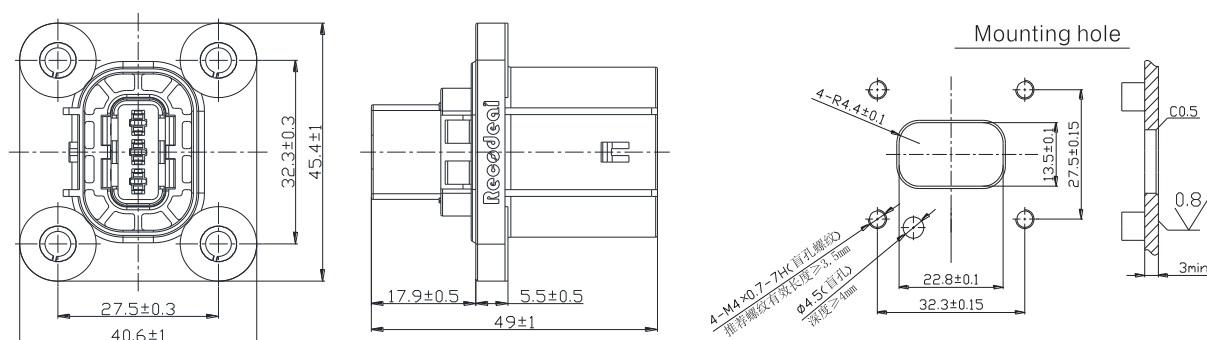
## 2POS Flange installation socket



## 3POS Plug



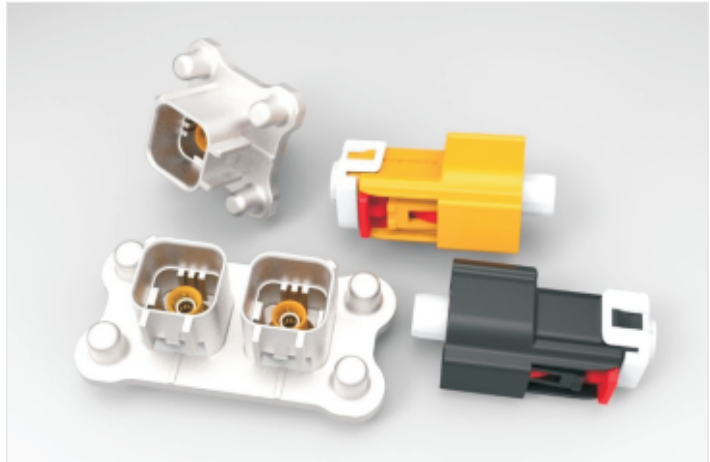
## 3POS Flange installation socket



## 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

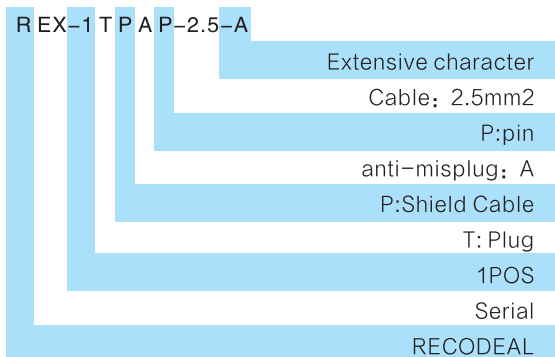


### Application

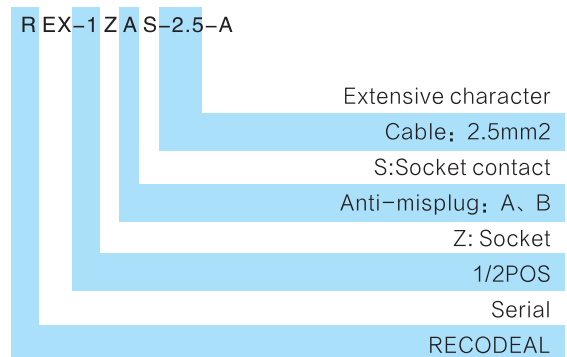
- Current Rating: 28A
- Voltage Rating: 1000V DC;
- Shielding: Option
- Working temperature: 40°C-- +140°C

### Ordering information

#### Plug



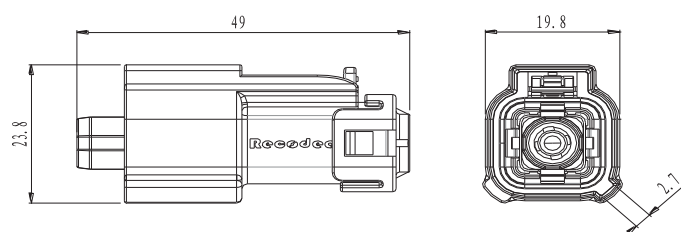
#### Socket



Note: Plug&Socket exclude Terminal

### Size

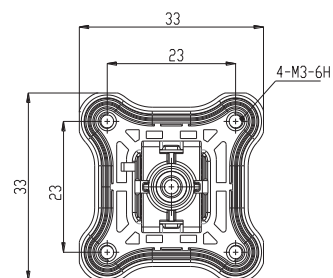
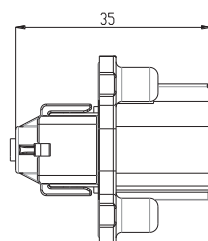
#### PLUG



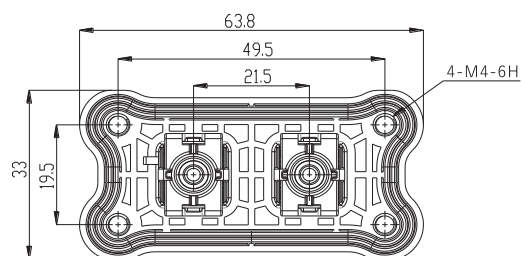
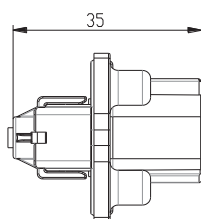


## SOCKET

1POS:

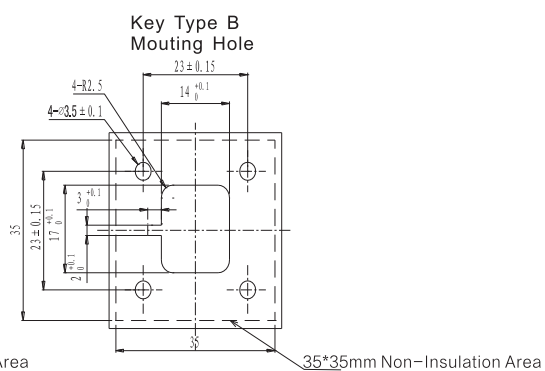
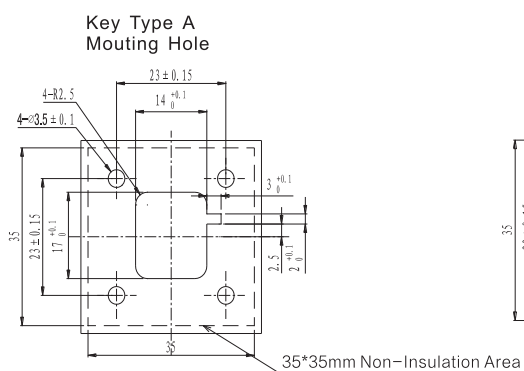


2POS:

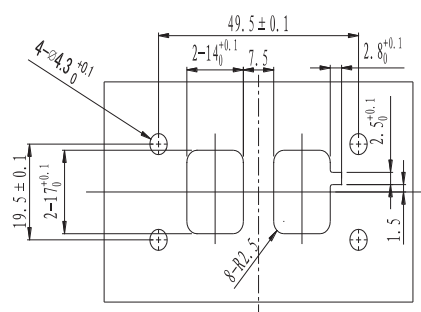


## Mounting Hole

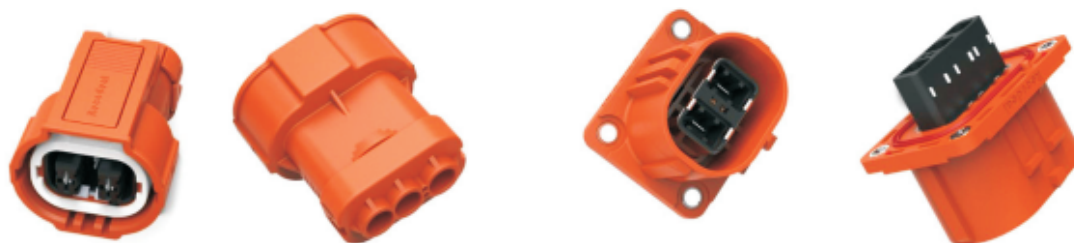
1POS



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)

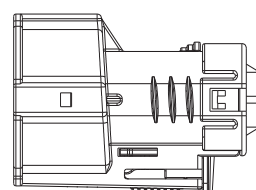
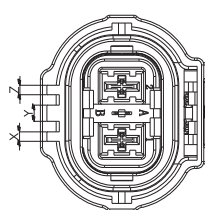
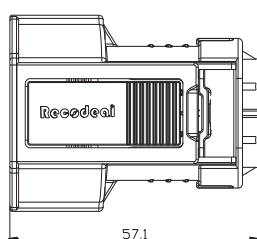
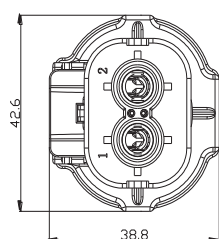
Number of pins:2 Pos. 3Pos

