



CATALOGUE

High Voltage Power Connector

Manual Service Disconnect (MSD)

Signal connector

Charging Connector

High Voltage Wire Harness

High Voltage PDU & BDU

EV & ESS SOLUTION PROVIDER

Company Profile

Based in Taiwan and founded in 2002, ANNREN TECHNOLOGIES Co., Ltd., (here after called “AT”) develops and produces battery compatible DC/DC electrical power converters, high efficiency on board chargers, and integrated all-in-one high voltage control units, like PDU, BDU, etc. including fan cooling and liquid cooling systems.

AT designs and manufactures system solutions to the EV OEM world widely. In response to EV industry market trending and customers’ demand changes, AT launched high voltage **power distribution units (PDU)**, **battery disconnected units (BDU)** for electric vehicle system in 2009. We also devote our R&D team into high voltage **on board charger(OBC)** & DC/DC converter since 2015. AT has been focused on electric vehicles and green energy products, and providing systematic solutions to worldwide OEM EV automotives.

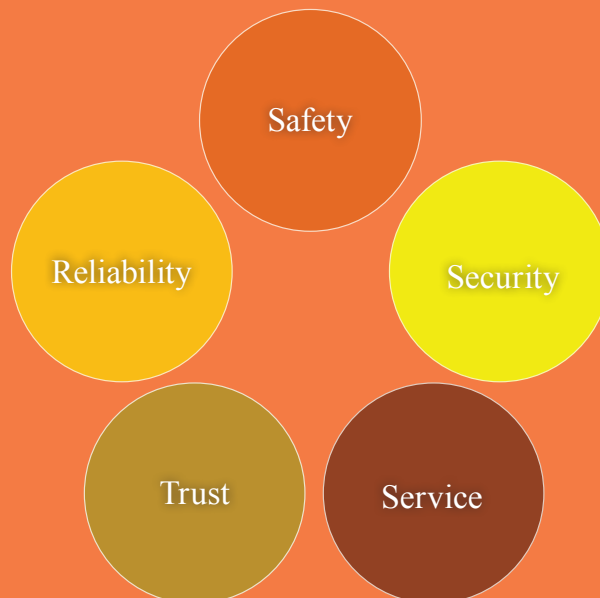
Our Core Competency: Systematic solutions like PDU, BDU, OBC, DC/DC converter, EVCC and SECC.

Product Categories

| | | |
|----------------------------|-------------------------------|------------------------------------|
| COMBO_PDU+OBC+DC/DC | On(off) Board Chargers | LV(HV) DC/DC Converters |
| PDU / BDU | EVCC & SECC | HV Connector |
| YEONHO Connector | Battery / BTMS | Energy Storage System (ESS) |

We according to SAE / IEC standard design our products, pass EMI, follow up the safety standards. Quality assurance. We provide our esteemed customers **safety, security, reliability, trust and service.**

Please feel free and contact us for product specification inquiries or OEM / ODM custom made requirements.



High Voltage Wire Harness Solution



The application of high voltage wire harness is to connect the high voltage equipment in the electric vehicle, such as the connection between PDU, battery pack, DC/DC converter, on board charger, air conditioner, pump, charging inlet, and charger socket etc. It involves the requirements of reliability, safety and other aspects, also is one of key parts of electric vehicle.

Features

- Cables temperature resistance $\geq 125^{\circ}\text{C}$
- Voltage requirements $\geq 500\text{ Vdc}$
- Cable with or without shielding
- IP67 Rating

Advantages

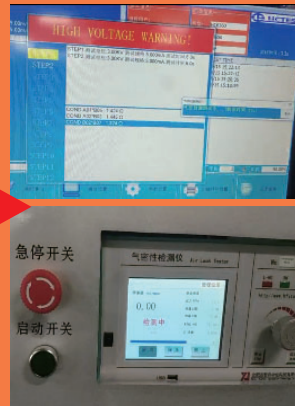
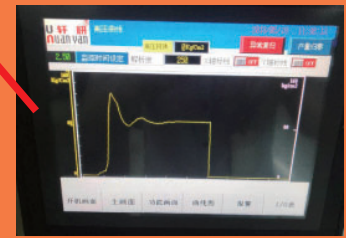
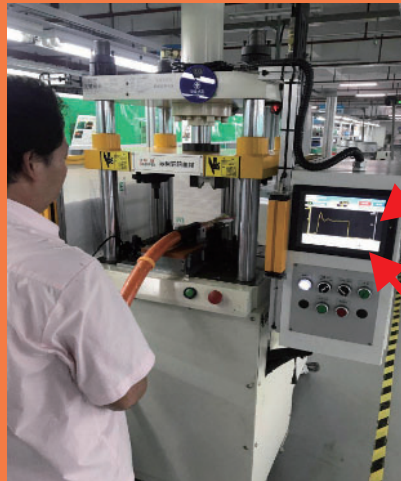
- In house made connectors & cables for the better solution of cost, quality and delivery
- Production line with MES traceability system
- Terminal crimping process has been monitored
- Complex processes like shielding layer combing have been implement of Automation or semi-automation
- Key test positions like air tightness, insulation withstand voltage and conduction have been monitored batch multi-variety support capability

Production Line Control Process

Quality Control

Intelligent Pressing System

- 10T~20T crimping equipment
- Safety Protection of Light Bolt
- On-line realtime of Layer processing system
- Monitoring & abnormal alarm control

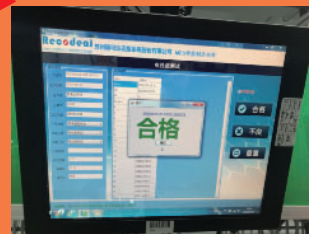


High Voltage Detection Platform

- Independent Detection Platform (Run ≥ 10 s)
- Electrical machine for electrical performance and airtight testing
- Test & Synchronization of Conduction, Insulation, Voltage & Airtight
- Safety Protection of Light Bolt
- Automatic testing of work flow & scan barcode
- Charging mode test to achieve overload, overcurrent, duty cycle and other parameters synchronous intelligent testing

MES traceability of workflow

- Implement of MES traceability of workflow
- Each process with Barcode scan for traceability
- Automatic identification/ overstation protection
- Test data storage / recording / reading
- Real-time monitoring and feedback of production quality, two-dimensional code traceability system





01 High Voltage Power Connector 15-80

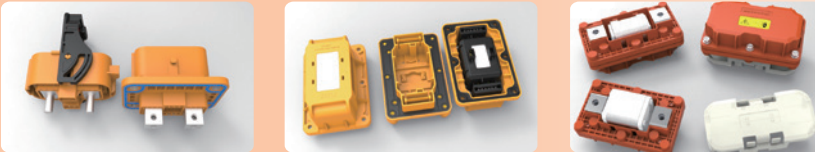
High Voltage Plastic Connector 16-49



High Voltage Metal Connector 52-80



02 Manual Service Disconnect (MSD) 81-98



03 Signal Connector 99-102



04 Charging Connector 111-112



05 High Voltage Wire Harness 116-117



06 High Voltage PDU & BDU 118-119







High voltage plastic connector

| Picture | Discription&application | Current Rating | Volatge Rating (DC) | No. of contact | Cable Section (mm²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|--|----------------|---------------------|----------------|---------------------|-----------|--------|----------------|-----------------|------|
|  | 2/3 POS High voltage plastic shell connector with shield . Main applying to bettry heating PTC、OBC、PDU、Compressor | 30A | 1000 | 2、 3 | 2.5-4 | option | option | Plastic | Ip68/ IP6K9K | 16 |
|  | REX High voltage lower current connector with shield Main applying to bettry heating PTC、OBC、PDU、Compressor | 28A | 1000 | 1、 2 | 2.5 | option | N/A | Plastic | IP68/ IP6K9K | 18 |
|  | REMIII(2/3/4)High voltage plastic shell connector with shield . Main applying to bettry heating PTC、OBC、PDU、Compressor | 40A | 1000 | 2、 3、 4 | 2.5-6 | option | option | Plastic | IP68/ IP6K9K | 20 |
|  | REMIII High voltage plastic shell connector with shield . Main applying to bettry heating PTC、OBC、PDU、Compressor | 40A | 1000 | 2 | 2.5-6 | option | option | Plastic | IP68/ IP6K9K | 24 |
|  | Multi -POS HV Plastic shell connector with shield(REM) Main applying to bettry heating PTC、OBC、PDU、Compressor | 40A | 1000 | 2、 3、 4 | 2.5-6 | option | option | Plastic | IP68/ IP6K9K | * |
|  | 2/4 POS plastic shell connector with shield(REL) Main applying to bettry heating PTC、OBC、PDU、Compressor | 60A | 1000 | 2、 4 | 2.5-10 | option | option | Plastic | IP68/ IP6K9K | 25 |
|  | 3 POS plastic shell connector (RE L 1) Main applying to bettry heating PTC、OBC、PDU、Compressor | 40A | 1000 | 3 | 2.5-6 | N/A | option | Plastic | IP68/ IP6K9K | 27 |
|  | 4 POS plastic shell connector with shield(RE L2) Main applying to bettry 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 (mm²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|---------------------|-----------|--------|----------------|-----------------|------|
|  | 6 POS plastic shell connector with shield(RE L3) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 1000 | 6 | 2.5-6 | option | option | Plastic | IP68/ IP6K9K | 29 |
|  | 2 POS High current plastic shell connector with shield(REN) 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 | * |
|  | 2 POS High current plastic shell connector with shield(REN1) 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 |
|  | 2 POS High current plastic shell connector with shield(REK) 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 | * |
|  | Single POS plastic shell connector (REA) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 250A | 1000 | 1 | 25-70 | N/A | N/A | Plastic | N/A | 31 |
|  | Single POS plastic connector (REA1) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 350A | 1000 | 1 | 25-120 | N/A | N/A | Plastic | IP68/ IP6K9K | 33 |
|  | Single POS High current plastic shell connector (REF) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 250A | 1000 | 1 | 25-70 | N/A | N/A | Plastic | IP68/ IP6K9K | * |
|  | Single POS plastic shell connector (REB) Applying in battery positive/negative to PDU、PDU to motor control ler ,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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|-----------------|------|
|  | 2/3 POS High voltage plastic shell connector with shield(REG) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 200A | 1000 | 2、3 | 25-50 | option | option | Plastic | IP68/ IP6K9K | 37 |
|  | 2 POS High voltage plastic shell connector with shield(REG) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 250A | 1000 | 2 | 25-70 | option | option | Plastic | IP68/ IP6K9K | 44 |
|  | 1-3 POS plastic shell connector (RIPT) Applying in battery positive/negative to PDU、PDU to motor control ler ,DC charging outlet to battery.Battery box connection | 250A | 1000 | 1、2、3 | 25-50 | option | N/A | Plastic | IP68/ IP6K9K | 49 |
|  | Cross wall Terminal Applying in bettery 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|----------|------|
|  | 2-3 POS low voltage curve connector with shield Main applying to bettry heating PTC、OBC、PDU、Compressor. | 25A | 1000 | 2、3 | 2.5-4 | option | option | Metal | IP68 | 52 |
|  | 2 POS 40A metal shell connector with shield.(RQH) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 1000 | 2 | 2.5-6 | option | option | Metal | IP68 | 53 |
|  | 3 POS 40A metal shell connector with shield.(RQH) Main applying to bettry 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 ²) | Shiolding | HVIL | Shell Material | IP level | Page |
|---|--|----------------|---------------------|--------------------|----------------------------------|-----------|----------------|----------------|----------|------|
|  | 3 POS 40A metal shell connector with shield.(RQB C-4) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 1000 | 3 | 2.5-6 | option | option | Metal | IP68 | 55 |
|  | 2 POS 40A metal shell connector with shield.(RQB C-5) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 60A | 1000 | 2 | 2.5-10 | option | option | Metal | IP68 | 58 |
|  | Multi POS push-pull metal shell circular connector.(RQB) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 750 | Refer to portfilio | 0.75-6 | N/A | Part with HIVL | Metal | IP68 | * |
|  | push-pull metal shell circular connector(RQG) Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 800 | 2 | 2.5-6 | option | option | Metal | IP68 | * |
|  | 8 POS High voltage metal shell connector Main applying to bettry heating PTC、OBC、PDU、Compressor. | 16A | 1000 | 8 | 2.5 | option | N/A | Metal | IP68 | * |
|  | 4 POS High voltage current Main applying to bettry heating PTC、OBC、PDU、Compressor. | 60A | 1000 | 4 | 2.5-10 | N/A | N/A | Metal | IP68 | * |
|  | 5 POS High voltage current Main applying to bettry heating PTC、OBC、PDU、Compressor. | 40A | 1000 | 5 | 1.5-6 | N/A | N/A | Metal | IP68 | * |
|  EOL | 1 POS HV/C Push-Pull metal shell circular connector(RQF) Applying in battery positive/ negative to PDU、PDU to motor control ler ,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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|--|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|----------|------|
|  | 1 POS High voltage current metal shell circular connector(RQD) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 250A | 1000 | 1 | 16-70 | option | N/A | Metal | IP68 | 64 |
|  | Low-cost HV metal connector (REQ4) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 250A | 1000 | 1 | 25-70 | option | option | Metal | IP68 | 69 |
|  | 2 POS HV/C Metal shell connector with shield.(REG2) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 300A | 1000 | 2 | 25-95 | option | option | Metal | IP68 | 71 |
|  | 2 POS Metal shell connector (RIPTII) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 300A | 1000 | 2 | 25-70 | option | N/A | Metal | IP68 | 73 |
|  | 3 POS cross cylinder metal shell connector(RET) Applying in PDU to motor control ler quick connection | 250A | 1000 | 3 | N/A | option | N/A | Metal | IP68 | 74 |
|  | 2 POS HV super current metal shell connector with shield(REX) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 350A | 1000 | 2 | 70-120 | option | option | Metal | IP68 | 75 |
|  | 1 POS high current push-pull metal shell connector(RQAI) Applying in battery positive/negative to PDU、 PDU to motor control ler ,DC charging outlet to battery.Battery box connection。 | 400A | 1000 | 1 | 70-135 | option | option | Metal | IP68 | 77 |
|  | Battery swap connector PFSC-TQA-BS1270/PFSC-TQA-CP1270 Quick swapping 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|----------|------|
|  | Manual service disconnector (MSD) Fuse current: 200A--630A Fuse Voltage: 690V AC Current Rating:250A | 220A | 500 | 2 | N/A | N/A | option | Plastic | IP68 | * |
|  | Manual service disconnector (MSD1) 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 |
|  | Manual service disconnector (MSD1A) With out Fuse; Current Rating:500A; Same size with MSD1 | 500A | 1000 | 2 | N/A | N/A | option | Plastic | IP68 | * |
|  | Manual service disconnector (MSD2) Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A | 250A | 750 | 2 | N/A | N/A | option | Plastic | IP68 | 83 |
|  | Manual service disconnector (MSD3) Fuse current: 200A--400A Fuse Voltage: 500V DC Current Rating:200A | 200A | 500 | 2 | N/A | N/A | option | Plastic | IP68 | 86 |
|  | Manual service disconnector (MSD4) Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A | 250A | 750 | 2 | N/A | N/A | option | Plastic | IP68 | 89 |
|  | Manual service disconnector (MSD5) Fuse current: 200A--630A Fuse Voltage: 750V DC Current Rating:250A | 250A | 750 | 2 | N/A | N/A | option | Plastic | IP68 | 91 |
|  | Manual service disconnector (MSD7) 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|----------|------|
|  | <p>Manual service disconnecter (MSD9) Fuse current: Voltage500V.DC80A ---450A; Current Rating: 200A</p> | 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|--|----------------|---------------------|----------------|----------------------------------|-----------|------|----------------|----------|------|
|  | <p>5 POS Bayonet circular connector Applying to battery management system and other EV signal control system.</p> | 13A | 400 | 5 | 0.5-1.5 | N/A | N/A | Metal | IP67 | * |
|  | <p>6 POS Push-Pull circular connector Applying to battery management system and other EV signal control system.</p> | 10A | 300 | 6 | 0.5-1 | N/A | N/A | Metal | IP67 | * |
|  | <p>7 POS Bayonet circular connector Applying to battery management system and other EV signal control system.</p> | 7A | 400 | 7 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | <p>8 POS Bayonet circular connector Applying to battery management system and other EV signal control system.</p> | 13A | 400 | 8 | 0.5-1.5 | N/A | N/A | Metal | IP67 | * |
|  | <p>8 POS Bayonet circular connector (Tiny) Applying to battery management system and other EV signal control system.</p> | 7A | 400 | 8 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | <p>8 POS Push-Pull circular connector Applying to battery management system and other EV signal control system.</p> | 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|---|----------------|---------------------|----------------|----------------------------------|-----------|------|----------------|----------|------|
|  | 8 POS Circular Signal Plastic shell connector 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 |
|  | 10 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 10 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | 12 POS Push-Pull Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 12 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | 12 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 13A | 400 | 12 | 0.5-1.5 | N/A | N/A | Metal | IP67 | * |
|  | 12 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 12 | 0.5-1.5 | N/A | N/A | Metal | IP67 | * |
|  | 12/18 POS Circular Signal Plastic shell connector 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 |
|  | 19 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 19 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | 19 POS Push-Pull Circular Signal connector 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 ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|--|----------------|---------------------|--|----------------------------------|-----------|------|----------------|----------|------|
|  | 26 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 13A | 400 | 26 | 0.5-1.5 | N/A | N/A | Metal | IP67 | * |
|  | 32 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 32 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | 32 POS Circular Signal Plastic shell connector Applying to battery management system and other EV signal control system. | 13A | 400 | 26Signal Terminal 43 Power Terminal | Signal 0.35-0.8 Power 0.5-1.5 | N/A | N/A | Plastic | IP68 | 101 |
|  | 37 POS Bayonet Circular Signal connector Applying to battery management system and other EV signal control system. | 7A | 400 | 37 | 0.5-0.75 | N/A | N/A | Metal | IP67 | * |
|  | 46 POS Bayonet Circular Signal connector 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

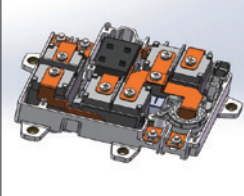
| Picture | Discription&application | Current Rating | Volatge Rating (DC) | No. of contact | Cable Section (mm ²) | Shielding | HVIL | Shell Material | IP level | Page |
|---|--|------------------------|---------------------|----------------|----------------------------------|-----------|------|----------------|----------|------|
|  | CCS combo 2 AC/DC integrated charging socket 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 | 112 |



EV High Voltage Harness Solution

| Picture | Discription&application | Current Rating | Volatge Rating (DC) | No. of contact | Cable Section (mm ²) | Shielding | HVIL | Shell Material | Page |
|---|--|----------------|---------------------|----------------|----------------------------------|-----------|------|----------------|------|
|  | <p>EV High Voltage Harness</p> <p>Applying to battery management system PDU signal and other EV signal control system</p> | option | option | option | option | N/A | N/A | option | 116 |

High Voltage PDU Solution

| Picture | Discription&application | Current Rating | Volatge Rating (DC) | No. of contact | Cable Section (mm ²) | Shielding | HVIL | Shell Material | Page |
|--|--|----------------|---------------------|----------------|----------------------------------|-----------|--------|----------------|------|
|  | <p>Power Distribution Unit (PDU)</p> <p>Customized according to customer requirements</p> | N/A | N/A | N/A | N/A | option | option | Metal | 118 |

Note:

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

email: sales@annren.com

High Voltage Power Connectors

The voltage ranges of high voltage connectors in electric vehicles are between 300V-1000V current ranges are 20A- 500A, POS is 1-6, general requirements with the function of shielding and interlock.

The applications are as follows.

| Current | POS | Application |
|-----------|---------|--|
| 30A/40A | 2/3/4/6 | A/C, PTC, OBC, DC/DCDC, PDU, OIL PUMP |
| 60A | 2/4 | A/C, PTC, OBC, DC/DCDC, PDU |
| 120A | 2 | Battery +/-, MCU, DC Socket, PDU, BDU |
| 200A | 2/3 | Battery +/-, MCU, DC Socket, PDU, BDU |
| 250A | 1/2/3 | Battery +/-, MCU, DC Socket, PDU, BDU |
| 300A/350A | 1 | Battery +/-, MCU, DC Socket, PDU, BDU, ESS |

Our model List

- Metal: RQD, RQB, RQF, REX series
- Plastic: REG, REG1, REMII, REL, RED
- ESS: REA, REA 1 series



2/3 POS High voltage plastic shell connector with shield(RED)

Describe

- 2/3 POS
- Plastic shell
- Locking handle
- Secondary locking structure
- High protection degree
- IP6K9K、IP68
- 6 anti-misplug key position.
- Cable section: 2.5mm² — 4mm²



Application

- Current Rating: 22A=2.5mm²
25A=3mm²
30A=4mm²
- Voltage Rating: 1000V DC
- Shielding: Option
- HVIL: Option
- Working Temperature: -40°C ~ +140°C

Ordering information

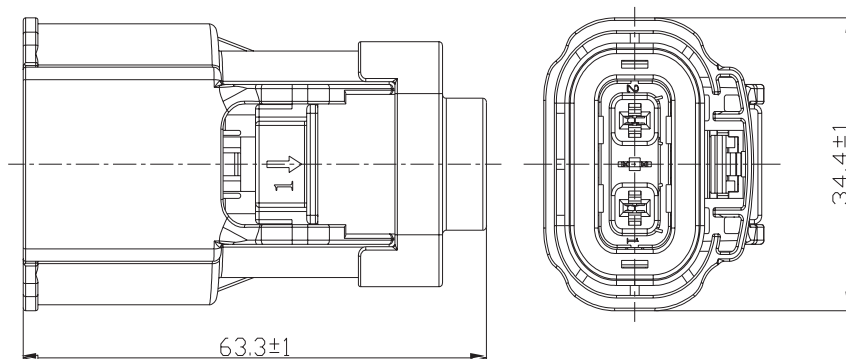
RED-TM2PAH-2.5-A-TW

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
 Product Series

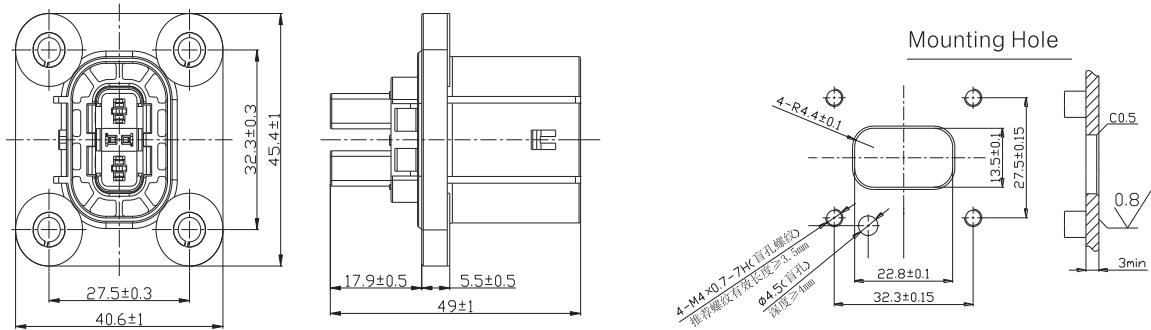
Note: connector type plug generated according to naming rules does not contain power terminal, socket does not contain power & interlocking terminal. Three-core connectors do not have high-voltage interlocking, three-core connector plug can not adapt to 3 mm² and 4 mm² shielded wire.

Size

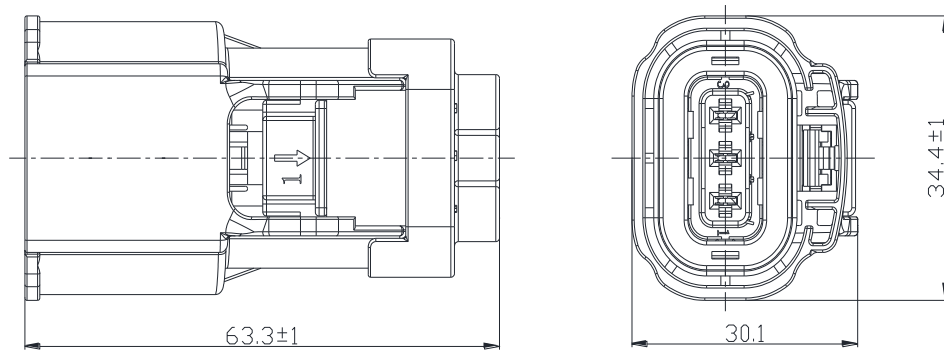
2 POS Plug



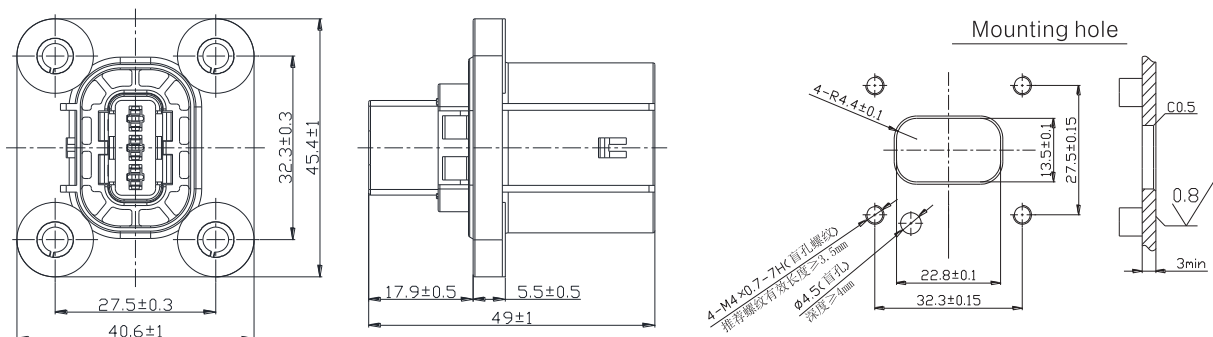
2 POS Flange installation socket



3 POS Plug



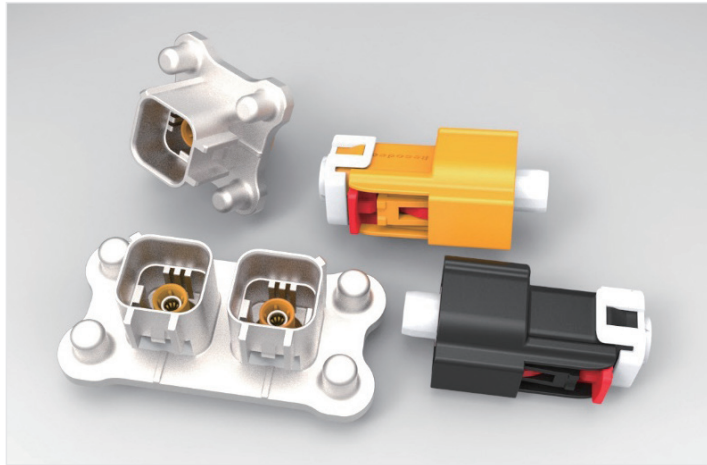
3 POS Flange installation socket



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

Describe

- 1/2 POS
- 1.Plug : plastic
- 2.Socket : aluminium alloy shell
- Locking handle
- Secondary Locking structure
- High protection degree: IP6K9K · IP68
- 2 anti-misplug key position
- Cable section: 2.5mm²
- Shield

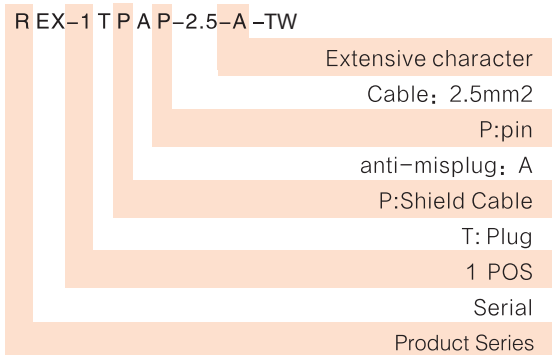


Application

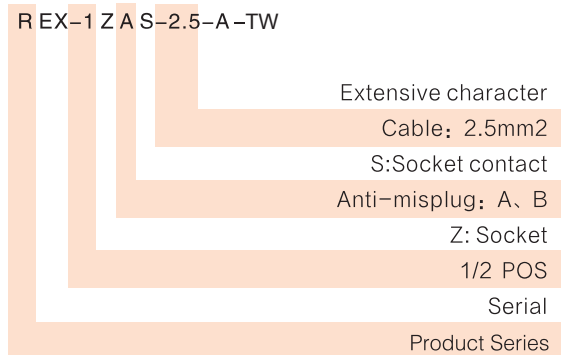
- Current Rating: 28A
- Voltage Rating: 1000V DC;
- Shielding: Option
- Working temperture: - 40°C~140°C

Ordering information

Plug



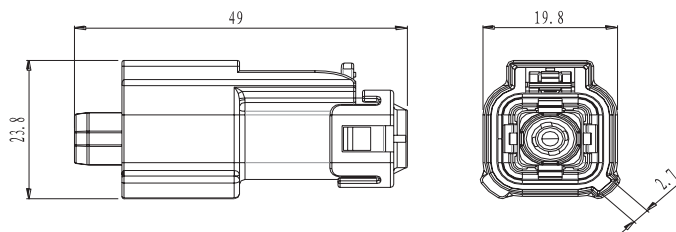
Socket



Note: Plug&Socket exclude Terminal

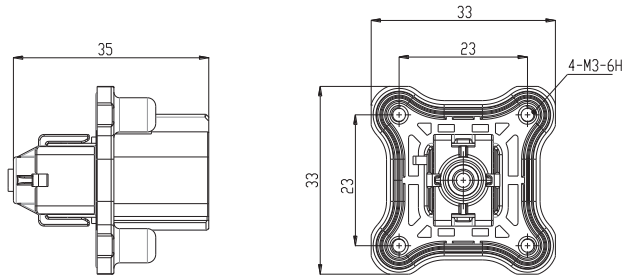
Size

PLUG

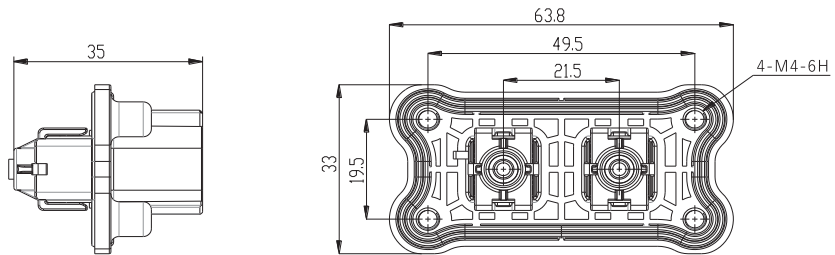


SOCKET

1 POS:

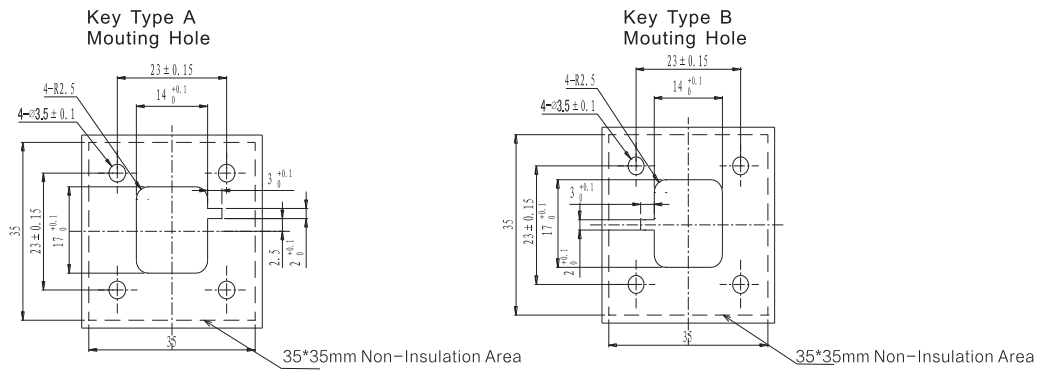


2 POS:

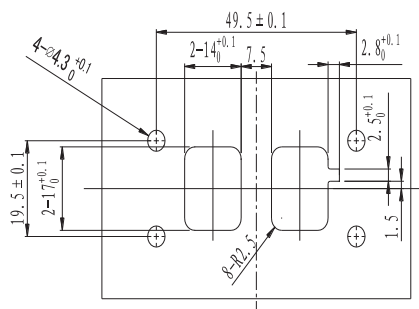


Mounting Hole

1 POS



2 POS



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-TW | Plug, 2 POS, Shield, Key position:A, HVIL, 2.5mm ² |
| 2 | 2 POS Jack(REM II) | REM II -Z2PAH-2.5-A-TW | Flange Jack, 2 POS, Shield, Key position:A, HVIL, 2.5mm ² |
| 3 | 3 POS Plug(REM II) | REM II -T3PAH-2.5-A-TW | Plug, 3 POS, Shield, Key position:A, HVIL, 2.5mm ² |
| 4 | 3 POS Jack(REM II) | REM II -Z3PAH-2.5-A-TW | Flange Jack, 3 POS, Shield, Key position:A, HVIL, 2.5mm ² |

