



Connector "A" for IMT-2000 Mobile Phones

CONNECTOR

MB-0052-6

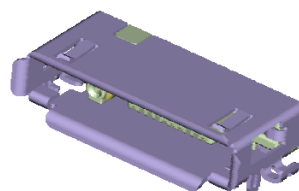
July 2006

RA1 Series

RoHS Compliant



(RA1P011FP3)



(RA1R011HA1)

Outline

The RA1 Series is an integrated connector incorporating signal contacts and a coaxial contact compliant with the requirements for connector "A" for IMT-2000 mobile phones. Connector "A" was standardized for the IMT-2000 interface by the EIAJ.

Features

- Compliant with EIAJ RC-5238 Connector "A" for IMT-2000 mobile phones. (Integrated connector with 10 signal contacts and 1 coaxial contact.)
- Smaller and lighter than the DH Series, connector for digital mobile phones. (0.5mm signal contact pitch, volume ratio is 1/3 for receptacle, 1/2 for plug (compared to the JAE products.))
- Static electricity countermeasure and EMI shield provided by a metal shell for signal transmission connector.
- Both receptacle and plug use full-cover shells for the mating area, and a mechanism to prevent opening of the shells.
- Compatible with live insertion/ removal (sequence) by providing contacts of different length in receptacle.
- Signal contacts are compatible with high-speed transmission. (Compatible with USB 1.1)
- Coaxial contact in receptacle compatible with operating frequency up to 2.2GHz.
- Embossed tape supply ensuring 6mm x 6mm adhesion area for receptacle is available.

General Specifications

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ No. of contacts: 11 (including 1 coaxial.) ■ Rated voltage: AC 30Vr.m.s. ■ Contact resistance: Initial 50m ohm max. ■ Withstand voltage: Signal contacts: AC 300Vr.m.s. per minute Coaxial contacts: AC 100Vr.m.s. per minute ■ VSWR: Less than 1.5 (Up to 2.2GHz) ■ Insertion loss: 0.5dB max. (Up to 2.2GHz) ■ Operating temperature & humidity: -25 to +70 Deg. C , 85% max. | <ul style="list-style-type: none"> ■ Rated current: Less than DC 0.5A (1.0A for 5 terminals max. ---Note) ■ Insulation resistance: 1000M ohm min. Signal contacts: AC 300Vr.m.s. Coaxial contacts AC 100Vr.m.s. ■ Electrostatic capacity: 2pF max. ■ Life time: 10,000 times ■ Applicable cable: Up to AWG #28 for signal contacts Equivalent to 1.5D for coaxial contact |
|---|--|

(Note) "5 terminals" indicates terminals 1, 4, 5, 6, and 10

Materials/Finishes

■Receptacle

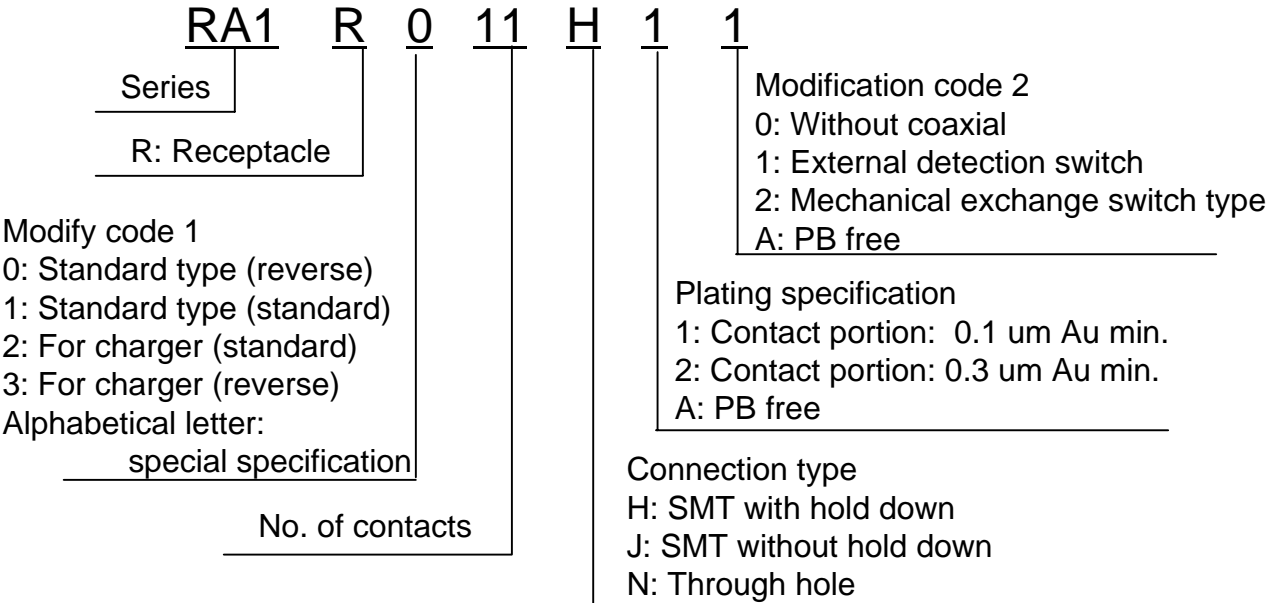
| Components | Materials/Finishes |
|------------|---|
| Contacts | Copper alloy / Contact: Au over Ni Terminal portion: Sn plating partially Au plating |
| Insulator | Glass filled nylon/color : Black PPS/ Color: Black (for charger) |
| Shell | Stainless steel/Sn plating |