T:Plug; Z:Flange Jack

REM II :Serial code

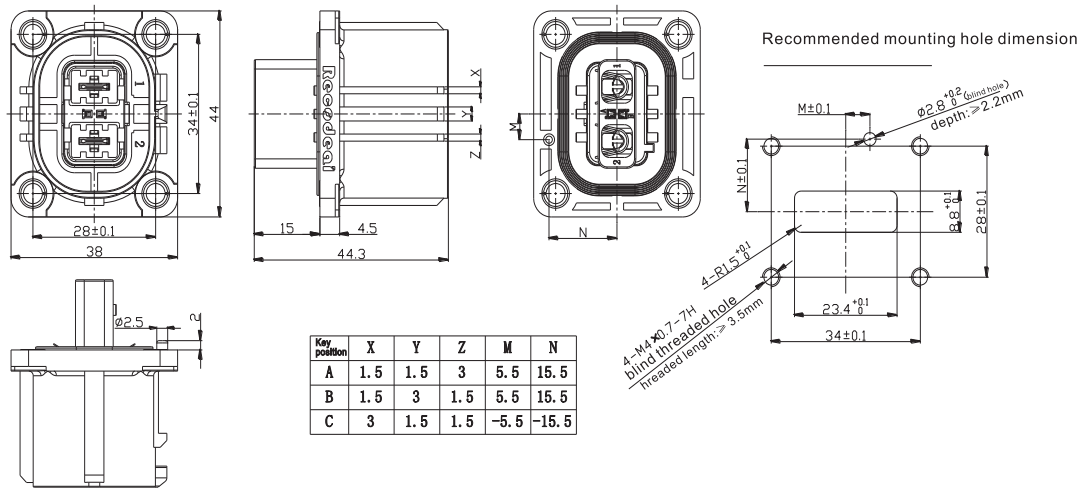
## Size

### 2 POS Plug

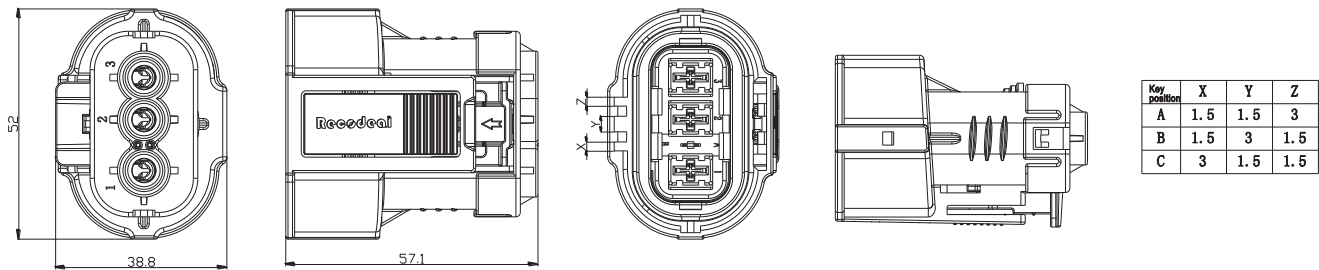


Key position	X	Y	Z
A	1.5	1.5	3
B	1.5	3	1.5
C	3	1.5	1.5

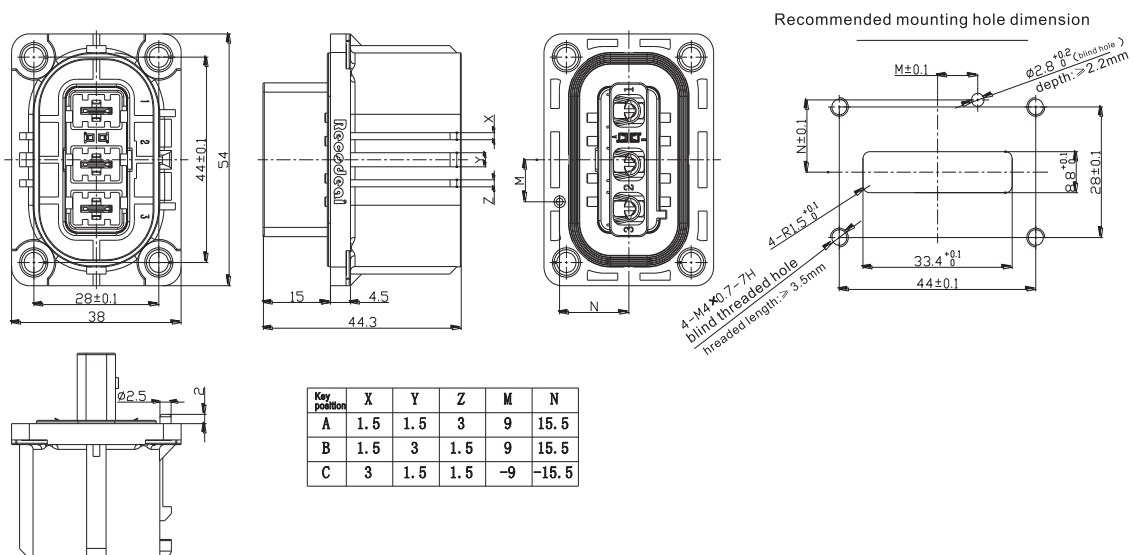
## 2 POS Flange Jack



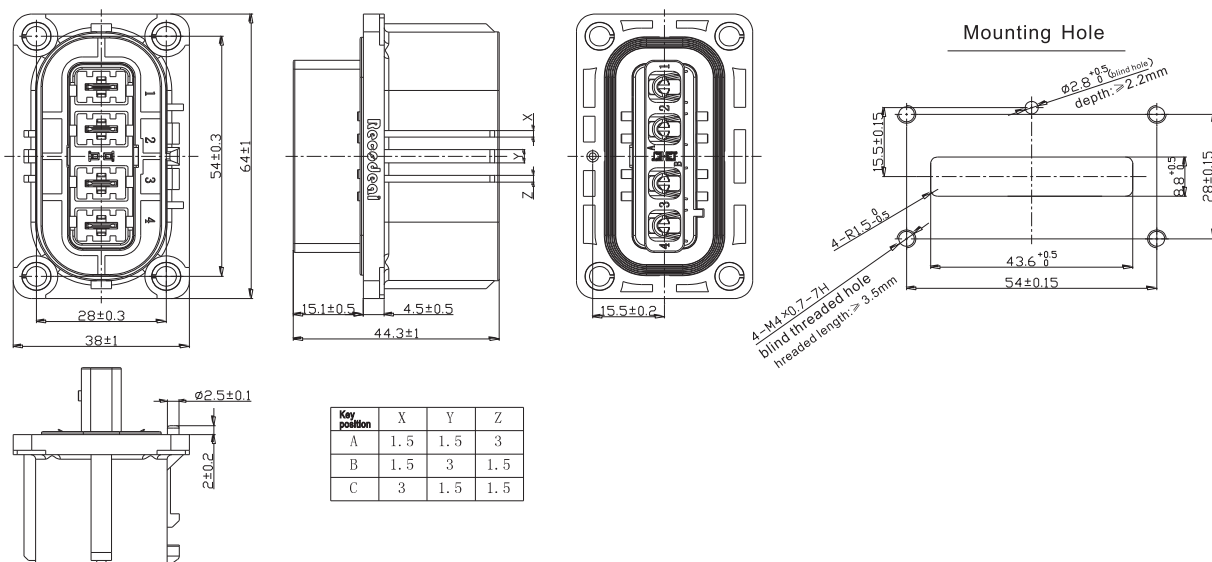
## 3 POS Plug



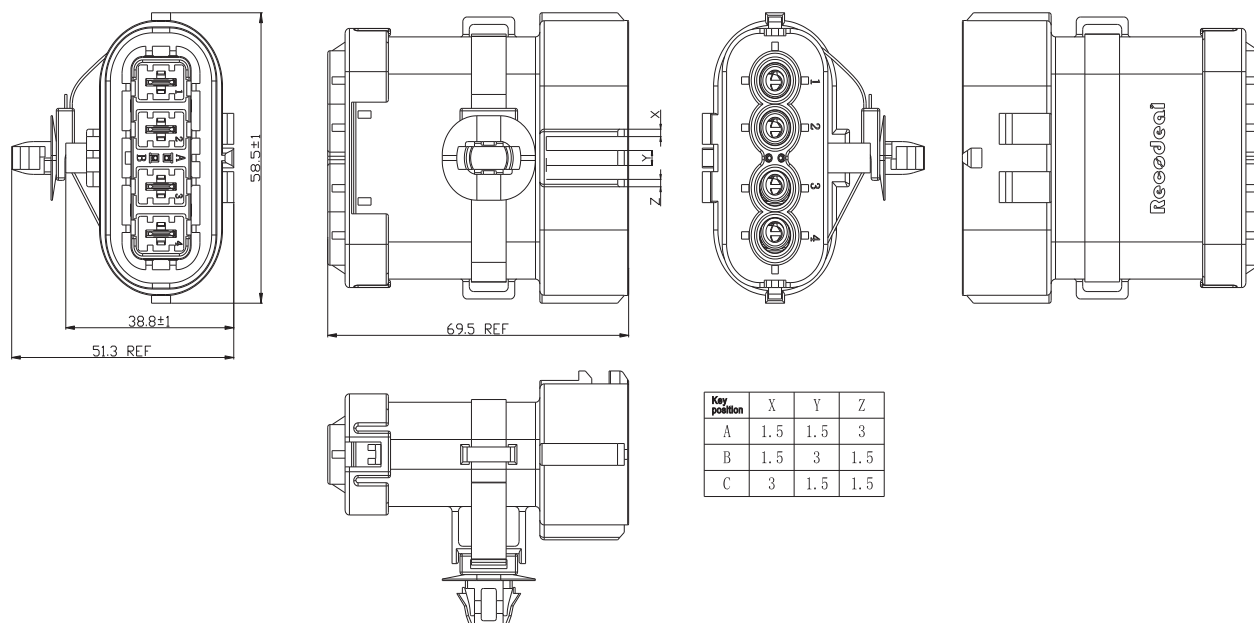
## 3 POS Flange Jack



## 4POS FLANGE SOCKET



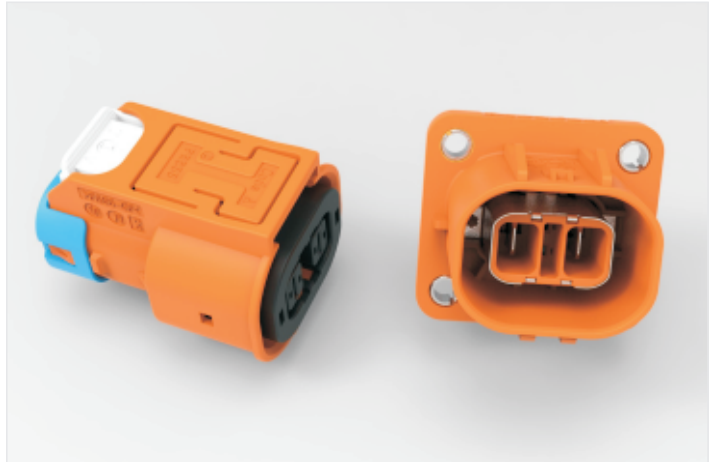
## 4 POS PLUG



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

### 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

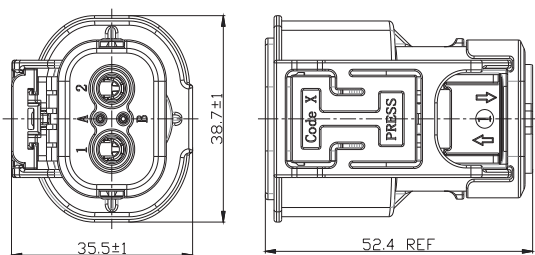
T:Plug; Z: Socket

REM III :Product series

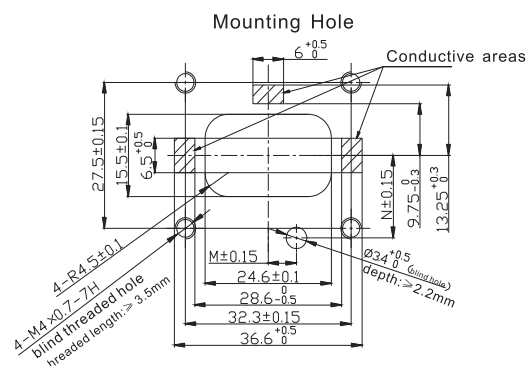
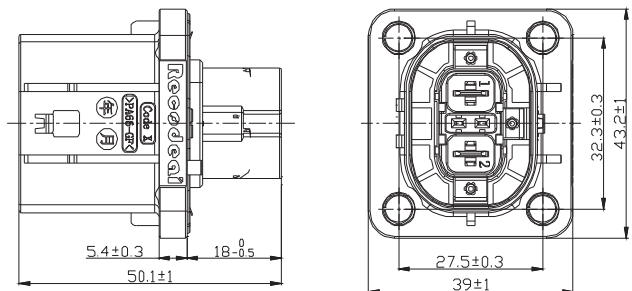
Plug and Socket exclude matching Power Terminal and HVIL which should be purchased separately.