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 2.5mm² to 6.0mm² 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(For2.5mm²cable);
 25A(For4mm²cable);
 40A(For6mm²cable);
 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 ² non-shielded cable | Φ3.3mm ~ Φ4.1mm |
| 4mm ² non-shielded cable | Φ4.0mm ~ Φ4.8mm |
| 6mm ² non-shielded cable | Φ4.6mm ~ Φ5.4mm |
| 2.5mm ² shielded cable | Φ5.3mm ~ Φ6.1mm |
| 4mm ² shielded cable | Φ6.1mm ~ Φ6.9mm |
| 6mm ² 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

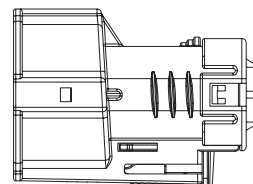
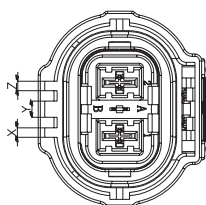
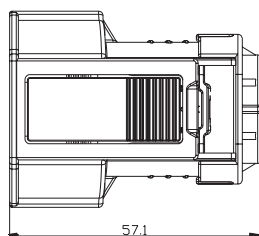
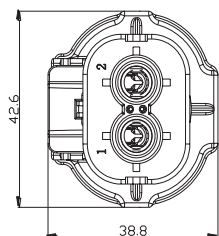
Ordering Information

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

Extensive character
 Cable section(mm²) :2.5mm²,4mm²,6mm²
 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
 Product Series

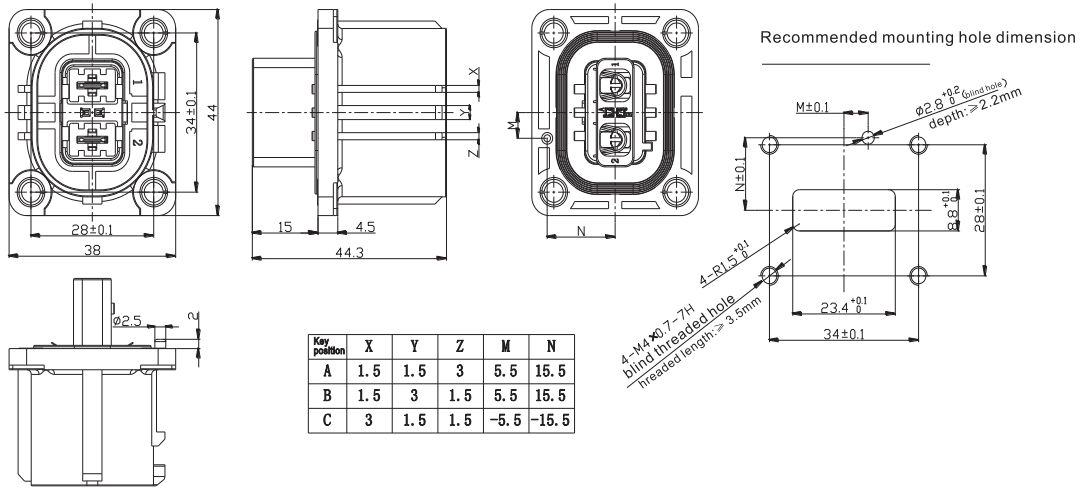
Size

2 POS Plug

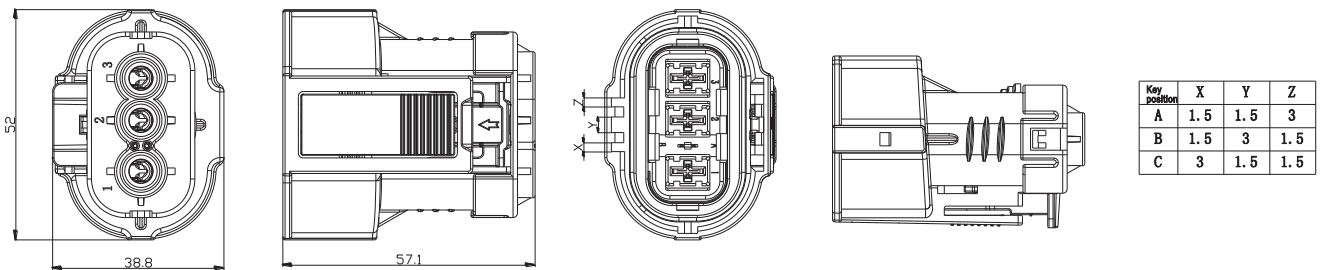


| Key position | X | Y | Z |
|--------------|-----|-----|-----|
| A | 1.5 | 1.5 | 3 |
| B | 1.5 | 3 | 1.5 |
| C | 3 | 1.5 | 1.5 |

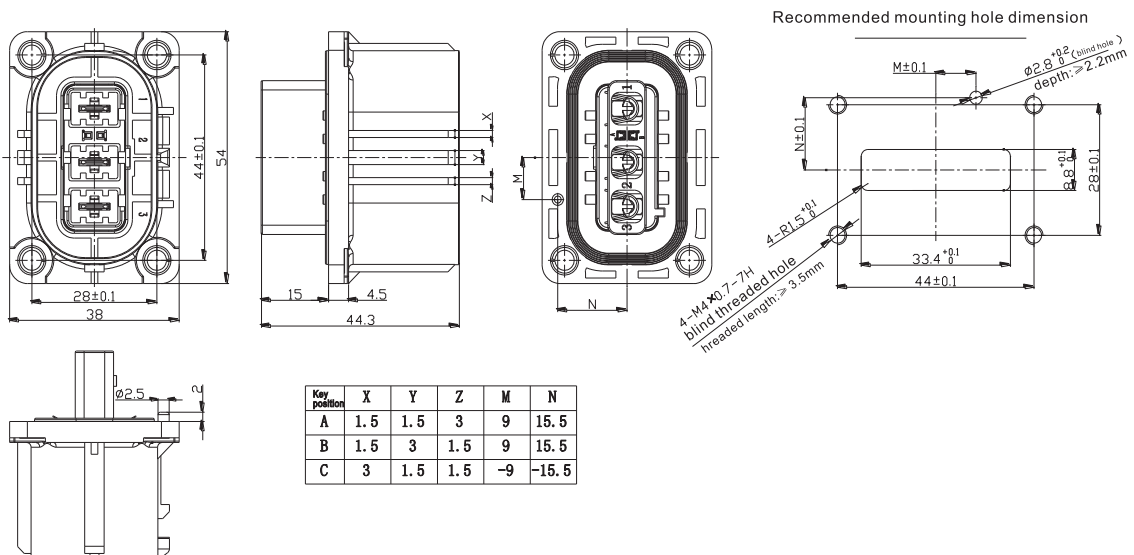
2 POS Flange Jack



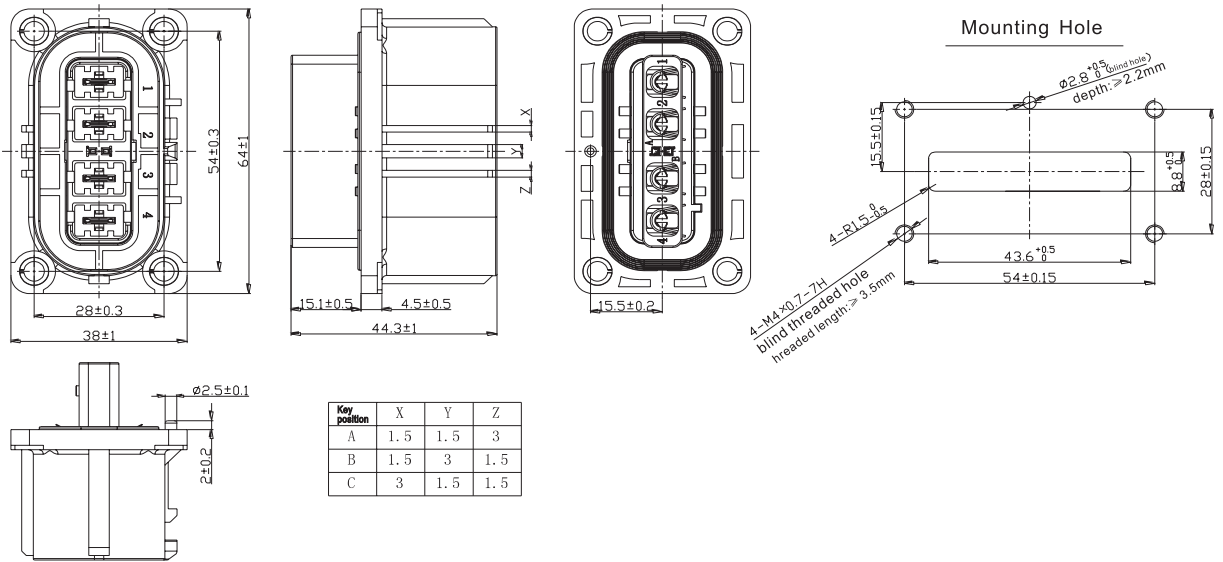
3 POS Plug



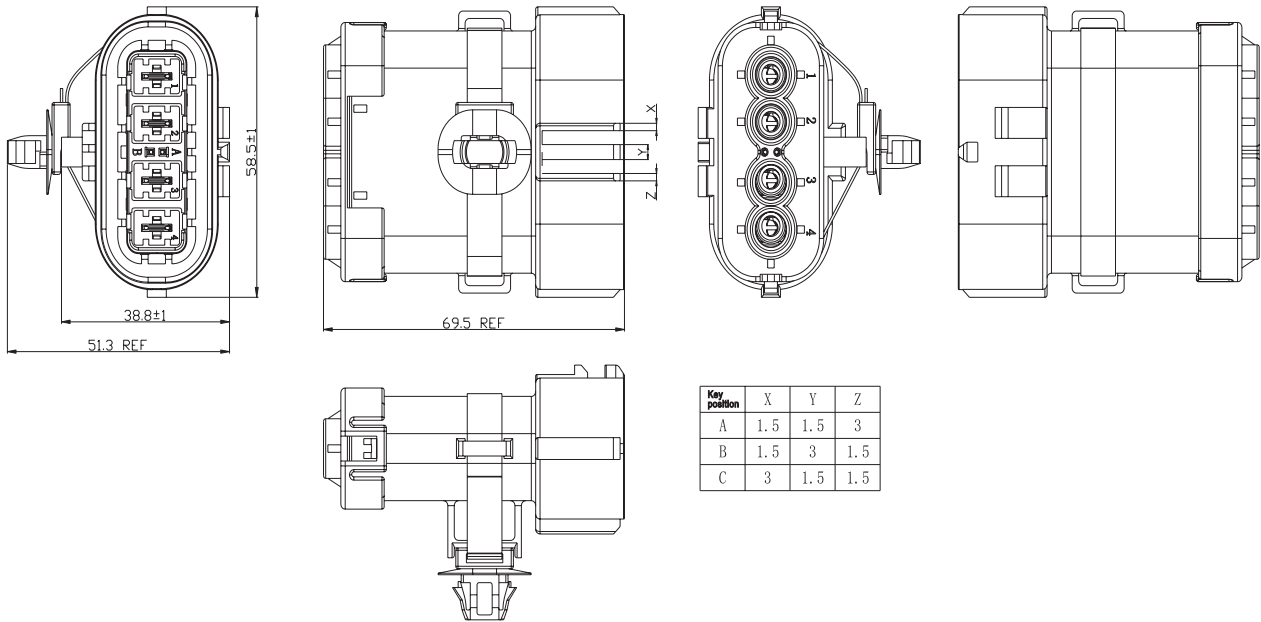
3 POS Flange Jack



4 POS FLANGE SOCKET



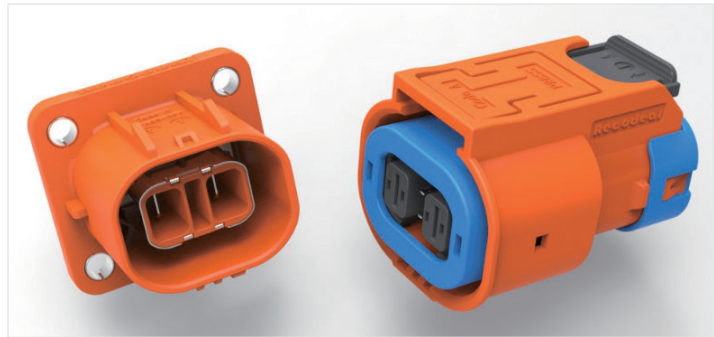
4 POS PLUG



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

Describe

- 2 POS
- 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

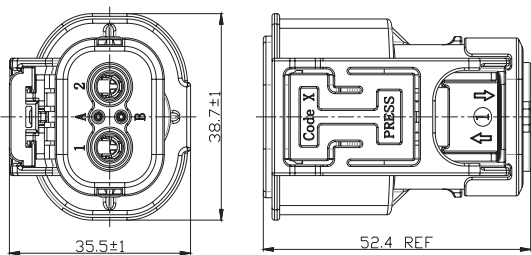
REM III - Z 2 P A H - 2.5 - B - TW

- 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
- Product Series

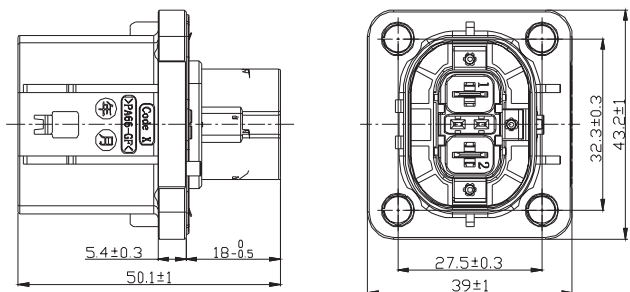
Plug and Socket exclude matching Power Terminal and HVIL which should be purchased separately.

Size

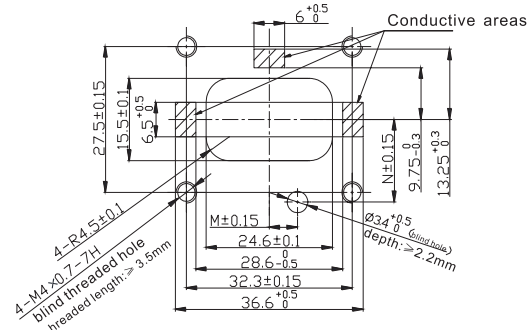
Plug



Socket



Mounting Hole



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

Describe

- 2/4 POS
- Plastic Shell
- Secondary locking structure
- False proof design
- High protection degree: IP6K9K、IP68
- 4 Anti-misplug
- Cable Section: 2.5mm²
- 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-T4PAH-6-A-TW

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

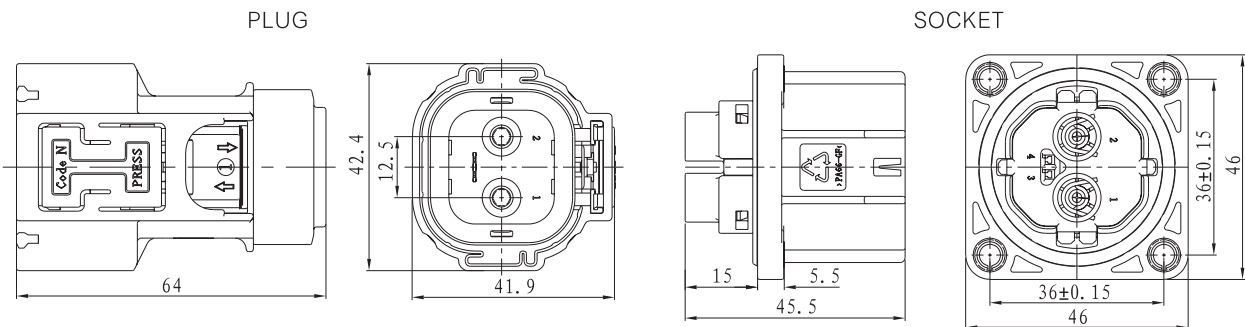
T:PLUG; Z: Socket

Product Series

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

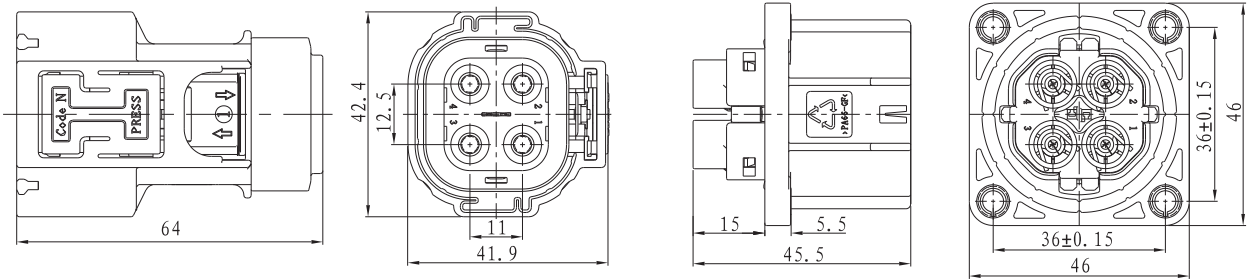
2 POS



SIZE of 2 POS

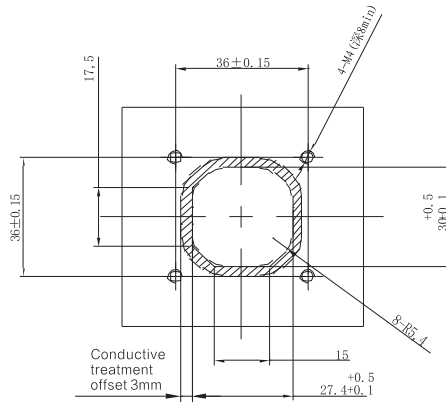
PLUG

Socket

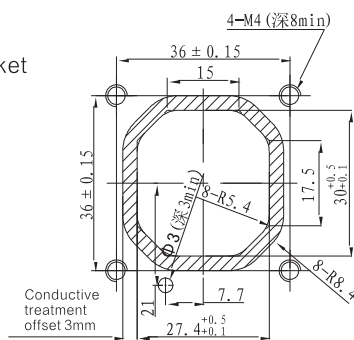


Install hole size

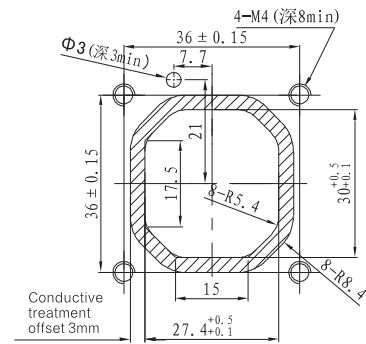
hole size of non-misfit socket



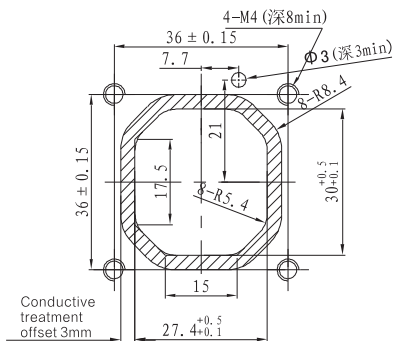
Hole size of anti-misfit socket



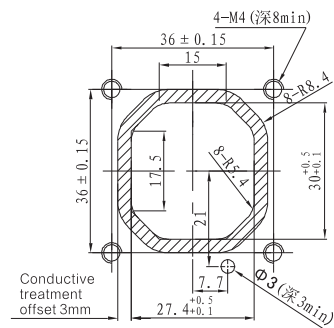
Key Position N



Key Position A



Key Position B

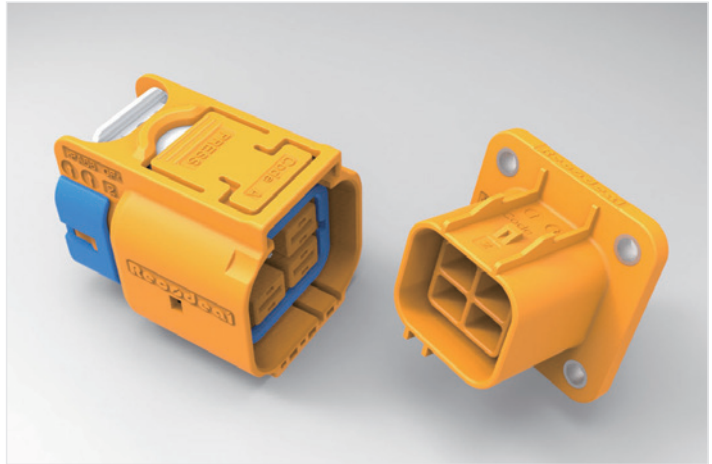


Key Position C

3 POS High Voltage Plastic Shell Connector (REL1)

Describe

- 3 POS
- Plastic shell
- Secondary locking structure
- False proof design
- High protection degree: IP6K9K、IP68
- 4 Anti-misplug
- Cable Section: 2.5mm²
- PTC、OBC、PDU



Application

- Current Rating: 16A=2.5mm²
25A=4mm²
40A=6mm²
- Voltage rating: 1000V DC
- Shield: N
- HVIL: Option
- Temperature Range: -40°C ~ 140°C

Ordering information

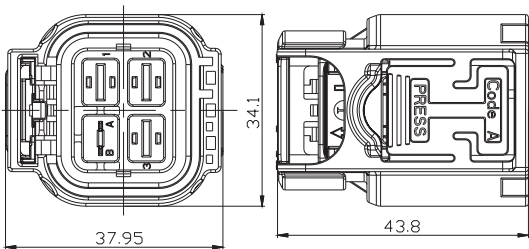
REL1-Z3AH-6-B-TW

- Design Extension Number
- Cable: 2.5/4/6
- H:HVIL
- Key Position: A、B、C、D
- POS:3
- T:plug; Z: socket
- REL1: Product Series

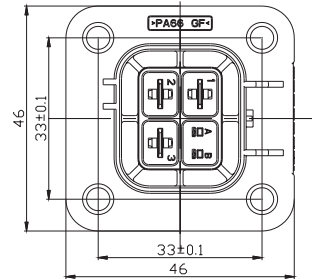
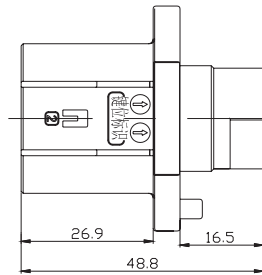
The connector type plug generated according to the naming rules does not contain power terminals, and the socket does not contain power & interlocking terminals.

Size

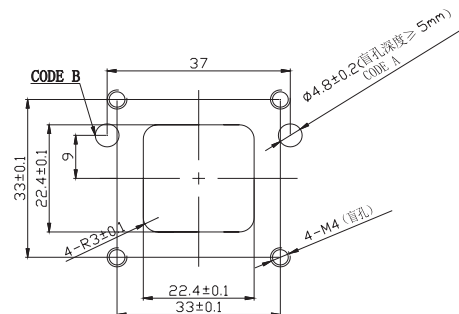
PLUG



Flange installation socket.



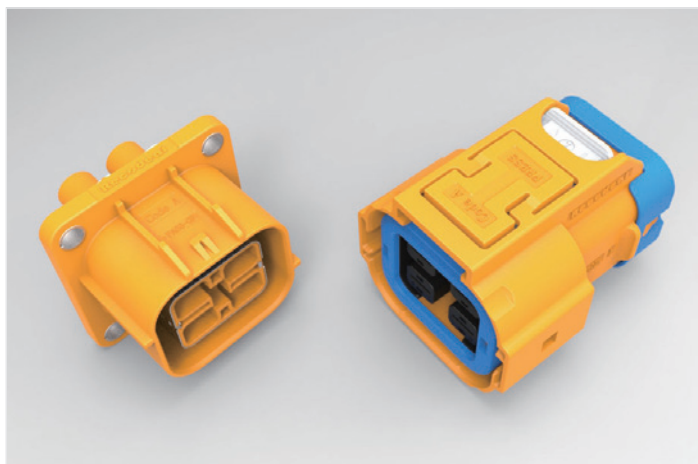
Recommended hole size for socket



4 POS High Voltage Plastic Shell Connector with Shield (REL2)

Describe

- 4 POS
- Plastic shell
- With secondary locking, delayed unlocking
- Anti-mis-touch design(IPXXB)
- High Protection Degree:
- 4 Anti-mistake key positions
- Cable Section: 2.5mm² – 6mm²
- 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-TW

Design Extension Number

Cable: 2.5/4/6

H:HVIL

Key position: A、B、C、D

P: Shield

POS:4

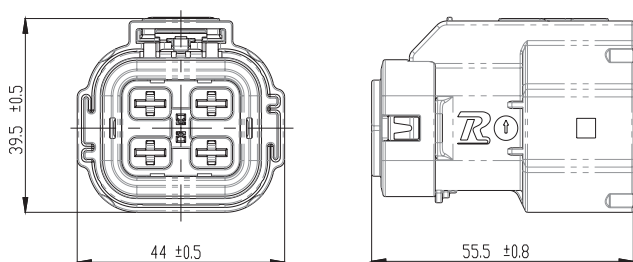
T:Plug; Z: Socket

Serial No.

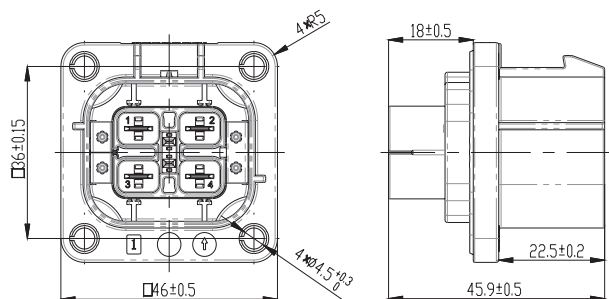
Note: Plug does not contain power terminals, socket does not contain power and interlocking terminals

Size

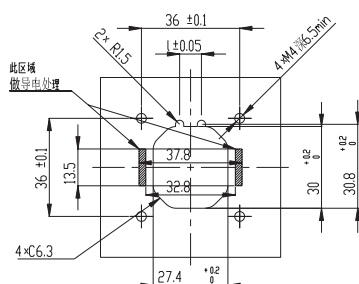
PLUG



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.

4 POS High Voltage Plastic Shell Connector with Shield(REL3)

Describe

- 6 POS
- Plastic Shell
- With secondary locking, delayed unlocking
- Anti-mis-touch design(IPXXB)
- High protection Degree: IP6K9K、IP68
- 4 Anti-mistake key positions
- Cable Section: 2.5mm²-6mm²
- Integrated Mask Interlocking Function
- For battery heating, OBC、PDU equipment



Application

- Current rating: 16A=2.5mm²
25A=4mm²
40A=6mm²
- Voltage rating:
- 1000V DC
- Shield: Option
- HVIL: Option
- temperature range: -40°C ~ 140°C

Ordering information

REL3-T 6 P A H -6 -B-TW

Design Extension Number

Cable: 2.5/4/6

H:HVIL(NoN-HVIL unmarked)

key positions: A、B、C、D

P:Shield

4:4pos

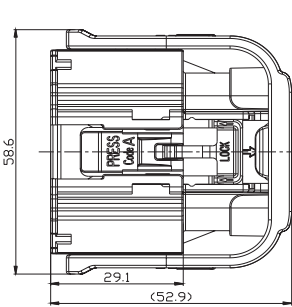
T:PLUG; Z: Socekt

REL3:Product Series

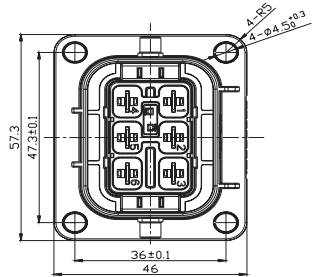
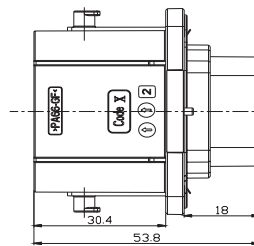
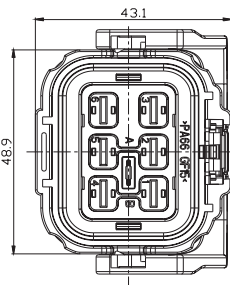
Note: plug does not contain power terminal, socket does not contain power and interlocking terminal.

Size

PLUG

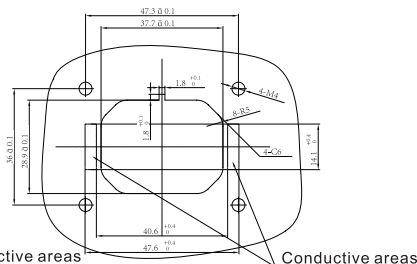
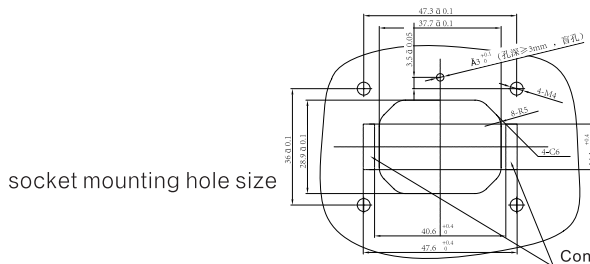


Flange socket



A Key position recommended hole size

B Key position recommended hole size



socket mounting hole size

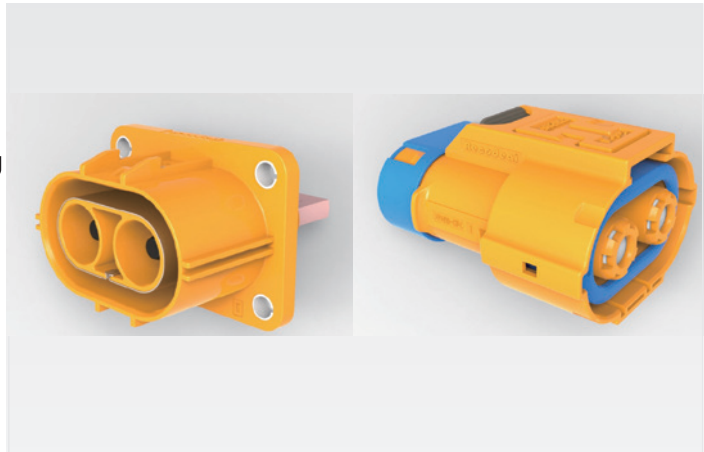
Conductive areas

Conductive areas

2 POS High Voltage Plastic Shell Connector with Shield(REN1)

Describe

- 2 POS
- Plastic shell
- With secondary locking, delayed unlocking
- Anti-mis-touch design(IPXXB)
- High protection Degree: IP6K9K、IP684
- Anti-mistake key positions
- Cable Section: 16mm²-25mm²
- Integrated Mask Interlocking Function For battery heating, OBC、PDU equipment



Application

- Current Rating: 80A=16mm²
125A=25mm²
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature range: -40°C~ +140°C

Ordering information

PLUG

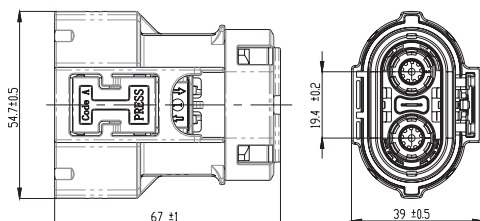
REN1-2 T A H -16P -B-TW
 Design Extension Number
 P:Shield
 Cable:16/25
 H:HVIL (non-HVIL)unmarked
 Key positions:A、B、C、D
 T:Plug
 POS:2
 Product Series

SOCKET

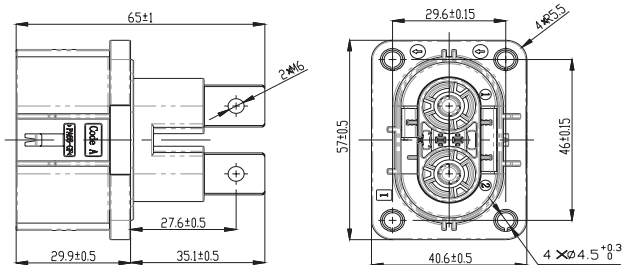
REN1-2 Z P A TH0.3 -16 -B-TW
 Design Extension Number
 Cable:16/25
 H:HVIL (non-HVIL)unmarked0.3: Default swing length for high voltage interlock (adjustable)
 T: equal length milling flat thread hole terminal; T1/T2 to be determined
 Key positions:A、B、C、D
 P:Shield
 Z:Socket
 Product Series
 Remarks: socket does not contain interlocking terminals

Size

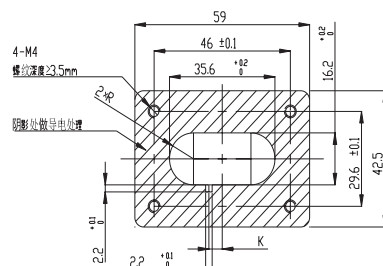
PLUG



Socket(Suitable for equal length milling flat threaded hole)

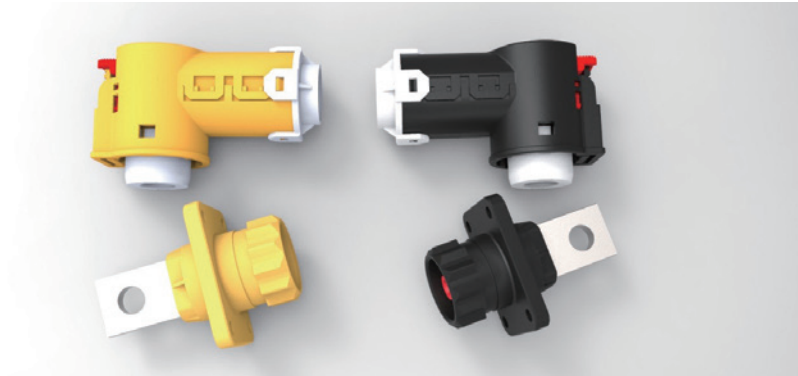


Socket install hole size



| 键位 | 尺寸K | 备注 |
|----|-----|----|
| A | 4.5 | |
| B | 9 | |

1 POS 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 50mm², 70mm²)
 Insulation resistance: $\geq 5000M\Omega$
 Withstand voltage: 3000V AC 1Min

Environmental Property

Working temperature: $-30^{\circ}C \sim +125^{\circ}C$
 Relative humidity: 95% (40 $^{\circ}C$)
 Flame retardant grade: UL94 V-0

Mechanical Property

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

Material

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

Ordering Information

Plug

RE A -T AH -50 -A-TW

Extensive character

Cable range:50

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

Plug

Serial

Product Series

Jack

R EA -Z AH D1 -A-TW

Extensive character

D1: Through-hole; D2: Thread-hole

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

Jack

Serial

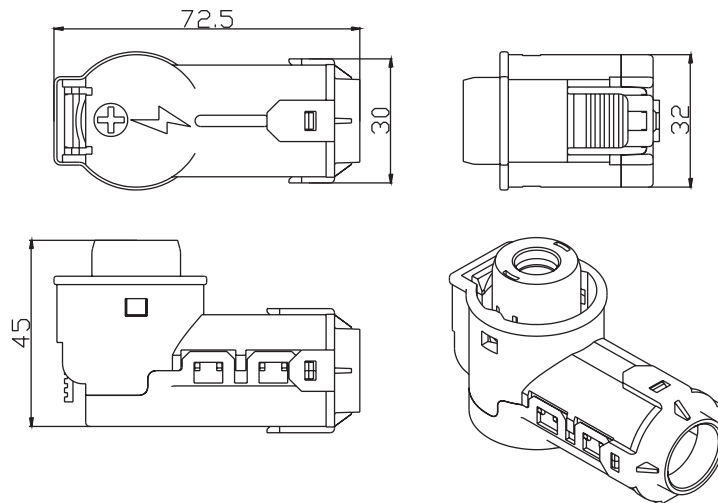
Product Series

Eg:REA-TAH-50-A means: REA series connectors, plug, shell(key position A) black, cable section for 50mm².

