

瑞可达

创新技术引领未来

Recodeal

REL2 系列技术规格书（常规版）

REL2 Series Technical Specifications (Standard Edition)



版本 Rev.	变更描述 / 变更内容 Change Description	修改日期 Revise. Date	编制 Prepared By	批准 Approved By
V1.0	首次发布 Initial version	2022.02.18	高力	李晓印
V2.0	插座壳体新增凸台和筋 Added protrusions and ribs on the receptacle out housing	2023.03.27	文朝生	李晓印
V3.0	新增-AS 系列和端子料号 Added -AS Series and Terminal Part Numbers	2023.05.15	文朝生	李晓印
V4.0	新增 C 键位规格 New C Key Specifications	2023.09.15	王娟	唐朝飞
V5.0	修改 C 键位、D 键位尺寸 Modify the dimensions of the C key and D key	2024.04.07	王娟	唐朝飞
V6.0	面板增加 R5 Add R5 rounded corners to the panel	2024.12.11	张志旭	唐朝飞
V7.0	增加英文版 Add English version	2025.11.27	杨梓航	李晓印

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一、常用物料型号（表1）：Common Material Models

序号 No.	产品名称 Product Name	产品型号 Product Model	备注 Note
1	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-6-B	适配线径 6 平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 6 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
2	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-4-B	适配线径 4 平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 4 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
3	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-2.5-B	适配线径2.5平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 2.5 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
4	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-6-B	适配线径 6 平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 6 mm ² wire diameter, with shielded interlocking, does not include power & interlock terminals (power and interlock terminals sold separately)
5	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-4-B	适配线径 4 平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 4 mm ² wire diameter, with shielded interlocking, does not include power & interlock terminals (power and interlock terminals sold separately)
6	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-2.5-B	适配线径2.5平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 2.5 mm ² wire diameter, with shielded interlocking, does not include power & interlock terminals (power and interlock terminals sold separately)
7	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-6-AS	适配线径 6 平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 6 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
8	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-4-AS	适配线径 4 平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 4 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
9	REL2四芯连接器插头 REL2 Four-Pin Connector Plug	REL2-T4PAH-2.5-AS	适配线径2.5平方、带屏蔽互锁、 不含功率端子（功率端子单独购买） Suitable for 2.5 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
10	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-6-AS	适配线径 6 平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 6 mm ² wire diameter, with shielded interlocking, does not include power & interlock terminals (power and interlock terminals sold separately)
11	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-4-AS	适配线径 4 平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 4 mm ² wire diameter, with shielded interlocking, does not include power & interlock terminals (power and interlock terminals sold separately)
12	REL2四芯连接器插座 REL2 Four-Pin Connector Receptacle	REL2-Z4PAH-2.5-AS	适配线径2.5平方、带屏蔽互锁、 不含功率&互锁端子（功率及互锁端子单独购买） Suitable for 2.5 mm ² wire diameter, with shielded interlocking, does not include power terminals (power terminals sold separately)
13	功率插槽端子 Power Slot Terminal	RC-SS6.3-6.0-Sn-A	适用于插头，适配4mm ² —6mm ² 电线，镀锡，配套数量：4 Suitable for plugs, compatible with 4mm ² —6mm ² wires, tin-plated, quantity per set: 4
14	功率插槽端子 Power Slot Terminal	RC-SS6.3-2.5-Sn-A	适用于插头，适配2.5mm ² 线，镀锡，配套数量：4 Suitable for plugs, compatible with 2.5mm ² wires, tin-plated, quantity per set: 4