### 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

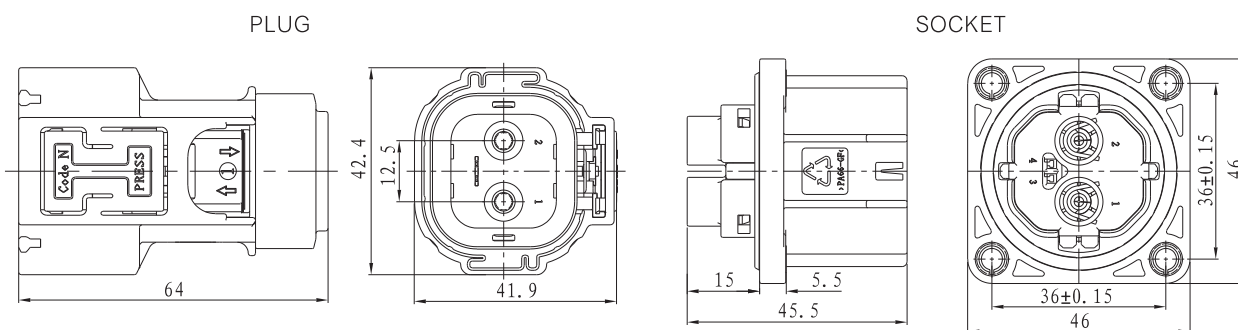
### Ordering information

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

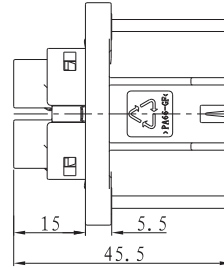
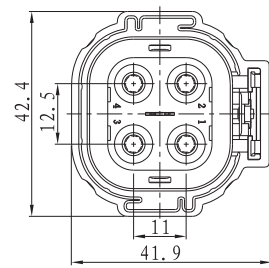
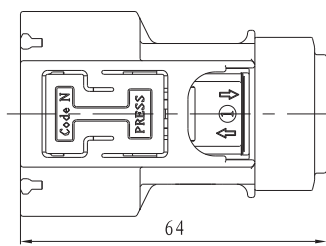
#### 2POS



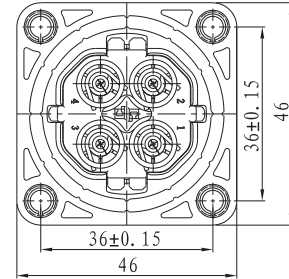


SIZE of 2POS

PLUG

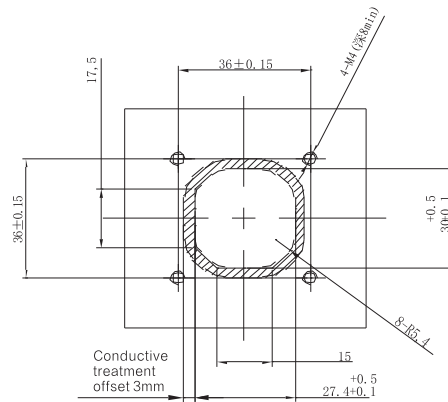


Socket

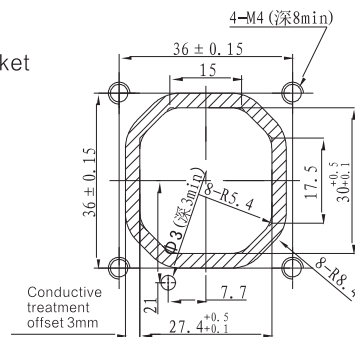


Install hole size

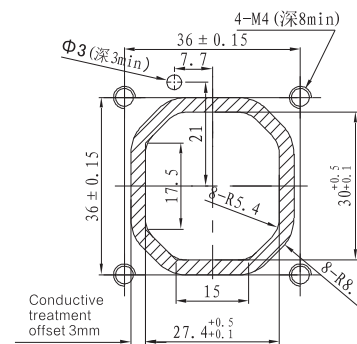
hole size of non-misfit socket



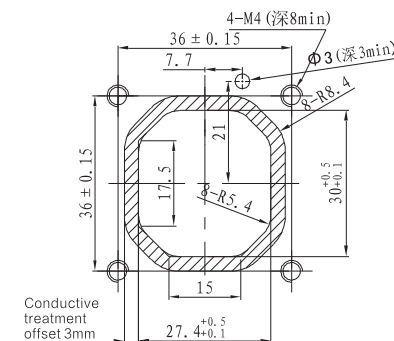
Hole size of anti-misfit socket



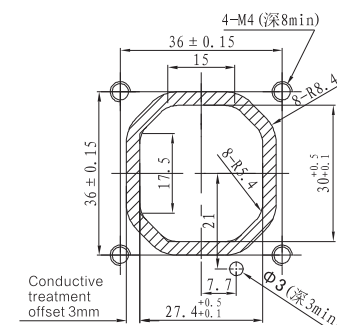
Key Position N



Key Position A



Key Position B

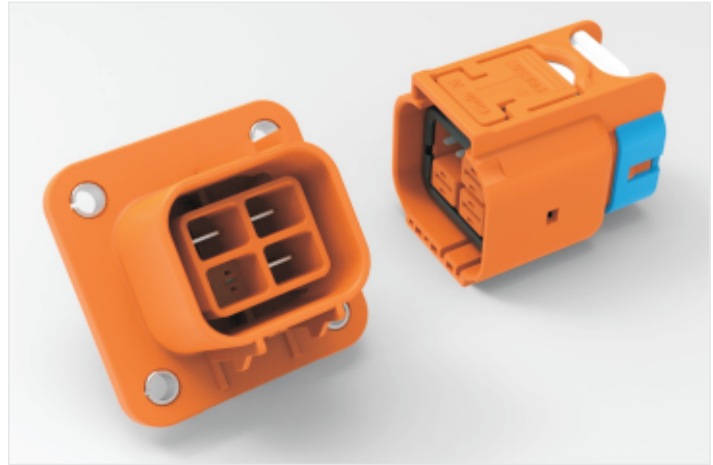


Key Position C

## 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

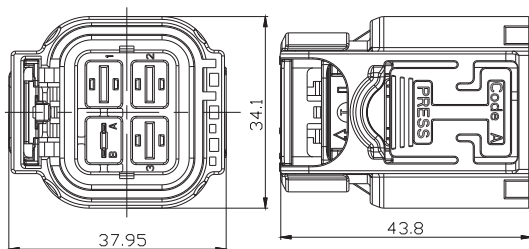
T:plug; Z: socket

REL1:product serial No

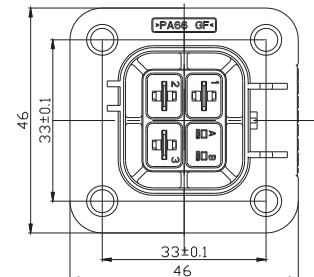
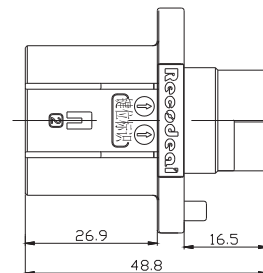
The connector type plug generated according to the naming rules does not contain power terminals, and the socket does not contain power & interlocking terminals.

### Size

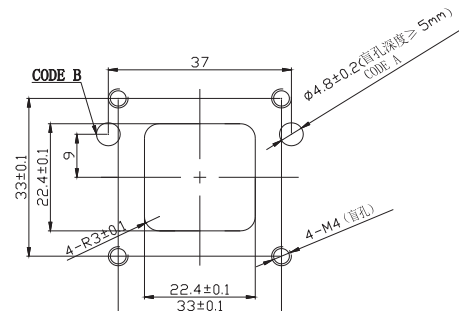
PLUG



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°C--+140°C

### Ordering information

REL2-T 4 P A H -2.5 -B

Design Extension Number

Cable: 2.5/4/6

H:HVIL

Key position: A、B、C、D

P: Shield

POS:4

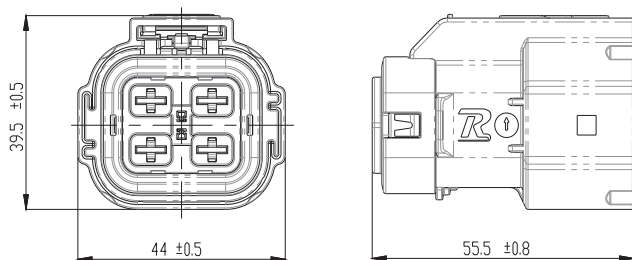
T:Plug; Z: Socket

Serial No.

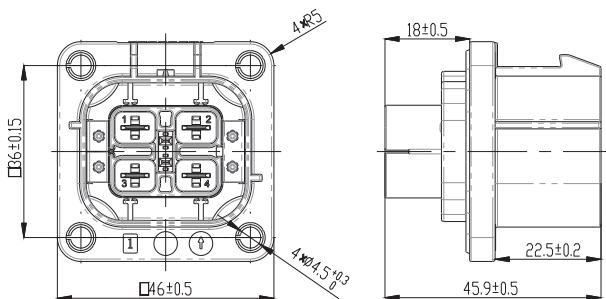
Note: Plug does not contain power terminals, socket does not contain power and interlocking terminals

### Size

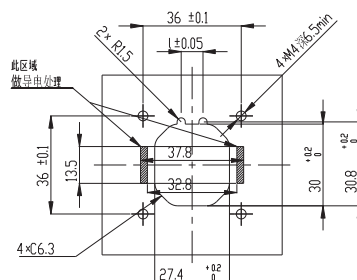
#### PLUG



#### Flange Socket



Socket install hole size



Key	L	Note
A	8 mm	
B	10.6mm	

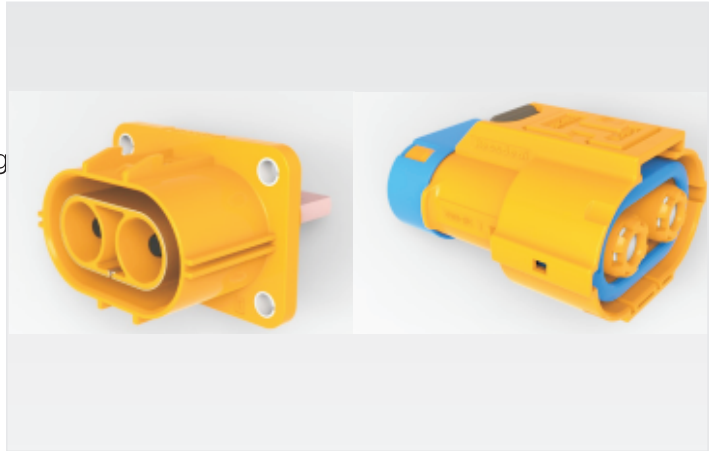
Note: panel roughness is not less than 0.4, flatness is not less than 0.2.