■Plug

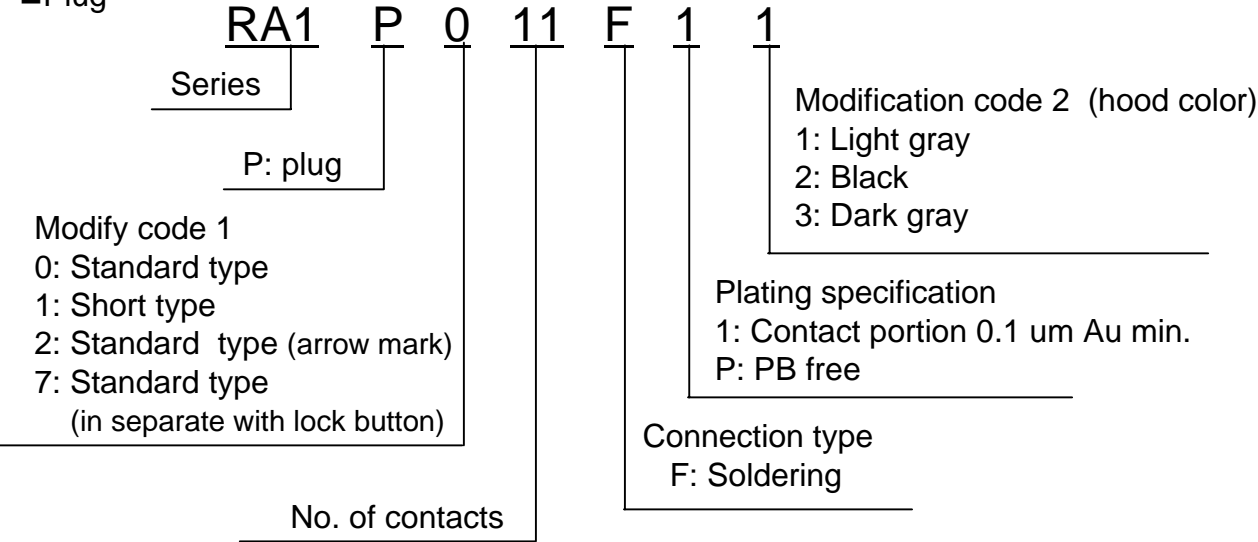
| Components | Materials/Finishes |
|-------------------|---|
| Contacts | Copper alloy / Contact: Au over Ni Terminal portion: Sn plating partially Au plating |
| Insulator | Glass filled nylon/ Color: Black |
| Shell | Stainless steel/ with Ni plating |
| Hood | PC/ Color: Light gray or dark gray |
| Coaxial insulator | PPS/ Color: Black |
| Tapping screw | Silver: Steel/ Ni plating Black: Steel/ Trivalent chrome plating |

Ordering Information

■Receptacle

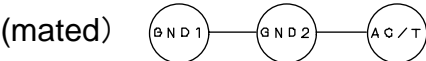
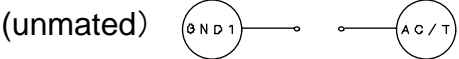
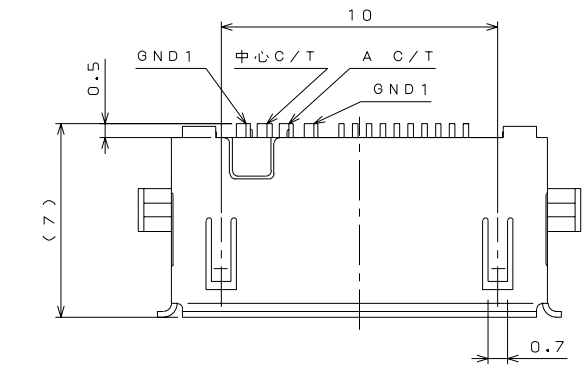


■Plug



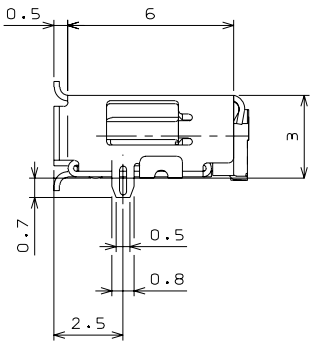
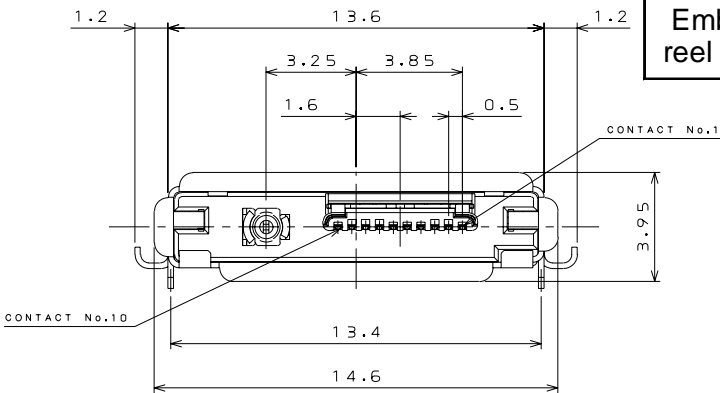
■ Part Number

RA1R011HA1 (Standard receptacle: external detection switch/ bottom mount type)



GND1: Receptacle coaxial external C/T
GND2 : Plug coaxial external C/T
AC/T : Detection C/T

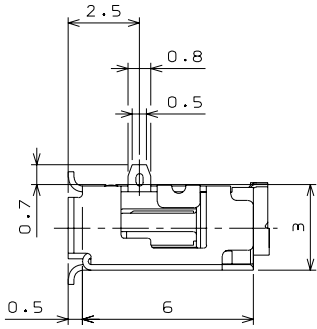
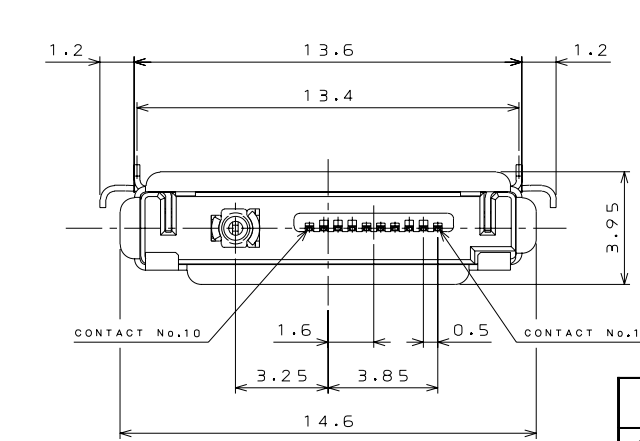
| | Part Number | SJ Drawing |
|-----------------------|-----------------|------------|
| Single item | RA1R011HA1 | SJ101719 |
| Embossed reel product | RA1R011HA1E1000 | SJ101720 |



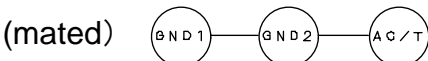
(Unit: mm)

■ Part Number

RA1R111HA1 (Standard receptacle: external detection switch/ top-mount type)