15	功率插片端子 Power Terminal Blocks	RC-SP6.3-6.0-Sn-B	适用于插座，适配4mm ² —6mm ² 线，镀锡，配套数量：4 Suitable for receptacles, compatible with 4mm ² –6mm ² wires, tin-plated, quantity per set: 4
16	功率插片端子 Power Terminal Blocks	RC-SP6.3-2.5-Sn-B	适用于插座，适配2.5mm ² 线，镀锡，配套数量：4 Suitable for receptacles, compatible with 2.5mm ² wire, tin-plated, quantity per set: 4
17	互锁插槽端子 Interlocking Slot Terminal	RC-SS1.6-0.5-Sn-B	适用于插座，适配0.35mm ² ~0.5mm ² 线，镀锡，配套数量：2 Suitable for receptacles, compatible with 0.35mm ² to 0.5mm ² wires, tin-plated, quantity per set: 2
18	插头防尘盖（选配） Dust Cover for Plug (Optional)	8.934.210005R	适用于插头，配套数量：1/For plugs, quantity per set: 1
19	插座防尘盖（选配） Dust Cover for Receptacle (Optional)	8.934.210006R	适用于插座，配套数量：1/For receptacles, quantity per set: 1
备注：1. 备注：本表以 A 键位产品为例作型号推荐，产品现有 A、B、C、D 键位（C、D 键位未建料号）； 2. -B 系列是单层屏蔽压套，不适用于硅胶线；-AS 系列为“内衬套+外压套”双层屏蔽压接状态，适用于硅胶线（符合 LV216 线径）。 Note: 1. This table recommends models based on the A-key layout as an example. The product currently has A, B, C, and D key positions (C and D key positions do not have assigned part numbers). 2. -B Series features a single-layer shield crimp sleeve and is not suitable for silicone wires; -AS Series employs a dual-layer shield crimp configuration (“inner liner sleeve + outer crimp sleeve”) and is suitable for silicone wires (compliant with LV216 wire gauge).			

二、物料简介：Material Overview:

- ◆ 本系列产品主要用于电动汽车行业，为设备之间提供稳定的高压、小电流传输。
This product series is primarily designed for the electric vehicle industry, providing stable high-voltage, low-current transmission between devices.
- ◆ 本系列产品外壳材料采用工程塑料，满足阻燃、RoHS、耐高温的要求，与同类型金属连接器相比具有成本更低、质量更轻、体积适中的特点。
The housing material for this product series utilizes engineering plastics, meeting requirements for flame retardancy, RoHS compliance, and high-temperature resistance. Compared to similar metal connectors, it offers lower cost, lighter weight, and a moderate size.
- ◆ 本系列产品插头插座采用锁扣连接的方式，并带有二次锁紧的结构，操作空间小，特别适用于安装操作空间有限的场合。
This series of plugs and receptacles employs a latch-type connection with a secondary locking mechanism, requiring minimal installation space. It is particularly suitable for applications with limited installation space.
- ◆ 本系列产品接线范围为 2.5mm²~6mm²，额定工作电流为 16A~40A，满足客户不同电气参数的需求。
This series of products supports wiring ranges from 2.5mm² to 6mm² and rated operating currents from 16A to 40A, meeting diverse electrical parameter requirements of customers.
- ◆ 本系列产品插头及插座均带有防手触电的功能，能避免在使用时意外触电。
All plugs and receptacles in this product series feature a touch-proof design to prevent accidental electric shock during use.
- ◆ 本系列产品也可以根据客户需要由我司做成线缆组件，方便客户使用。
This product series can also be assembled into wire assemblies by our company according to customer requirements for convenient use.
- ◆ 本系列产品可带屏蔽、高压互锁功能。
This series of products can be equipped with shielding and high-voltage interlocking functions.

三、命名规则：Naming Rules



- 备注：1. 插头型号不含功率端子，功率端子需单独购买，配套信息见表 1；
 2. 插座型号不含功率端子和互锁端子，功率端子及互锁端子均需单独购买，配套信息见表 1；
 3. 插头与插座的型号均不含防尘盖，插头/插座防尘盖选配，配套信息见表 1。

Note:

1. Plug models do not include power terminals; power terminals must be purchased separately. Refer to Table 1 for compatibility information.
2. The receptacle model does not include power terminals or interlock terminals. Both power terminals and interlock terminals must be purchased separately. Refer to Table 1 for compatibility information.
3. Neither the plug nor receptacle model includes dust covers. Dust covers for plugs/receptacles are optional. Refer to Table 1 for compatibility information.