## 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

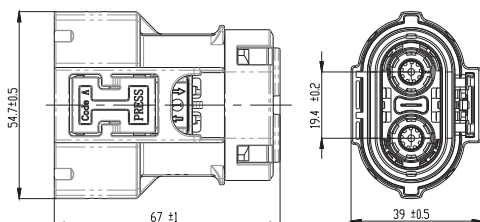
Z:Socket

Product Series

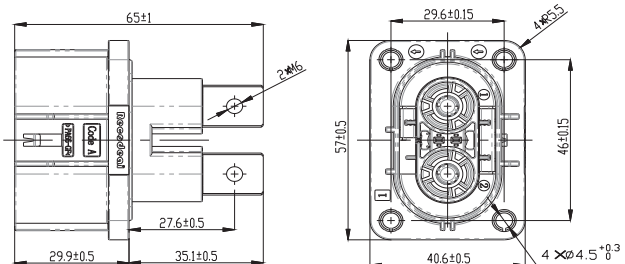
Remarks: socket does not contain interlocking terminals

### Size

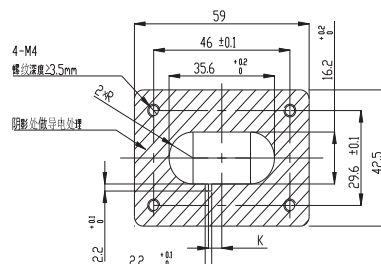
#### PLUG



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



Socket install hole size



键位	尺寸K	备注
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:  $\leq 0.3\text{m}\Omega$   
Current Rating: 250A (For  $50\text{mm}^2$ ,  $70\text{mm}^2$ )  
Insulation resistance:  $\geq 5000\text{M}\Omega$   
Withstand voltage: 3000V AC 1Min

#### Mechanical Property

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

#### Environmental Property

Working temperature:  $-30^\circ\text{C} \sim +125^\circ\text{C}$   
Relative humidity: 95% ( $40^\circ\text{C}$ )  
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

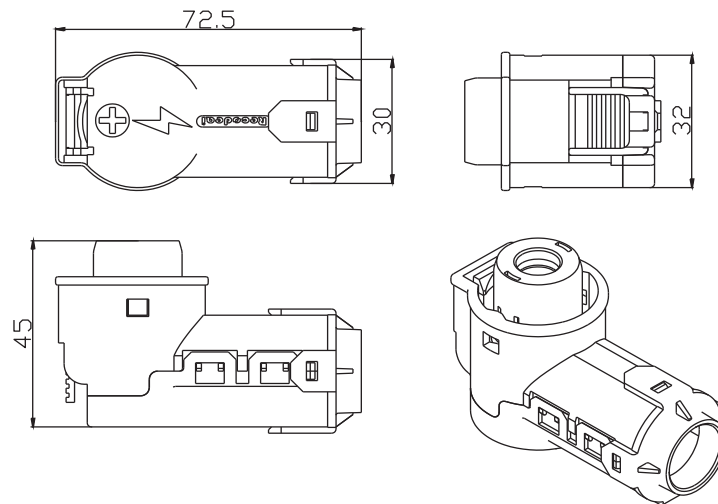
RECODEAL

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

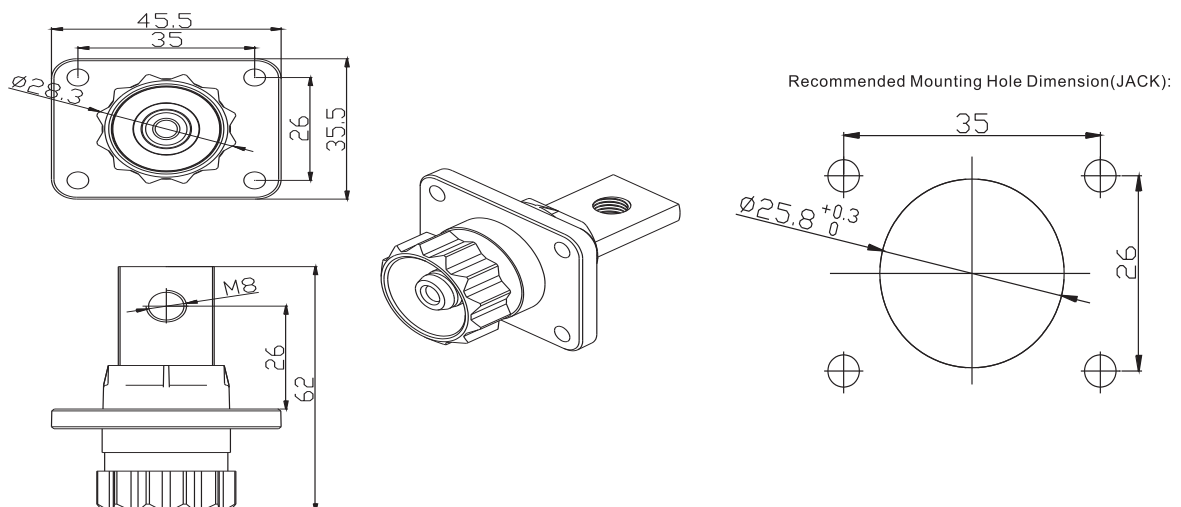
Eg:REA-ZAHD1-A means: REA series connectors, jack, black shell, the tail of the terminal is the through-hole.

## Size

### Plug



### Jack

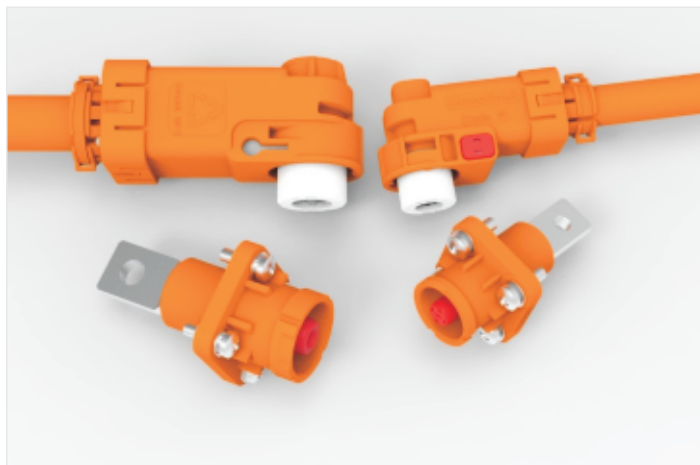




## 1POS High current plastic shell connector(REA1)

### 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

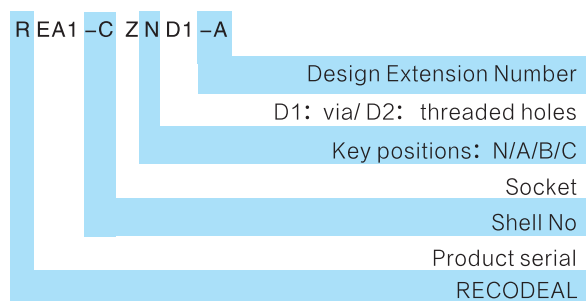
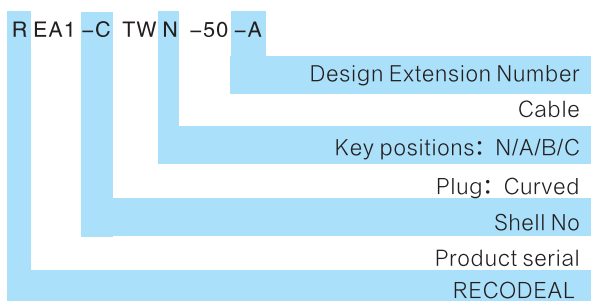
- Current rating:

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

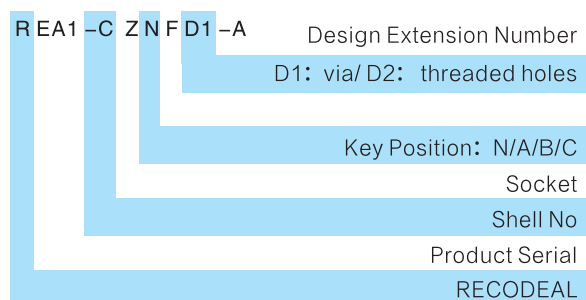
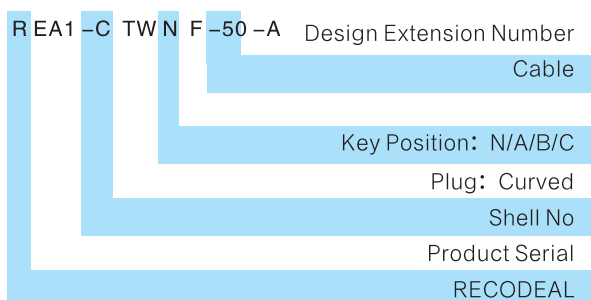
### Ordering information

#### Waterproof



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

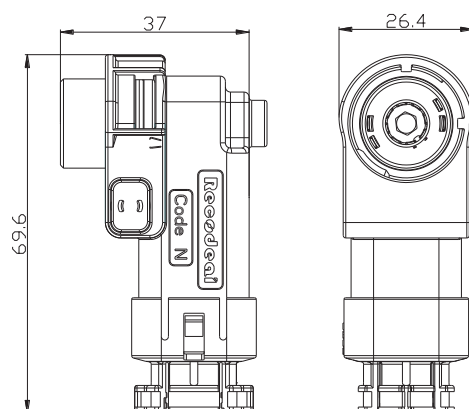
#### Non-waterproofing



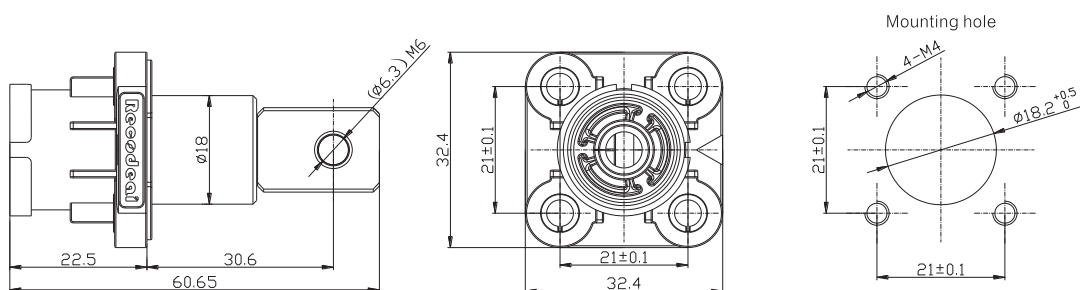
Note: N/A key housing is orange, B/C key housing is black

## Size

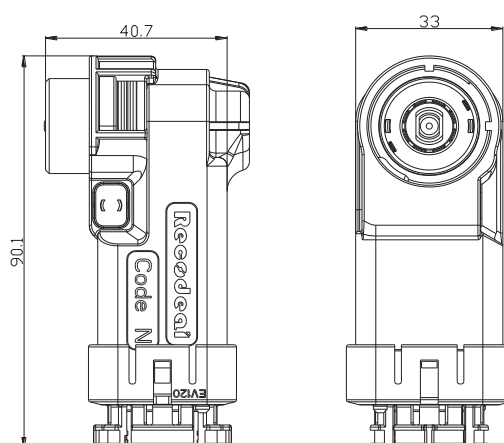
### 8mm JACK(C Shell)