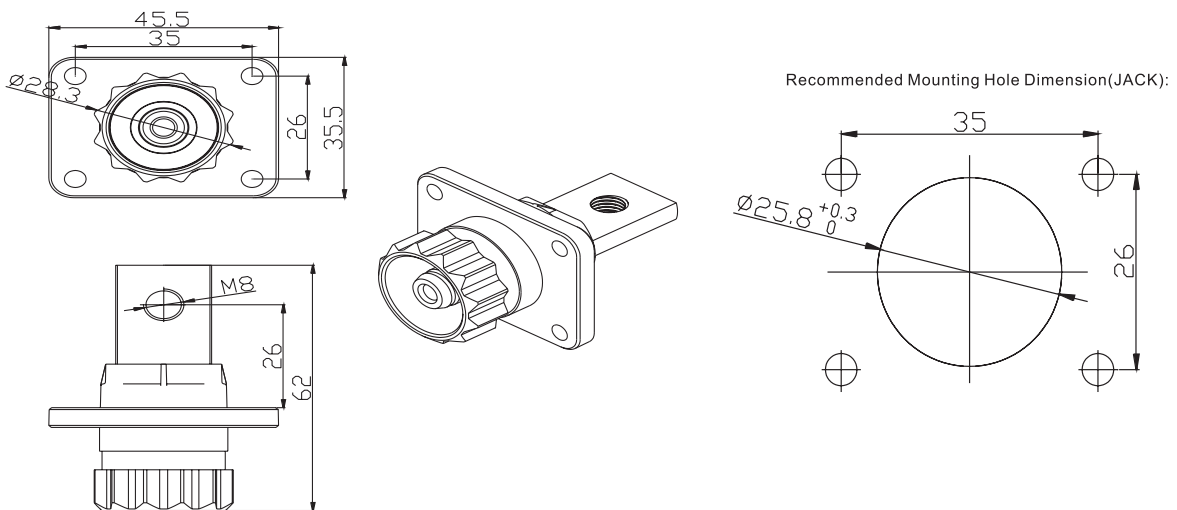
Eg;REA-ZAHD1-A means: REA series connectors, jack, black shell, the tail of the terminal is the through-hole.

Size

Plug



Jack

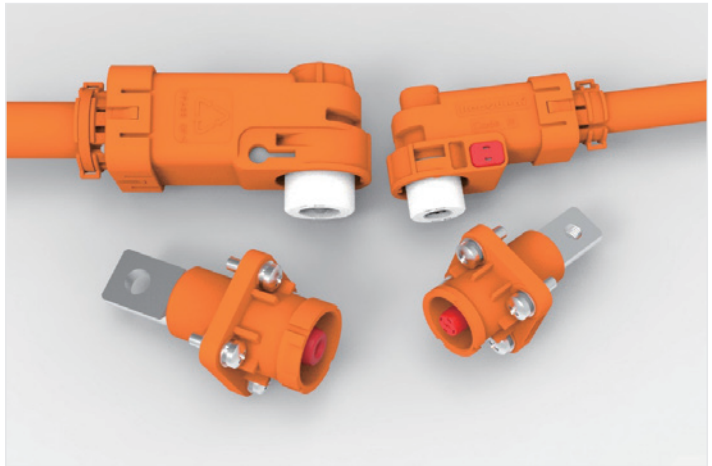




1 POS High current plastic shell connector(REA1)

Describe

- 1 POS
 - Plastic shell
 - Protection Degree: IP68
 - 4 Anti-mistake key positions
 - Cable Section: 25mm² – 120mm²
 - Non-Shield Non-HVIL
 - The plug socket can rotate 360 degrees after the plug is in place
- Mainly used in energy storage systems



Application

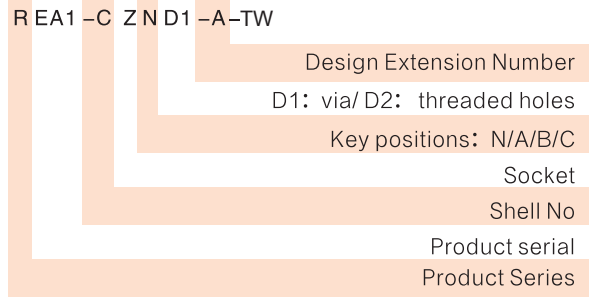
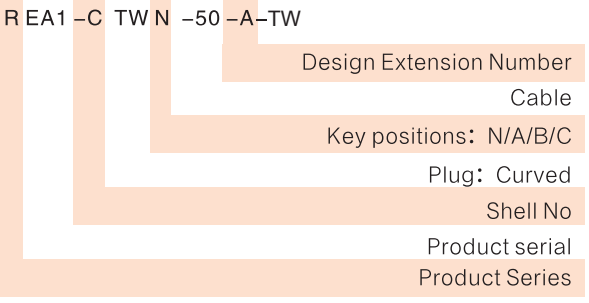
- Current rating:

| Shell | NoContact | Cable | Rating |
|-------|-----------|--------------------|--------|
| C | 8mm | 25mm ² | 125A |
| | | 35mm ² | 150A |
| | | 50mm ² | 200A |
| D | 12mm | 70mm ² | 250A |
| | | 95mm ² | 300A |
| | | 120mm ² | 350A |

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

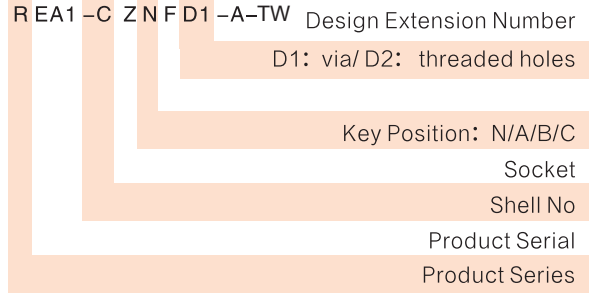
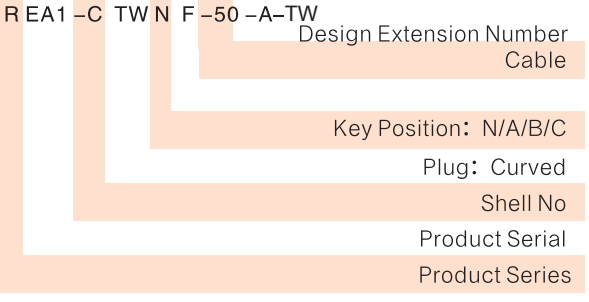
Ordering information

Waterproof



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

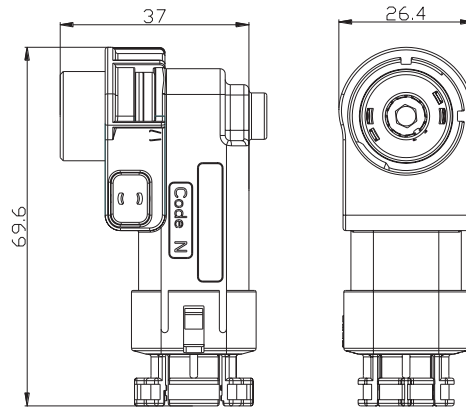
Non-waterproofing



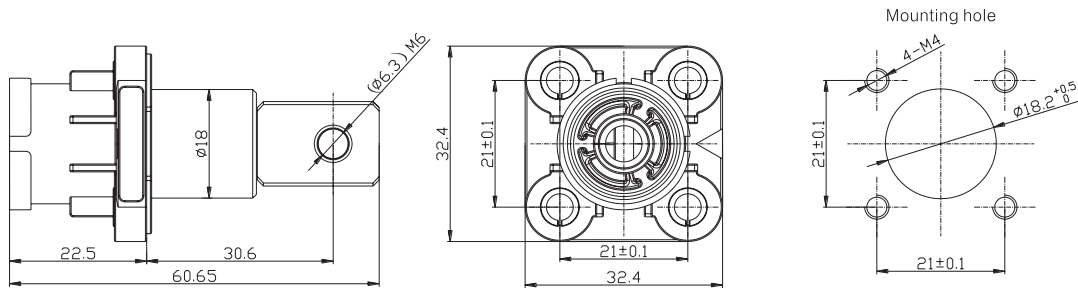
Note: N/A key housing is orange, B/C key housing is black

Size

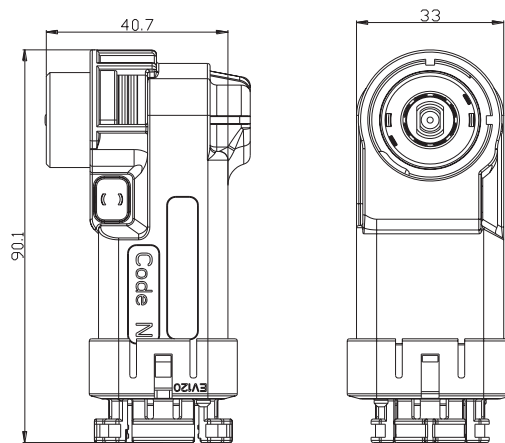
8mm JACK(C Shell)



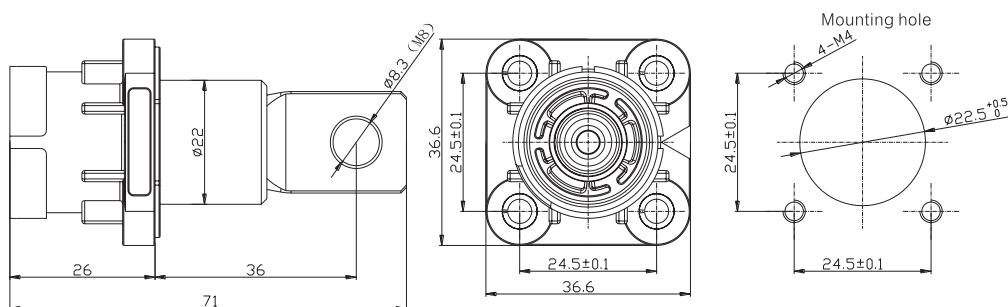
8mm JACK(C Shell)



12mm PLUG(D Shell)



12mm JACK(D Shell)



1 POS 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 25mm² ~70mm² (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 |
|---------|-------------------|----------------|
| Φ11mm | 25mm ² | 120A |
| | 35mm ² | 180A |
| | 50mm ² | 250A |
| | 70mm ² | 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

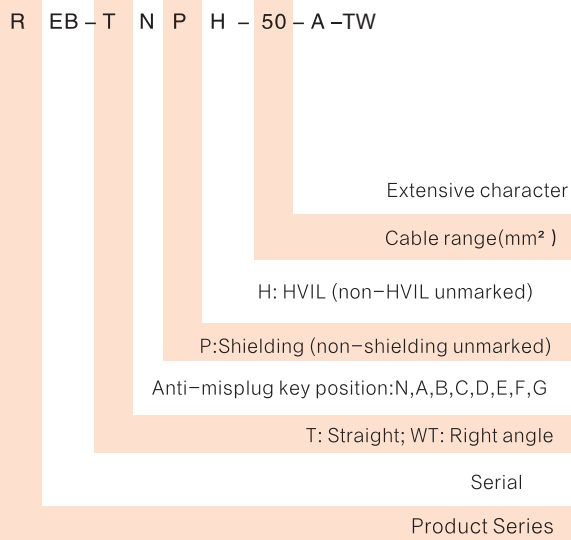
Shell: aluminum alloy/zinc alloy

Contact : copper alloy silver plated

Seal: rubber or elastomer

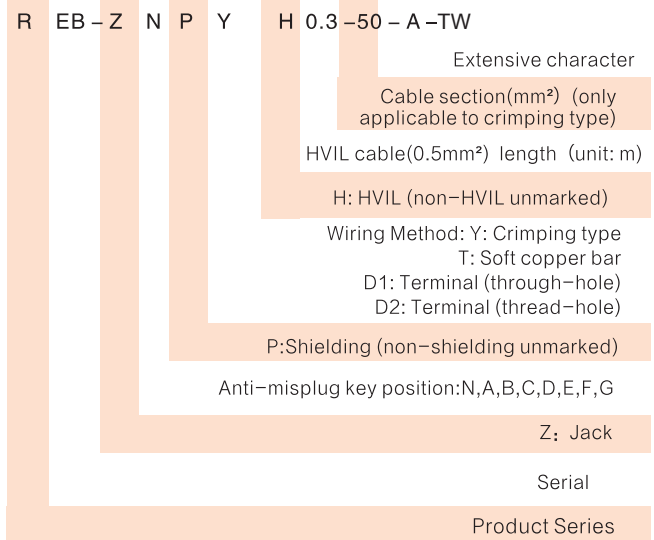
Ordering Information

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 70mm².

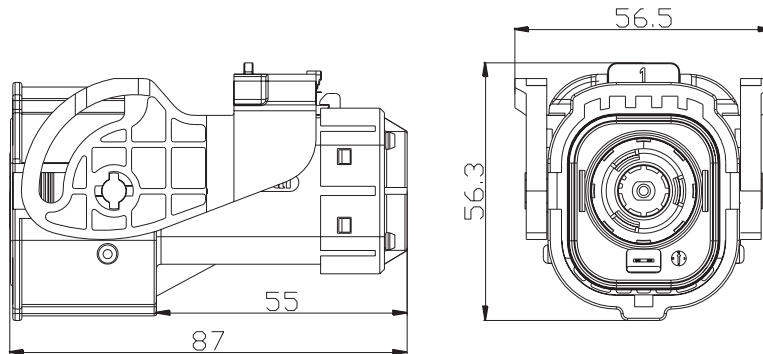
Jack



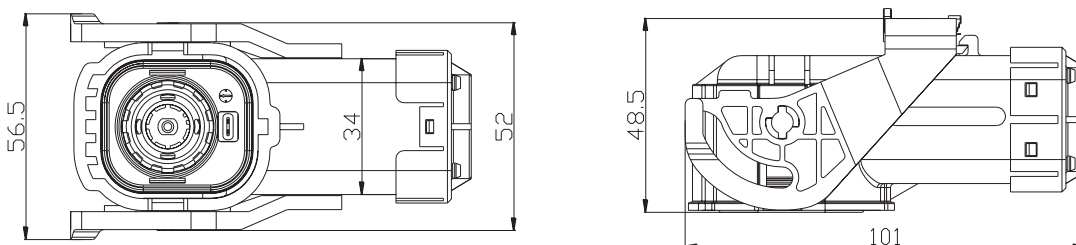
Eg:REB-ZNPD1H0.5-A means: REB series jack, Shielding(key position N),wiring method:through-hole,HVIL,The length of HVIL cable:0.5m

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 25mm² ~50mm² (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 ² | 80A | Shield or Non-shield is optiona |
| | 25mm ² | 120A | |
| | 35mm ² | 180A | |
| | 50mm ² | 200A | |

Voltage rating:750V DC

Withstand voltage: 3000V AC 1min

Insulation resistance: 5000MΩ

Shielding: optional

HIVL: 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

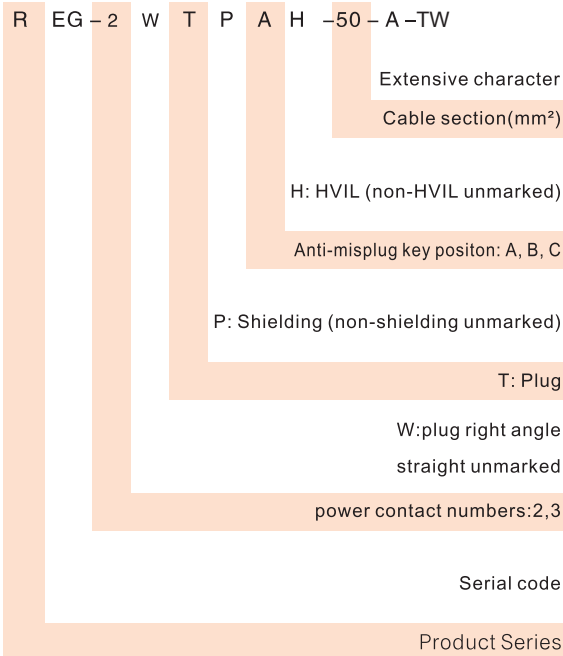
Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

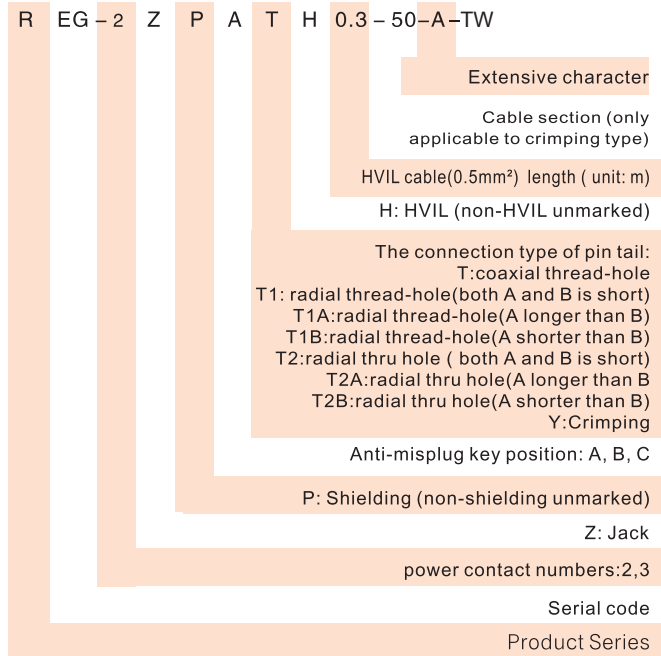
Seal: rubber or elastomer

Ordering Information

Plug



Jack



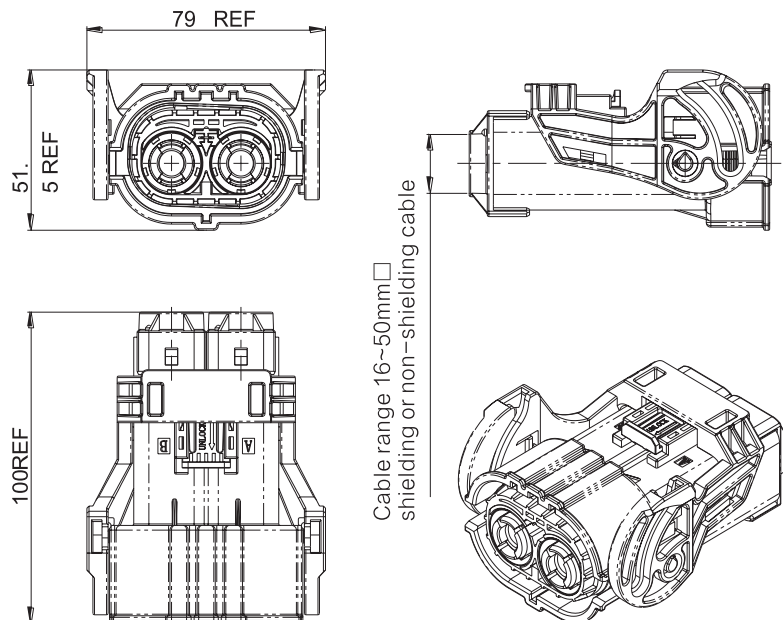
NOTE:The plug type is empty plug without wiring. If you need to purchase wiring components, you can contact our company technical department and give the model of wiring harness components before confirming the details of components. The 16mm² wiring is unconventional, it needs to book in advance.

Note:

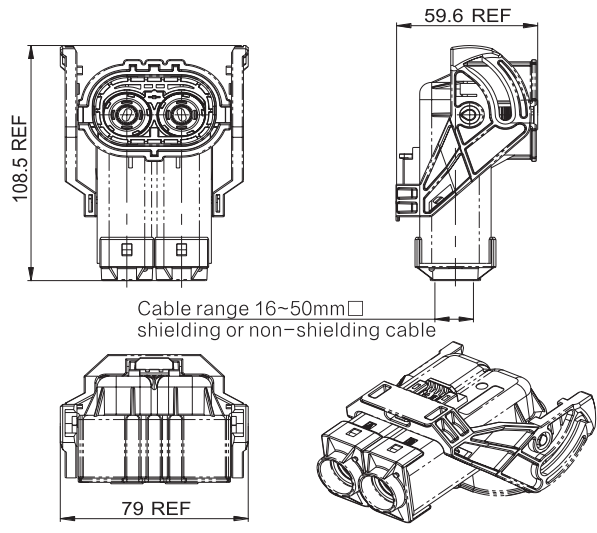
1. The mode of termination for plug assemble with pin in the tail is "T1A", "T1B", "T2A", "T2B", "T3A", "T3B", and "A", "B" means connector's hole site. Termination mode with "A" means long pin in A hole site, termination mode with "B" means long pin in B hole site, if without A or B means short pin.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

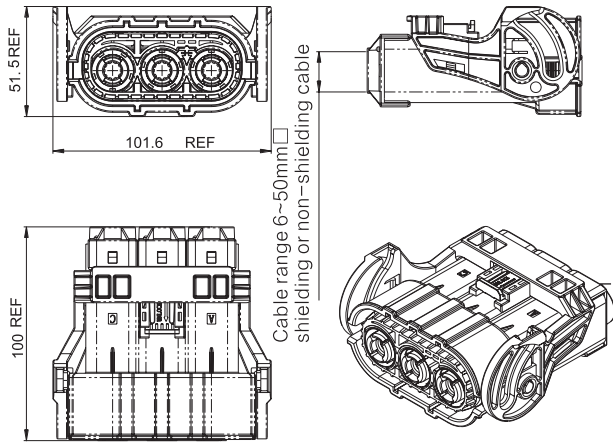
2 POS straight plug



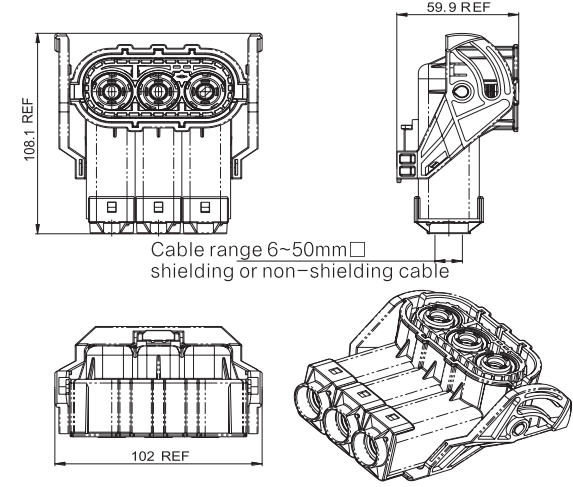
2 POS right angle



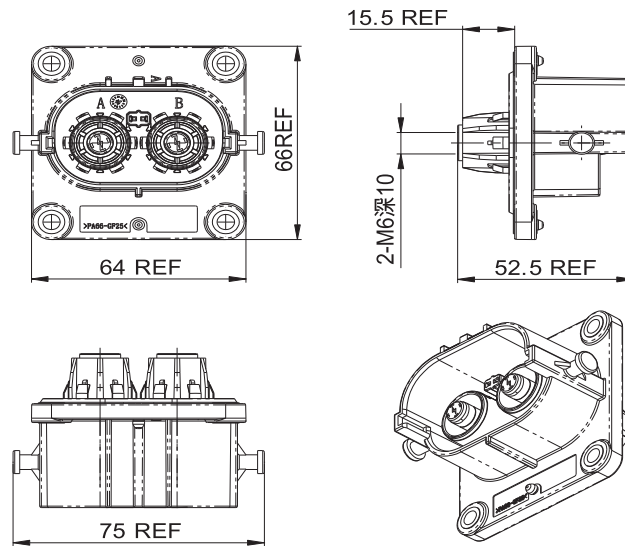
3 POS straight plug



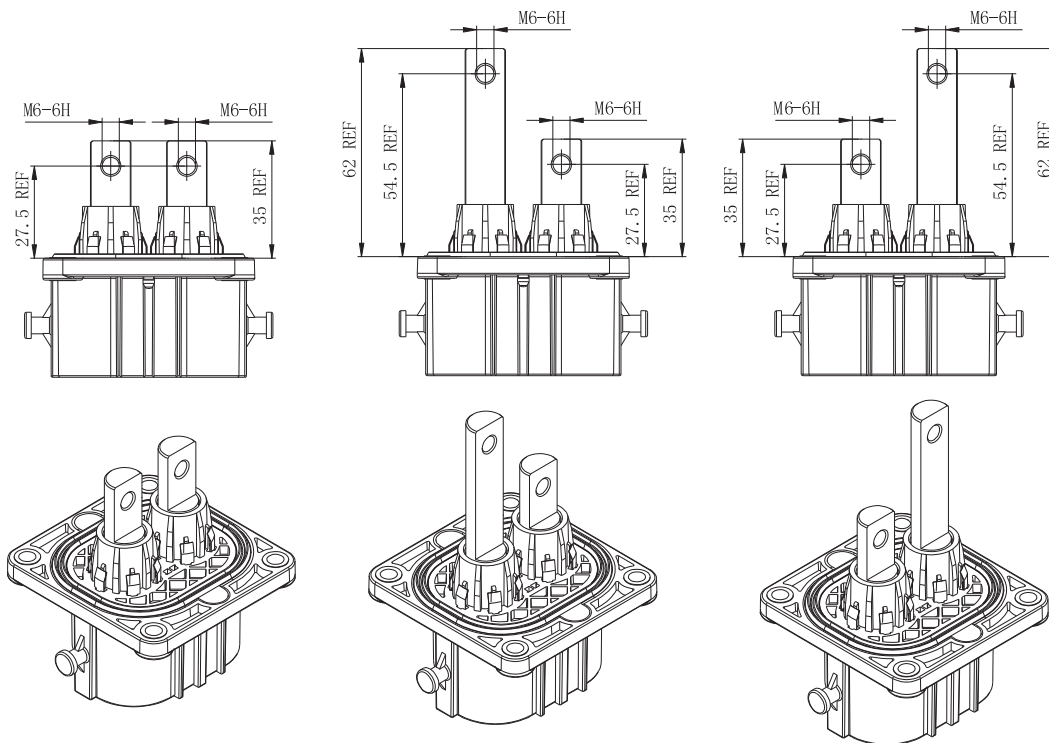
3 POS right angle



2 POS Plug(copper bar with coaxial thread holeT)

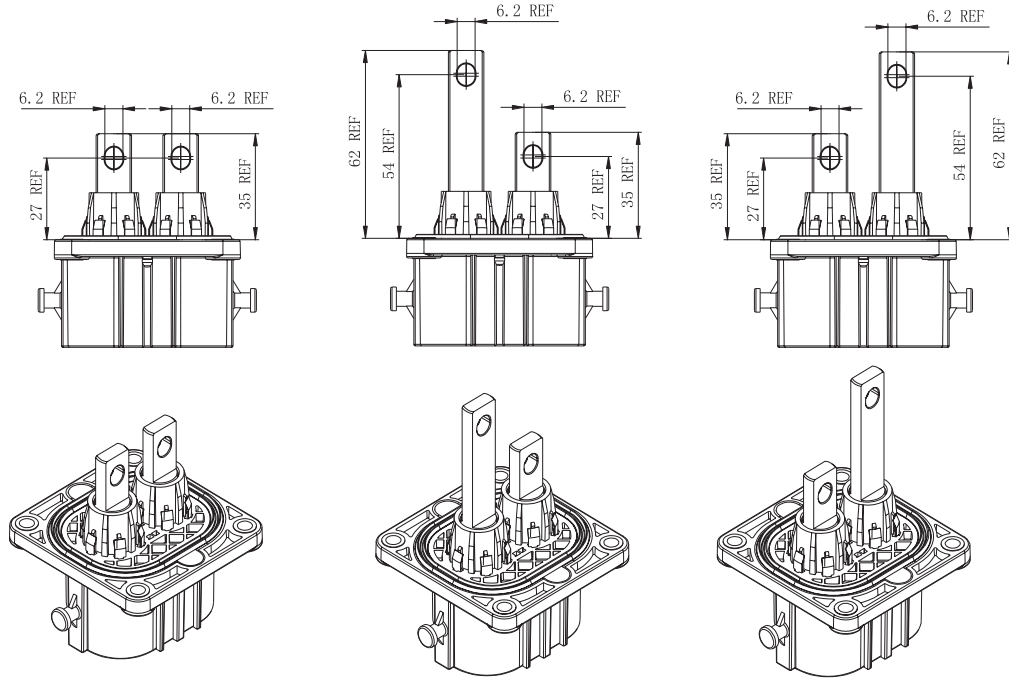


2 POS Plug(copper bar with radial thread hole T1,T1A,T2B, from left to right)

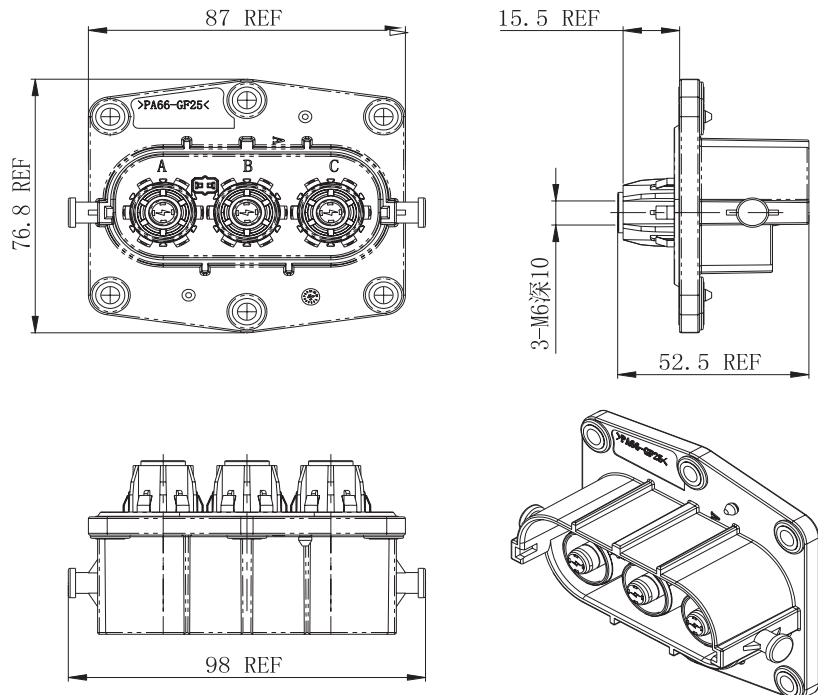


NOTE: When the end pin of the socket is T3、T3A、T3B, the pin on the corresponding socket in the picture above is opposite.