四、技术参数：Technical Specifications:

1. 电气特性：Electrical Characteristics:

- ◆ 额定电流：16A (适配2.5mm² 线缆)；Rated current: 16A (suitable for 2.5mm² wire);
 30A (适配 4 mm² 线缆)；30A (suitable for 4 mm² wire);
 40A (适配 6 mm² 线缆)；40A (suitable for 6 mm² wire);
- ◆ 额定电压：1000V.DC；Rated voltage: 1000V DC;
- ◆ 耐 电 压：3500V.AC 1min，漏电流≤1mA（功率端子与外壳之间、功率端子与互锁之间）；
 500V.AC 1min，漏电流≤1mA（互锁与壳体之间、高压互锁之间）
 Withstand Voltage: 3500V AC for 1 minute; leakage current≤1mA (between power terminals and the housing, between power terminals and high-voltage interlock terminals);
 500V.AC for 1 minute;leakage current≤1mA (between the interlocking terminals and the housing, between high-voltage interlock terminals)
- ◆ 绝缘电阻：≥3000MΩ（常态）（1000V DC）Insulation resistance: ≥3000 MΩ (normal conditions) (1000 V DC)
 ≥200 MΩ（湿热）（1000V DC）≥200 MΩ (humidity and heat) (1000V DC)
- ◆ 屏 蔽：可选Blocking: Optional
- ◆ 高压互锁：可选High-voltage interlock: Optional
- ◆ 接触电阻：功率接触对≤3mΩ，互锁接触对≤10mΩ；Contact resistance: Power contact pairs ≤3 mΩ, interlock contact pairs ≤10 mΩ

2. 机械特性：Mechanical Properties

- ◆ 机械寿命：50次；Mechanical life: 50 cycles;
- ◆ 震动等级：USCAR2 V2等级；Vibration Level: USCAR2 V2 Level;

3. 工作环境：Work Environment:

- ◆ 温 度：-40℃～+140℃；Temperature: -40℃ to +140℃;
- ◆ 湿 度：95%以下（40℃时）；Humidity: Below 95% (at 40℃);

- ◆ 盐雾等级：48小时 (5%NaCl中性盐雾)；Salt spray rating: 48 hours (5% NaCl neutral salt spray);
- ◆ 防护等级：IP68 (头座插合时, 1米水深静置48h不进水)，IP6K9K；IPXXB；Protection Rating: IP68 (when plug and receptacle are mated, no water ingress after 48 hours at 1 meter depth), IP6K9K; IPXXB;
- ◆ 阻燃等级：UL94-V0（塑料件，防尘盖除外），UL94-HB（密封件）Flame Retardant Rating: UL94-V0 (plastic components, except for the dust cover), UL94-HB (sealing components)

4. 主要材料：Primary Materials

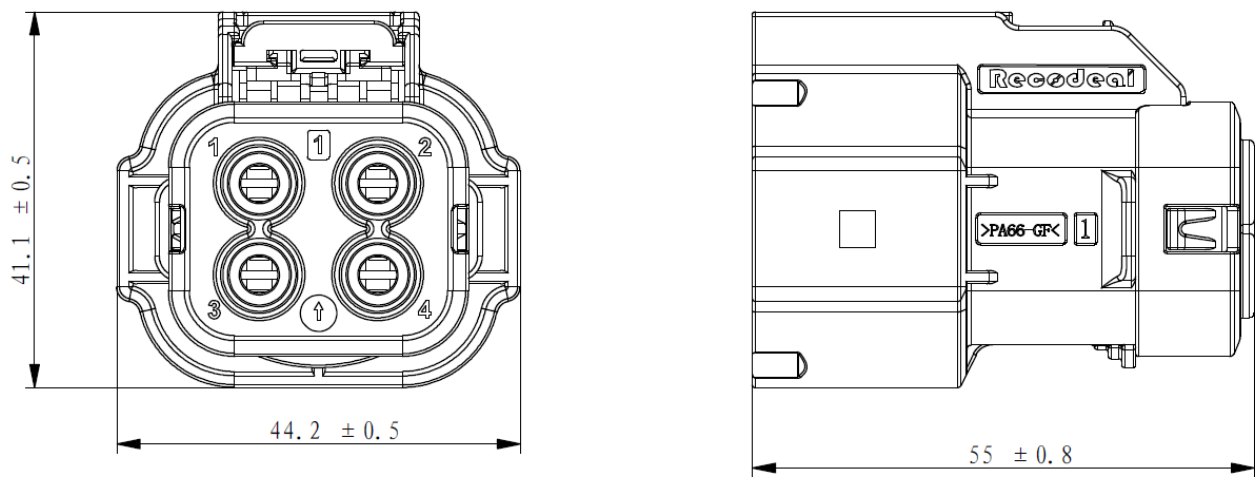
- ◆ 外 壳：热塑性阻燃工程塑料；Outer Housing: Thermoplastic flame-retardant engineering plastic;
- ◆ 屏 蔽 件：铜合金；Shielding component: Copper alloy;
- ◆ 密 封 件：硅橡胶；Sealing Material: Silicone Rubber;