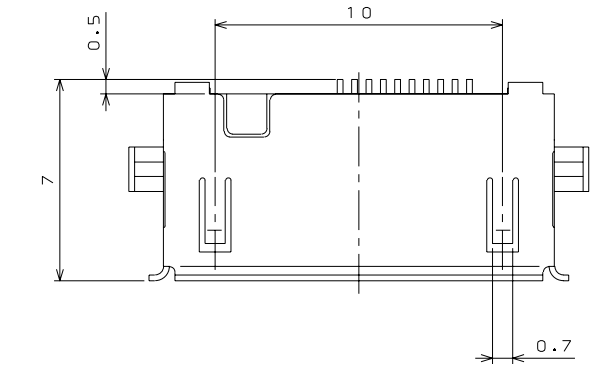
| | Part Number | SJ Drawing |
|-----------------------|-----------------|------------|
| Single item | RA1R111HA1 | SJ101721 |
| Embossed reel product | RA1R111HA1E1000 | SJ101722 |



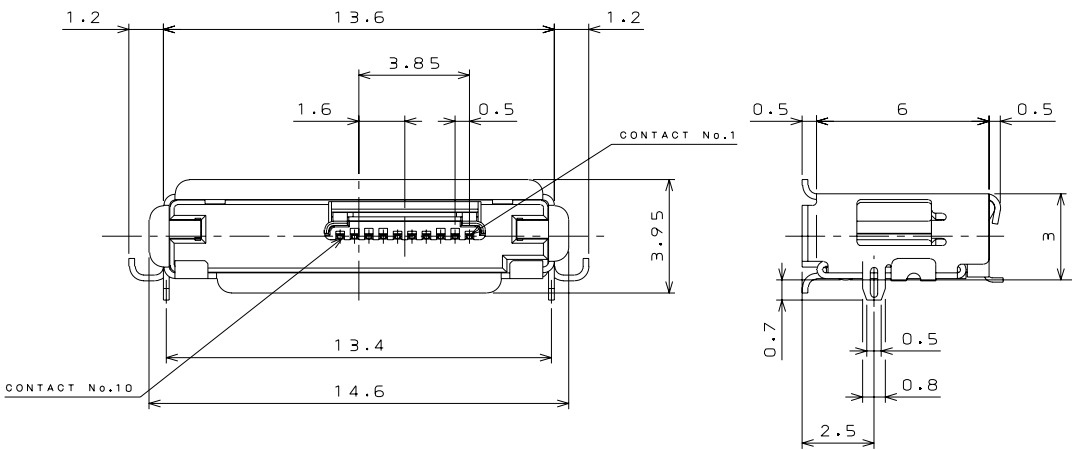
GND1: Receptacle coaxial external C/T
GND2 : Plug coaxial external C/T
AC/T : Detection C/T

■ Part Number

RA1R010H1A (Receptacle for signal : without coaxial/ bottom mount type)



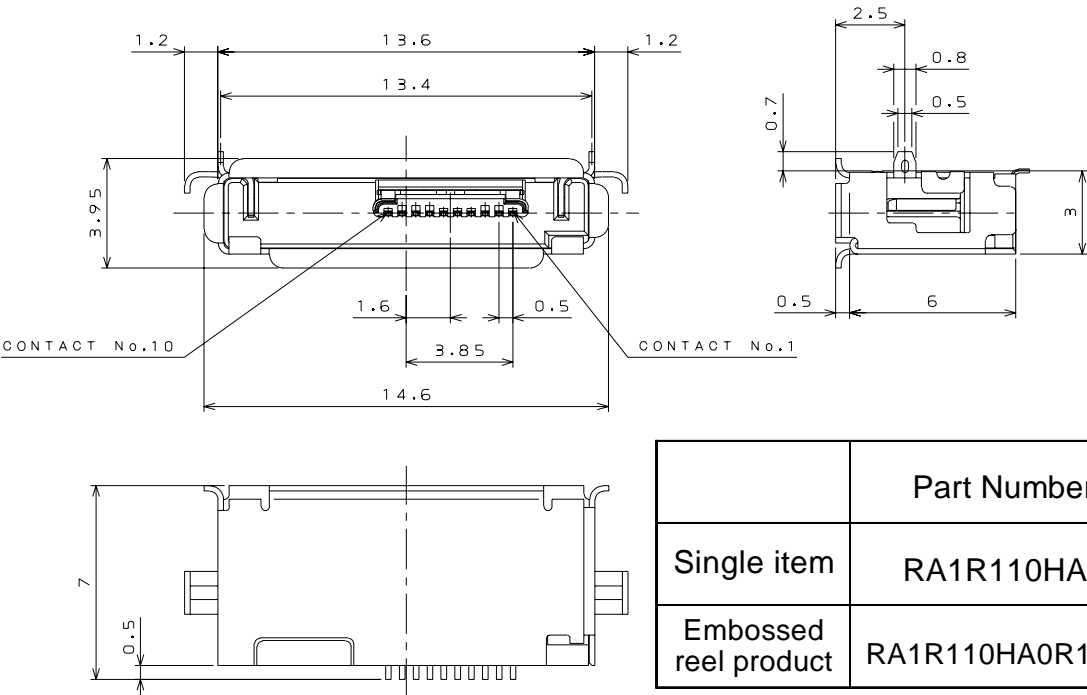
| | Part Number | SJ Drawing |
|-----------------------|-----------------|------------|
| Single item | RA1R010H1A | SJ100588 |
| Embossed reel product | RA1R010H1AR1000 | SJ100613 |



(Unit: mm)

■ Part Number

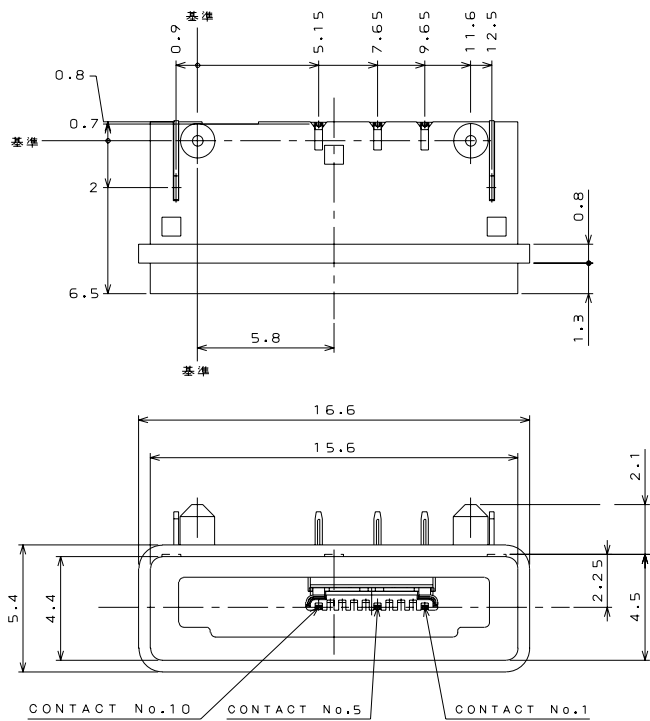
RA1R110HA0 (Receptacle for signal: without coaxial/ top-mount type)



| | Part Number | SJ Drawing |
|-----------------------|-----------------|------------|
| Single item | RA1R110HA0 | SJ104402 |
| Embossed reel product | RA1R110HA0R1000 | SJ104409 |