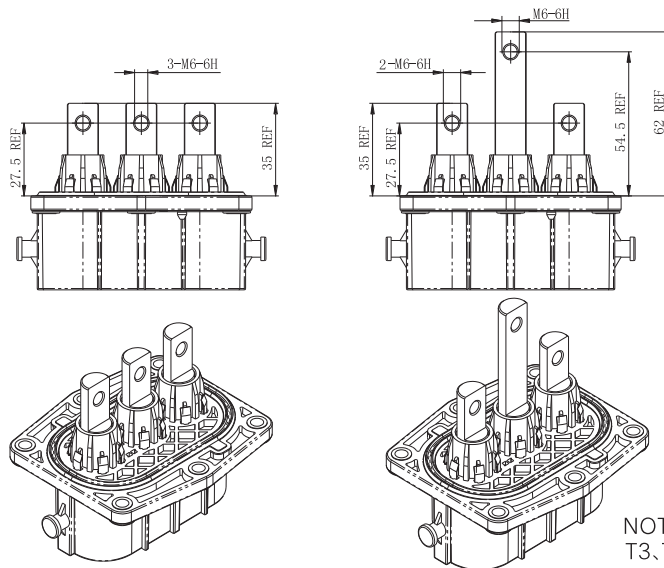
2 POS Plug(copper bar with radial thru hole T2,T2A,T2B, from left to right)



3 POS Plug(copper with coaxial thread hole T)

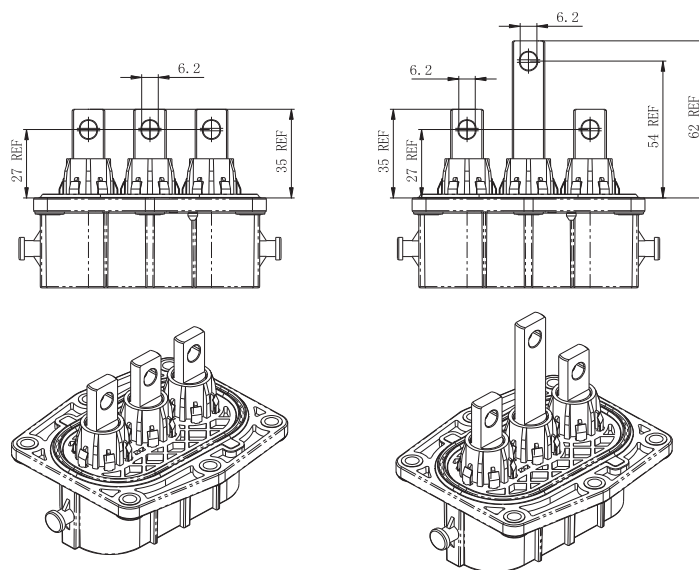


3 POS Jack(copper with radial thru hole T1,T1B, from left to right)



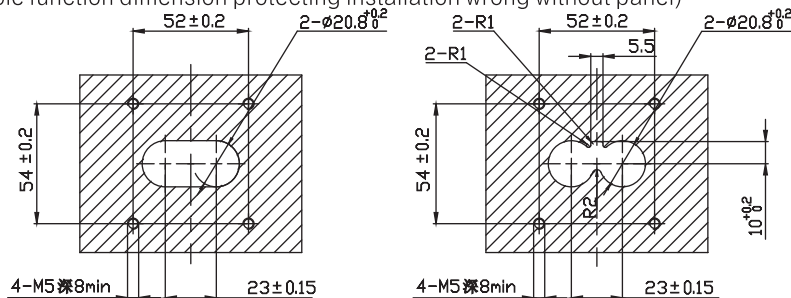
NOTE: When the end pin of the socket is T3.T3B, the pin on the corresponding socket in the picture above is opposite.

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)



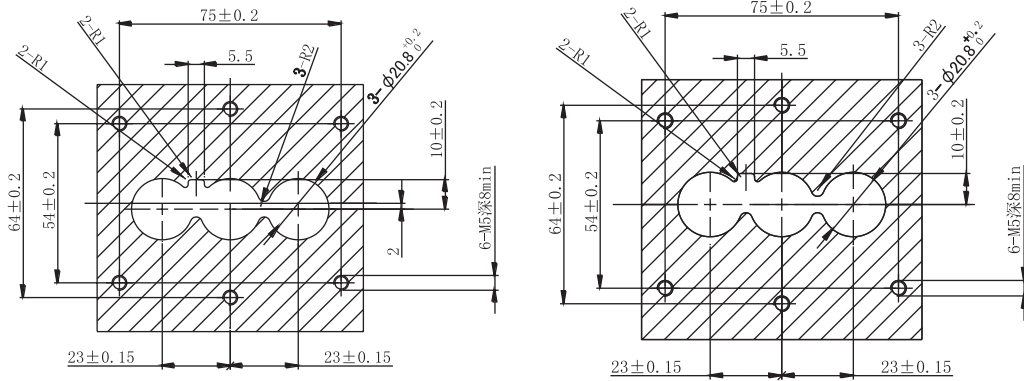
Conventional shielding requirement mounting hole (left)

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 clapboard, the 2 Pos Jack must be mounted according to conventional shielding requirement(left) hole dimension.

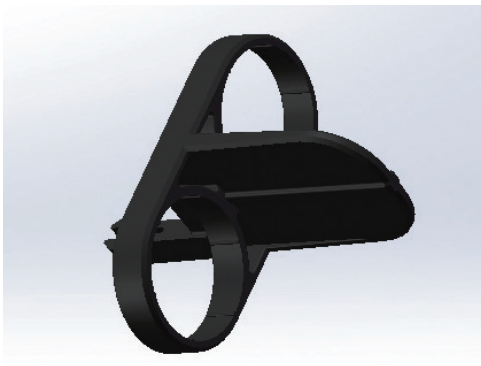
3 Pos Jack Z(left)、3 Pos Jack Z1(right)



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 25mm² ~70mm² (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 |
|---------------------|-------------------|----------------|----------------------------------|-------------------------|-----------------------------|
| $\Phi 9.1\text{mm}$ | 25mm ² | 120A | Shield or Non-Shield is optional | $\phi 12.2 \pm 0.3$ | $\phi 11.1 \pm 0.3$ |
| | 35mm ² | 180A | Shield or Non-Shield is optional | $\phi 14.5 \pm 0.3$ | $\phi 12.2 \pm 0.3$ |
| | 50mm ² | 220A | Shield or Non-Shield is optional | $\phi 15.9 \pm 0.3$ | $\phi 14.5 \pm 0.3$ |
| | 70mm 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: 5000m Ω /1000V DC
 Shielding: optional
 HIVL: YES (HVIL is normal,
 Non-HVIL is optional)

Environmental Property

Working Temperature: -40°C~+125°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

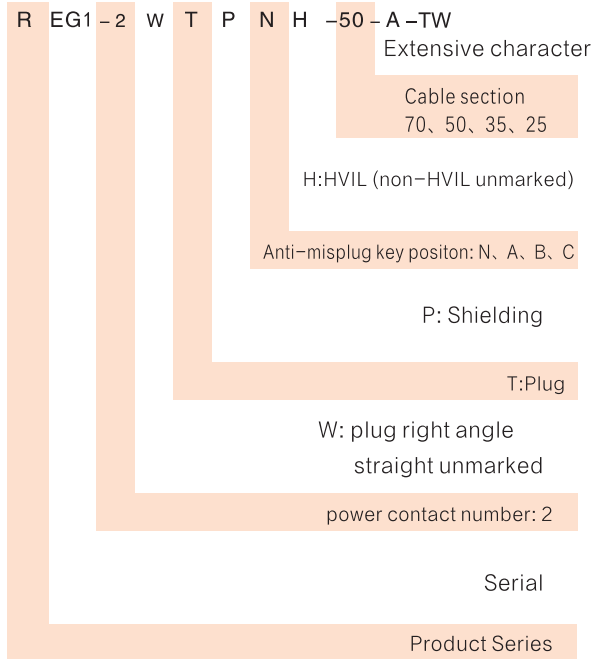
Mating Cycle: ≥ 100 times
 Vibration: 10~80Hz, amplitude 0.75
 81~500Hz, 20g
 500~2000Hz, 18g

Material

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

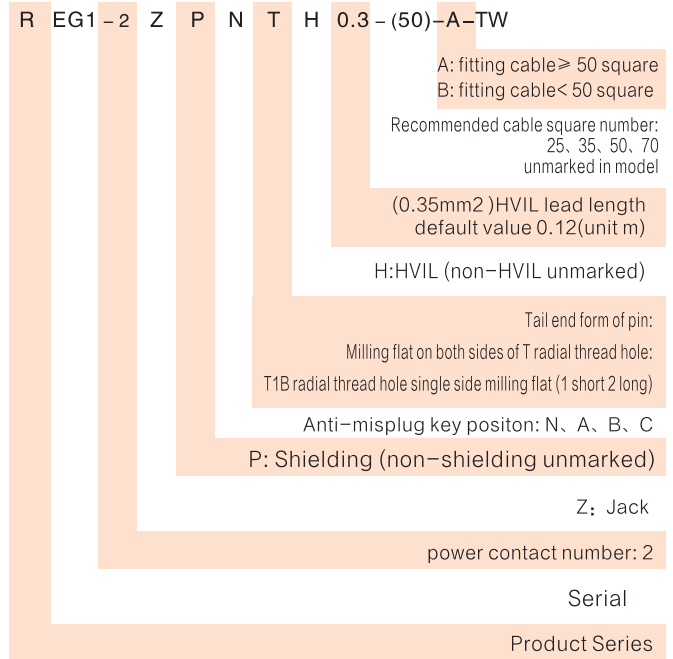
Ordering Information

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.

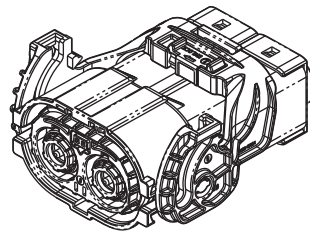
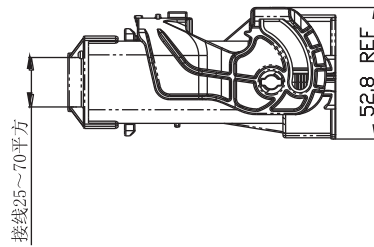
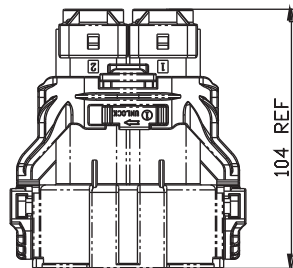
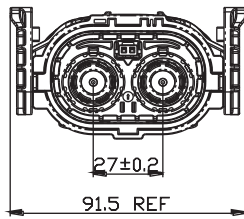
Jack



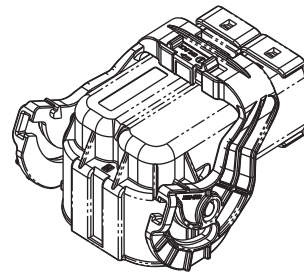
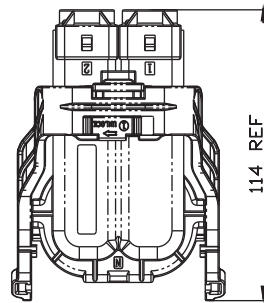
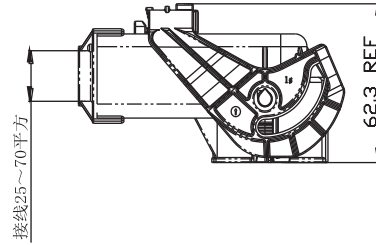
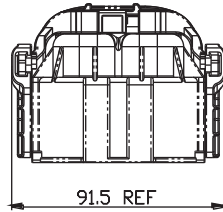
NOTE: Model (50) is not included in the model. In the tail end connection mode of the pin on the socket, T means that the pin on the socket of the connector is in the form of two-sided milling flat (Fig. 3). T1B means that the pin for position 1 is a short pin, while the 2 pin is a long pin, which is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

Size

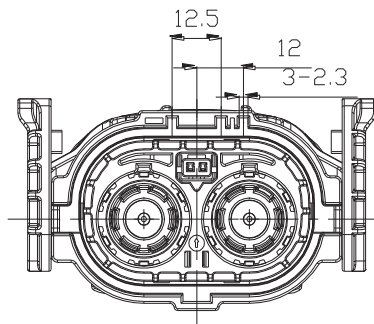
2 POS Straight Plug



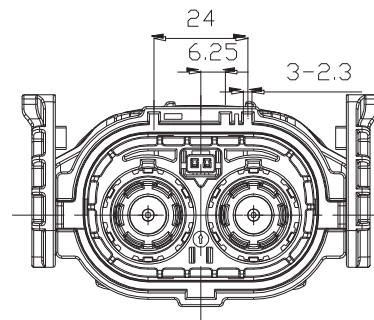
2 POS right angle plug



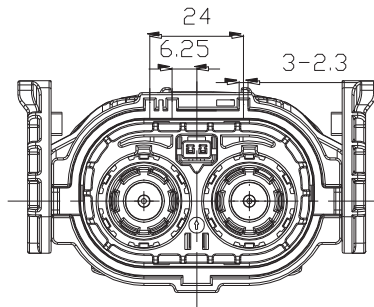
Instruction according to the key position of the plug.



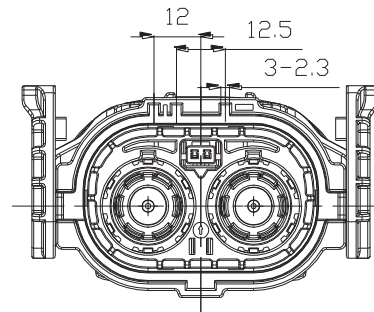
CODE N



CODE A

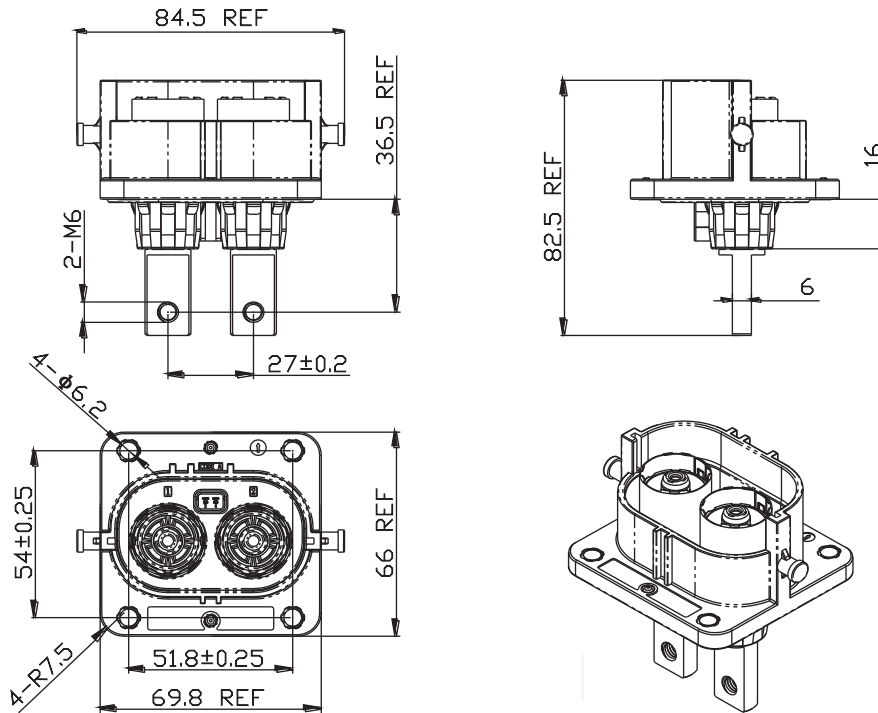


CODE B

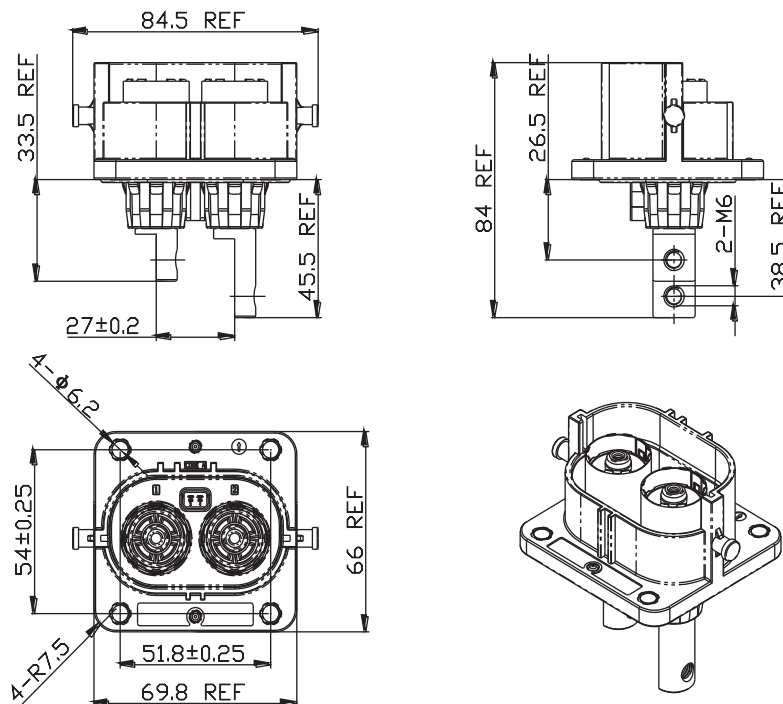


CODE C

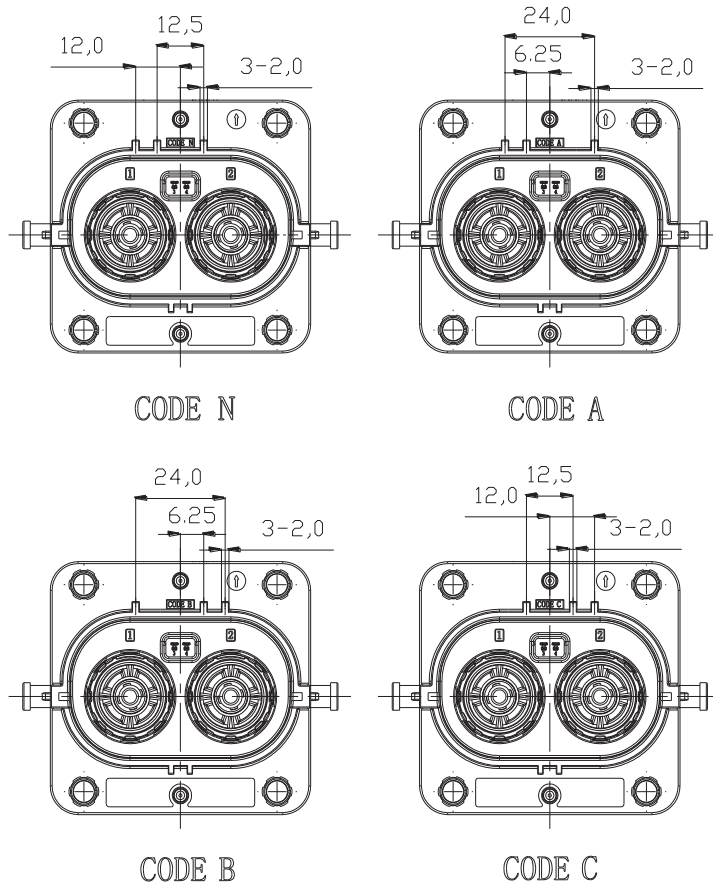
2 POS jack T



2 POS jack T1B

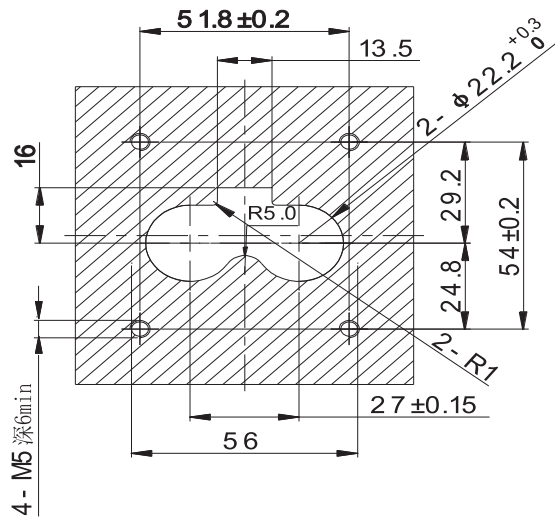


Instruction according to the key position of the socket.



Mounting hole dimension

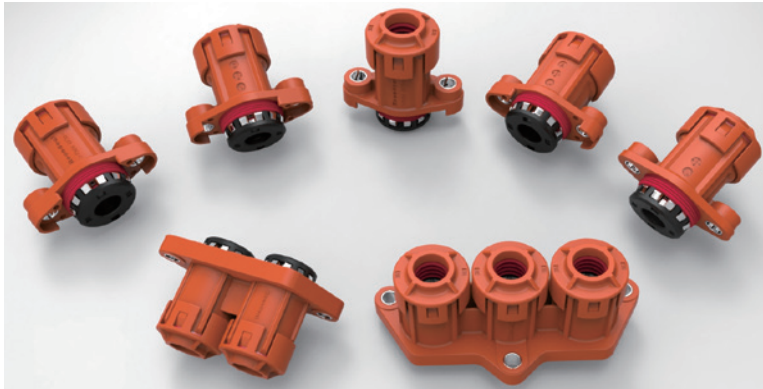
2 POSJack(mounting hole dimension when make mistake without panel)



NOTE

- 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.
- The hole of 4-M5 thread should be blind.

1 POS / 2 POS / 3 POS 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/25mm²

200A/35mm²

250A/50mm²

Voltage Rating: 700V DC

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

Insulation Resistance: $\geq 5000m\Omega$

Fitting cable: 25mm² shielding wire (Cable diameter range $\phi 13.2 \sim \phi 13.8$)

35mm² shielding wire (Cable diameter range $\phi 14.0 \sim \phi 14.7$)

50mm² shielding wire (Cable diameter range $\phi 17.15 \sim \phi 17.85$)

Mechanical Property

Mating Cycle: ≥ 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-TW

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

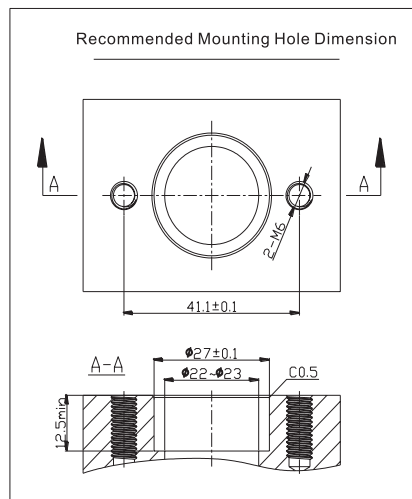
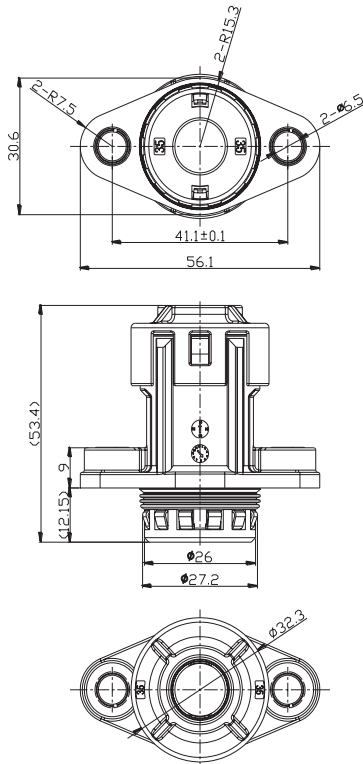
IPT: Serial code

Product Series

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.

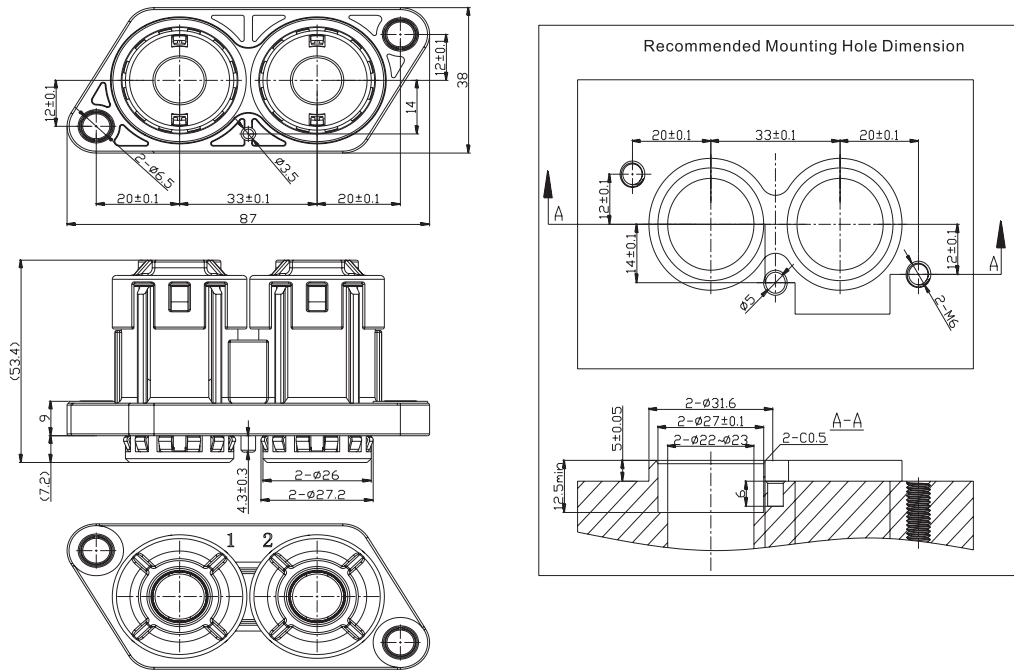
Size

1 POS plastic connector (No key)

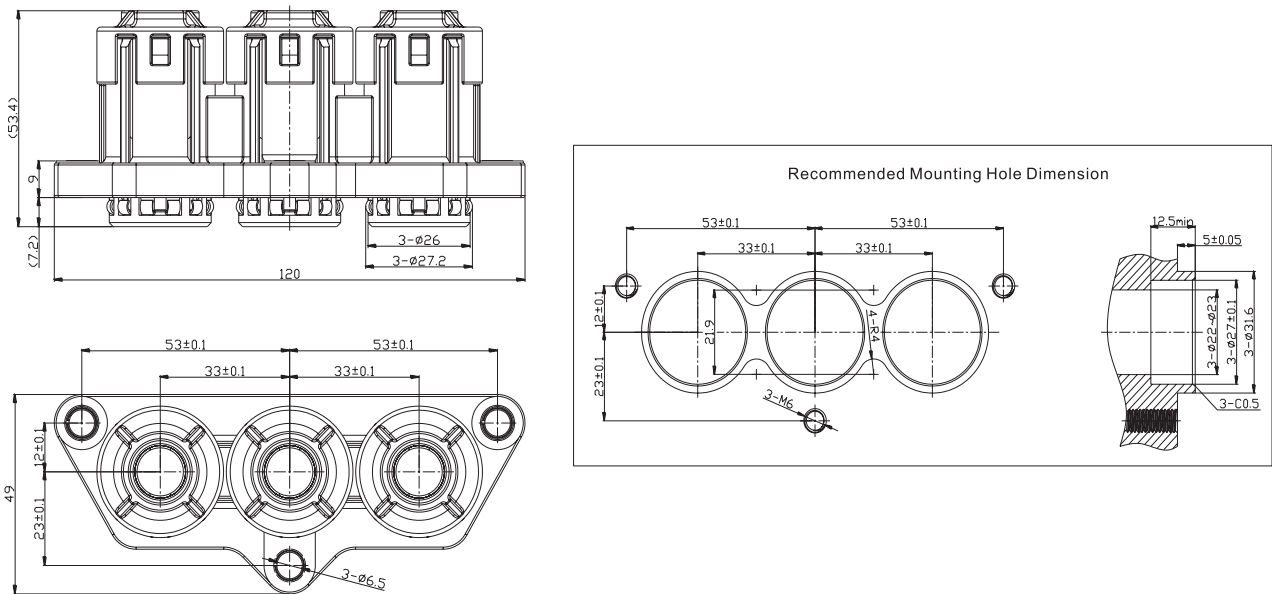


1 POS IPT other keys(A/B/C/D) size and mounting size can be seen in product specification or provided by Annren.

2 POS plastic connector



3 POS plastic connector



2-3 POS Low voltage right angle connector with shield

Describe

- 2 POS, 3 POS
- Metal Shell
- Push-pull fast locking structure
- High Protection Degree: IP68
- 6 Anti-mistake key position
- Cable Section: 2.5mm²–4mm²
- Integrated Shield Interlocking Function
- For battery heating, compressor, PTC、
- OBC、PDU equipment



Application

- Current Rating: 16A=2.5mm²
25A=4mm²
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature Range: -40°C ~ +140°C

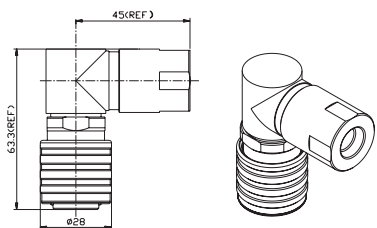
Name of material

| No | Product name | Product Model | Key Position | Cable Section | Cable sheath diameter |
|----|----------------------------------|--------------------|--------------|---|-----------------------|
| 1 | 2 POS right angle connector plug | RQB-B-4SP5-NR-A-TW | N | 2×1.5mm ² Shielding Outcover | Φ8.5±0.3 |
| 2 | 2 POS right angle connector plug | RQB-B-4SP5-AH-A-TW | A | | |
| 3 | 2 POS right angle connector plug | RQB-B-4SP5-NR-B-TW | N | 2×2.5mm ² Shielding Outcover | Φ11±0.4 |
| 4 | 2 POS right angle connector plug | RQB-B-4SP5-AH-B-TW | A | | |
| 5 | 2 POS right angle connector plug | RQB-B-4SP5-NR-C-TW | N | 2×4mm ² Shielding Outcover | Φ11.5±0.4 |
| 6 | 2 POS right angle connector plug | RQB-B-4SP5-AH-C-TW | A | | |
| 7 | 2 POS connector socket | RQB-B-4PR1-AH-D-TW | A | | |

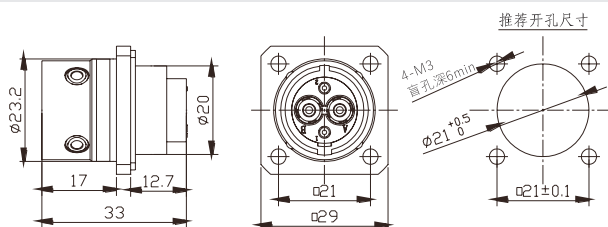
| | | | | | |
|---|----------------------------------|--------------------|---|---|-----------|
| 1 | 3 POS right angle connector plug | RQB-B-2SP5-NR-A-TW | N | 3×1.5mm ² Shielding Outcover | Φ10.2±0.3 |
| 2 | 3 POS right angle connector plug | RQB-B-2SP5-AH-A-TW | A | | |
| 3 | 3 POS right angle connector plug | RQB-B-2SP5-NR-B-TW | N | 3×2.5mm ² Shielding Outcover | Φ11.5±0.3 |
| 4 | 3 POS right angle connector plug | RQB-B-2SP5-AH-B-TW | A | | |
| 5 | 3 POS right angle connector plug | RQB-B-2SP5-NR-C-TW | N | 3×4mm ² Shielding Outcover | Φ13.3±0.4 |
| 6 | 3 POS right angle connector plug | RQB-B-2SP5-AH-C-TW | A | | |

SIZE

PLUG



SOCKET





RQH 2 POS Metal shell connector with shield

Describe

- 2 POS
- Metal shell
- Push-pull fast locking structure
- Anti-mis-touch design IPXXB
- High Protection Degree;
- 4Anti-mistake key positions
- Cable Section: 2.5mm² -6mm²
- Integrated Mask Interlocking Function
- For battery heating, compressor, PTC、OBC、PDU equipment

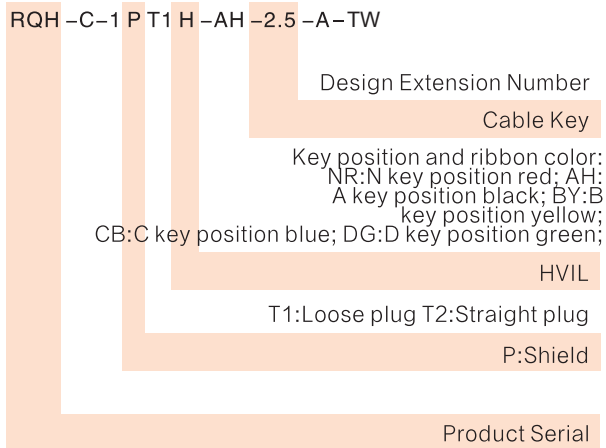


Application

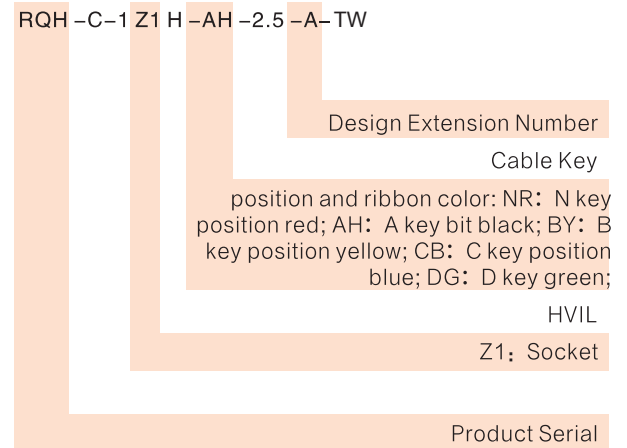
- Current Rating 16A=2.5mm²
25A=4mm²
40A=6mm²
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature range: -40°C ~ +140°C