5. 适配线缆：Adaptor Wire

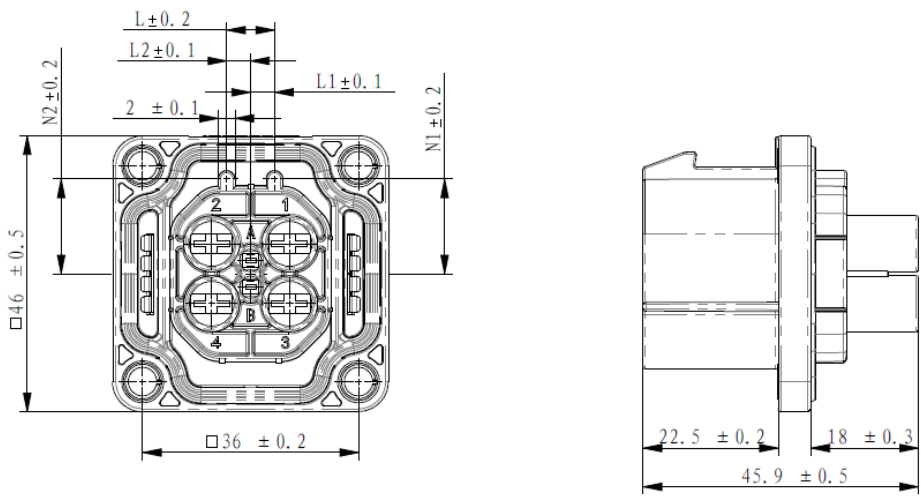
线缆规格 Wire Specifications	线缆外被尺寸 Wire Outer Sheath Dimensions	线缆规格 Wire Specifications	线缆外被尺寸 Wire Outer Sheath Dimensions
0.35/0.5mm²非屏蔽线 0.35/0.5mm² unshielded wire	Φ 1.2mm～Φ 1.6mm	2.5mm² 屏蔽线 2.5mm² shielded wire	Φ 4.2mm～Φ 4.7mm
2.5mm²非屏蔽线 2.5mm² unshielded wire	Φ 3.5mm～Φ 3.9mm	4 mm² 屏蔽线 4mm² shielded wire	Φ 5.3mm～Φ 5.8mm
4mm² 非屏蔽线 4mm² unshielded wire	Φ 4.2mm～Φ 4.6mm	6 mm² 屏蔽线 6mm² shielded wire	Φ 6.0mm～Φ 6.5mm
6mm² 非屏蔽线 6mm² unshielded wire	Φ 4.8mm～Φ 5.2mm		