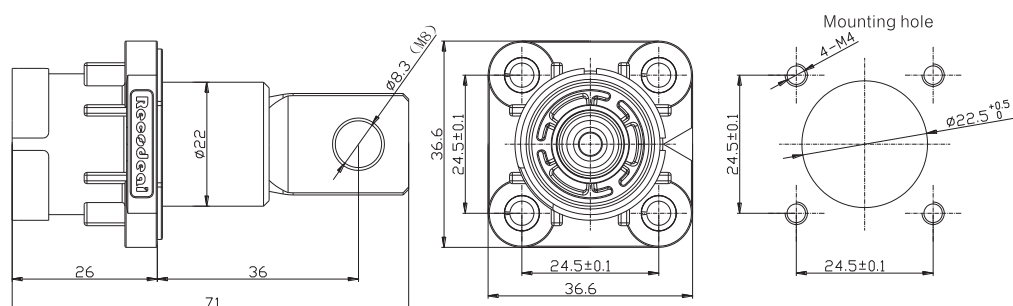
### 8mm JACK(C Shell)



### 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

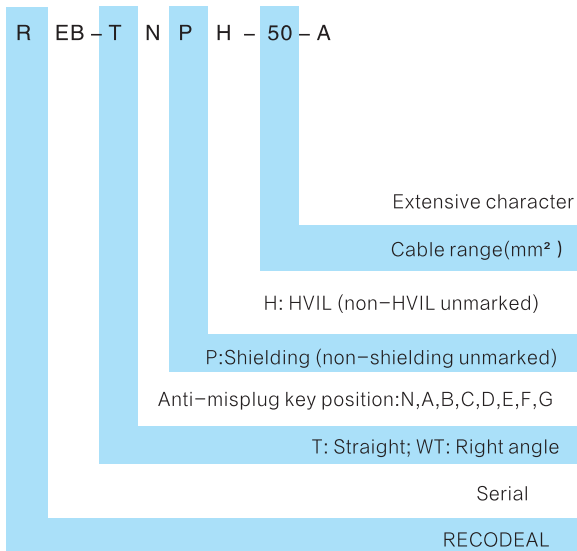
Shell: aluminum alloy/zinc alloy

Contact: copper alloy silver plated

Seal: rubber or elastomer

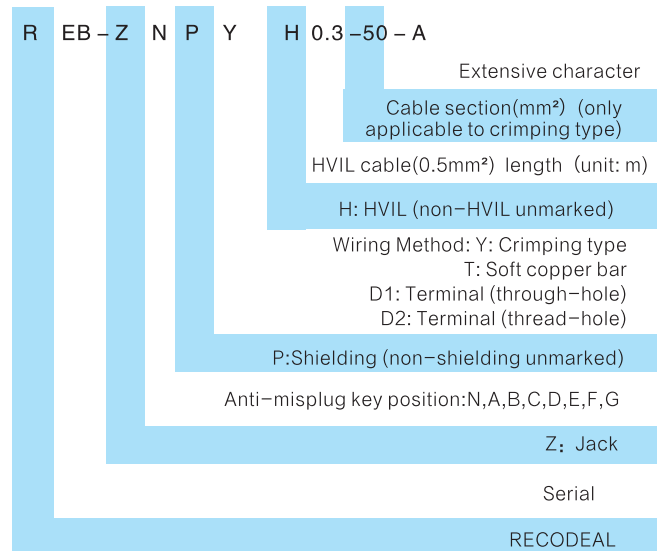
## Ordering Information

### 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>.

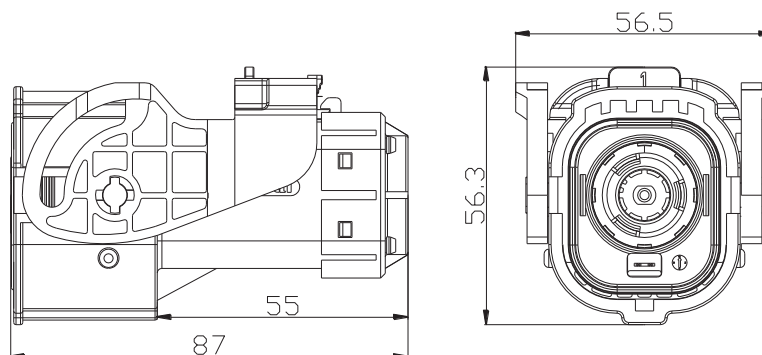
### Jack



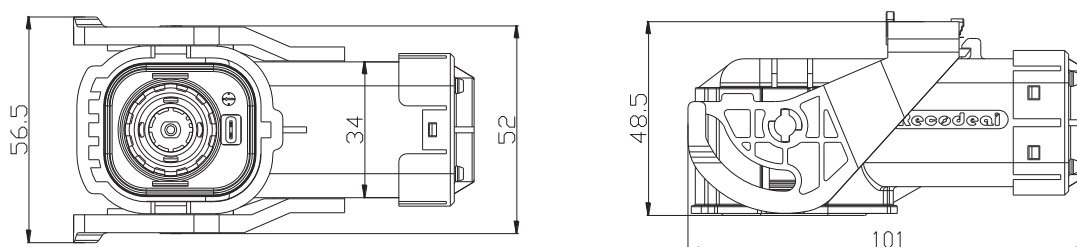
Eg:REB-ZNPD1H0.5-A means: REB series jack, Shielding(key position N),wiring method:through-hole,HVIL,The length of HVIL cable:0.5m

## 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

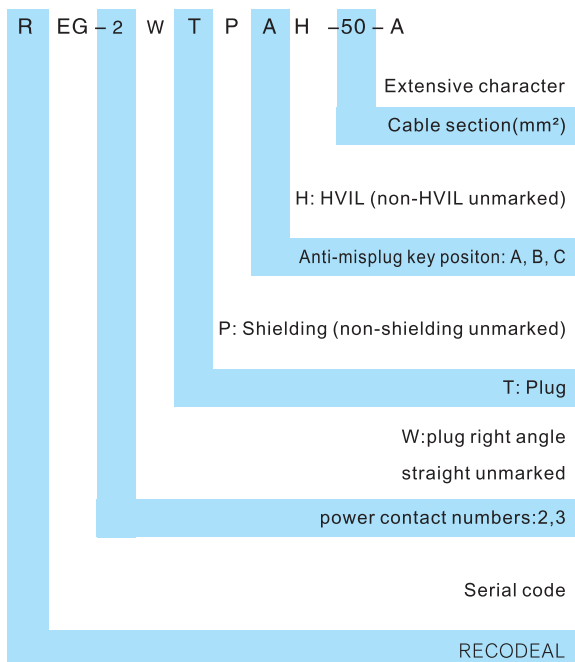
Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

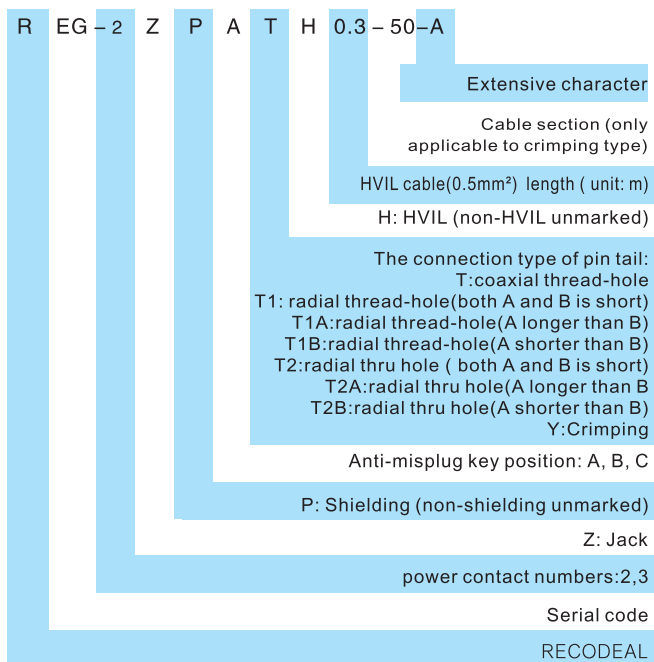
Seal: rubber or elastomer

## Ordering Information

### Plug



### Jack



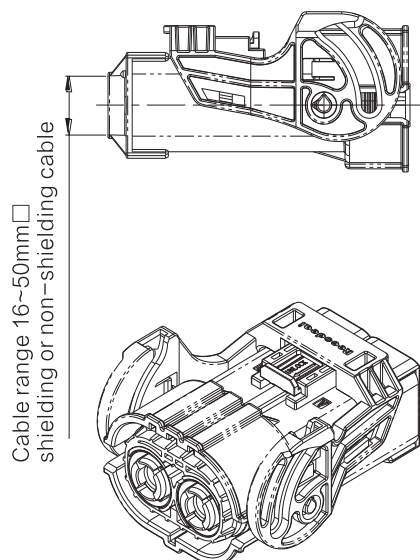
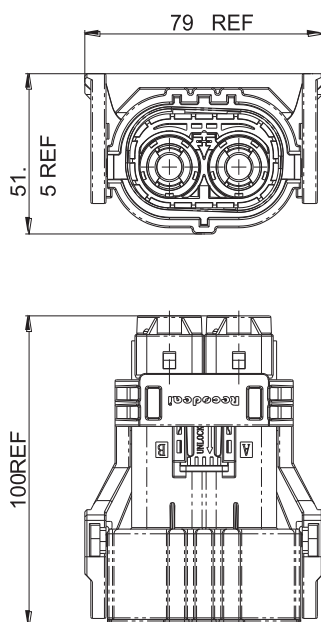
NOTE:The plug type is empty plug without wiring. If you need to purchase wiring components, you can contact our company technical department and give the model of wiring harness components before confirming the details of components. The 16mm<sup>2</sup> wiring is unconventional, it needs to book in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

Note:

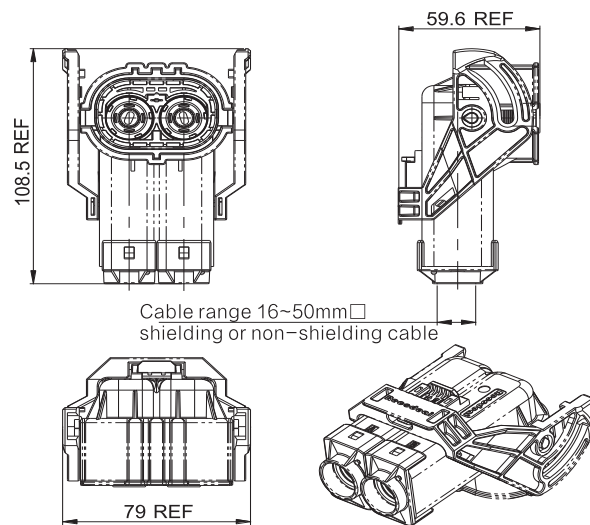
- 1.The mode of termination for plug assemble with pin in the tail is "T1A", "T1B", "T2A", "T2B", "T3A", "T3B", and "A", "B" means connector's hole site. Termination mode with "A" means long pin in A hole site, termination mode with "B" means long pin in B hole site, if without A or B means short pin. 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