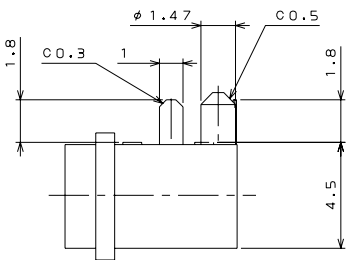
■ Part Number

RA1RN03N1A (Receptacle for charger: top-mount through hole type)



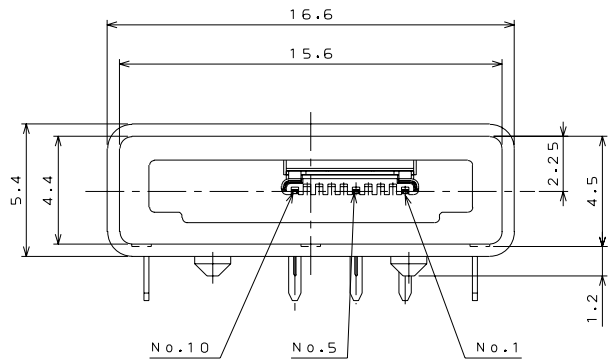
(Unit: mm)

| Part Number | SJ Drawing |
|-------------|------------|
| RA1RN03N1A | SJ100332 |



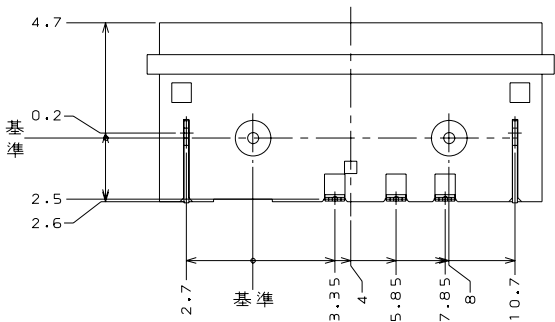
■ Part Number

RA1R303NA0 (Receptacle for charger: bottom mount through hole type)



(Unit: mm)

| Part Number | SJ Drawing |
|-------------|------------|
| RA1R303NA0 | SJ102355 |

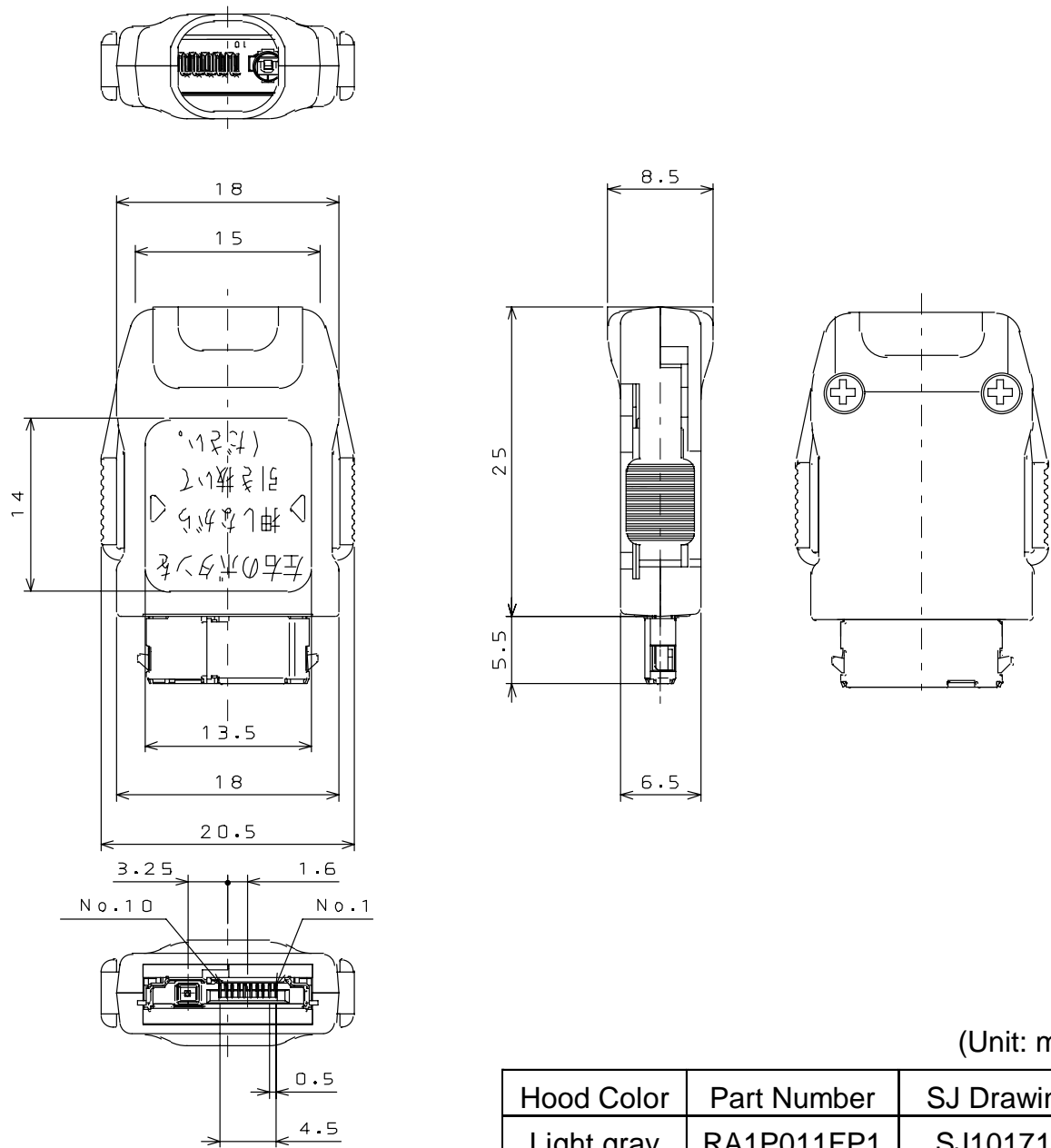


■ Part Number

RA1P011FP* (Standard plug/ solder connection type)

Applicable wire: AWG#28 max. Applicable cable diameter: 5.0 mm dia. max.