五、外形尺寸图：External Dimensions Drawing

1、插头：Plug

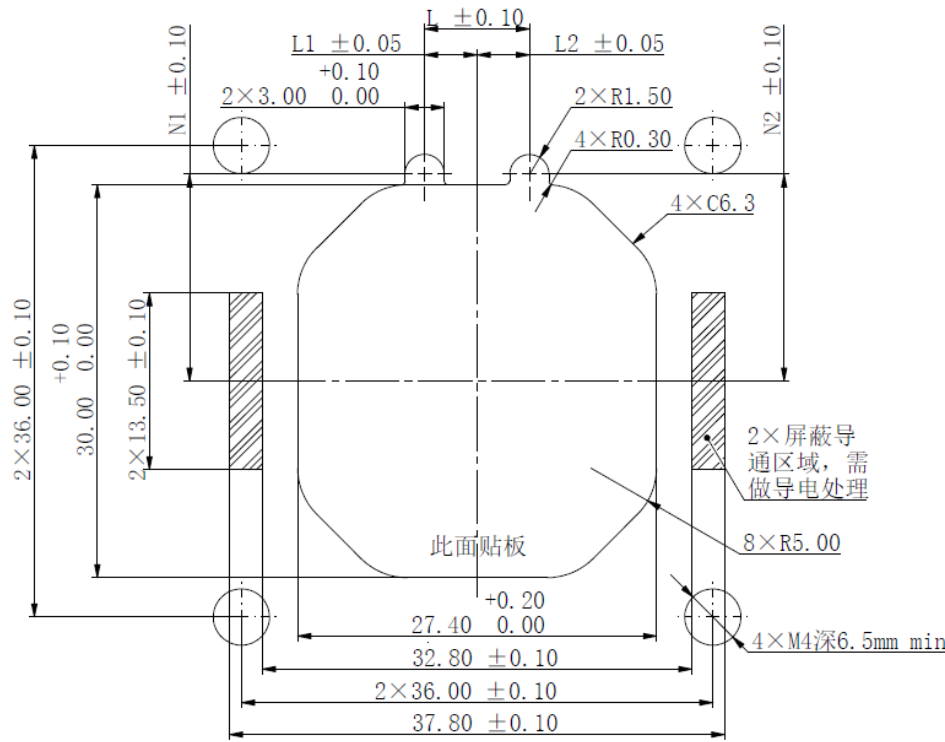


2、 法兰安装压线式插座：Flange-Mounted Wire-Clamping Receptacle



键位 Key	尺寸 L1 DimensionsL1	尺寸 L DimensionsL	尺寸 L2 DimensionsL2	尺寸 N1 DimensionsN1	尺寸 N2 DimensionsN2	备注 Note
A	4 mm	8 mm	4 mm	15.8 mm	15.8 mm	
B	5.3 mm	10.6 mm	5.3 mm	15.4 mm	15.4 mm	
C	4 mm	9.3 mm	5.3 mm	15.8mm	15.4 mm	
D	5.3mm	9.3 mm	4 mm	15.4mm	15.8 mm	

3、 插座推荐开孔尺寸：Recommended Cutout Dimensions for Receptacle



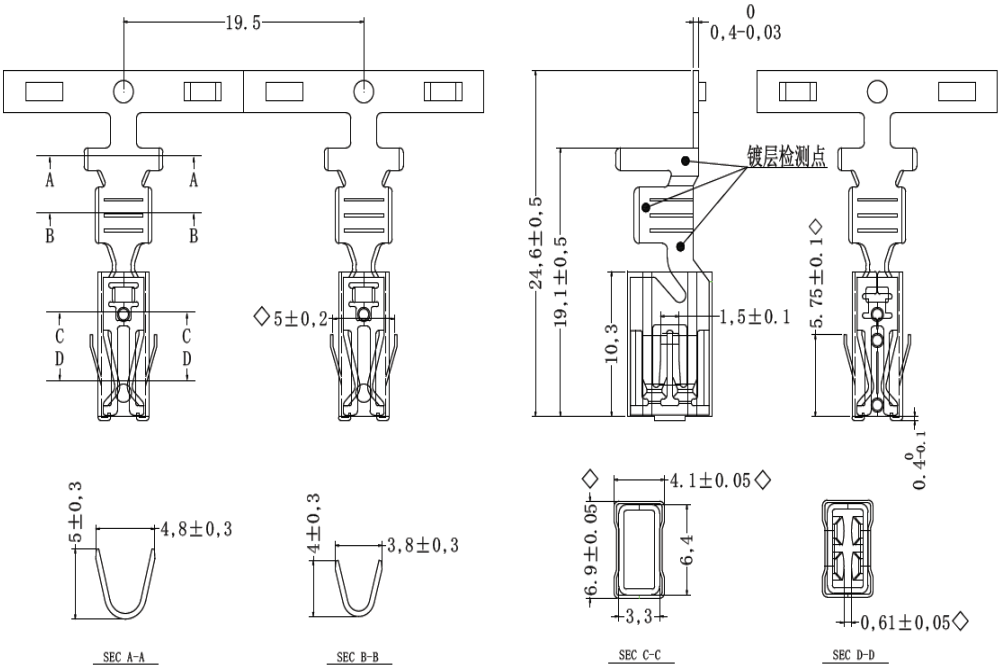
键位 Key	尺寸 L1 DimensionsL1	尺寸 L DimensionsL	尺寸 L2 DimensionsL2	尺寸 N1 DimensionsN1	尺寸 N2 DimensionsN2	备注 Note
A	4 mm	8 mm	4 mm	15.8 mm	15.8 mm	
B	5.3 mm	10.6 mm	5.3 mm	15.4 mm	15.4 mm	
C	4 mm	9.3 mm	5.3mm	15.8 mm	15.4mm	
D	5.3mm	9.3 mm	4 mm	15.4 mm	15.8mm	