Naming Rules

Plug



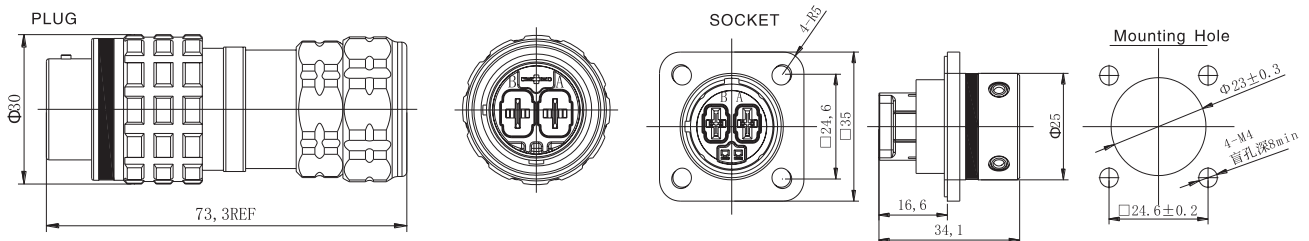
Socket



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

- 3 POS
- Metal shell
- Push-pull fast locking structure
- Anti-mis-touch design IPXXB
- High Protection Degree: IP6K9K、IP68
- 4 Anti-mistake key position
- Cable Section: 2.5mm² –6mm²
- Integrated Mask Interlocking Function
- For battery heating, compressor, PTC、OBC、PDU equipment

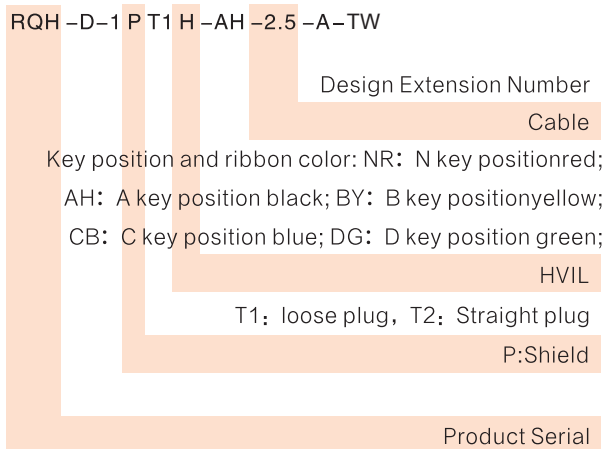


Application

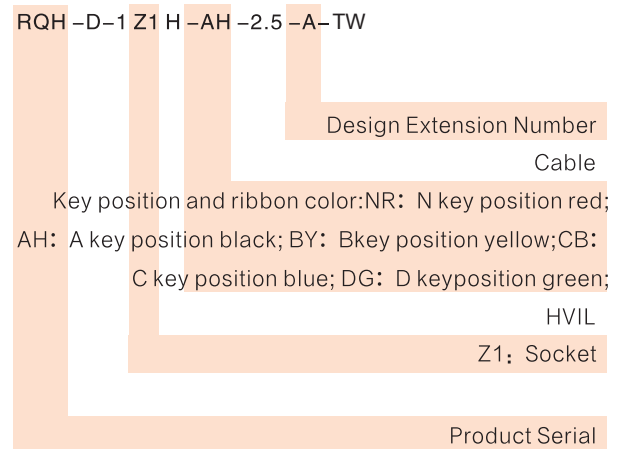
- Current Rating: 16A=2.5mm²
25A=4mm²
40A=6mm²
- Voltage Rating: 1000V DC
- Shield: Option
- HVIL: Option
- Temperature Range: -40°C ~ +140°C

Naming rules

Plug



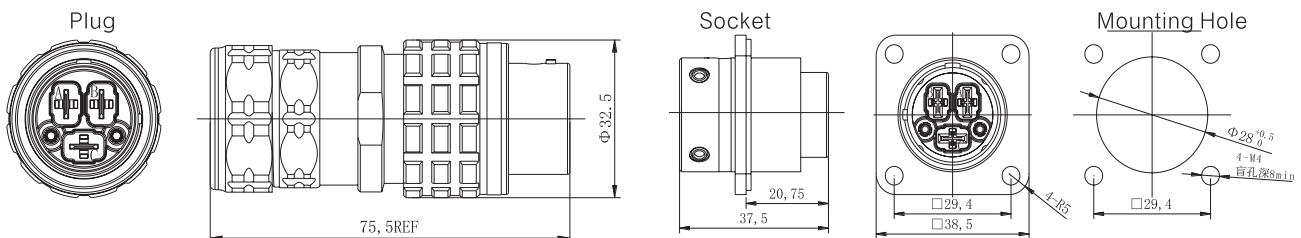
Socket



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-TW | N | red | 3*6mm ² shielded cable Outer dia: φ15.5±0.3 |
| 2 | RQB-C-4PP1-AH-E-TW | A | black | |
| 3 | RQB-C-4PP1-BY-E-TW | B | yellow | |
| 4 | RQB-C-4PP1-CB-E-TW | C | blue | |
| 5 | RQB-C-4PP1-DG-E-TW | D | green | |
| 1 | RQB-C-4PP1-NR-F-TW | N | red | 3*4mm ² shielded cable Outer dia: φ14±0.3 |
| 2 | RQB-C-4PP1-AH-F-TW | A | black | |
| 3 | RQB-C-4PP1-BY-F-TW | B | yellow | |
| 4 | RQB-C-4PP1-CB-F-TW | C | blue | |
| 5 | RQB-C-4PP1-DG-F-TW | D | green | |
| 1 | RQB-C-4PP1-NR-G-TW | N | red | 3*2.5mm ² shielded cable Outer dia: φ12±0.25 |
| 2 | RQB-C-4PP1-AH-G-TW | A | black | |
| 3 | RQB-C-4PP1-BY-G-TW | B | yellow | |
| 4 | RQB-C-4PP1-CB-G-TW | C | blue | |
| 5 | RQB-C-4PP1-DG-G-TW | D | green | |
| 1 | RQB-C-4PP2-NR-E-TW | N | red | 6mm ² Non-shielded cable |
| 2 | RQB-C-4PP2-AH-E-TW | A | black | |
| 3 | RQB-C-4PP2-BY-E-TW | B | yellow | |
| 4 | RQB-C-4PP2-CB-E-TW | C | blue | |
| 5 | RQB-C-4PP2-DG-E-TW | D | green | |



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

Jack

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

Technical Specification

Electrical Property

Current rating

| Contact Diameter | Cable Range | Current Rating | Remarks |
|------------------|-------------------------|----------------|---------------|
| 1mm | 0.3~0.75mm ² | 7A | HVIL Terminal |
| 3mm | 2.5mm ² | 16A | Main Terminal |
| | 4mm ² | 25A | |
| | 6mm ² | 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

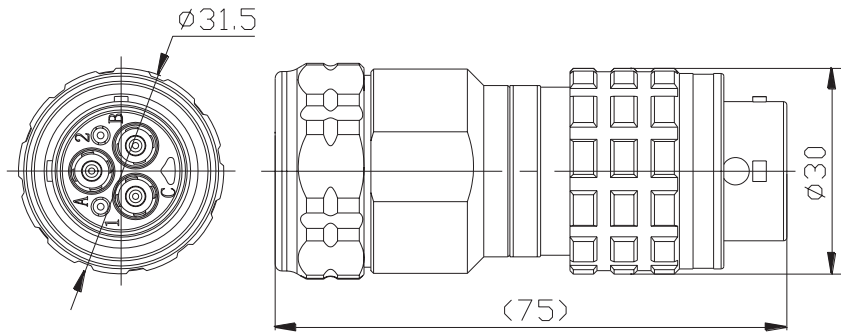
Shell: aluminum alloy/zinc alloy

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

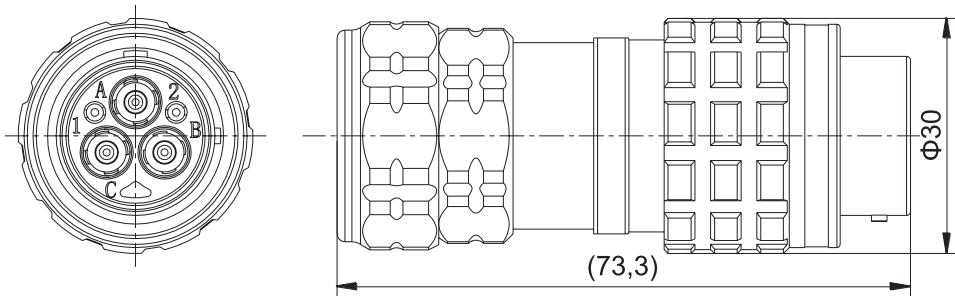
Seal: rubber or elastomer

Size

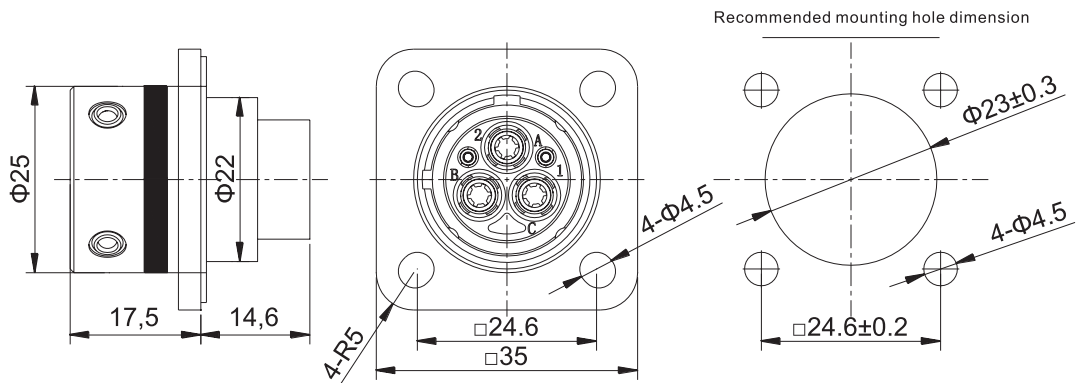
Plug (For 3*6mm² shielded cable)



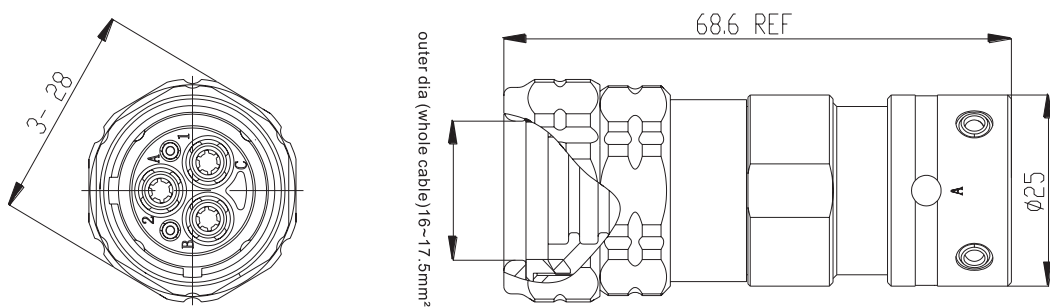
Plug



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-TW | N | red | 2*6mm ² shielded cable Outer dia: φ 12.5±0.25 |
| 2 | 2+2 POS Plug | RQB-C-5PP1-AH-A-TW | A | black | |
| 3 | 2+2 POS Plug | RQB-C-5PP1-BY-A-TW | B | yellow | |
| 4 | 2+2 POS Plug | RQB-C-5PP1-CB-A-TW | C | blue | |
| 5 | 2+2 POS Plug | RQB-C-5PP1-DG-A-TW | D | green | |
| 1 | 2+2 POS Plug | RQB-C-5PP1-NR-B-TW | N | red | 2*2.5、2*4mm ² shielded cable Outer dia: φ11.5~φ12±0.25 |
| 2 | 2+2 POS Plug | RQB-C-5PP1-AH-B-TW | A | black | |
| 3 | 2+2 POS Plug | RQB-C-5PP1-BY-B-TW | B | yellow | |
| 4 | 2+2 POS Plug | RQB-C-5PP1-CB-B-TW | C | blue | |
| 5 | 2+2 POS Plug | RQB-C-5PP1-DG-B-TW | D | green | |
| 1 | 2+2 POS Plug | RQB-C-5PP1-NR-C-TW | N | red | 2*10mm ² shielded cable Outer dia: φ17±0.3 |
| 2 | 2+2 POS Plug | RQB-C-5PP1-AH-C-TW | A | black | |
| 3 | 2+2 POS Plug | RQB-C-5PP1-BY-C-TW | B | yellow | |
| 4 | 2+2 POS Plug | RQB-C-5PP1-CB-C-TW | C | blue | |
| 5 | 2+2 POS Plug | RQB-C-5PP1-DG-C-TW | D | green | |
| 1 | 2+2 POS Plug | RQB-C-5PP2-NR-A-TW | N | red | 6mm ² Non-shielded cable |
| 2 | 2+2 POS Plug | RQB-C-5PP2-AH-A-TW | A | black | |
| 3 | 2+2 POS Plug | RQB-C-5PP2-BY-A-TW | B | yellow | |
| 4 | 2+2 POS Plug | RQB-C-5PP2-CB-A-TW | C | blue | |
| 5 | 2+2 POS Plug | RQB-C-5PP2-DG-A-TW | D | green | |



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

2 . Jack

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

Technical Specification

Electrical Property

Current rating:

| Contact Diameter | Cable Range | Current Rating | Remarks |
|------------------|-------------------------|----------------|---------------|
| 1.6mm | 0.3~0.75mm ² | 7A | HVIL Terminal |
| 3.5mm | 2.5mm ² | 16A | Main Terminal |
| | 4mm ² | 25A | |
| | 6mm ² | 40A | |
| | 10mm ² | 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°C~+125°C

Relative humidity: 95%(40°C)

Sealing: IP67 in mated condition

Flame retardant grade: UL94 V-0

Mechanical Property

Mating cycle: >500 times

Vibration: 10~80Hz, amplitude 0.75

81~500Hz, 20g

500~2000Hz, 18g

Material

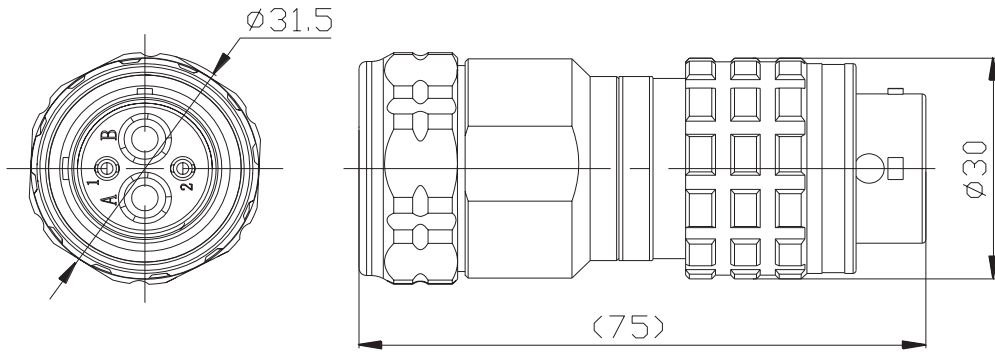
Shell: aluminum alloy/zinc alloy

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

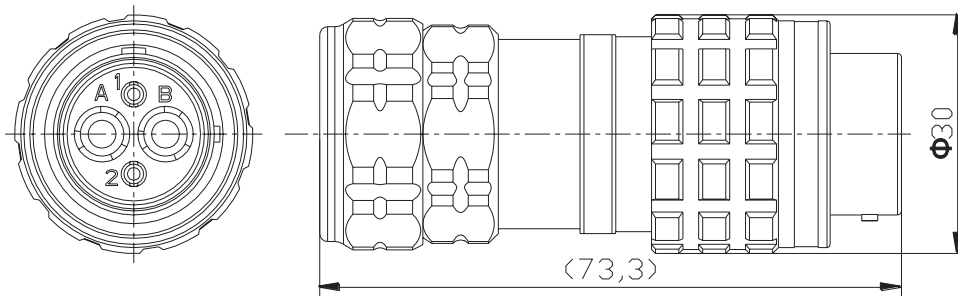
Seal: rubber or elastomer

Size

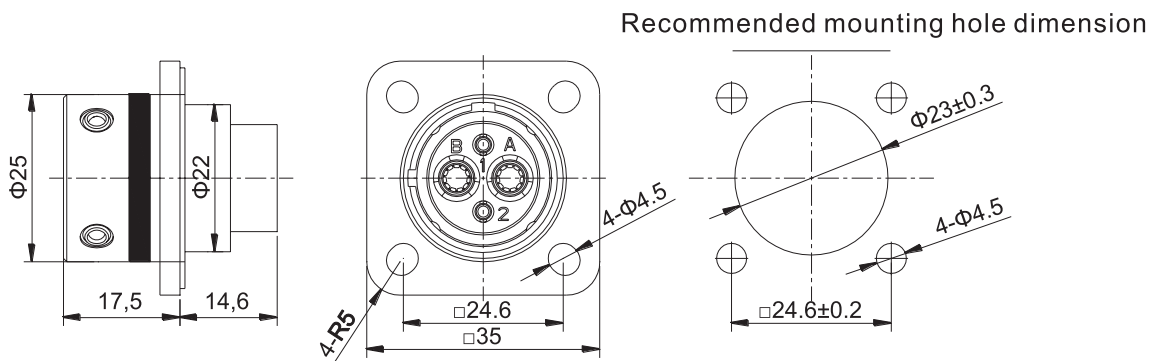
Plug(For 2*10mm² shielded cable)



Plug(other)



Jack

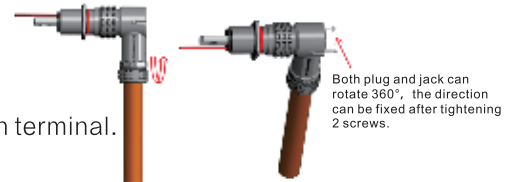


1 POS High current push-pull metal shell connector (RQF-D)



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: 35mm², 50mm², 70mm²
 Contact: Φ 10mm
 Voltage rating: 1000V DC
 Contact resistance: 5m Ω
 Withstand voltage: 1500V(AC)
 Insulation resistance: 5000M Ω
 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-TW

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: Staight; PW: Right angle

P: Shielding (non-shielding unmarked)

Shell: D

High Current Push-pull Metal Shell Connecor (RQF)

Jack

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

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

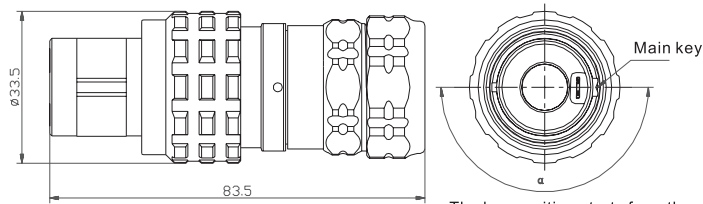
High Current Push-pull Metal Shell Connecor (RQF)

Size

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

Plug

Plug straight

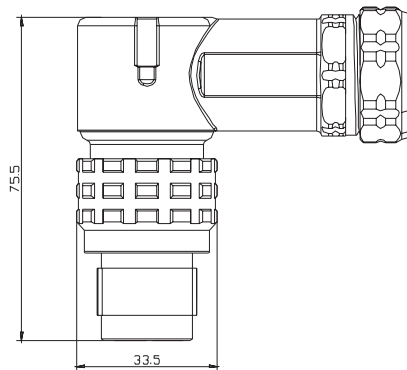
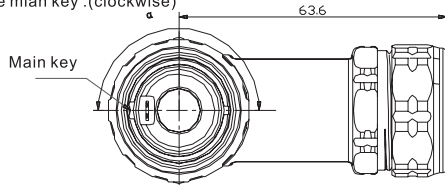


The key position strats from the mian key .(clockwise)

| Contact | Cable Range | Current Rating | The Position Of α (Build Position Corner) | | | | | |
|--------------------|-------------------|----------------|--|-----|------|------|------|------|
| $\Phi 10\text{mm}$ | 35mm ² | 180A | N | A | B | C | D | E |
| | 50mm ² | 200A | | | | | | |
| | 70mm ² | 250A | 180° | 90° | 160° | 190° | 270° | 330° |

Plug right angle

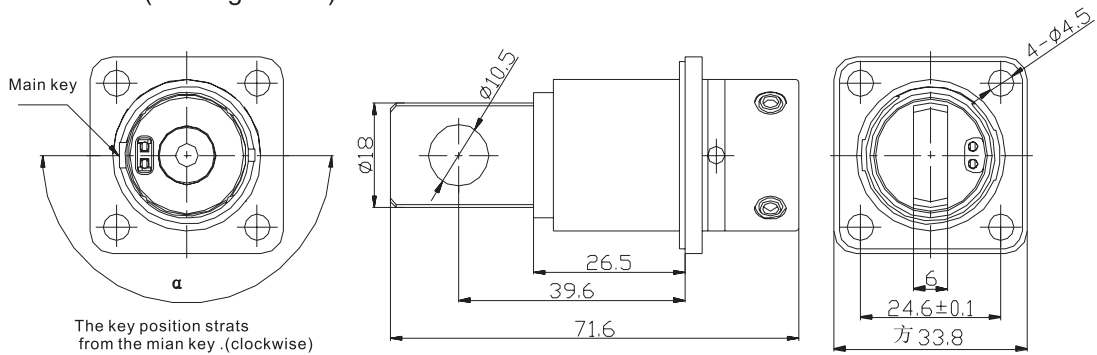
The key position strats from the mian key .(clockwise)



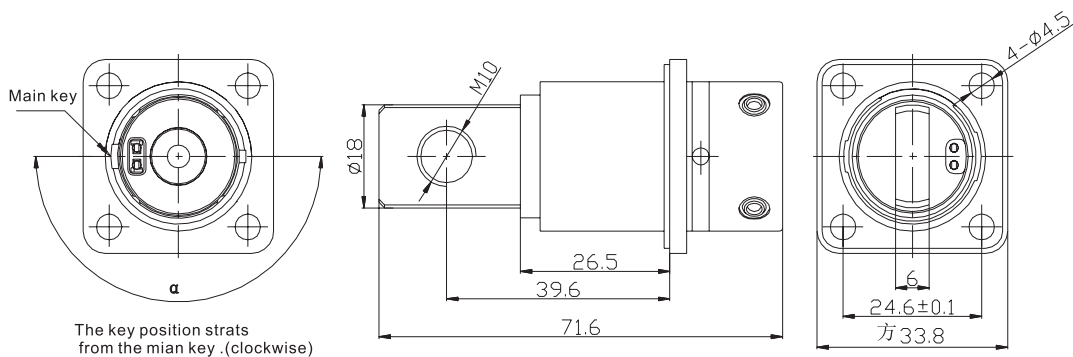
| Contact | Cable Range | Current Rating | The Position Of α (Build Position Corner) | | | | | |
|--------------------|-------------------|----------------|--|-----|------|------|------|------|
| $\Phi 10\text{mm}$ | 35mm ² | 180A | N | A | B | C | D | E |
| | 50mm ² | 200A | | | | | | |
| | 70mm ² | 250A | 180° | 90° | 160° | 190° | 270° | 330° |

Jack

Jack:for terminal (through-hole)



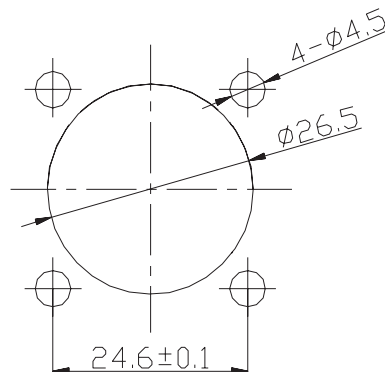
Jack:for terminal (thread-hole)



| Contact | Cable Range | Current Rating | The Position Of α (Build Position Corner) | | | | | |
|--------------------|-------------------|----------------|--|-----|------|------|------|------|
| $\Phi 10\text{mm}$ | 35mm ² | 180A | N | A | B | C | D | E |
| | 50mm ² | 200A | | | | | | |
| | 70mm ² | 250A | 180° | 90° | 160° | 190° | 270° | 330° |

- 1.Thickness of mounting plate: $t \leq 1.0\text{mm}$, recommended mounting screw: $M4 \times (9+t)$,the tightening torque: $(2.5 \sim 3.5N \cdot M)$;
- 2.The recommended tightening torque of M10: $14N \cdot M$ (Jack:copper,Mounting plate:thermoplastic);
- 3.The recommended tightening torque of $\Phi 10$: $22N \cdot M$ (Jack:copper,Mounting plate:thermoplastic).

Recommended Mounting Hole Dimension



1 POS High current push-pull metal shell connector (RQD)



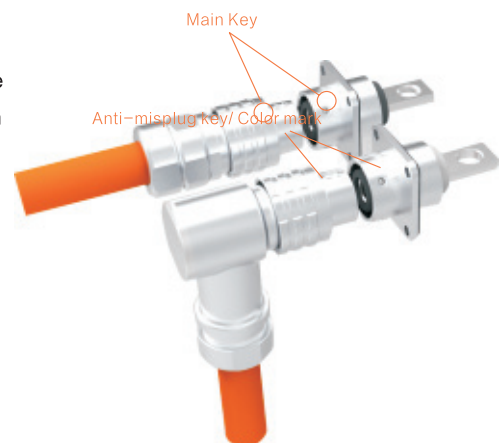
Features/Application

- 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 ² | 40A |
| | | 10mm ² | 60A |
| B | Φ6mm | 16mm ² | 80A |
| | | 25mm ² | 130A |
| C | Φ8mm | 35mm ² | 180A |
| | | 50mm ² | 220A |
| D | Φ10mm | 50mm ² | 240A |
| | | 70mm ² | 270A |
| E | Φ12mm | 95mm ² | 300A |
| | | 120mm ² | 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

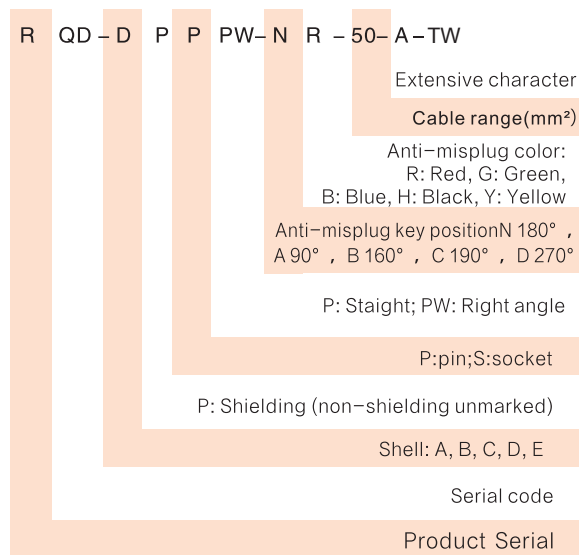
Insulator: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: rubber or elastomer

Ordering Information

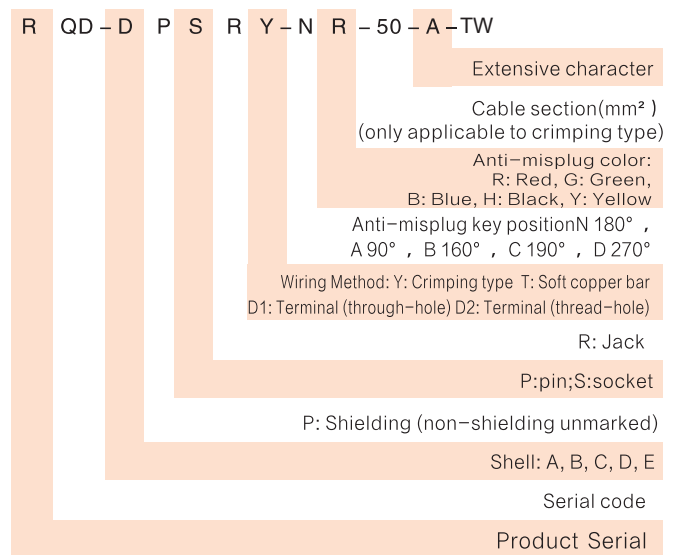
Plug



Note: Plug assemble with pins

eg: RQD-CPPPW-AH-35-A means: RQD series plug, Shell C connect 35 mm² shield cable, right angle plug, A position black.

Jack



Note: Plug assemble with socket

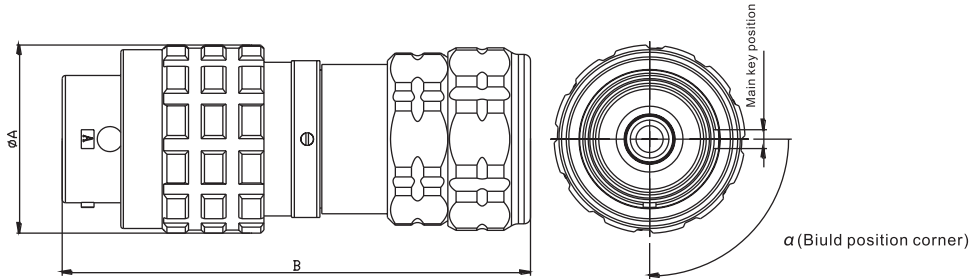
eg: RQD-CPPPW-AH-35-A means: RQD series plug, Shell C A position black , plug trail is open end.