Coaxial cable: 1.5D equivalent



(Unit: mm)

| Hood Color | Part Number | SJ Drawing |
|------------|-------------|------------|
| Light gray | RA1P011FP1 | SJ101712 |
| Black | RA1P011FP2 | SJ101713 |

Note: This product does not include bushing and clamp barrel.

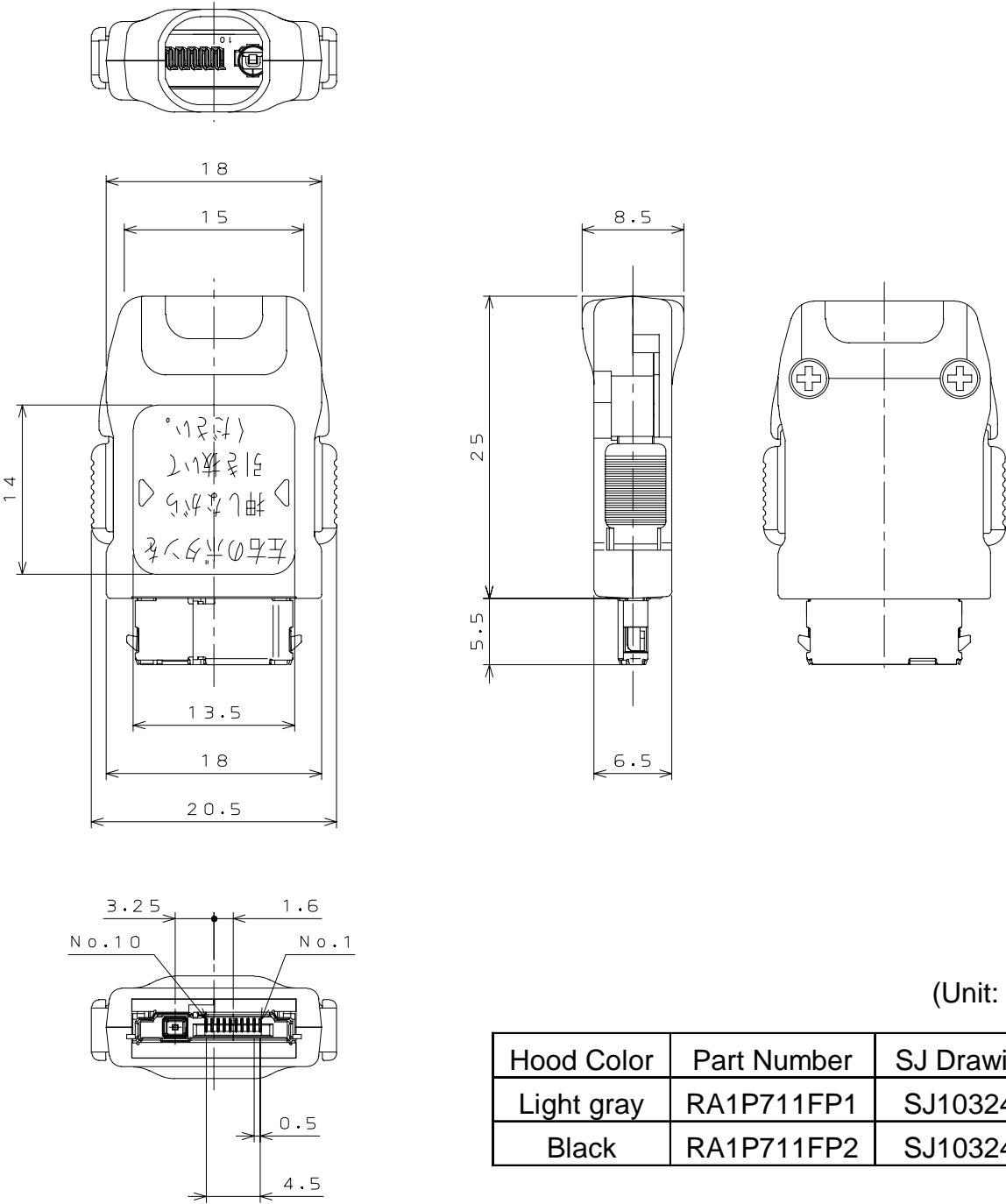
Please refer to Handling Instruction JAHL-3228 regarding connection, assembly process, bushing portion design and dimensions.

■ Part Number

RA1P711FP* (Standard plug: in separate with lock button/ soldering connection type)

Applicable wire: AWG#28 max. Applicable cable diameter: 5.0 mm dia. max.

Coaxial cable: 1.5D equivalent



(Unit: mm)