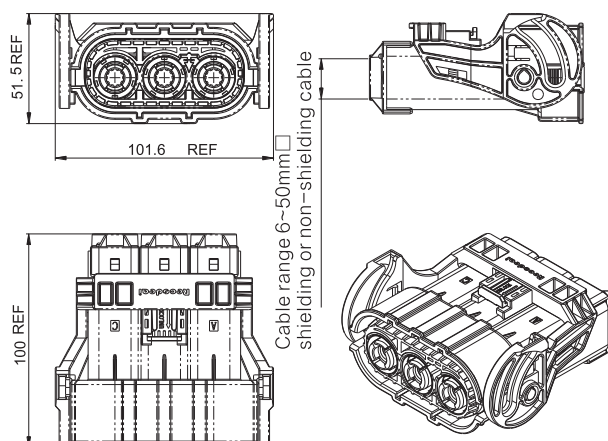
2 POS straight plug



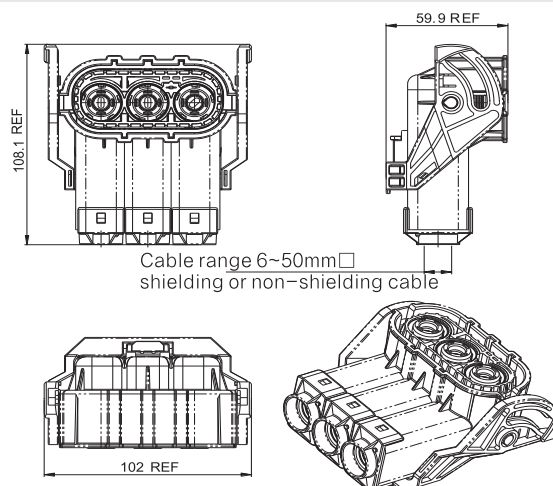
## 2 POS right angle



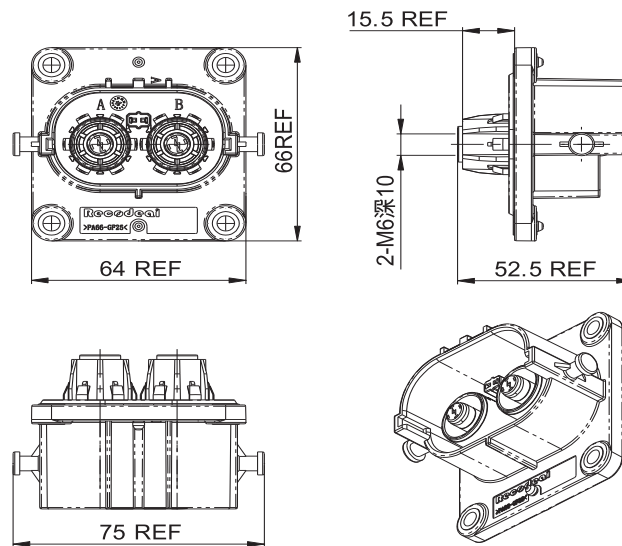
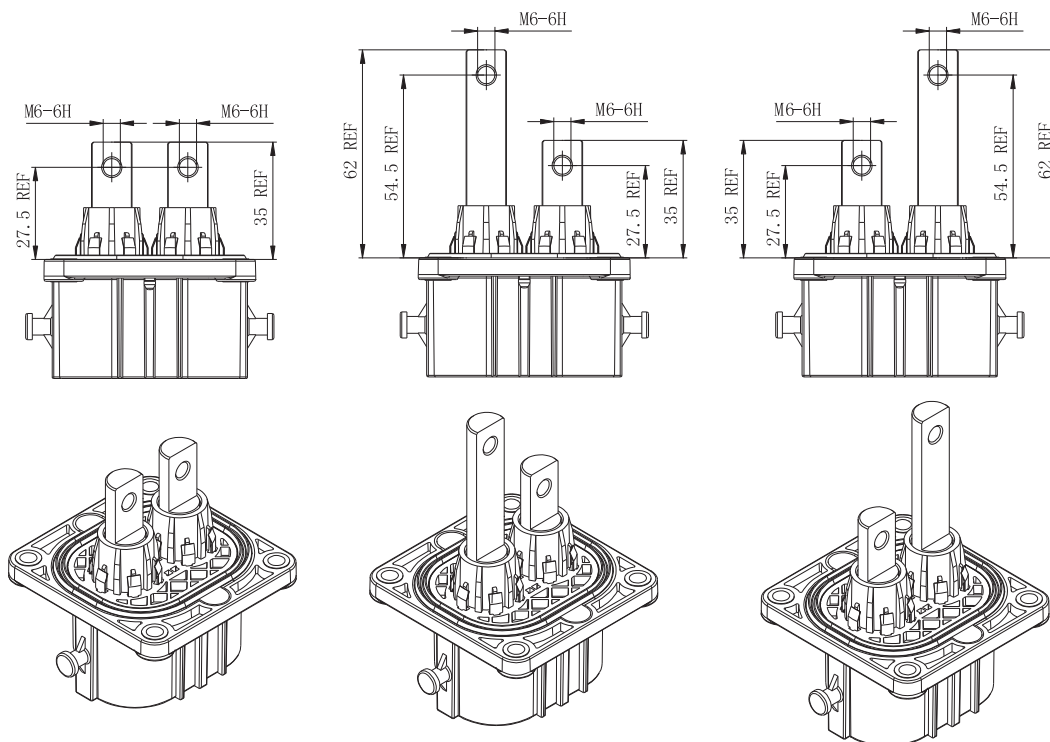
## 3 POS straight plug



## 3 POS right angle

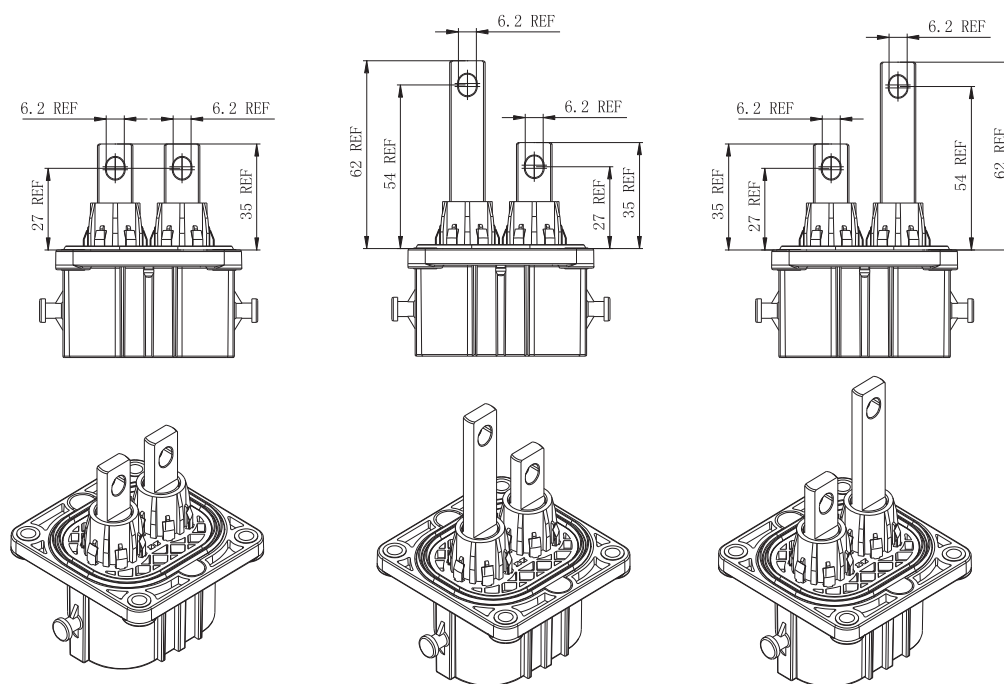




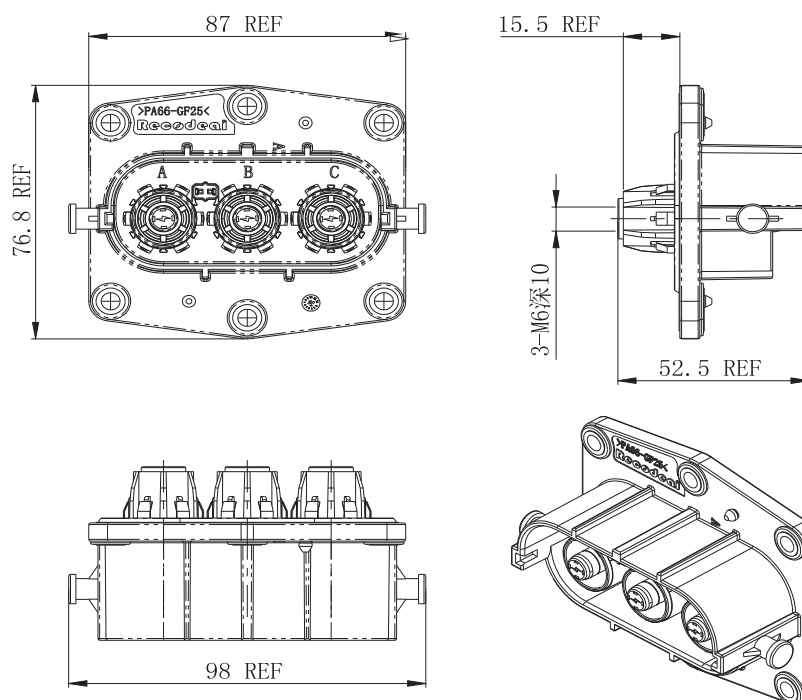
**2 POS Plug(copper bar with coaxial thread holeT)**

**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.

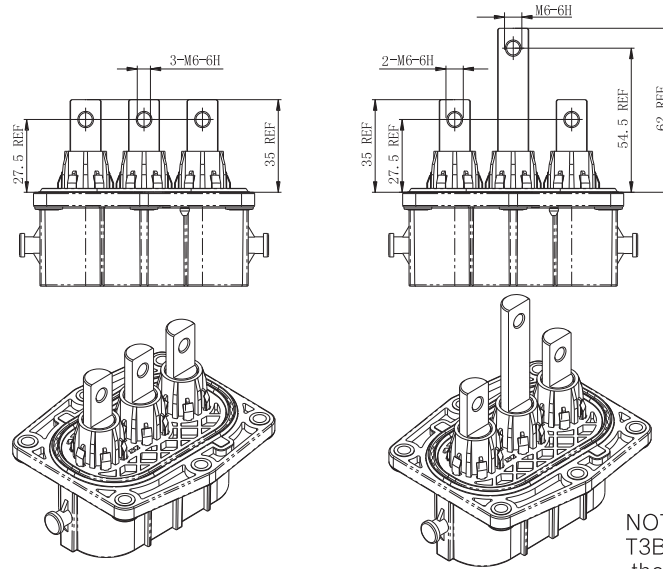
## 2 POS Plug(copper bar with radial thru hole T2,T2A,T2B, from left to right)



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

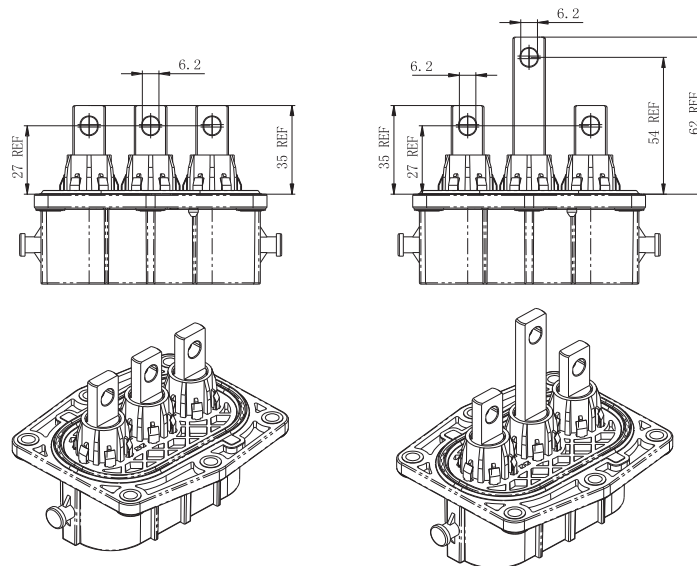


3 POS Jack(copper with radial thru hole T1, T1B, from left to right)



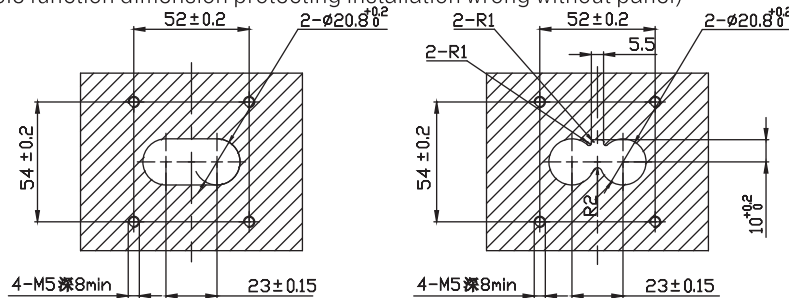
NOTE: When the end pin of the socket is T3, T3B, the pin on the corresponding socket in the picture above is opposite.