Size

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

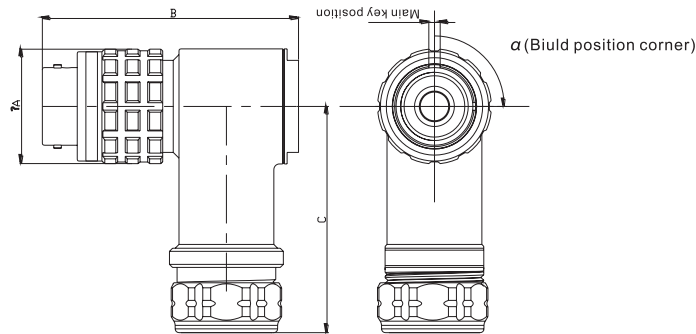
Plug

Plug straight



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

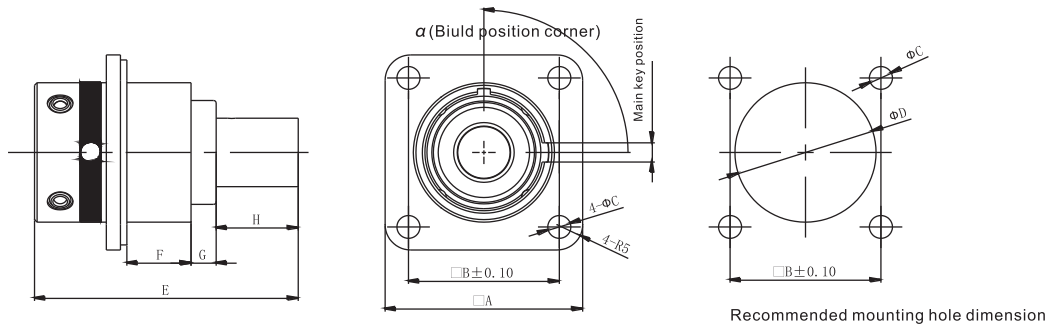
Plug right angle



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

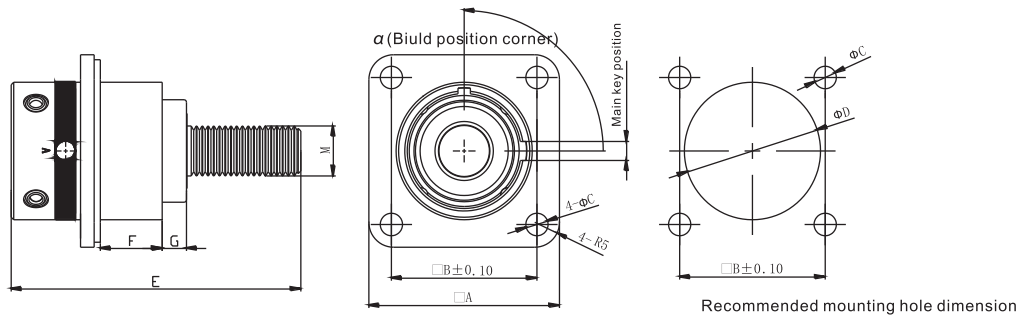
Jack

Jack: crimping type



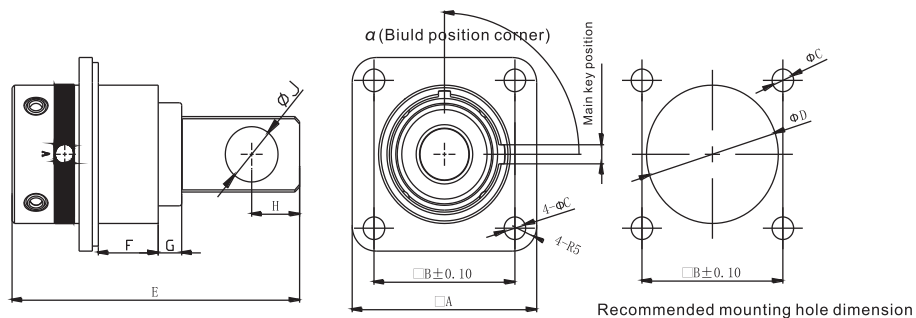
| Shell | Contact | Cable Range | Current Rating | A | B | C | D | E | F | G | H |
|-------|---------|--------------------|----------------|------|-------|-----|------|------|------|---|------|
| A | Φ3.6mm | 6mm ² | 40A | 24 | 18 | 3.2 | 19 | 35 | 4.5 | 2 | 15 |
| | | 10mm ² | 60A | | | | | | | | |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

Jack: for copper bar



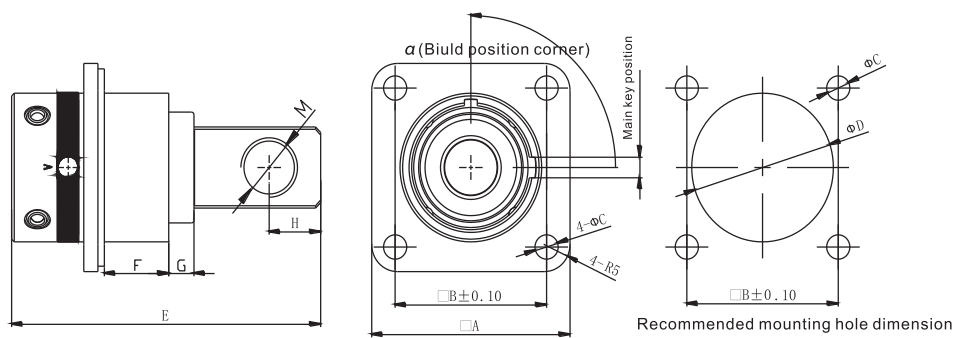
| Shell | Contact | Cable Range | Current Rating | A | B | C | D | E | F | G | M |
|-------|---------|--------------------|----------------|------|-------|-----|------|------|------|---|-----|
| A | Φ3.6mm | 6mm ² | 40A | 24 | 18 | 3.2 | 19 | 35 | 4.5 | 2 | M5 |
| | | 10mm ² | 60A | | | | | | | | |
| B | Φ6mm | 16mm ² | 80A | 31 | 22-23 | 4.2 | 20 | 40 | 5 | 2 | M6 |
| | | 25mm ² | 120A | | | | | | | | |
| C | Φ8mm | 35mm ² | 180A | 35 | 24 | 4.5 | 23 | 43.1 | 6.9 | 4 | M8 |
| | | 50mm ² | 200A | | | | | | | | |
| D | Φ10mm | 50mm ² | 200A | 38.5 | 29.4 | 4.5 | 28.5 | 58.5 | 13 | 5 | M10 |
| | | 70mm ² | 250A | | | | | | | | |
| E | Φ12mm | 95mm ² | 300A | 41 | 34 | 4.5 | 34 | 56 | 12.5 | 5 | M12 |
| | | 120mm ² | 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 ² | 40A | 24 | 18 | 3.2 | 19 | 35 | 4.5 | 2 | 6 | 4.5 |
| | | 10mm ² | 60A | | | | | | | | | |
| B | Φ6mm | 16mm ² | 80A | 31 | 22-23 | 4.2 | 20 | 40 | 5 | 2 | 5.5 | 6.5 |
| | | 25mm ² | 120A | | | | | | | | | |
| C | Φ8mm | 35mm ² | 180A | 35 | 24 | 4.5 | 23 | 47.6 | 6.9 | 4 | 7 | 8.5 |
| | | 50mm ² | 200A | | | | | | | | | |
| D | Φ10mm | 50mm ² | 200A | 38.5 | 29.4 | 4.5 | 28.5 | 60 | 13 | 5 | 10 | 10.5 |
| | | 70mm ² | 250A | | | | | | | | | |
| E | Φ12mm | 95mm ² | 300A | 41 | 34 | 4.5 | 34 | 56 | 12.5 | 5 | 12 | 12.5 |
| | | 120mm ² | 350A | | | | | | | | | |

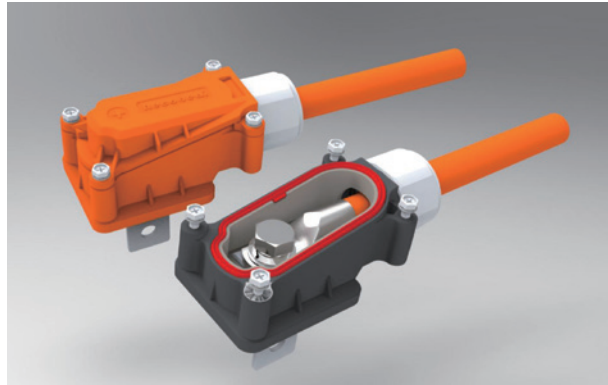
Jack:for terminal(thread-hole)



| Shell | Contact | Cable Range | Current Rating | A | B | C | D | E | F | G | H | M |
|-------|---------|--------------------|----------------|------|-------|-----|------|------|------|---|-----|-----|
| A | Φ3.6mm | 6mm ² | 40A | 24 | 18 | 3.2 | 19 | 35 | 4.5 | 2 | 6 | M4 |
| | | 10mm ² | 60A | | | | | | | | | |
| B | Φ6mm | 16mm ² | 80A | 31 | 22-23 | 4.2 | 20 | 40 | 5 | 2 | 5.5 | M6 |
| | | 25mm ² | 120A | | | | | | | | | |
| C | Φ8mm | 35mm ² | 180A | 35 | 24 | 4.5 | 23 | 47.6 | 6.9 | 4 | 7 | M8 |
| | | 50mm ² | 200A | | | | | | | | | |
| D | Φ10mm | 50mm ² | 200A | 38.5 | 29.4 | 4.5 | 28.5 | 60 | 13 | 5 | 10 | M10 |
| | | 70mm ² | 250A | | | | | | | | | |
| E | Φ12mm | 95mm ² | 300A | 41 | 34 | 4.5 | 34 | 56 | 12.5 | 5 | 12 | M12 |
| | | 120mm ² | 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: $\leq 3m\Omega$
 Withstand voltage: $\geq 3000V$ AC 1Min
 Insulation resistance: $\geq 3000M\Omega$ ($\leq 40^\circ C$, $\leq 50\% RH$)
 $\geq 300M\Omega$ ($> 95\% RH$)

Mechanical Property

Mating cycle: 20 times

Environmental Property

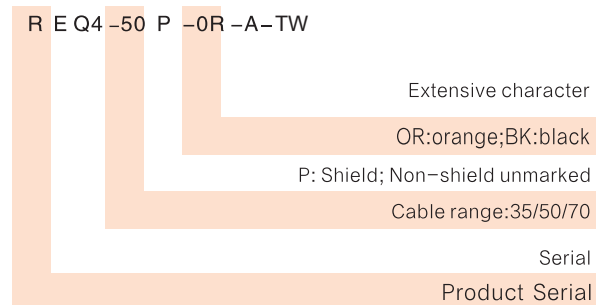
Working temperature: $-40^\circ C \sim +125^\circ C$
 Relative humidity: $\leq 95\%$ ($40^\circ C$)
 Sealing: IP67 (Depth of water: 1m, 48h, water tight)
 Single jack: waterproof (IP67) or aleak

Material

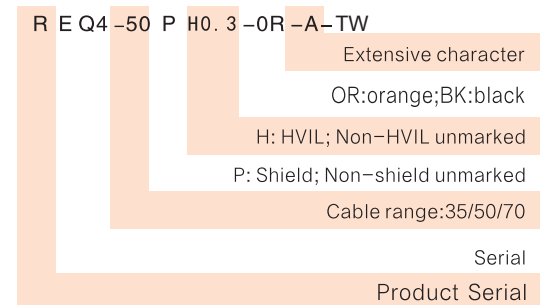
Meeting the RoHS
 Shell: aluminum alloy
 Contact: copper alloy
 Seal: rubber

Ordering Information

Non-HVIL

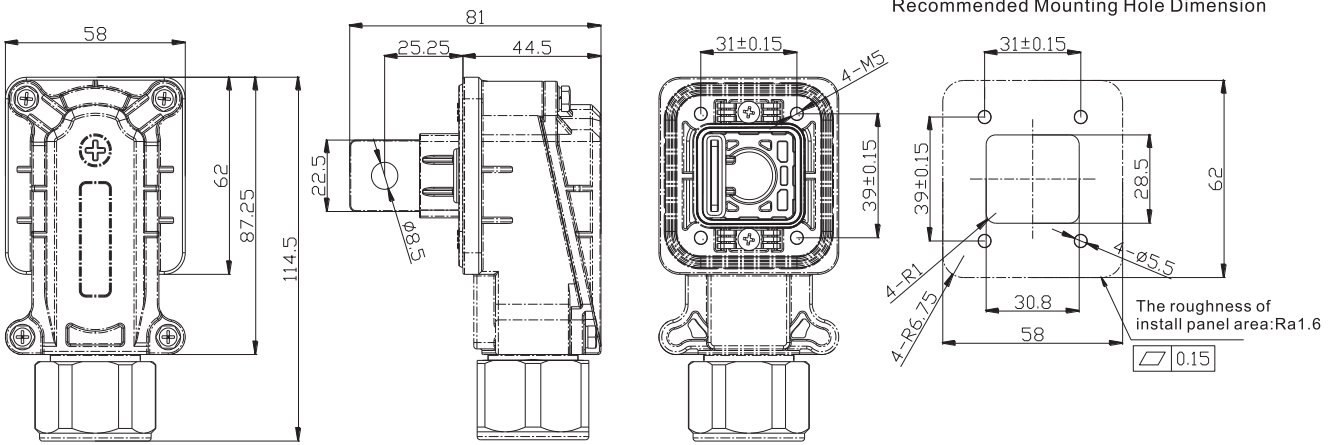


HVIL

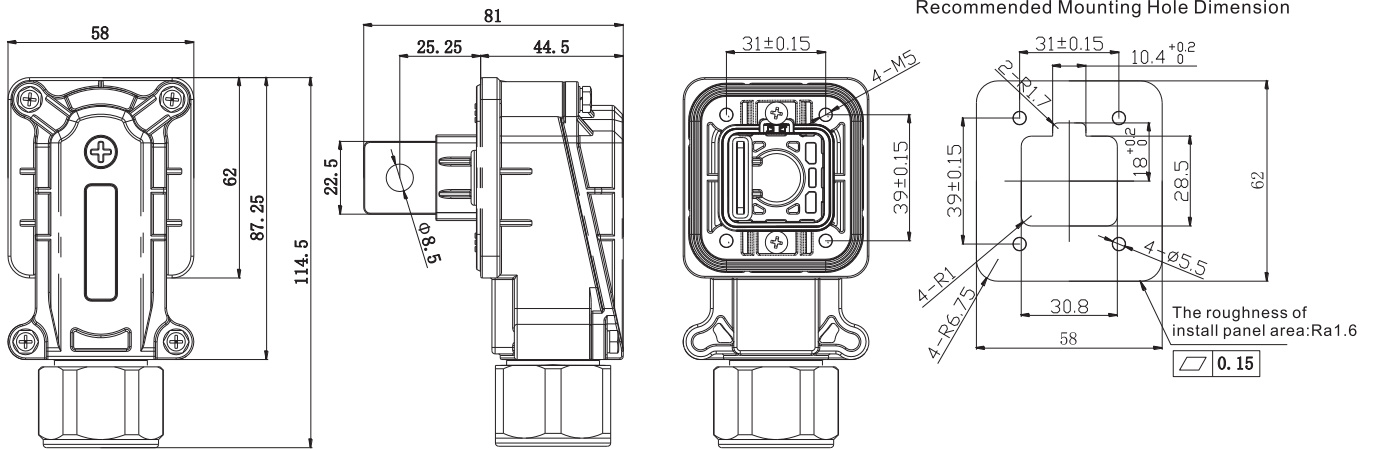


Size

Non-HVIL



HVIL



Note:

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

| Name | 35 ² | 50 ² | 70 ² |
|-------------------|-----------------|-----------------|-----------------|
| 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

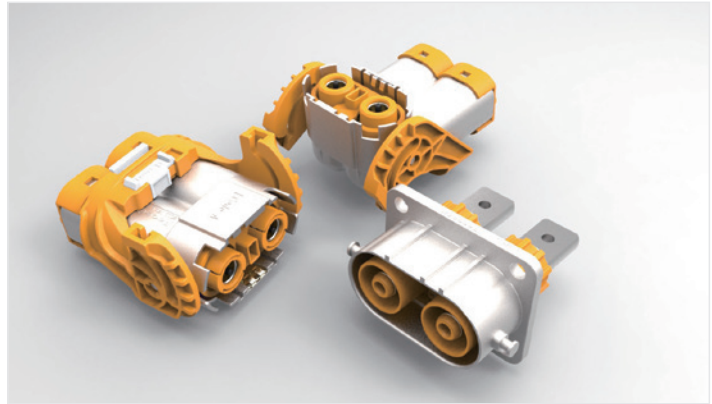
HVIL terminal: terminal8240-0447/SWS plastic shell: 6098-7898/SWS

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

Multi 2 POS High current metal shell connector with shield(REG2)

Describe

- 2 POS
- Metal shell
- Locking handle and
- Secondary locking structure
- False-proof design (IPXXB)
- Sealing: IP6K9K、IP68
- Supporting cable: 25mm²--95mm²



Application

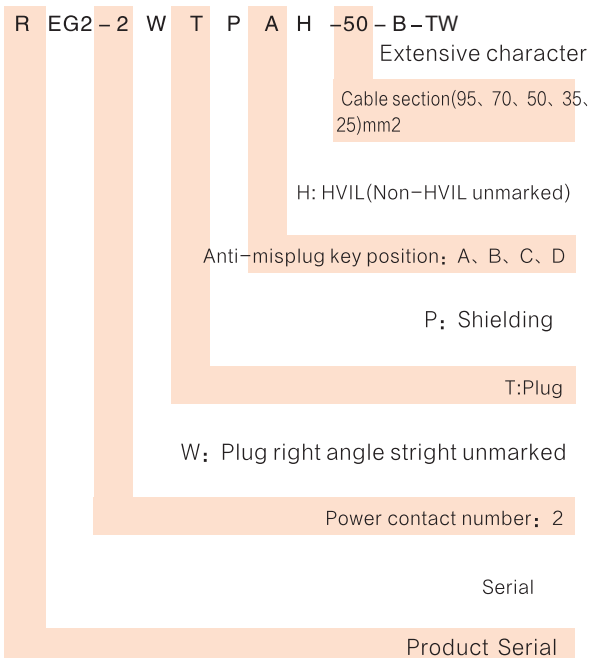
Current Rating

| Contact | Cable range | current rating | Cable type | Diameter of the insulation layer in the cable | External diameter of cable | Remark |
|---------|---------------------------|----------------|----------------------------------|---|----------------------------|--------|
| Φ 10mm | 25mm ² | 120A | Shield or Non-Shield is optional | Φ8.2mm~Φ8.8mm | Φ 11.6mm~Φ 12.2mm | / |
| | 35mm ² | 180A | Shield or Non-Shield is optional | Φ9.8mm~Φ 10.5mm | Φ 13.8mm~Φ 14.4mm | / |
| | 50mm ² | 220A | Shield or Non-Shield is optional | Φ 11.5mm~Φ 12.2mm | Φ 15.2mm~Φ 15.8mm | / |
| | 70mm ² | 250A | Shield or Non-Shield is optional | Φ 14mm~Φ 15.5mm | Φ 19.2mm~Φ 20mm | / |
| | 95mm ² | 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 ² | 3A | Non-shield | / | Φ 1.4mm~Φ 2.0mm | HIVL |

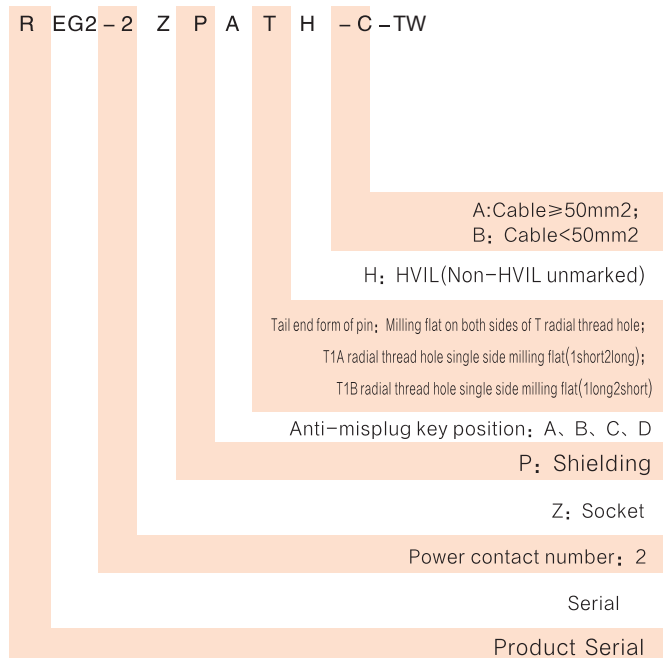
- Current Rating: 1000V DC;
- Shielding: optional
- HIVL: YES(HIVL is normal)
- Non HIVL is optional
- Working Temperture: -40°C ~ +140°C

Ordering information

Plug



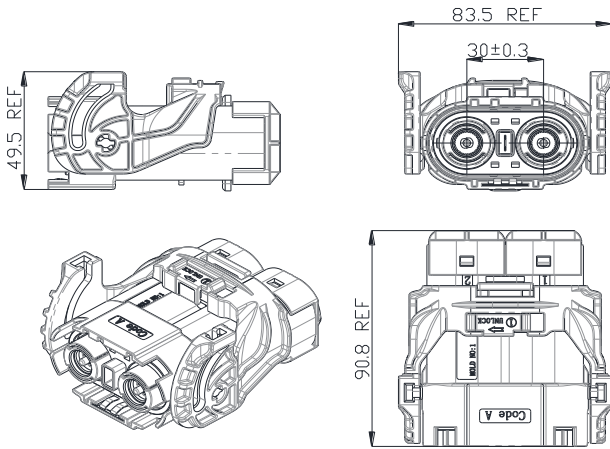
Socket



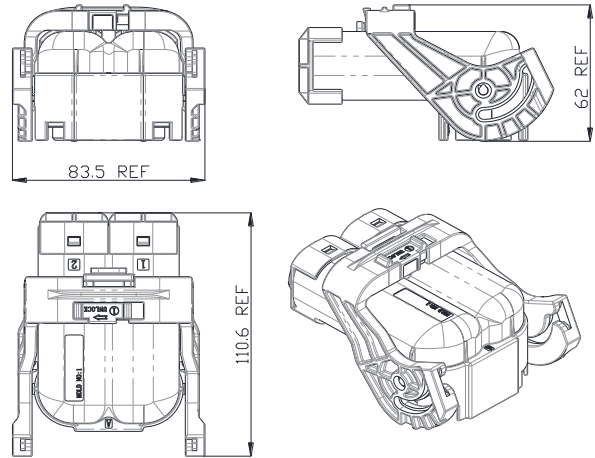
Fitting Cable ≥ 50mm² Socket

size

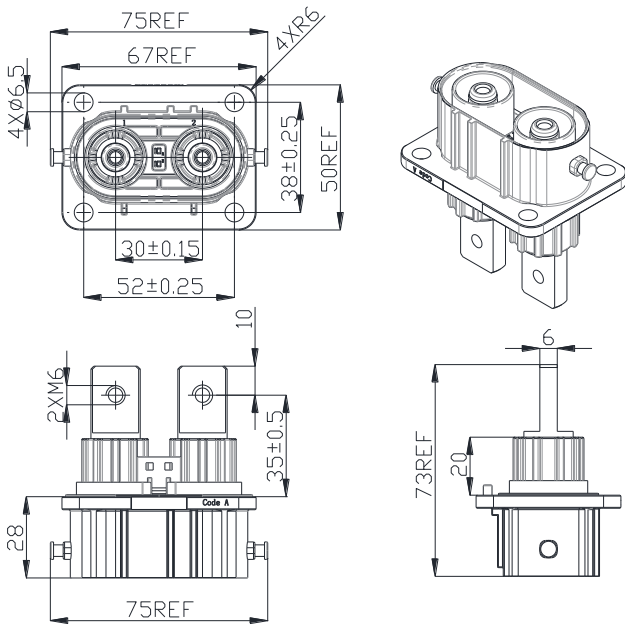
2 POS Straight socket



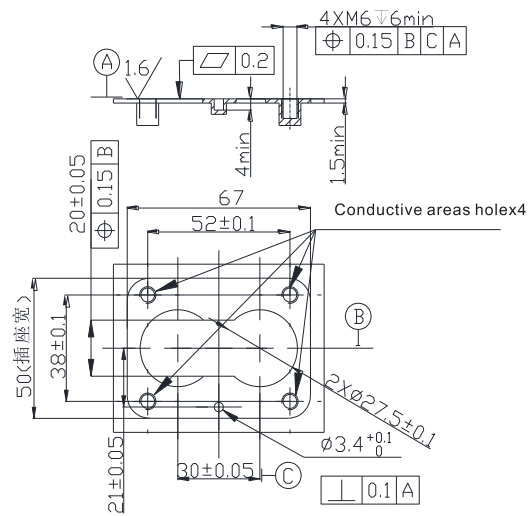
2 POS Right angle plug



2 POS Straight socket



Mounting hole dimension(A key position)



Metal shell connector (RIPTII)

Describe

- 2 POS
- Metal shell
- High Protection Degree: IP6K9K、IP68
- Cable Section: 25mm² ~ 70mm²
- 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

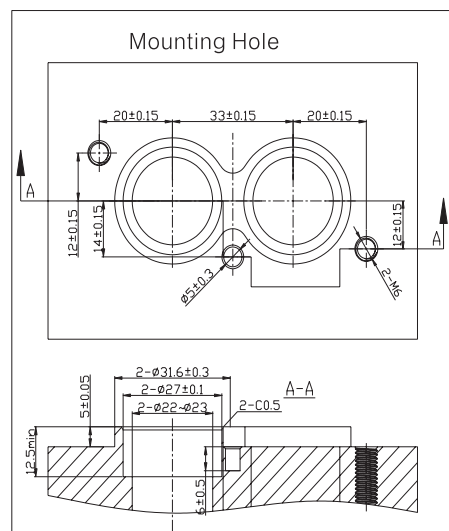
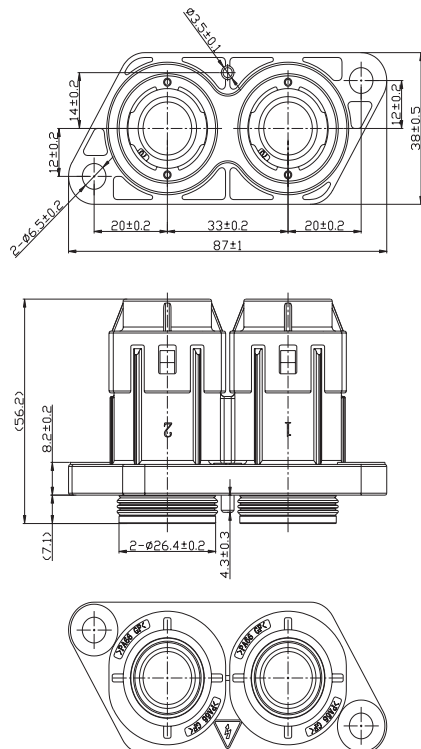
Naming rules

RIPTII-2-70P-A-TW

Extension serial number
P: Shield
Cable: 25、35、50、70
POS: 2
IPT II:Product Serial
Product Serial

RIPT II-2-50P-Aⁿ means: Recodeal manufacture, IPT II series, two-core, suitable for 50 mm² shielded cable, with shielding, expansion model is A.

SIZE



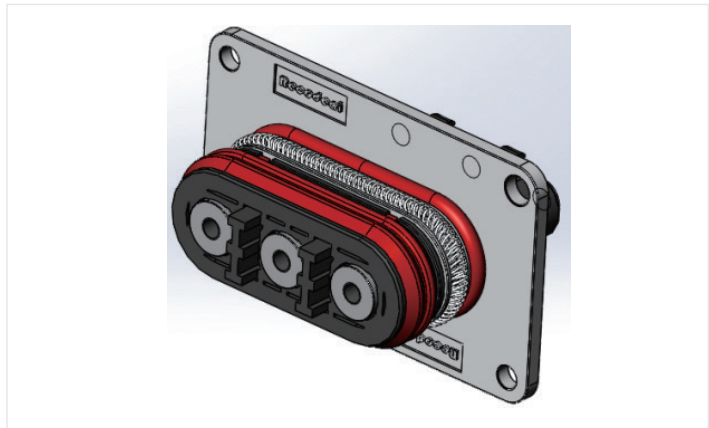
RET Metal /Plastic shell connector with shield

Describe

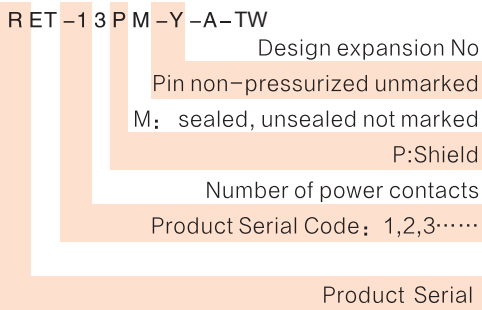
- 3 POS
- Metal/Plastic shell
- High protection Degree: IP6K9K、IP68
- Mainly used for battery, MCU、, PDU and other equipment

Application

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



Naming Rules

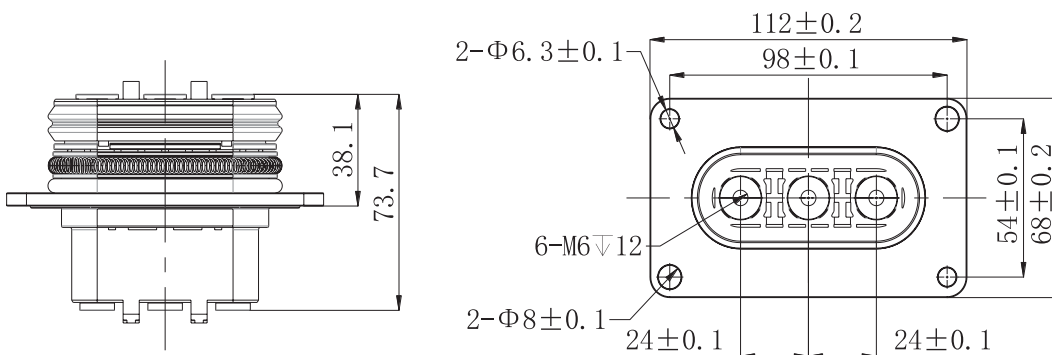


Product Serial Code

| 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

- 2 POS
- Metal shell
- Hand locking structure
- Anti-mis-touch design (IPXXB)
- High protection Degree: IP6K9K、IP68
- 2 Anti-mistake key positions
- Cable Section: 70mm² ~ 120mm²
- Integrated Mask Interlocking Function
- The socket integrates the function of temperature probe
- For battery pack, MCU、PDU equipment



Application

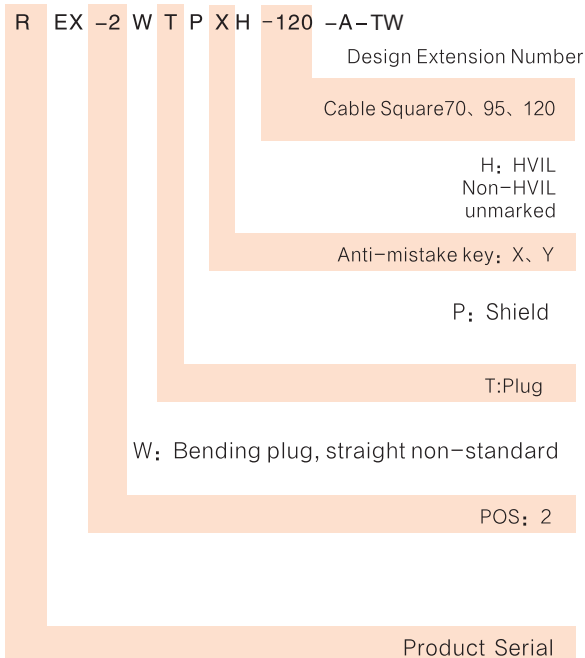
- Current Rating

| Contact Specifications | Cable Square | Current Rating | Cable Type | Outer diameter of Shield Cable | Outer diameter of Non-Shield Cable |
|------------------------|--------------------|----------------|-----------------------|--------------------------------|------------------------------------|
| φ 12 | 70mm ² | 2*250A | Shield and Non-Shield | φ 19.5±0.5 | φ 15.5±0.3 |
| φ 12 | 95mm ² | 2*300A | Shield and Non-Shield | φ 22.5±0.5 | φ 18.7±0.5 |
| φ 12 | 120mm ² | 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°C ~ +140°C

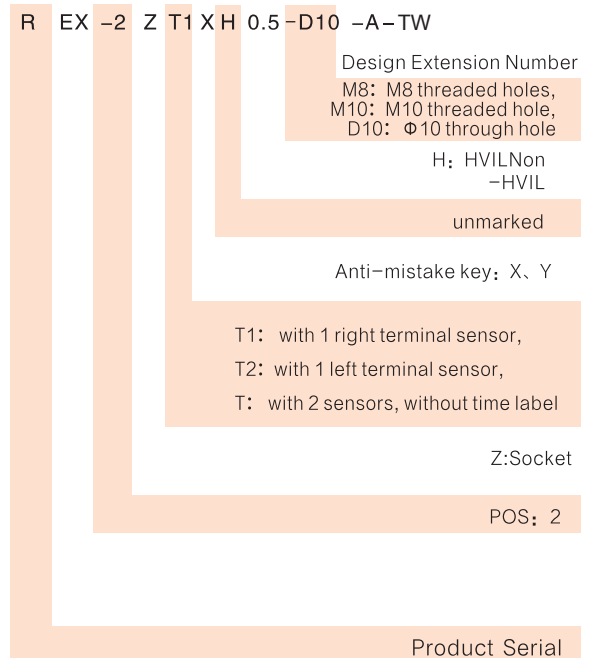
Naming Rules

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.