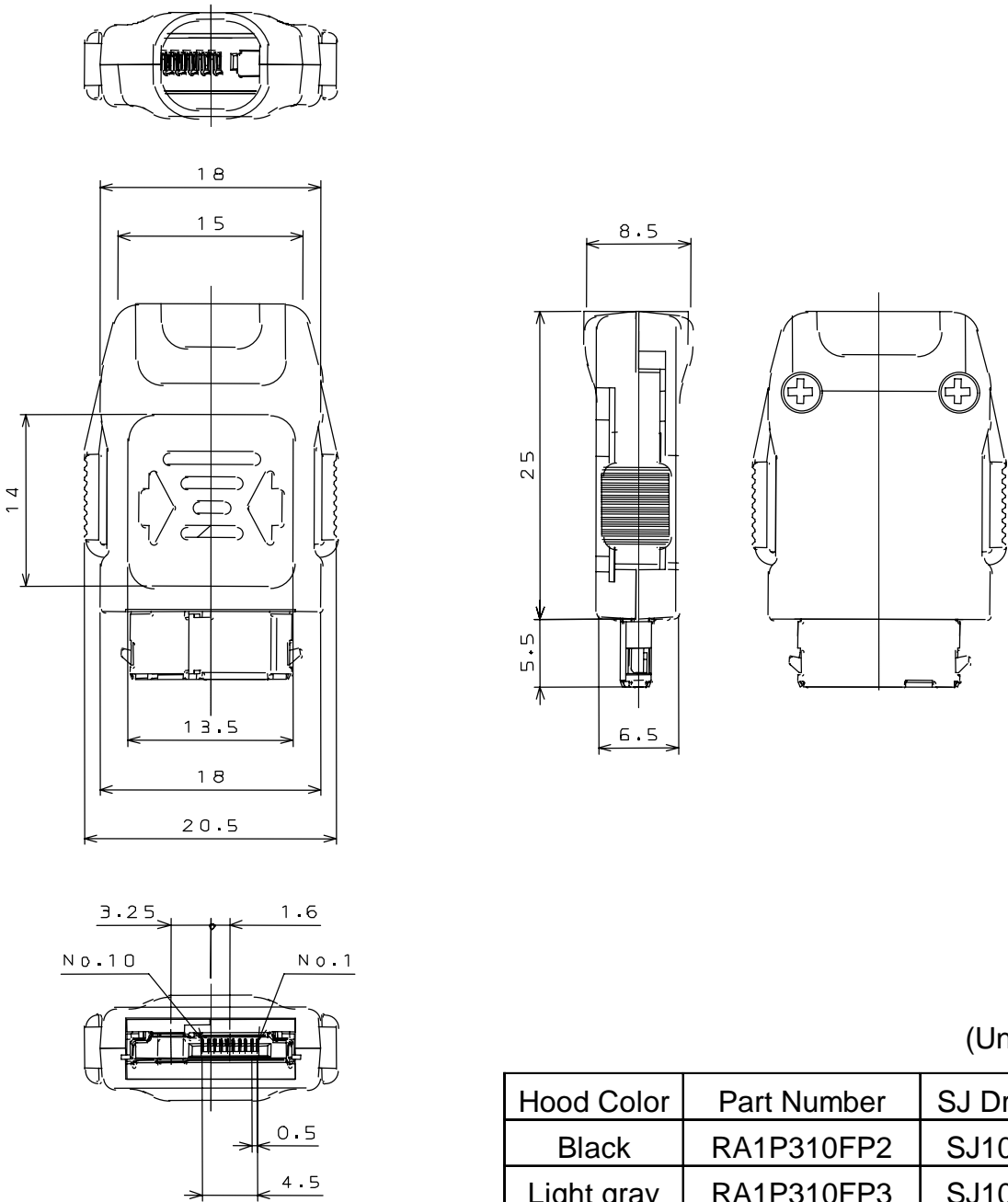
Note: This product does not include bushing and clamp barrel.

Please refer to Handling Instruction JAHL-3228 regarding connection, assembly process, bushing portion design and dimensions.

■ Part Number

RA1P310FP※ (Standard plug: arrow mark type/ soldering connection type)

Applicable wire: AWG#28 max. Applicable cable diameter: 5.0 mm dia. max.



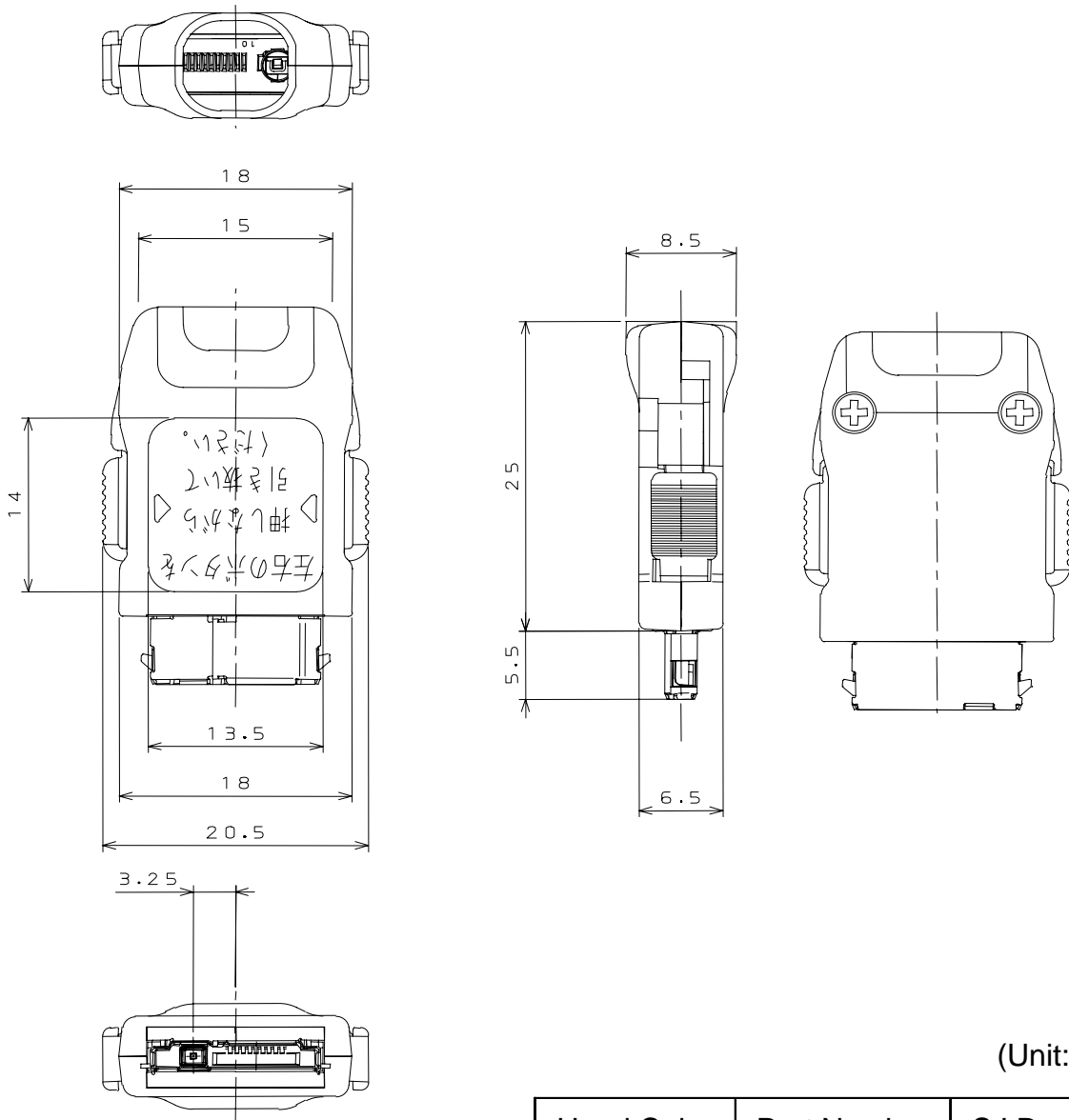
Note: This product does not include bushing and clamp barrel.

Please refer to Handling Instruction JAHL-3228 regarding connection, assembly process, bushing portion design and dimensions.