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)



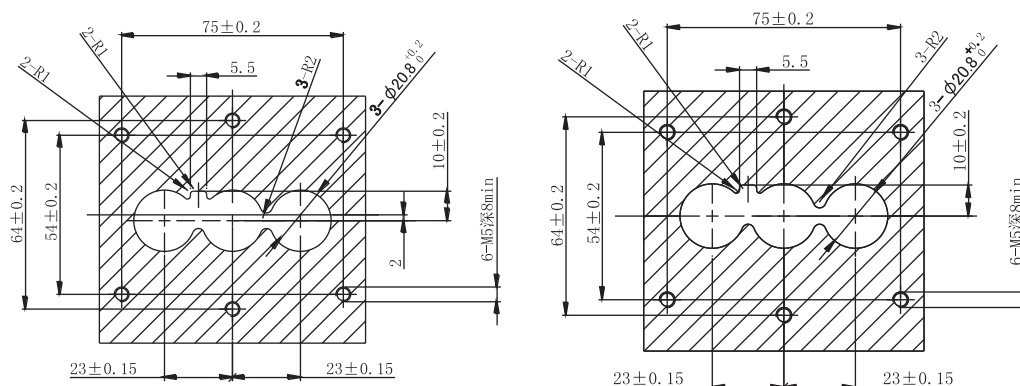
Conventional shielding requirement mounting hole (left)

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.

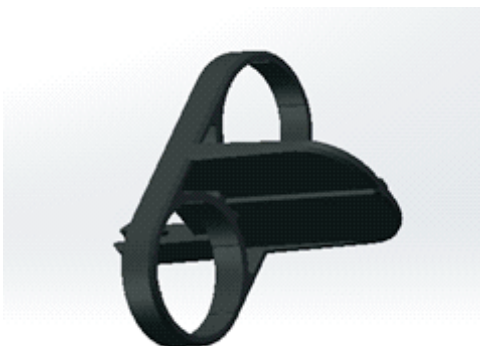
## 3 Pos Jack Z(left)、3 Pos Jack Z1(right)



## 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°C)  
 Salt spray: 500h(NaCl 5%)  
 Sealing: IP68B in mated condition, plug and jack meet IPXXB separately  
 Flame Retardant Grade: UL94-V0

### Mechanical Property

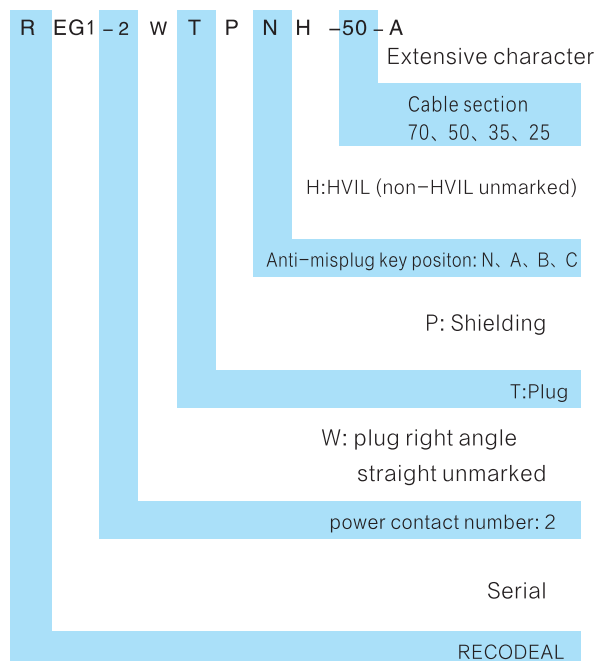
Mating Cycle:  $\geq 100$  times  
 Vibration: 10~80Hz, amplitude 0.75  
                   81~500Hz, 20g  
                   500~2000Hz, 18g

### Material

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

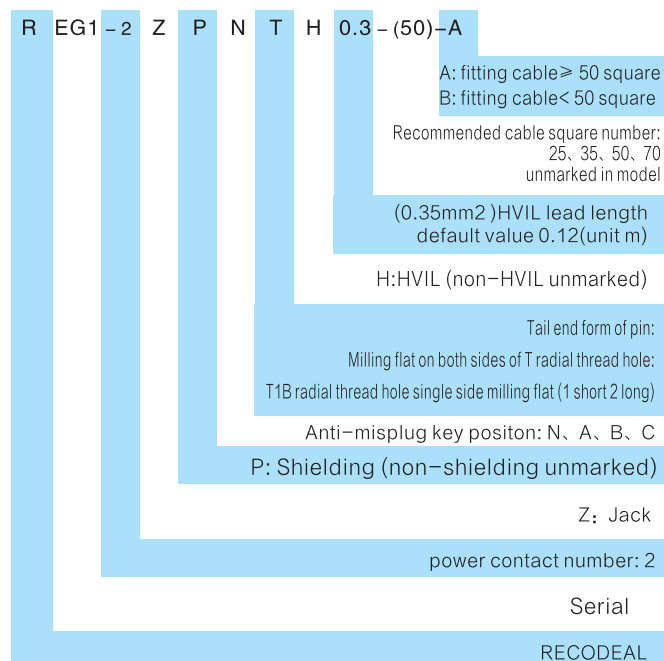
## Ordering Information

## 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.

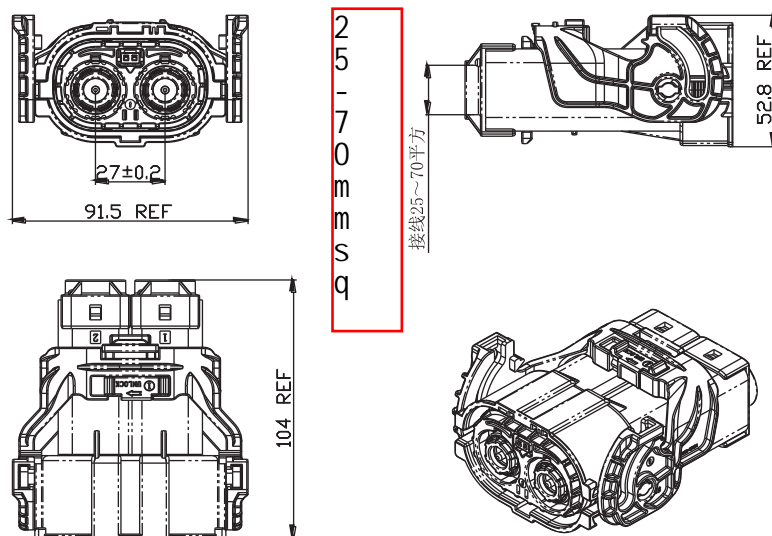
## Jack



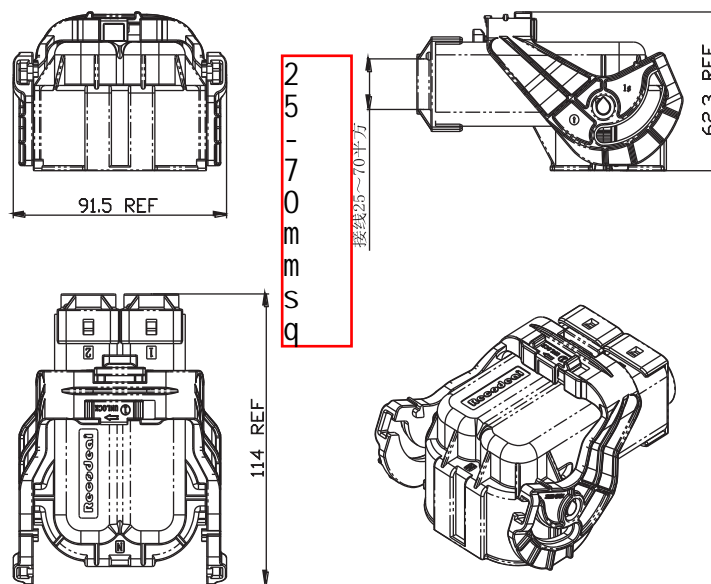
NOTE: Model (50) is not included in the model. In the tail end connection mode of the pin on the socket, T means that the pin on the socket of the connector is in the form of two-sided milling flat (Fig. 3). T1B means that the pin for position 1 is a short pin, while the 2 pin is a long pin, which is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

## Size

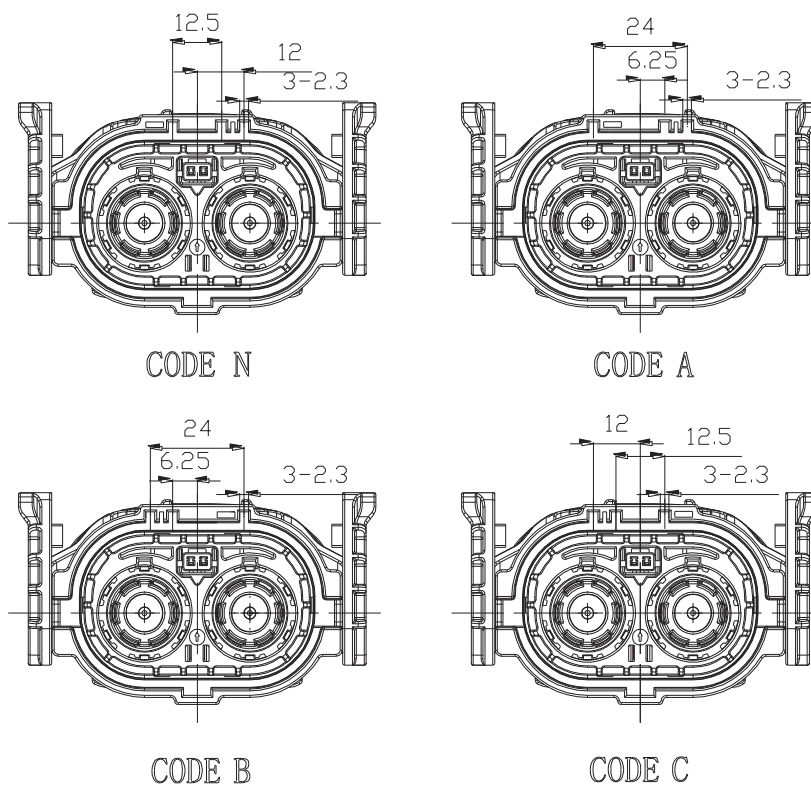
## 2 POS Straight Plug



2 POS right angle plug



Instruction according to the key position of the plug.