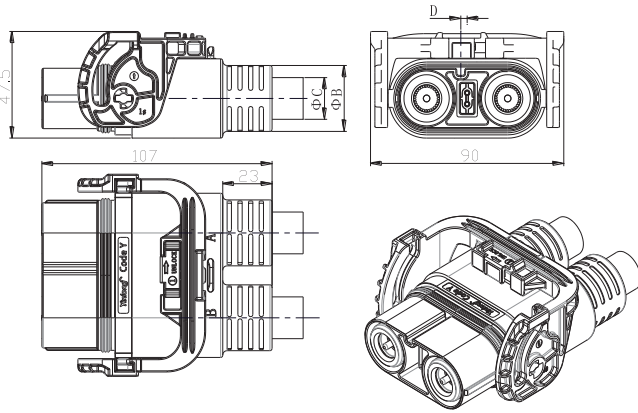
Socket



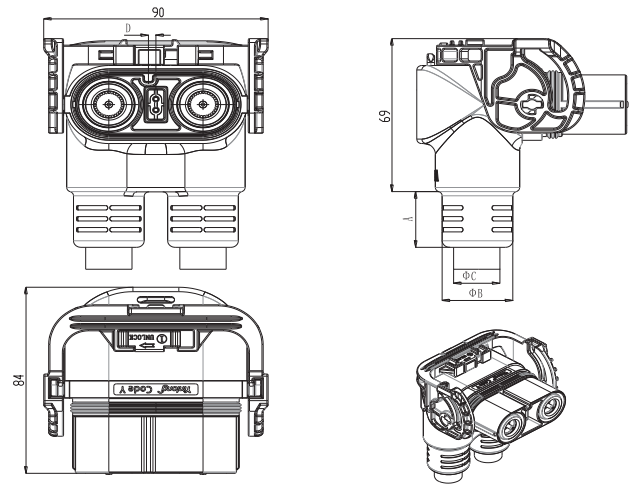
Note: For example: REX-2ZT1XH0.3-D10-A means two core with a sensor T1、X key position insulation cap color orange, with high voltage interlocking and pin bronze hole for Φ10 (through hole) connector socket;

SIZE

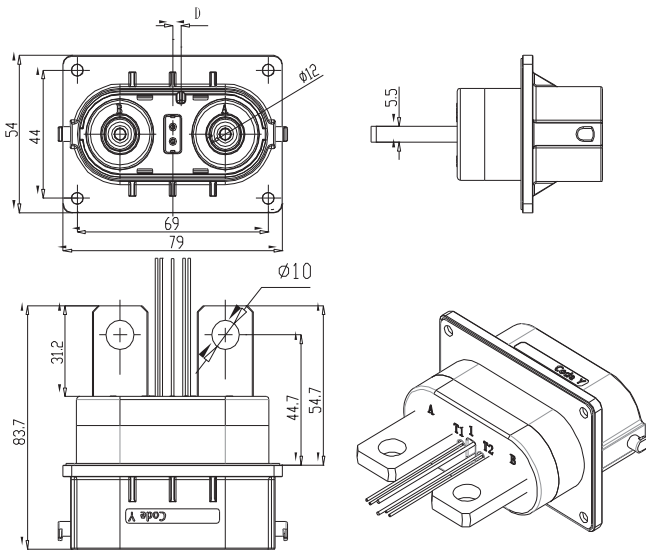
2 POS straight plug



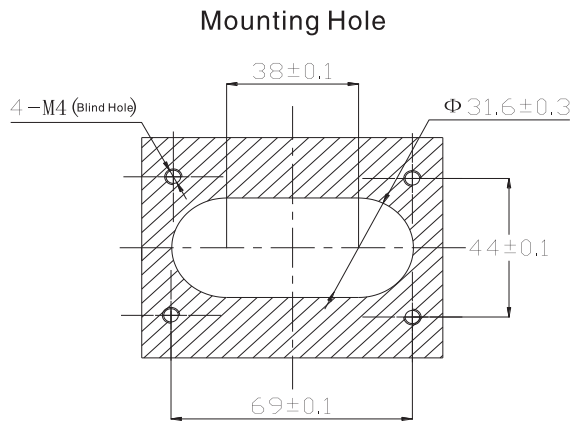
2 POS right angle plug



2 POS Socket



Install hole size





High current push-pull metal connector RQAI

Describe

- 1 POS
- Metal Shell
- Hand locking structure
- Anti-mis-touch design (IPXXB)
- High Protection Degree: IP6K9K、IP68
- 2 Anti-Mistake Key Positions
- Cable Section ; 95mm² ~ 135mm²
- 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 ² | 300 | Shield and Non-Shield |
| φ 15 | 120mm ² | 350 | Shield and Non-Shield |
| φ 15 | 135mm ² | 400 | Shield and Non-Shield |

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

Naming Rules

Plug

RQAI-F SP P W H -NR C -135 -A-TW

Design Extension Number
Cable: 95/120/135

C: Suit the primary key bit to the copper bar mounting plane vertical socket

NR:N key red; AH: A key black

H:HVIL Non-HVIL unmarked

W:Plug right angle

P:Shield

SP: Plug

Product Serial

Socket

RQAI-F PR C H D1 -NR C -A-TW

Design Extension Number

C: Primary key of busbar mounting face and socket The surface is vertical and does not indicate parallelism;

NR:N key red; AH: A key black

D1 straight hole, D2 thread hole

H:HVIL Non-HVIL unmarked

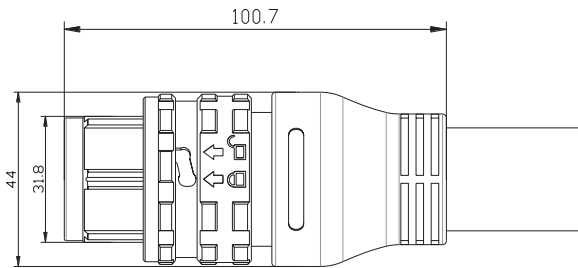
Ctemperature probe

PR: Socket

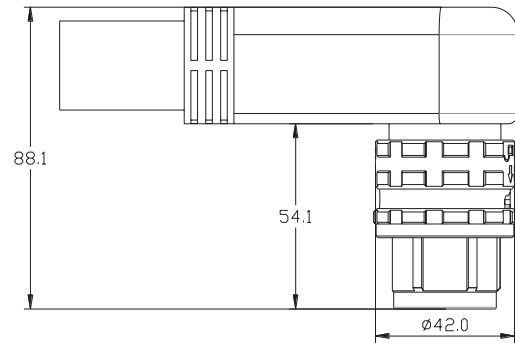
Product Serial

SIZE

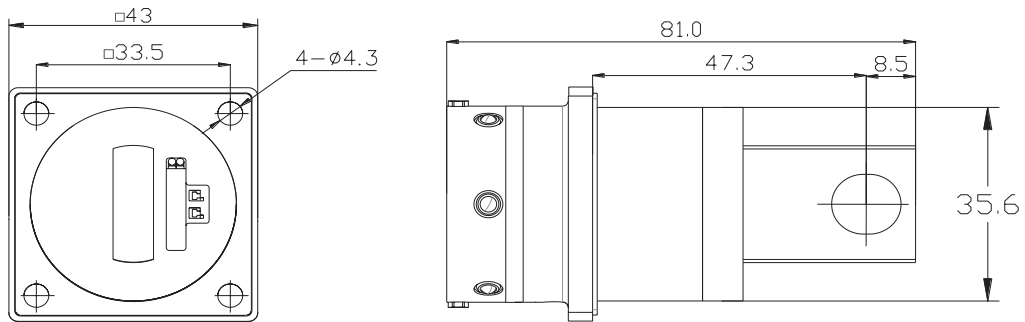
Straight plug



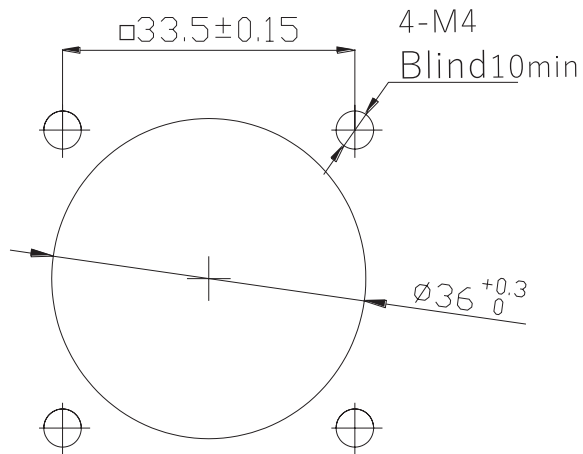
Right angle plug



Socket



Installation of hole size



Battery swap connector PFSC-TQA-BS1270/PFSC-TQA-CP1270

Describe

- Floatation: X,Yway: $\pm 5\text{mm}$; Zway: 0—10mm
- 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

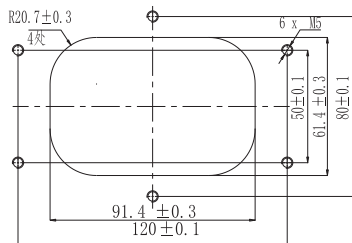


Application

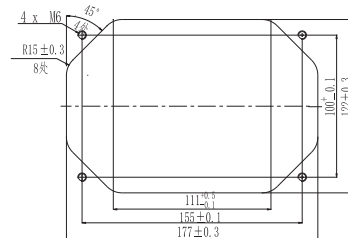
- Current Rating: 300A
- Voltage Rating: 750V DC
- Shield: Option
- HVIL: Option
- Temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Hole SIZE

Battery end panel hole size

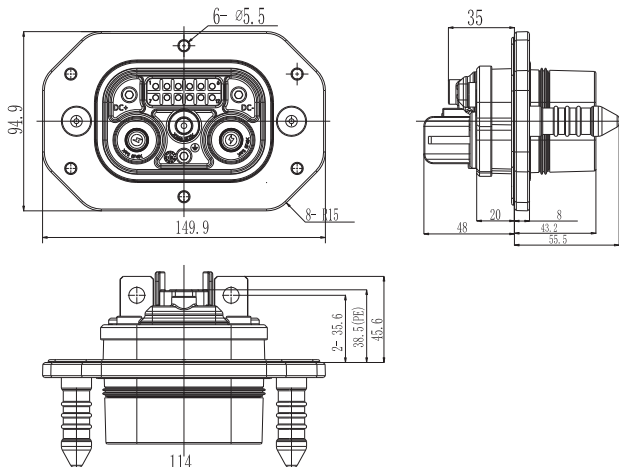


Car end panel hole size

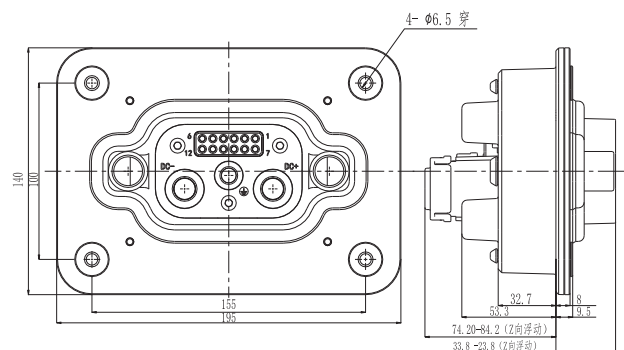


Dimensions of connector

Dimensions of Battery



Dimensions of Car

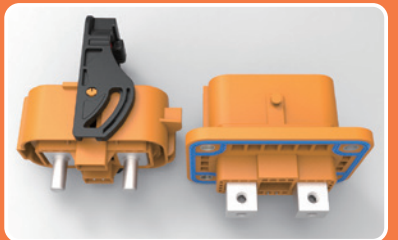
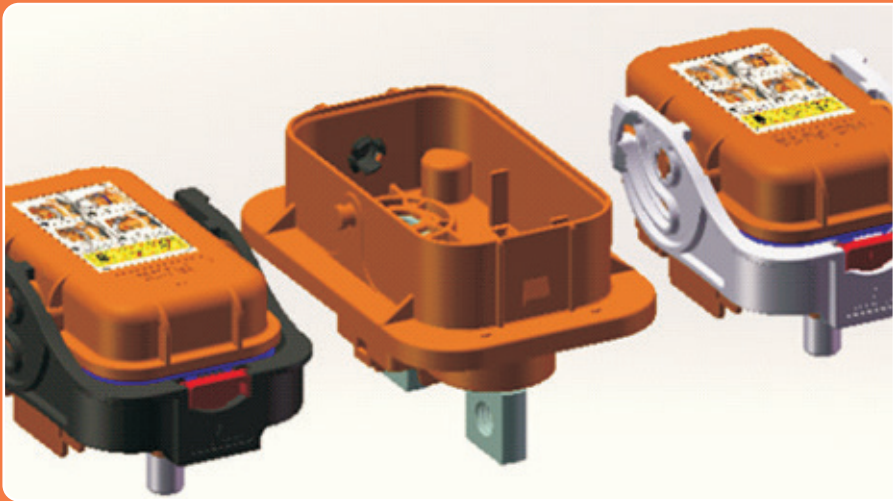


Manual Service Disconnect (MSD)

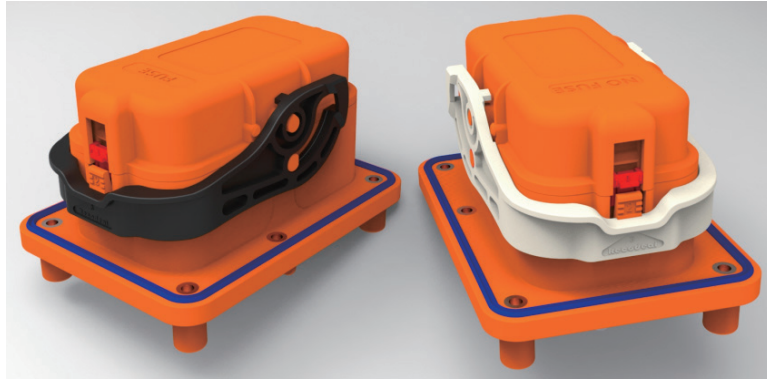
The application of MSD is integrated in PDU, BDU for safety, reliability of power cut off, short circuit protection. The voltage ranges of high voltage in electric vehicles are between 500V-1000V fuse current ranges are 200A- 630A, general requirements with the function of shielding and interlock.

MSD Table

| Model No. | Voltage(DC) | Current | Application |
|---------------------------------------|---------------|---|--------------------------------------|
| MSD3 / MSD5 / MSD7 | 500V 750V | Fuse: 200A-400A Rating: 200A/220A/250A/500A | Passenger cars Logistics Vehicles |
| MSD1 MSD1A MSD2 MSD4 MSD9 | 750V 1000V | Fuse: 200A-630A Rating: 200A/220A/250A/500A | Buses Commercial Vehicles |



Manual Service Disconnect (MSD1)



Features/Application

- Annren 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 ($\varnothing 11$) and two pairs of signal contact ($\varnothing 1$). 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°C)
 Vibration: 10~55Hz, amplitude 0.75mm
 Mechanical shocks: 980m/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 : $3500\text{M}\Omega$ (normal status), $100\text{M}\Omega$ (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 - TW

Extensive character

H: HVIL (non-HVIL unmarked)

Fuse specification(A)

Serial code

Product Serial

Jack

RC-MSD1 - H - Z - A - TW

Extensive character

Z : Jack

H: HVIL (non-HVIL unmarked)

Serial code

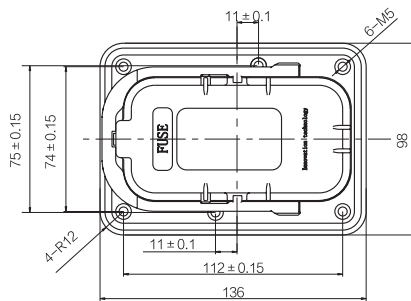
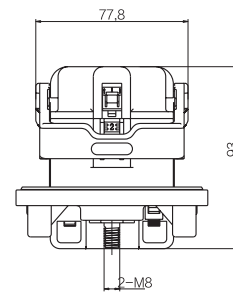
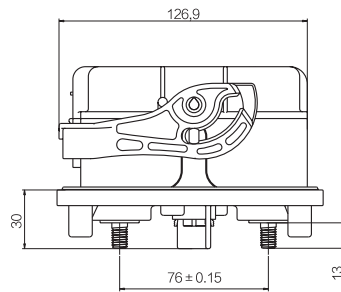
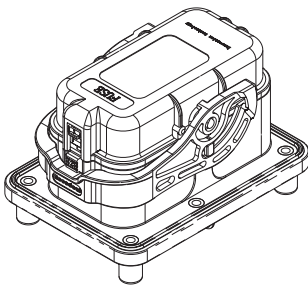
Product Serial

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

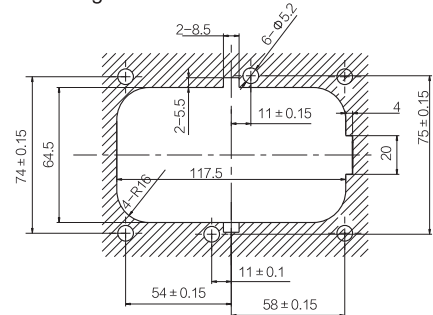
2 Fuse max current rating:400A.

Size

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



mounting hole dimension



Manual Service Disconnect (MSD2)



Features/Application

- **Annren** 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 Ω (normal status), 100 M Ω (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/s²
 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

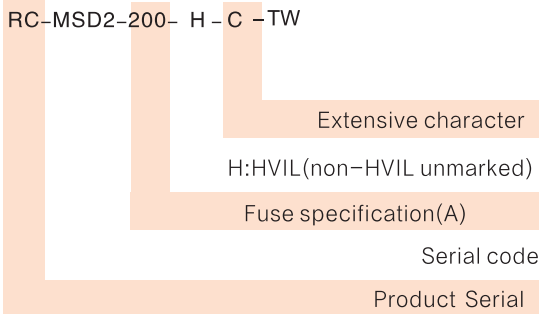
Material

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

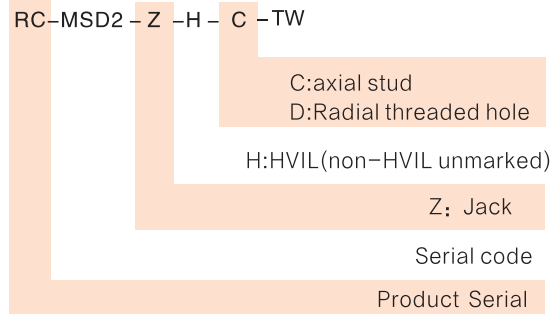
Ordering Information

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



Jack



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 | | |

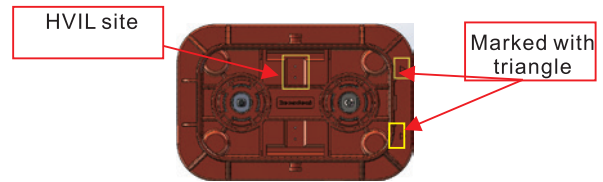
2. "RC-MSD2-630-H-C" means with 630A ZB Type fuse and HVIL MSD2 Plug.

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

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

NOTE:

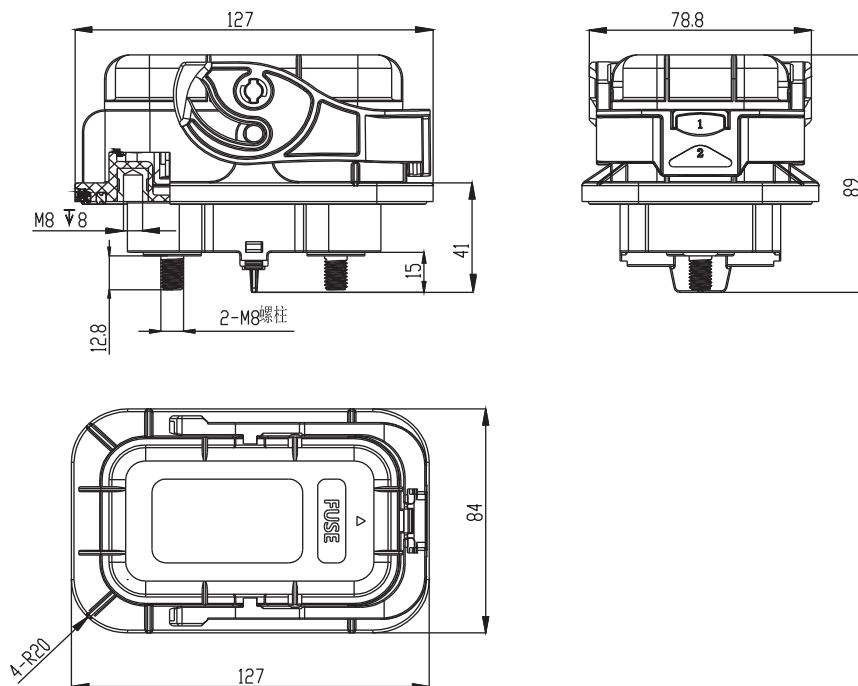
1. Socket non-HVIL with Silicone oil resistant is with plug non-HVIL.
2. RC-MSD2-Z-C type means M8 axial stud with non-HVIL plug.
3. RC-MSD2-Z-H-D type means with M10 Radial threaded hole socket.
4. Plug and socket can only meet function when both are HVIL, as the picture below HVIL do like this on the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



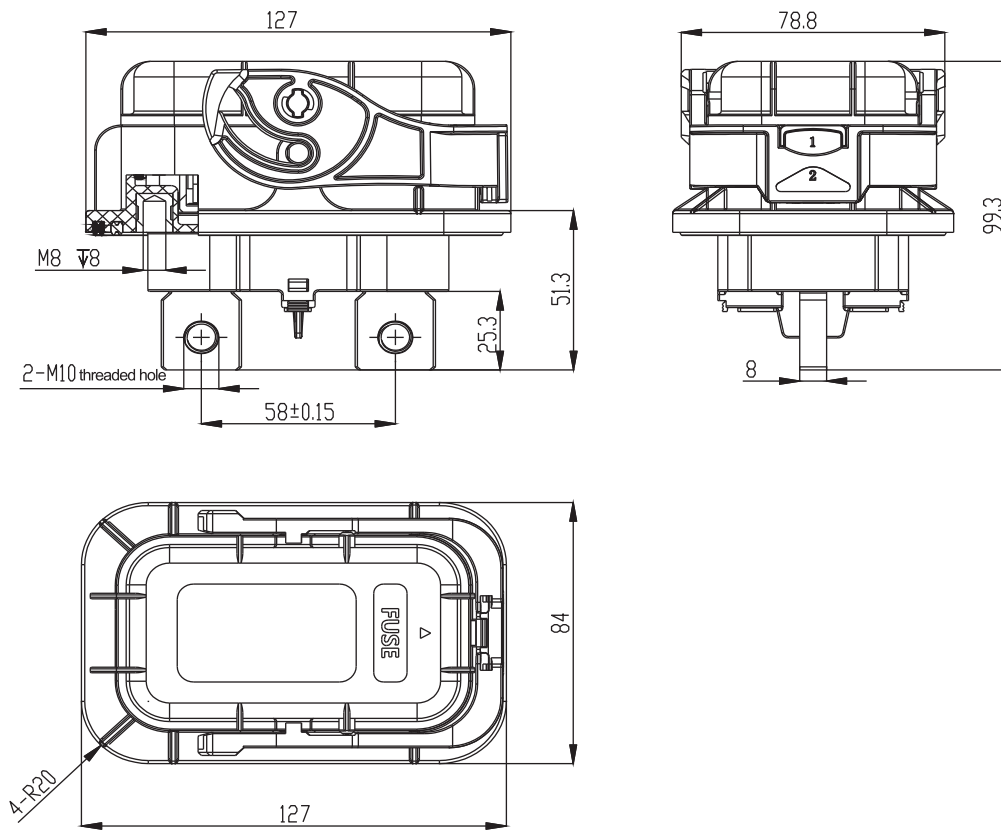
Size

The shape of fuse and copper are the same.

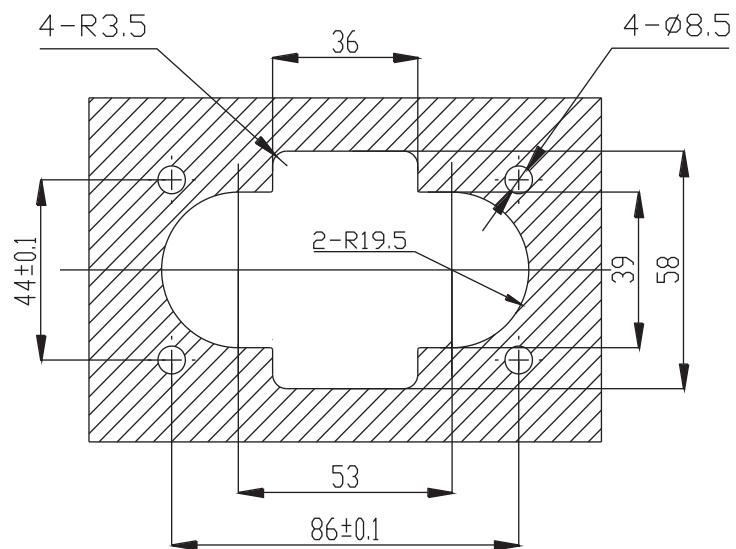
Manual Service Disconnecter (Socket Jack:M8)



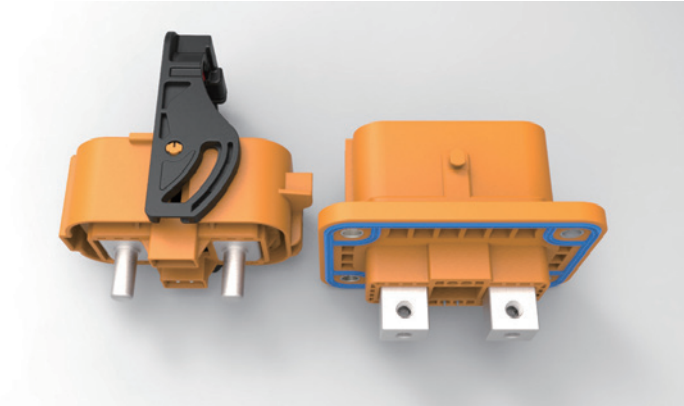
Manual Service Disconnect (Socket Jack:M10)



Mounting hole dimension



Manual Service Disconnecter (MSD3)



Features/Application

- **Annren** 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/s²
 plug and socket divorce: $\leq 75\text{N}$

Material

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

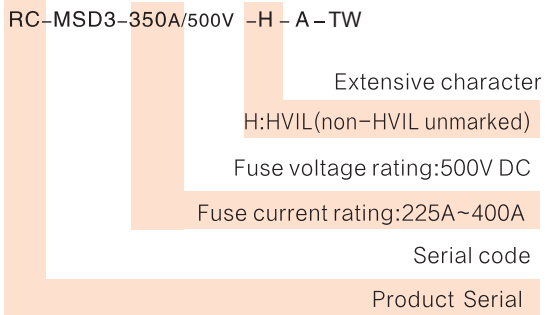
Environment Property

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

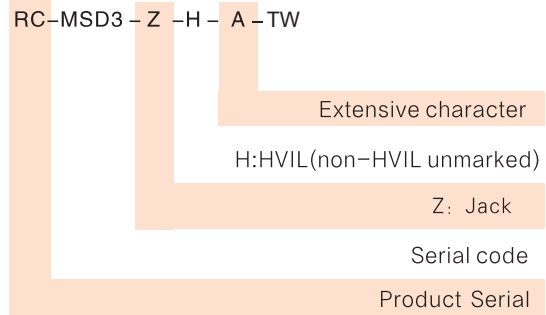
The plug and socket are separate as default, if you need whole part connect with "&".
 For example, RC-MSD3-350A/500V-H-A&RC-MSD3-Z-H-A means Equipped with 350A/500V fuse, with HVIL plug and socket whole part.

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.

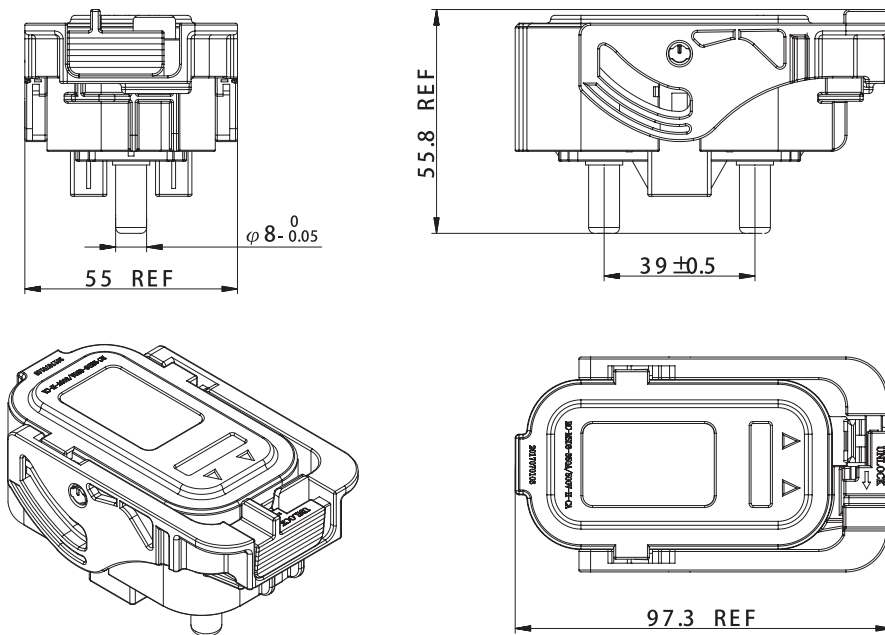
Jack



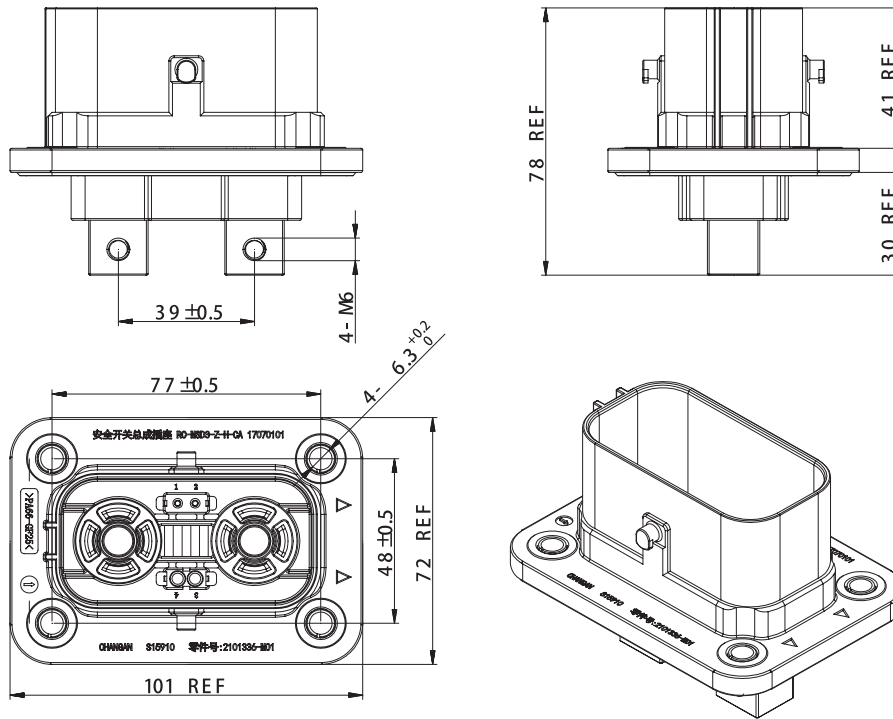
- NOTE:
- Plug with socket with HVIL together meet function, HVIL is designed together for certain.

Size

Plug



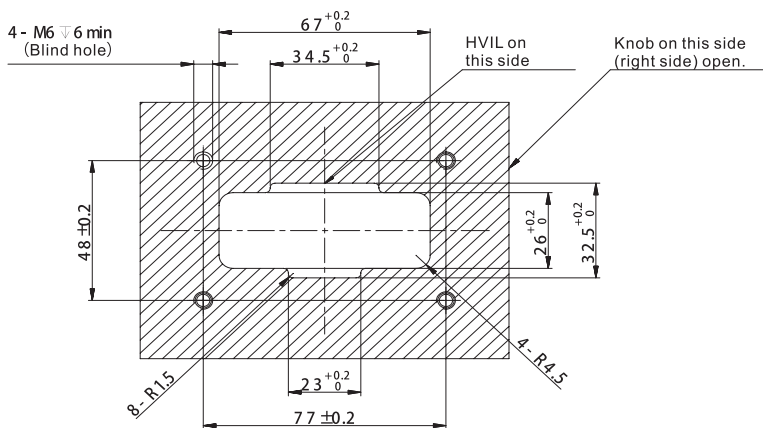
Jack



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±1 N.m.

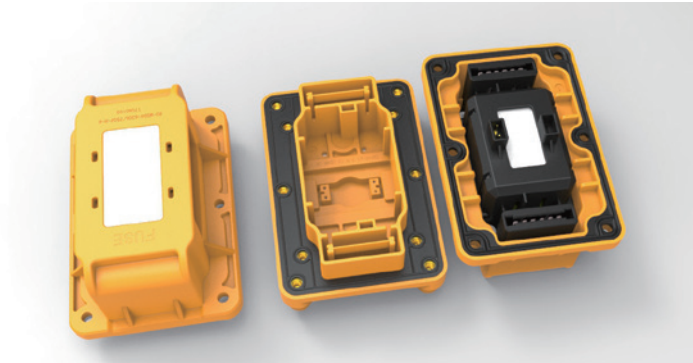
Mounting hole dimension



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 Disconnecter (MSD4)



Features/Application

- Annren 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 $\leq 0.5m\ \Omega$ (not including fuse resistance)

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

current rating: 25A (300A in 30 mins) temperature rise $< 55K$

voltage rating: 750V DC

voltage Resistance:

3000V DC in 1 min, Leakage current $< 0.1\ mA$ (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: 980m/s²

plug and socket divorce: $\leq 100N$

Material

Shell: thermoplastic flame-retardant

Contact: copper alloy silver plated

Seal: silicon rubber

Environment Property

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

Relative humidity: 95%(40°C)

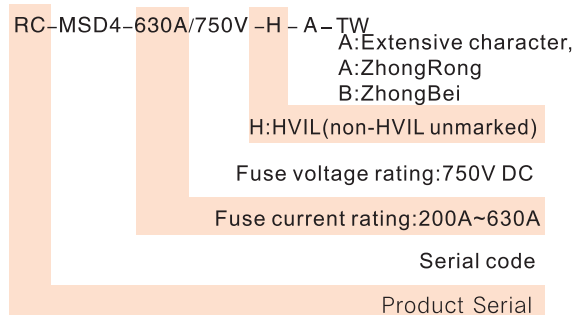
Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);

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

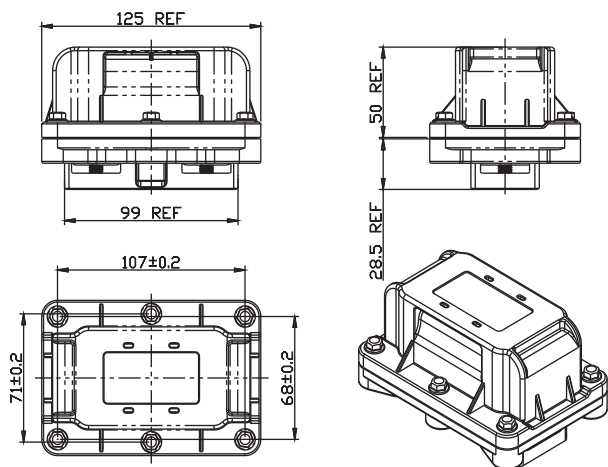


Note:

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:

Size

Plug Jack Mated(plate thick is 0.8mm)



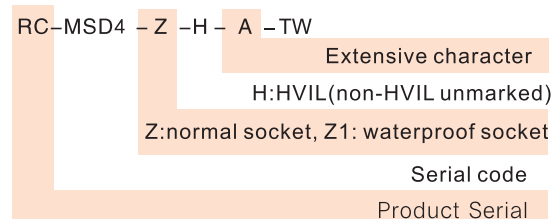
Remarks:
Jack tail lock copper row nut defaults to use M8 hexagon without elastic pad, flat padFlange nut, the national standard is GB/T 6177.1-2000.