■Part Number

RA1P701FP* (Standard plug: in separate with lock button, single contact coaxial type)

Coaxial cable: 1.5D equivalent



(Unit: mm)

| Hood Color | Part Number | SJ Drawing |
|------------|-------------|------------|
| Light gray | RA1P701FP3 | SJ104524 |

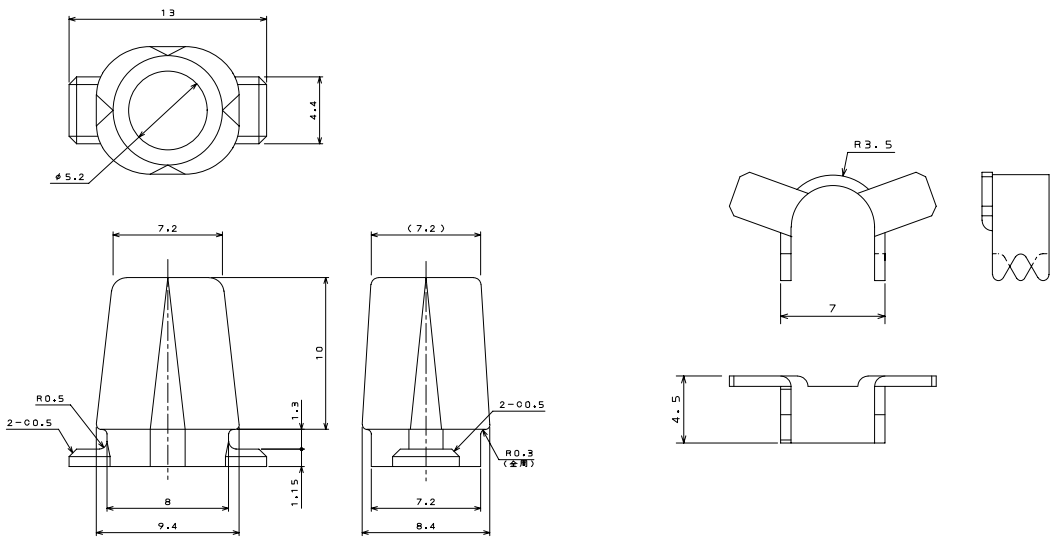
Note: This product does not include bushing and clamp barrel.

Please refer to Handling Instruction JAHL-3228 regarding connection, assembly process, bushing portion design and dimensions.

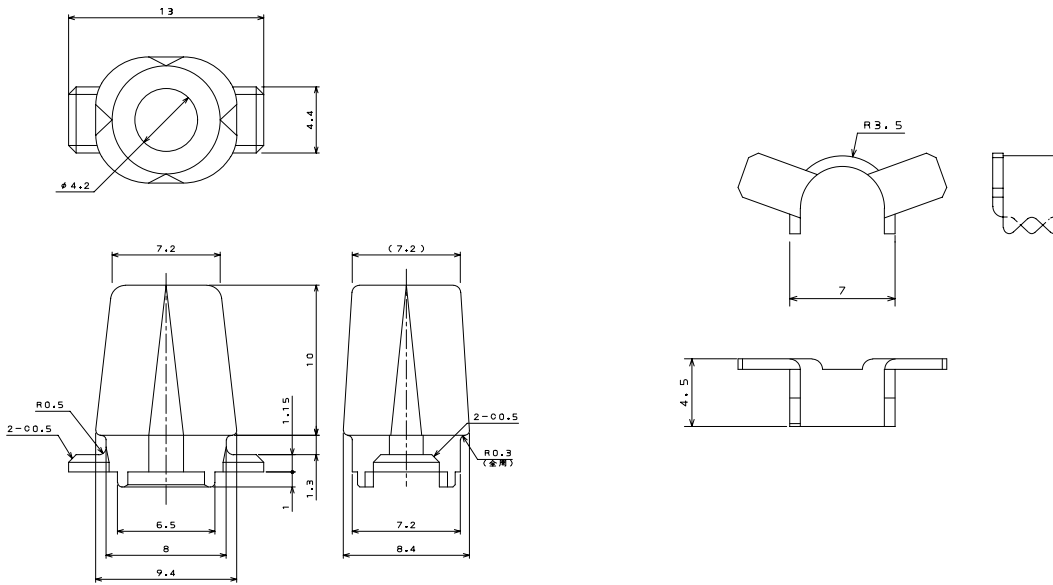
■Part Number

Bushing/ Clamp barrel (for Standard plug)

•for Cable diameter 5mm dia.



•for Cable diameter 4mm dia.



| | Bushing | | | Applicable clamp barrel | Rivet hand tool for clamp barrel |
|------------|------------|----------------|------------|-------------------------|----------------------------------|
| | Color | Part Number | SJ Drawing | | |
| for 5 dia. | Light gray | R012-50612 | SJ035694 | 026-50837 | CT150-6-RH07 |
| | Dark gray | R012-50612-001 | SJ035695 | | |
| for 4 dia. | Light gray | R012-50611 | SJ035693 | 026-50843 | CT150-6B-RH07 |
| | Black | R012-50616 | SJ036094 | | |

Note: Please refer to below, regarding hand tools and handling instructions.