## 2 Pos jack T

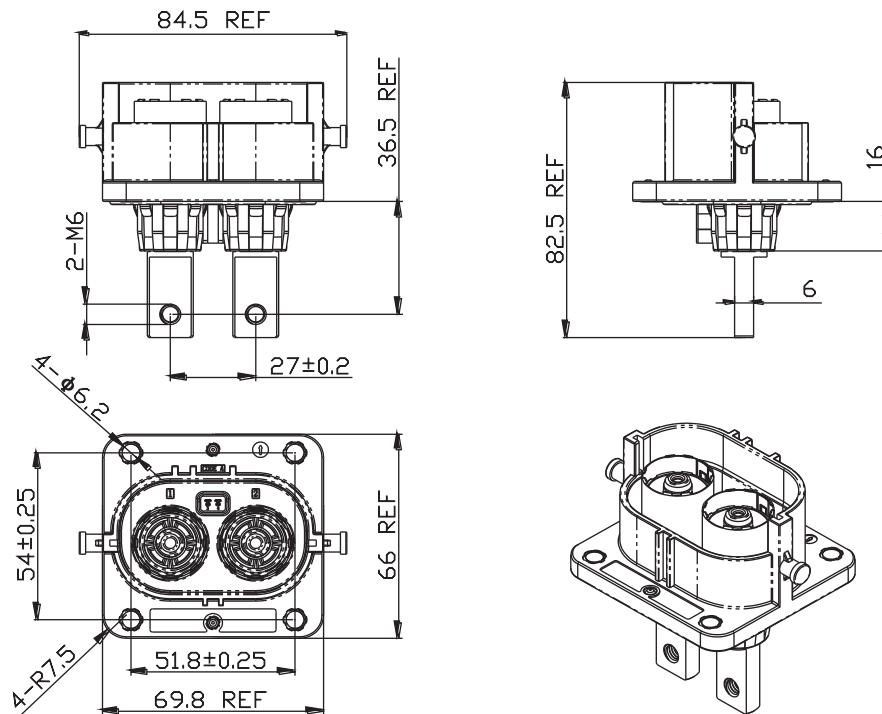


图3

## 2 Pos jack T1B

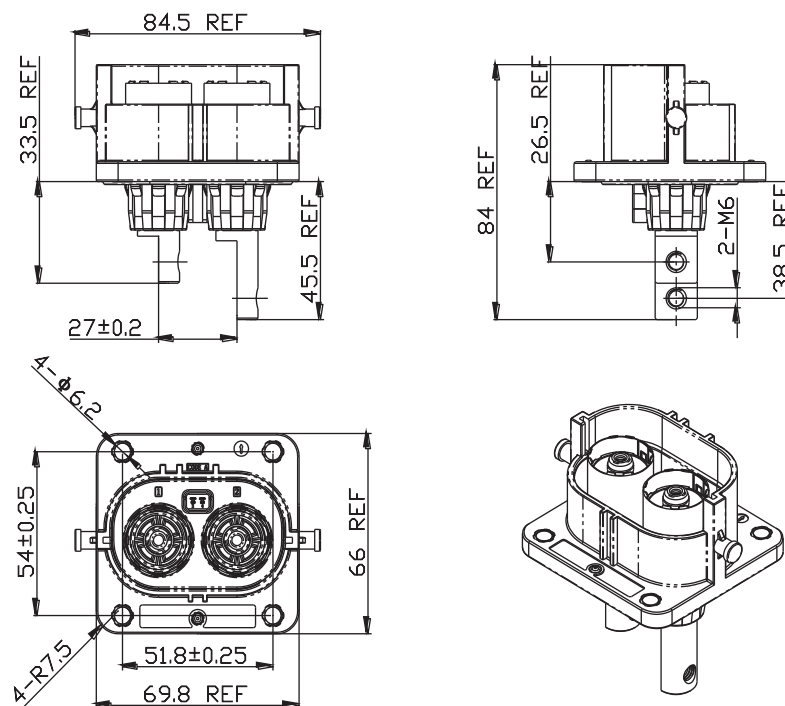
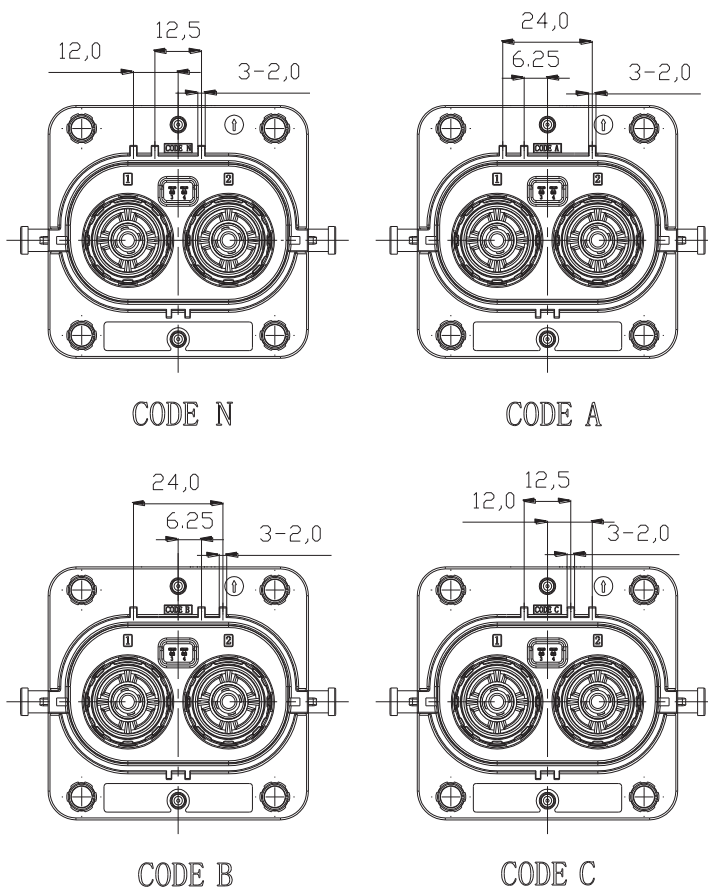


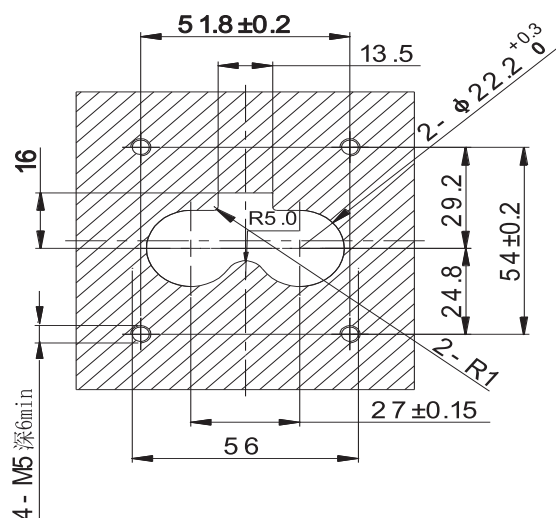
图4

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

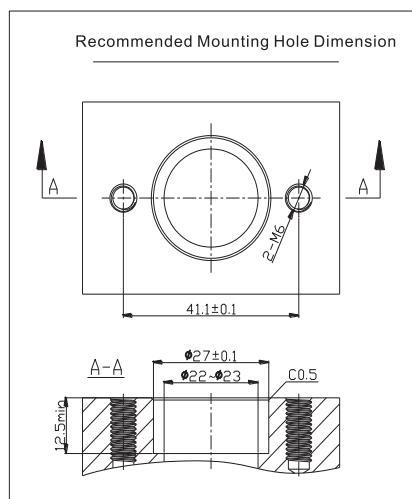
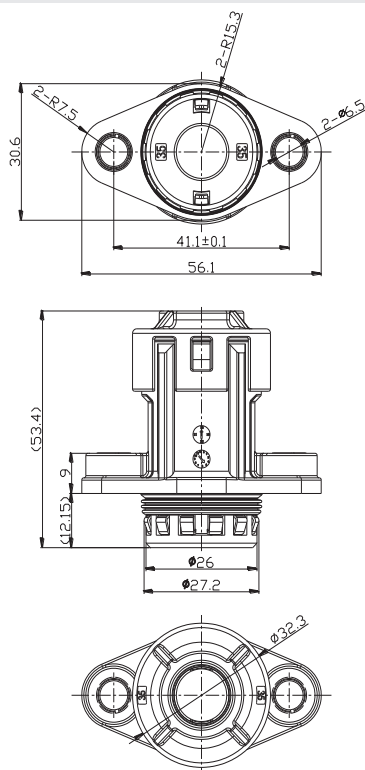
IPT: Serial code

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.

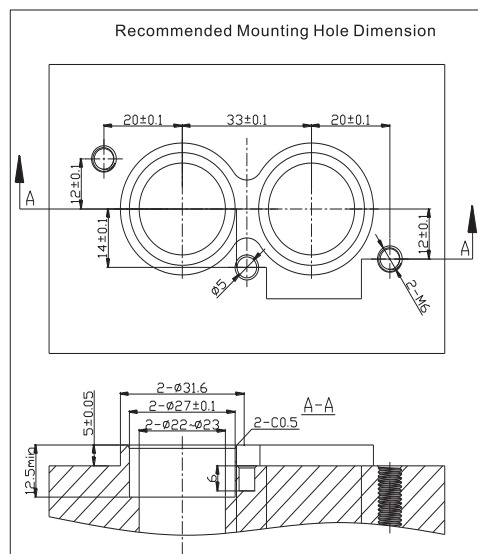
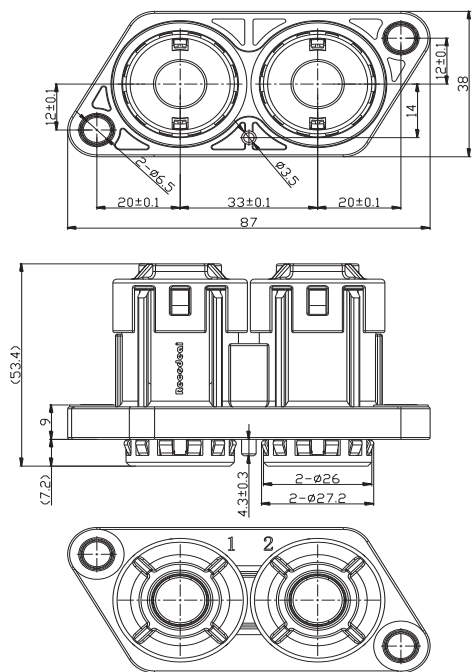
## Size

### 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