备注：安装面板阴影区域为屏蔽导通区域，不允许喷漆处理，建议安装面板粗糙度为 1.6，平面度 0.1。面板螺纹孔须满足密封要求，推荐锁紧力矩 3N.m~3.5N.m。筋位宽度建议开孔 3 +0.1/0mm。

Note: The shaded area on the mounting panel is the shielding contact zone and must not be painted. Recommended panel roughness is 1.6, with flatness of 0.1. Panel threaded holes must meet sealing requirements; recommended tightening torque is 3 N·m to 3.5 N·m. Rib width is recommended to be 3 +0.1/0 mm.

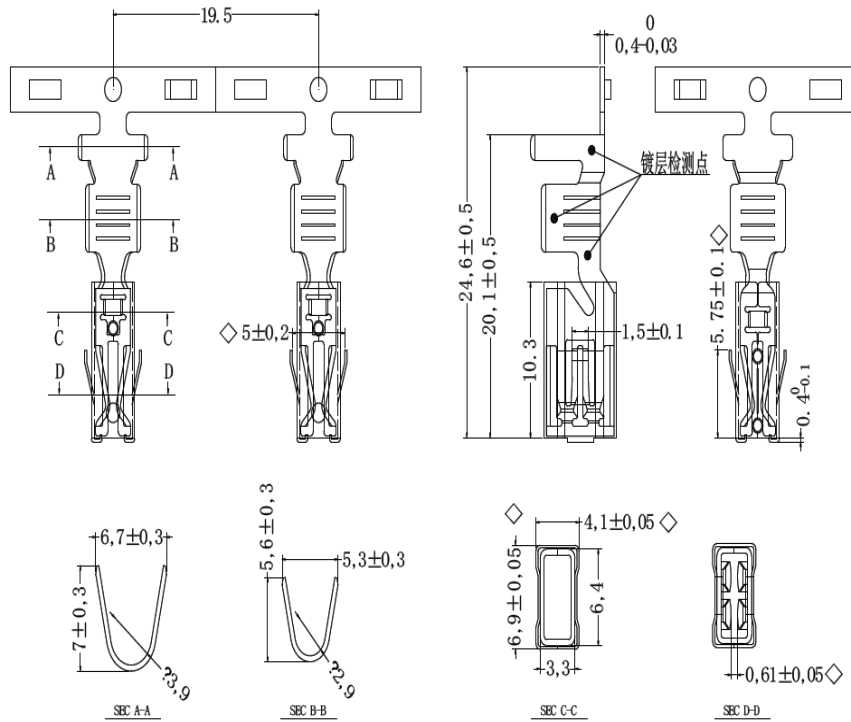
4、插槽端子 RC-SS6.3-2.5-Sn-A（适配线缆 2.5mm²，用于插头，料号：7.746.210018R）