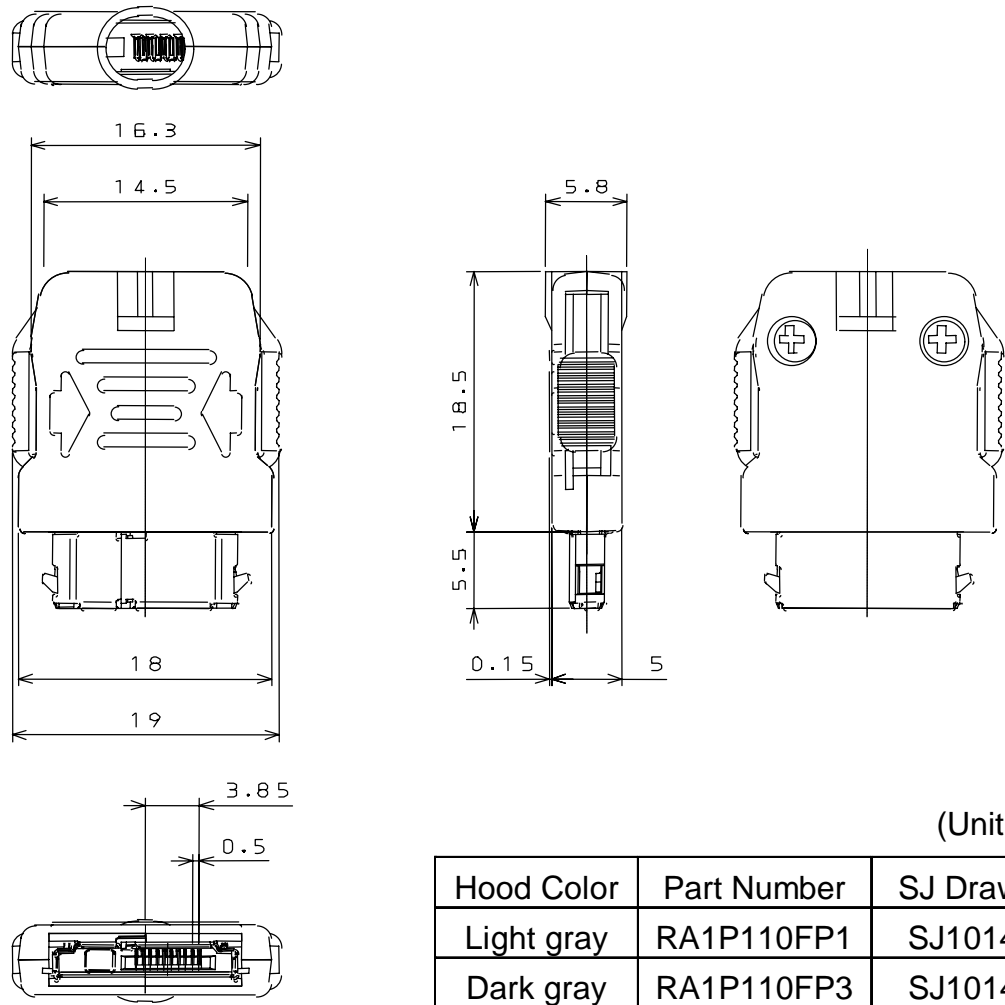
CT150-6-RH07 --- Handling Instructions: T700116

CT150-6B-RH07 --- Handling Instructions: T700160

■ Part Number

RA1P110FP* (Short plug for data communication/ soldering connection type)

Applicable wire: AWG#28 max. Applicable cable diameter: 3.6 mm dia. max.



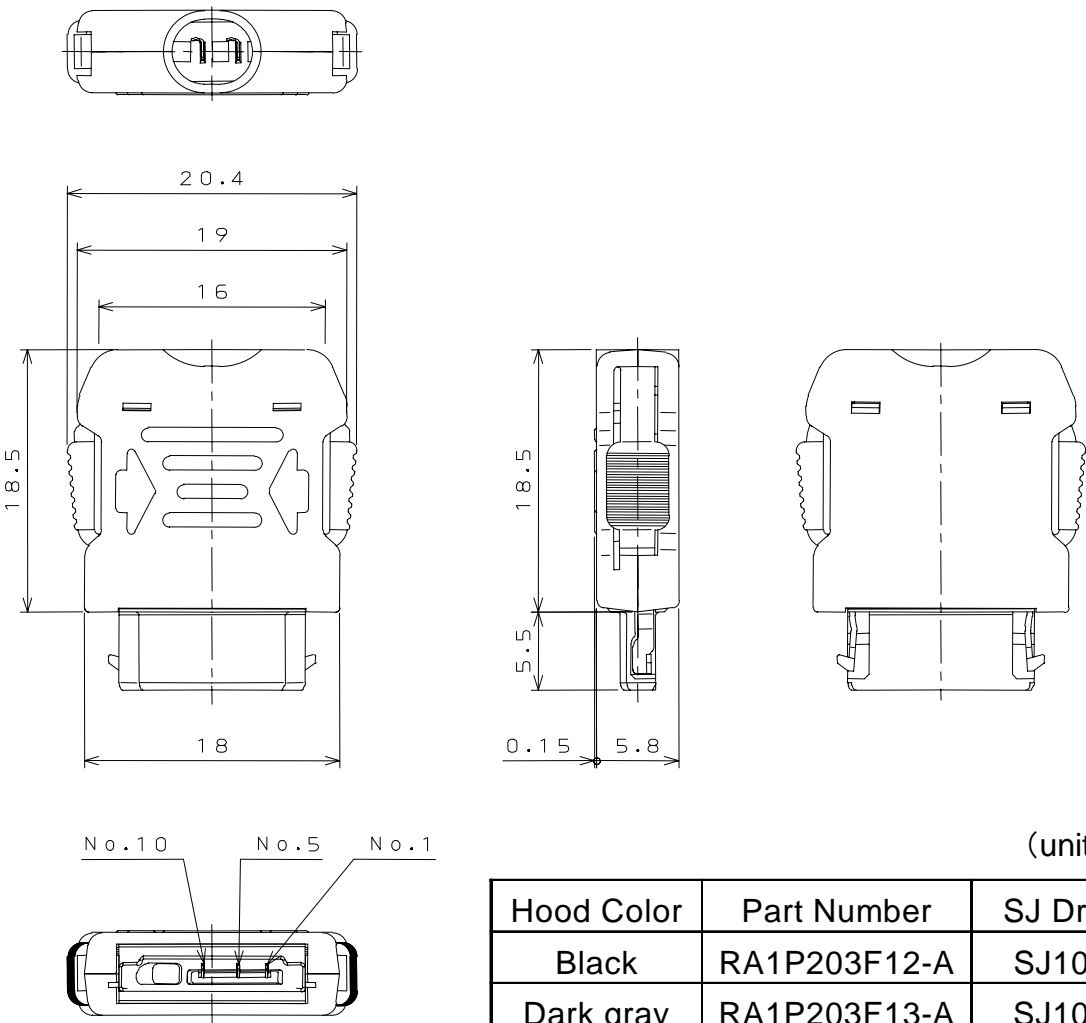
Note: Bushing for this product is cable mold-in type.

Please refer to Handling Instruction JAHL-3247 regarding connection, assembly process, bushing portion design and dimensions.

■Part Number

RA1P203F1*-A (3 contact plug for short type charger/ soldering connection type)

Applicable wire: AWG#28 max. Applicable cable diameter: 3.6 mm dia. max.



Note: Bushing for this product is cable mold-in type.

Please refer to Handling Instruction JAHL-3281 regarding connection, assembly process, bushing portion design and dimensions.

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Notice: Products shown in this leaflet are made for the applications listed below. However, if the above-mentioned products are to be used in aerospace devices, marine cable-connection devices, atomic power control systems, medical equipment for life-support systems, or any other specific application requiring extremely high reliability, please contact JAE for further information.
Recommended applications: computers, office machines, measuring devices, telecommunication devices (terminals, mobile devices), AV devices, household applications, FA devices, etc.

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