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.

Jack



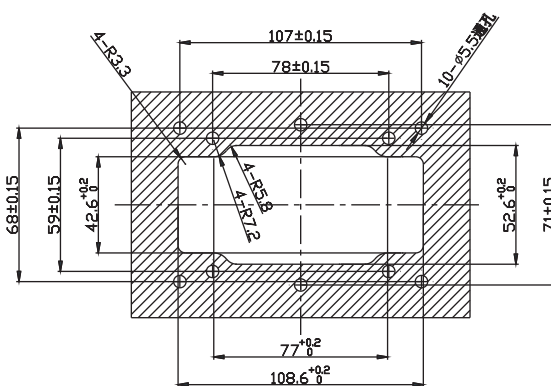
NOTE:

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 | |

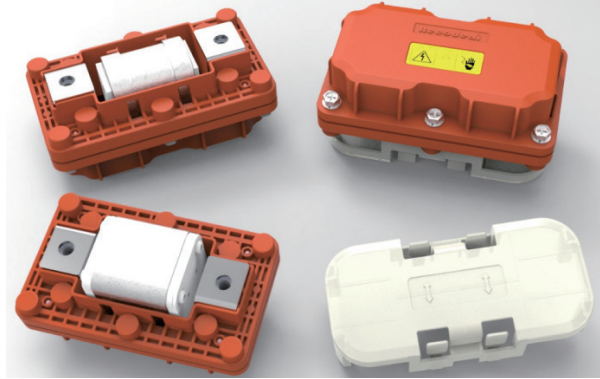
The selection of the rated current of the fuse needs to be comprehensively evaluated in combination with the following points: the fuse is expected protection mode, line rated working current value, instantaneous current impact value and its impact frequency, wiring specifications, the breaking current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

Recommended mounting hole dimension



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

Manual Service Disconnecter (MSD5)



Product Name

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

- Annren MSD5 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD4 provides overcurrent and short-circuit protection.
- Annren 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 $\leq 0.5m\Omega$ (not including fuse resistance)
 current rating: 25A (300A in 30 mins) temperature rise $< 55K$
 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 Ω (Normal; test environment temperature $\leq 40^\circ\text{C}$, humidity 50%RH)
 300m Ω (humidity $\geq 95\%$ RH)

Environment Property

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

Mechanical Property

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

Material

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

Ordering information

RC-MSD5-350A/750V -A-TW

A: circular tube fuse, B: rectangle fuse

750V: fuse voltage rating

350A: fuse current rating

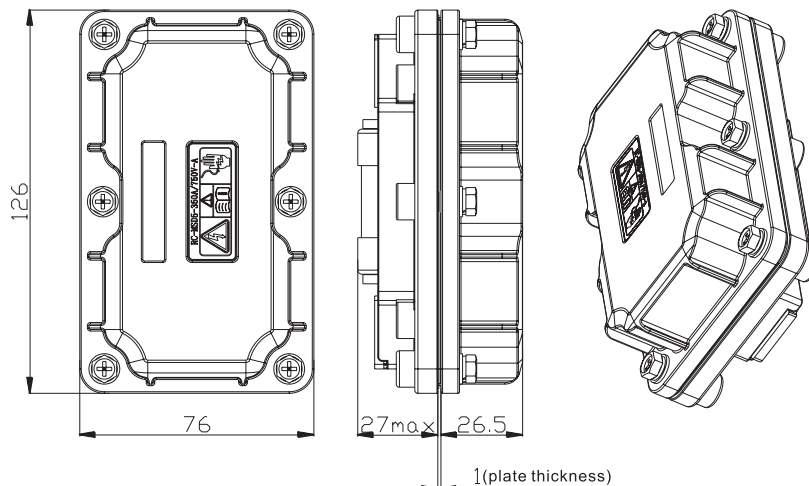
MSD5: Product series

Product Serial

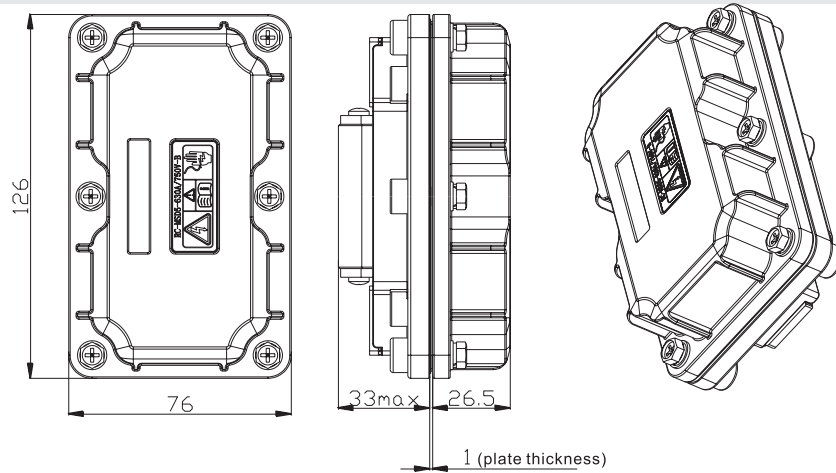
For example, "RC-MSD5-280A/750V-A" MSD5 fuse current rating 280A, fuse voltage rating 750V DC, circular tube fuse.

Size

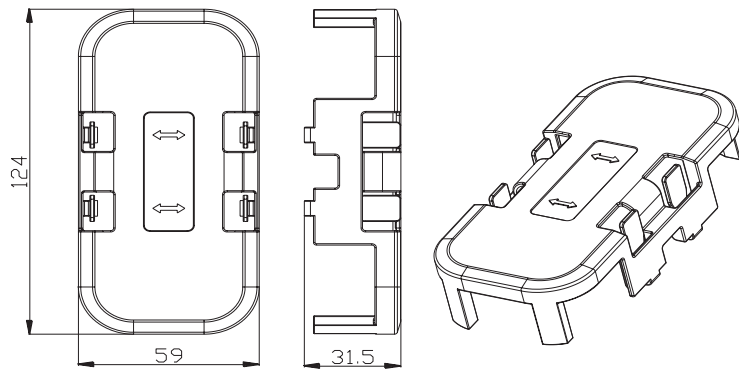
circular tube fuse type



Rectangle fuse type

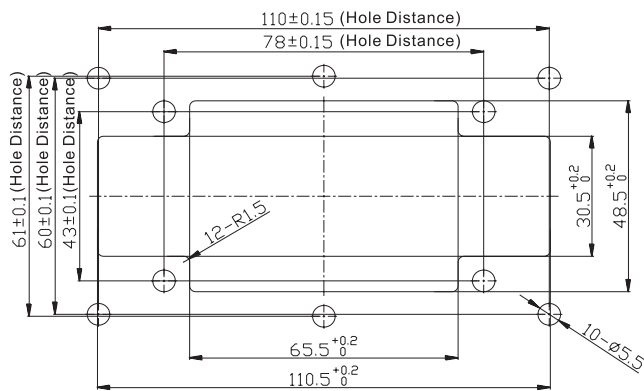


Dustproof



Size

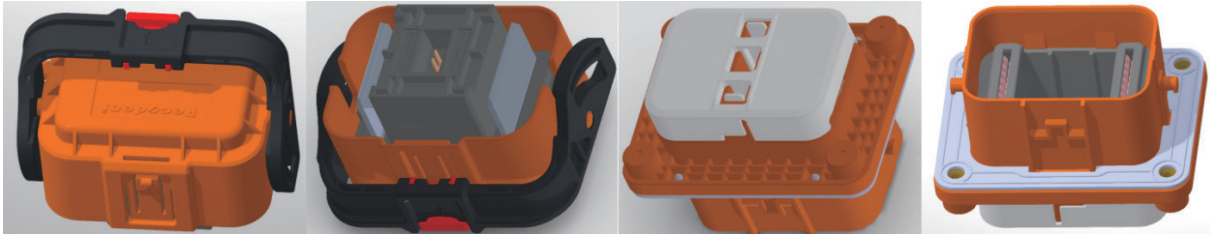
Recommend Mounting Hole Dimension



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 Disconnecter (MSD7)



Features/Application

- Annren 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 $\leq 0.5m\Omega$ (not including fuse resistance)
 signal contact resistance $\leq 5m\Omega$ (not including HVIL resistance)
 current rating: 25A (300A in 30 mins) end temperature rise $< 55K$
 voltage rating: 750V DC
 voltage Resistance:
 3000V DC in 1 min, Leakage current $< 0.1 mA$ (in normal status except fuse)
 fuse technical specification:
 Insulation resistance:
 5000m Ω (Normal; test environment temperature $\leq 40^{\circ}C$, humidity 50%RH)
 300m Ω (humidity $\geq 95\%RH$)
 fuse Electrical property: voltage rating: 750V DC
 current rating: 100A~400A

Environment Property

Working temperature: $-40^{\circ}C \sim +85^{\circ}C$
 Relative humidity: 95%(40 $^{\circ}C$)
 Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);
 plug meet IPXXB separately

Mechanical Property

Mating cycle: 75 times
 Vibration: 10~55GHz, amplitude 0.75mm
 Mechanical shocks: 980m/s 2
 plug and socket divorce: $\leq 75N$

Material

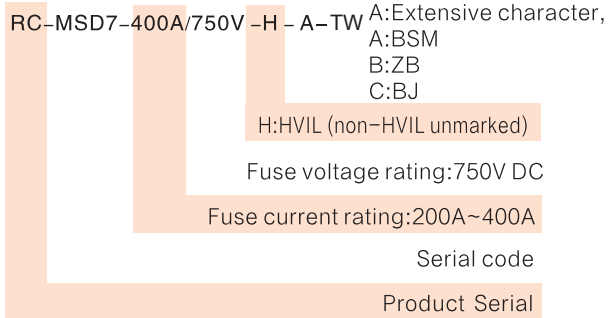
Shell: thermoplastic flame-retardant
 Contact: copper alloy silver plated
 Seal: silicon rubber



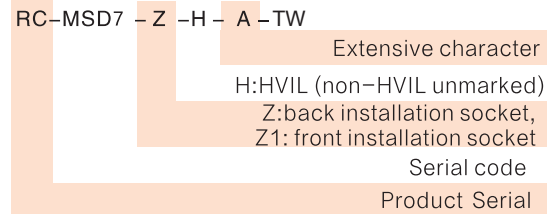
Ordering information

The plug and socket are separate as default, if you need whole part 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



Jack



Remarks:

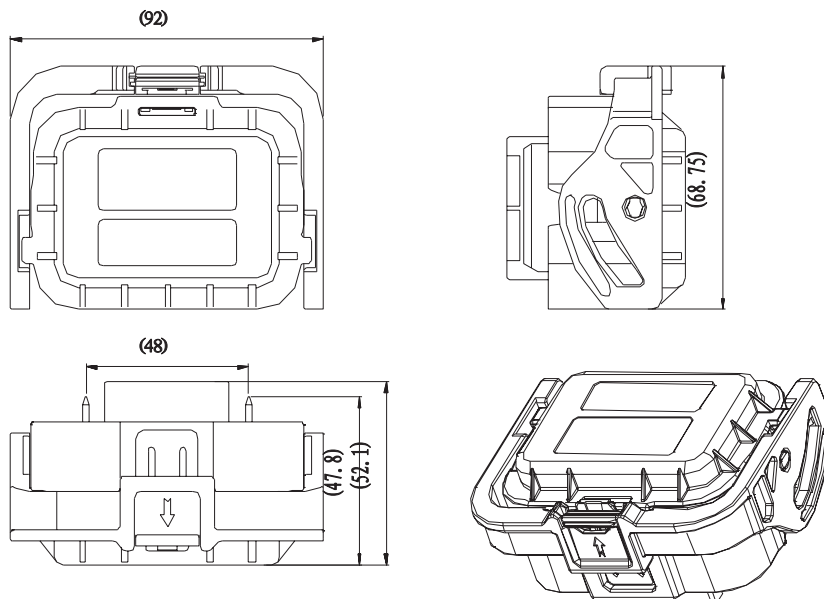
Plug and Jack need to have high voltage interlock at the same time to meet the functional requirements, and the high voltage interlock is 1 set;

- 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;

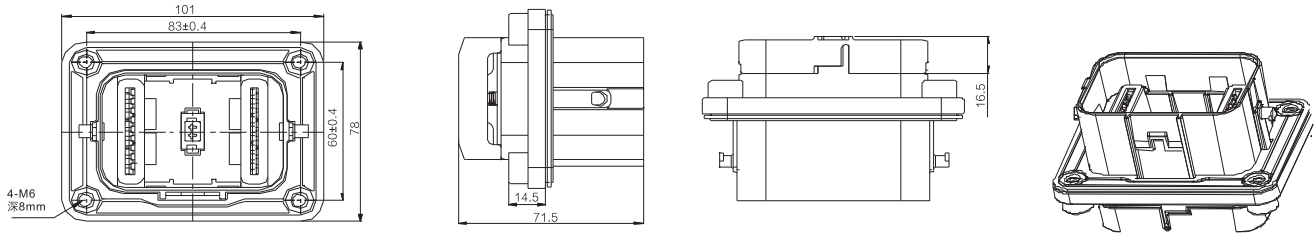
| | | |
|-----------------|-----------------|-----------------|
| 125A 750VDC | 160A 750VDC | 200A 750VDC |
| 250A 750VDC | 315A 750VDC | 350A 750VDC |
| 400A 750VDC(BY) | 400A 600VDC(ZB) | 500A 500VDC(BY) |

Size

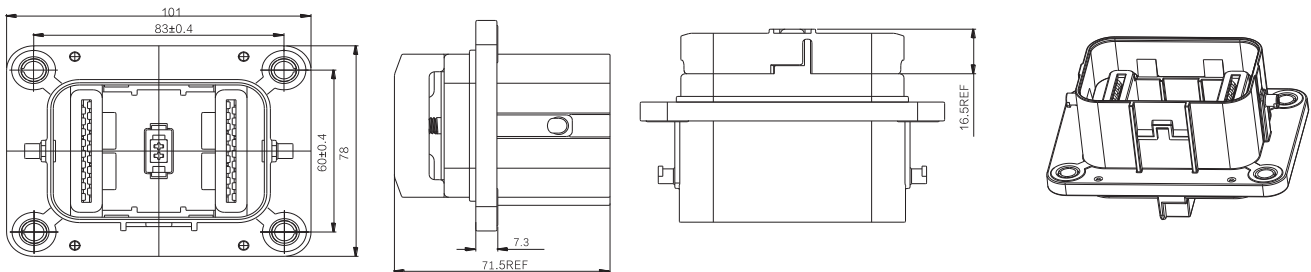
Plug



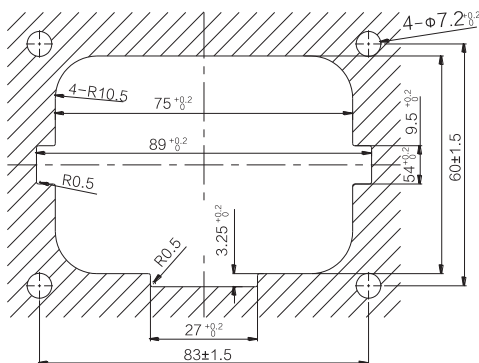
Back installation socket



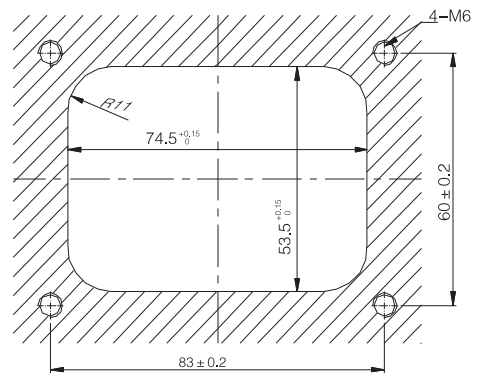
Front installation socket



Back installation socket size



Front installation socket size



NOTE:

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

Special Instruction:

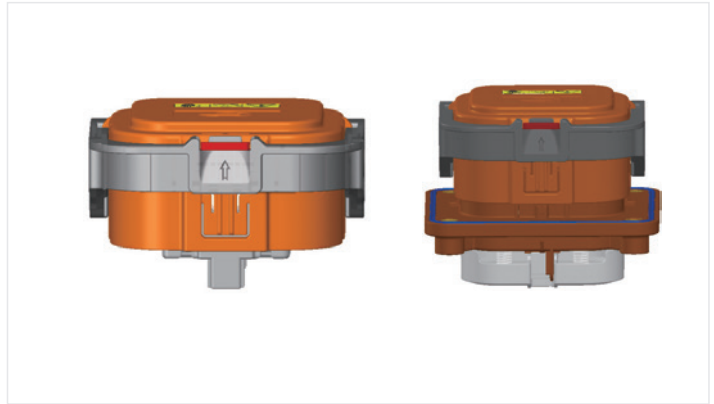
The product has Equipped fuse and Equipped copper platoon two working states, it has different Current-carrying performance when different state, pay attention when choosing.

- Equip fuse
current rating: 250A Max(specification $\geq 350A$, Temperature rise $\geq 55K$, specification $< 350A$ current rating should decrease Accordingly);
- 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
- 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°C ~ +125°C

Naming rules

PLUG

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

Design Extension Number
 HVIL(NON-HVIL unmarked)
 Fuse type:
 C:40A~630A V:690V.AC

Product Serial

SOCKET

RC-MSD9 - Z - H - A - TW

Design Extension Number
 HVIL(NON-HVIL unmarked)
 Z: Socket

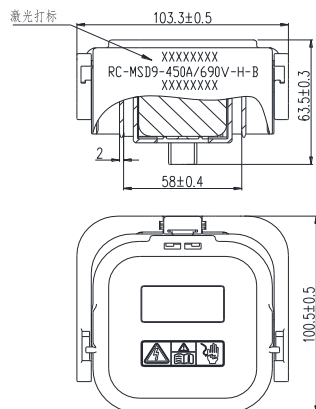
Product Serial

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

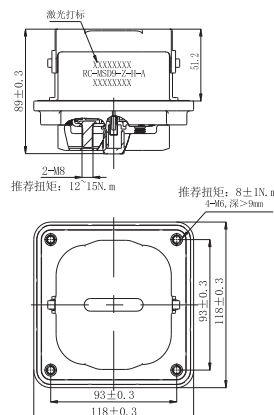
SIZE

MSD PLUG

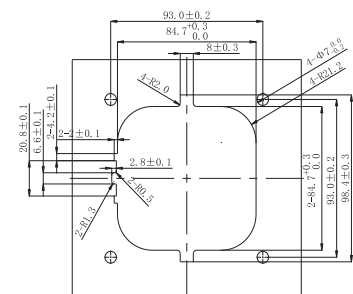
(product size with fuse and copper bar is the same)



MSD SOCKET



Installation of hole size



Signal Connectors

The voltage of our signal connectors 400V, the specification is as follows.

| Items | Current ranges | POS | Wire cable ranges |
|-------|----------------|---|---|
| 1 | 7A | 5, 6, 7, 8, 10, 12, 19, 26, 32, 37, 46 | 0.5mm ² – 1.5mm ² |
| 2 | 10A | | |
| 3 | 13A | | |



8 POS 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

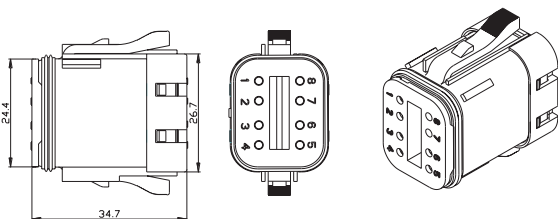
- Current Rating: 7A
- Voltage Rating: 300V DC
- Shield: Non
- HVIL: Non
- Temperature: -40°C ~ +125°C

Name of material

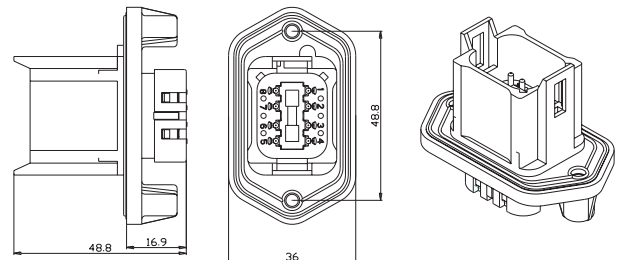
| No | Name of material | Drawing No | materia Type | Note |
|----|--------------------------------------|-----------------|------------------|--|
| 1 | Contact part | 1062-16-0122S | | |
| 2 | Plug Cap | RC047-01-00-02 | | |
| 3 | Plug assembly (N Position Black) | RC047-01-01-00 | RS4-K8TY-NH-B-TW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

SIZE

PLUG



SOCKET (Installation without outlet box)



12/18 POS 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: Non
- HVIL: Non
- Temperature: -40°C ~ +125°C

Naming Rules

Plug

RS4 -K 18 TY -DW -B -TW

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

Press plug
 POS: 12/18
 Plug contact
 Product Serial

Socket

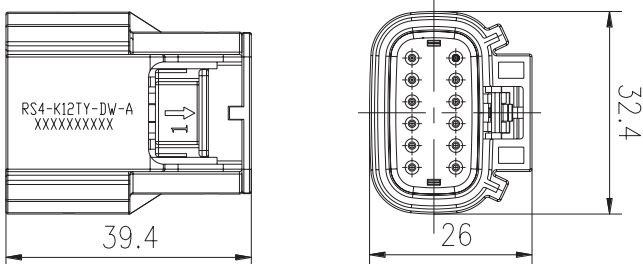
Rs4 -J 12 ZY -AH -B -TW

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

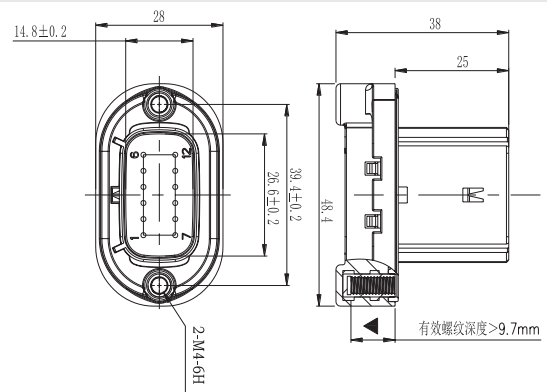
Press plug
 POS: 12/18
 Plug contact
 Product Serial

SIZE

PLUG



SOCKET



32 POS 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

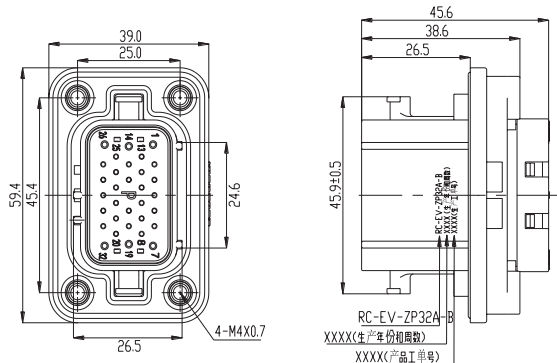
- Current Rating: Big Terminal7A, Small5A
- Voltage Rating: 300V DC
- Shield: Non
- HVIL: Non
- Temperature: -40°C ~ +125°C

Name of Material

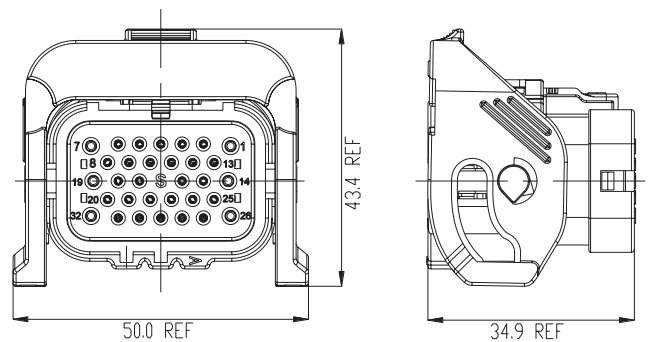
| No | Product Name | Product Model | Product Chart | Product Chart | Note |
|----|--------------------------|------------------|---------------|--------------------|------------------------|
| 1 | 32POS Plastic shell plug | RC-EV-TS32A-B-TW | R3.653.605002 | Free Plug | No contact, dust cover |
| 2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

SIZE

Socket RC-EV-ZP32-B-TW



PLUG RC-EV-TS32-B-TW



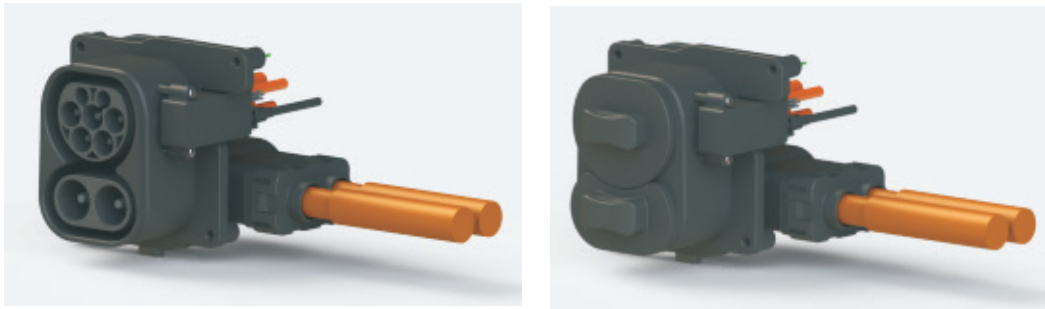
Charging Connectors

The voltage of our signal connectors 400V, the specification is as follows.

| Items | Part Name | Wire out direction | Voltage | Current |
|-------|-----------------------------|----------------------------|---------|-----------------|
| 1 | AC type 1 Charging Gun | Straight | 450V | 16A/32A/40A/80A |
| 2 | AC type 1 Charging Inlet | Straight | 450V | 16A/32A/40A/80A |
| 3 | AC type 2 Charging Gun | Straight | 450V | 16A/32A/40A/63A |
| 4 | AC type 2 Charging Inlet | Straight | 450V | 16A/32A/40A/80A |
| 5 | CCS COMBO 1 Charging Gun | Straight | 750V | 125A/150A/250A |
| 6 | CCS COMBO 1 Charging Socket | Straight Right Angel | 1000V | 32A AC/300A DC |
| 7 | CCS COMBO 2 Charging Gun | Straight | 750V | 125A/150A/250A |
| 8 | CCS COMBO 2 Charging Socket | Straight Right Angel | 1000V | 32A AC/300A DC |



CCS Combo1 & Combo 2 AC/DC integrated charging socket



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: 25mm²、35mm²、50mm²、70mm²、95mm² Unshielded line (LV216) AC: 2.5mm²、6mm² 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 : $\geq 2700V$ (AC) 1min, Leakage current less than 5 mA, No breakdown
- insulation resistance : 1000V DC, $\geq 200M\Omega$
- Cable can be welded or pressed by ultrasonic wave

mechanical properties

- mechanical life : More than 10000 times

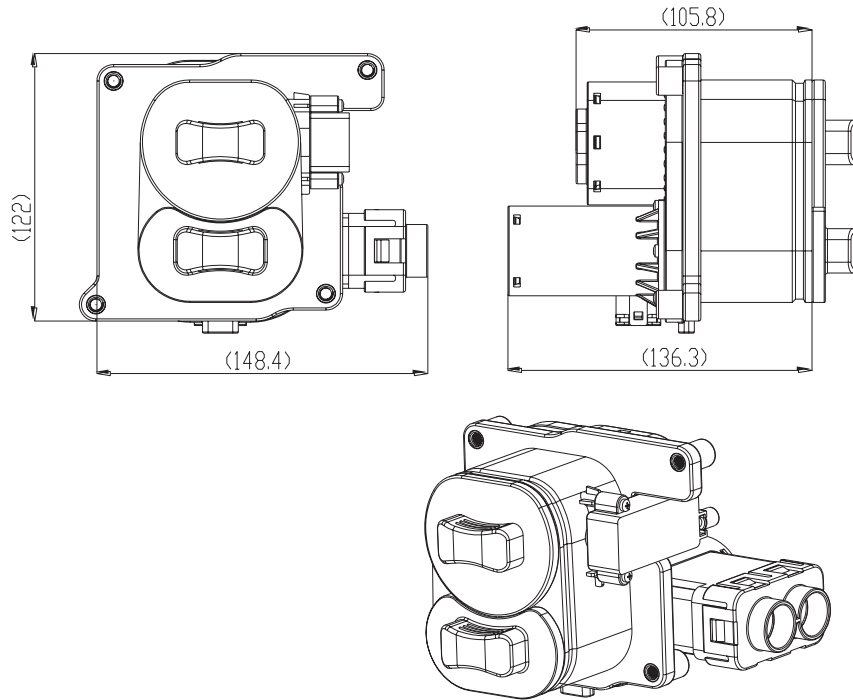
work environment

- working temperature : -40°C ~ +85°C
- Dampness : Low than 95% (40°C)
- 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



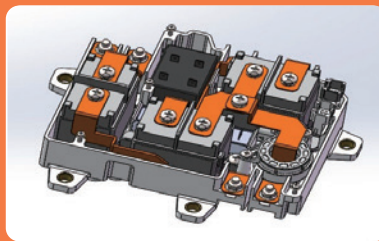
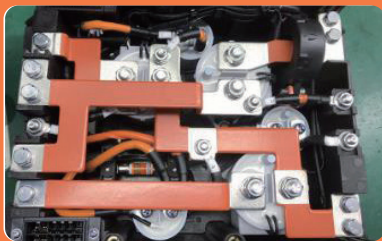
Note: Customizable development and installation panel size and outlet mode according to customer requirements

High Voltage Battery Disconnected Unit(BDU) & Power Distribution Unit (PDU)

- 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.

1. BDU series

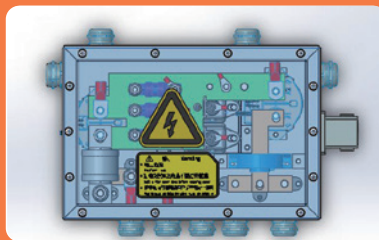
BDU Integrated in the battery box, due to the limitation of battery box space, the general shape is irregular, the shell processing adopts engineering plastics with good impact and high strength, such as PA66ABS, etc.



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)

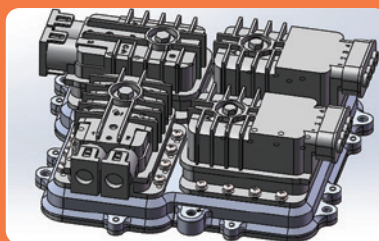
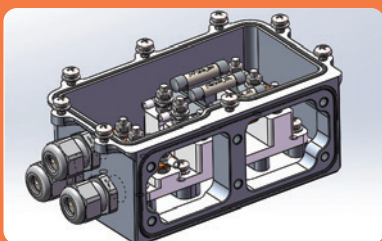
2. Microcar Series

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 control is strict.



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

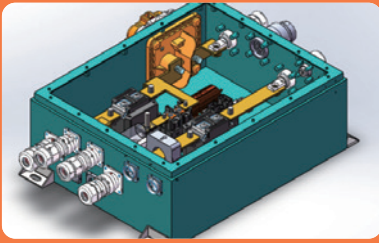
3. Small passenger car series



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

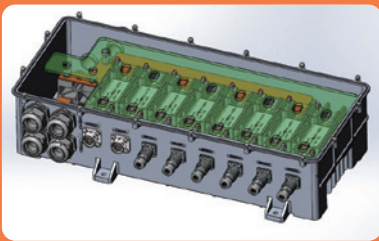
4. SUV series

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.



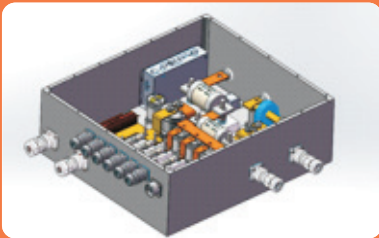
Voltage Rating: 750V
power rating: 110 KW
Device Voltage: $\geq 2500V$
Relay voltage: 24V/12V
working temperature: $-40^{\circ}C - 130^{\circ}C$
Protection Degree: IP67

5. Bus Series



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

6. Mini vehicles, garbage trucks, logistics vehicles, ect.



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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