Power Slot Terminal RC-SS6.3-2.5-Sn-A (for 2.5mm² wires, used for plugs, part No.: 7.746.210018R)



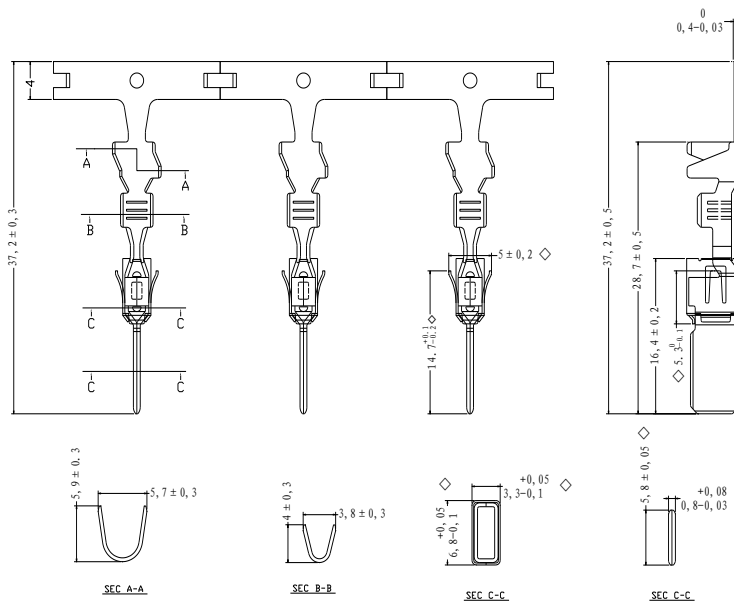
5、插槽端子 RC-SS6.3-6.0-Sn-A (适配线缆 4mm²-6mm², 用于插头, 料号: 7.746.210019R)

Power Slot Terminal RC-SS6.3-6.0-Sn-A (for wires 4mm²-6mm², for plugs, Part No.: 7.746.210019R)



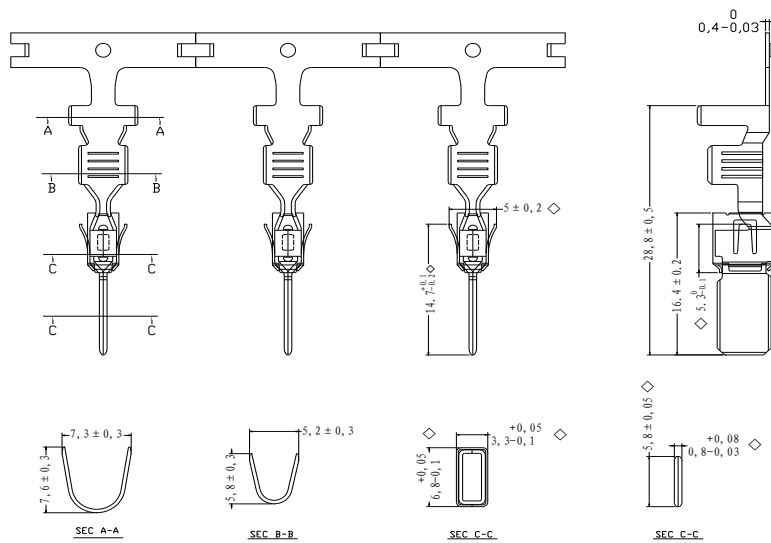
6、插片端子 RC-SP6.3-2.5-Sn-B (适配线缆 2.5mm², 用于插座, 料号: 7.744.210021R)

Power Terminal Blocks RC-SP6.3-2.5-Sn-B (for wires up to 2.5mm², used in receptacles, Part No.: 7.744.210021R)



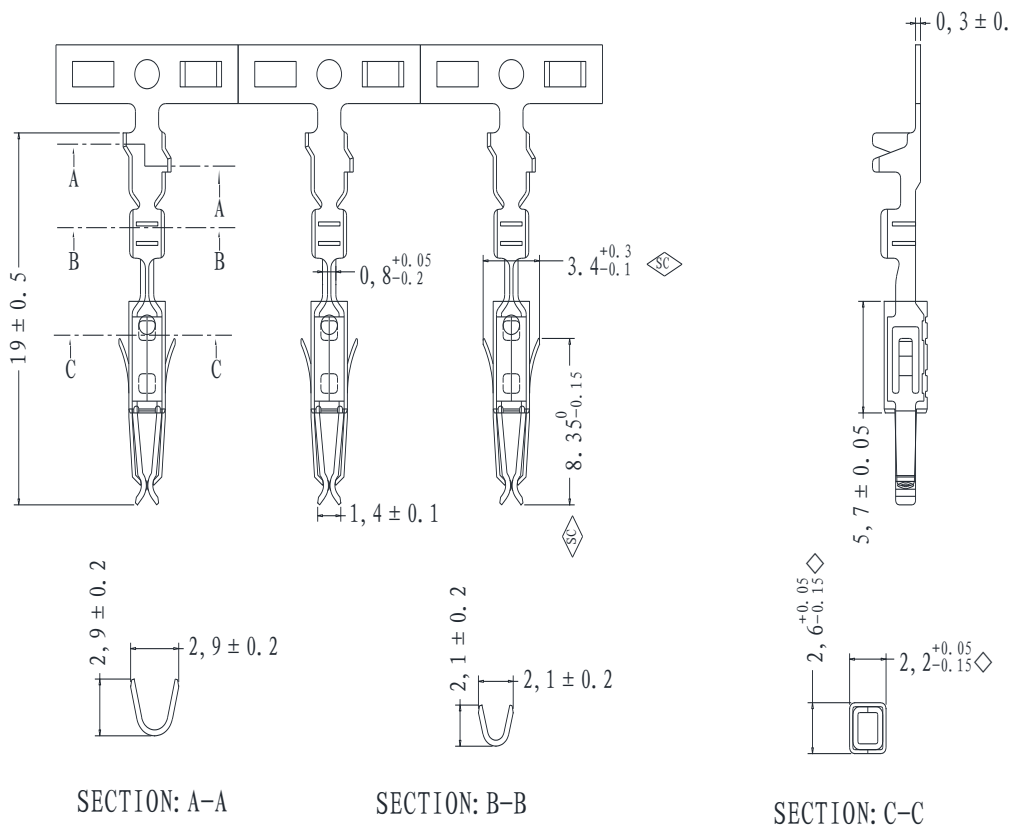
7、插片端子 RC-SP6.3-6.0-Sn-B (适配线缆 4mm²--6mm², 用于插座, 料号: 7.744.210023R)

Power Terminal Blocks RC-SP6.3-6.0-Sn-B (Suitable for wires 4mm²–6mm², for receptacles, Part No.: 7.744.210023R)



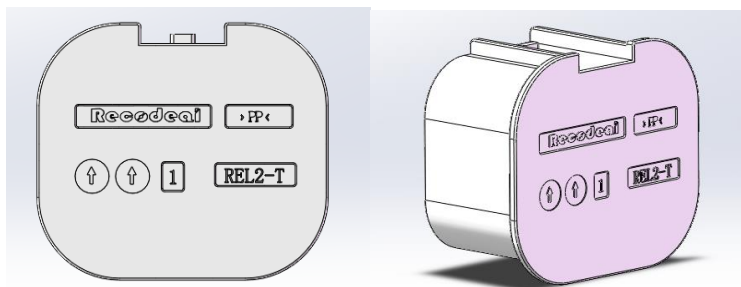
8、互锁插槽端子 RC-SS1.6-0.5-Sn-B (适配线缆 0.35mm²--0.5mm², 用于插座, 料号: 7.746.210017R)

Interlocking Slot Terminal RC-SS1.6-0.5-Sn-B (Suitable for wires 0.35mm²–0.5mm², for receptacles, Part No.: 7.746.210017R)



六、选配件外观图片：Optional Accessories Visual Images

插头防尘盖（8.934.210005R） Plug Dust Cover (8.934.210005R)



插座防尘盖（8.934.210006R） Dust Cover for Receptacle (8.934.210006R)

