



Connector "A" for IMT-2000 Mobile Phones

CONNECTOR

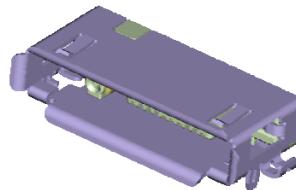
MB-0052-6

July 2006

RA1 Series



(RA1P011FP3)



(RA1R011HA1)

RoHS Compliant

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

- 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.

- 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

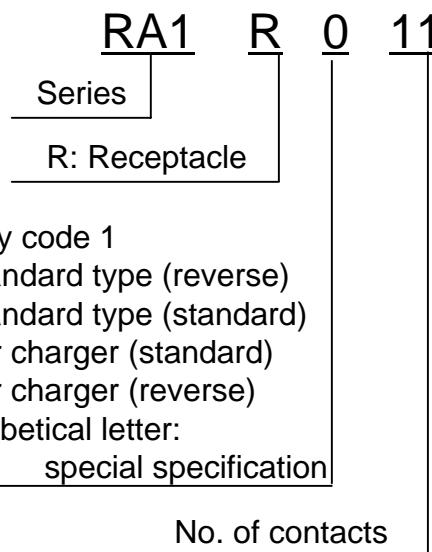
Components	Materials/Finishes
Contacts	Copper alloy / Contact: Au over Ni Terminal portion: Sn plating partially Au plating
Insulator	Glass filled nylon/color : Black PPS/ Color: Black (for charger)
Shell	Stainless steel/Sn plating

■ 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

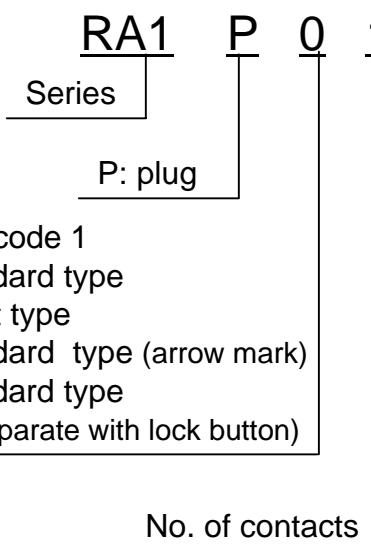


Modification code 2
0: Without coaxial
1: External detection switch
2: Mechanical exchange switch type
A: PB free

Plating specification
1: Contact portion: 0.1 um Au min.
2: Contact portion: 0.3 um Au min.
A: PB free

Connection type
H: SMT with hold down
J: SMT without hold down
N: Through hole

■ Plug



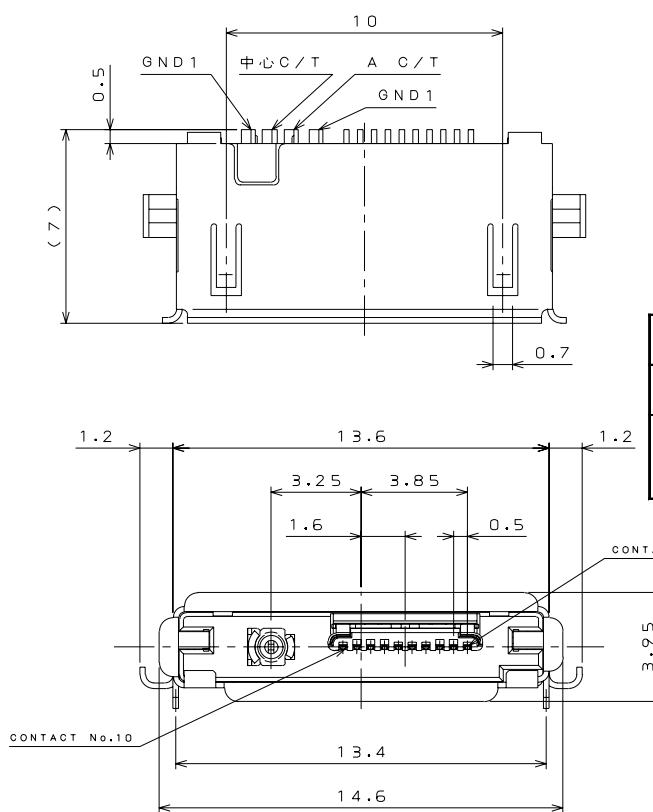
Modification code 2 (hood color)
1: Light gray
2: Black
3: Dark gray

Plating specification
1: Contact portion 0.1 um Au min.
P: PB free

Connection type
F: Soldering

■ Part Number

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



(unmated) 

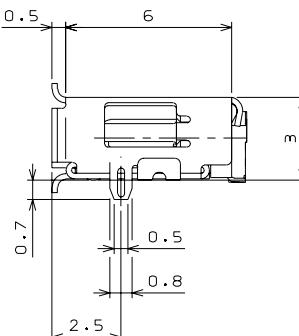
(mated) 

GND1: Receptacle coaxial external C/T

GND2 : Plug coaxial external C/T

AC/T : Detection C/T

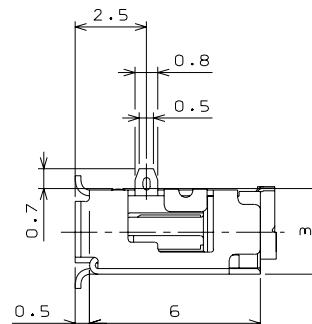
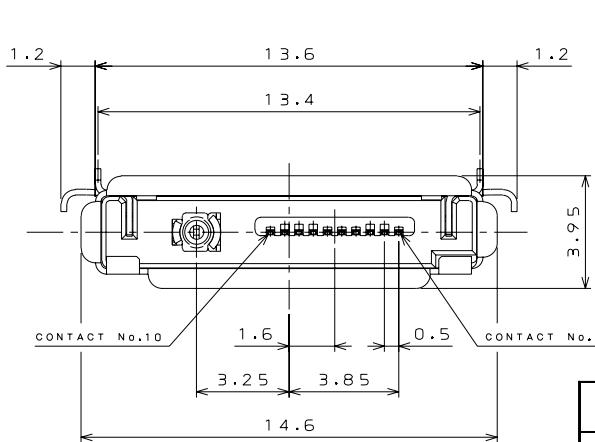
	Part Number	SJ Drawing
Single item	RA1R011HA1	SJ101719
Embossed reel product	RA1R011HA1E1000	SJ101720



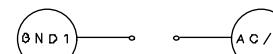
(Unit: mm)

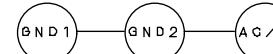
■ Part Number

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



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

(unmated) 

(mated) 

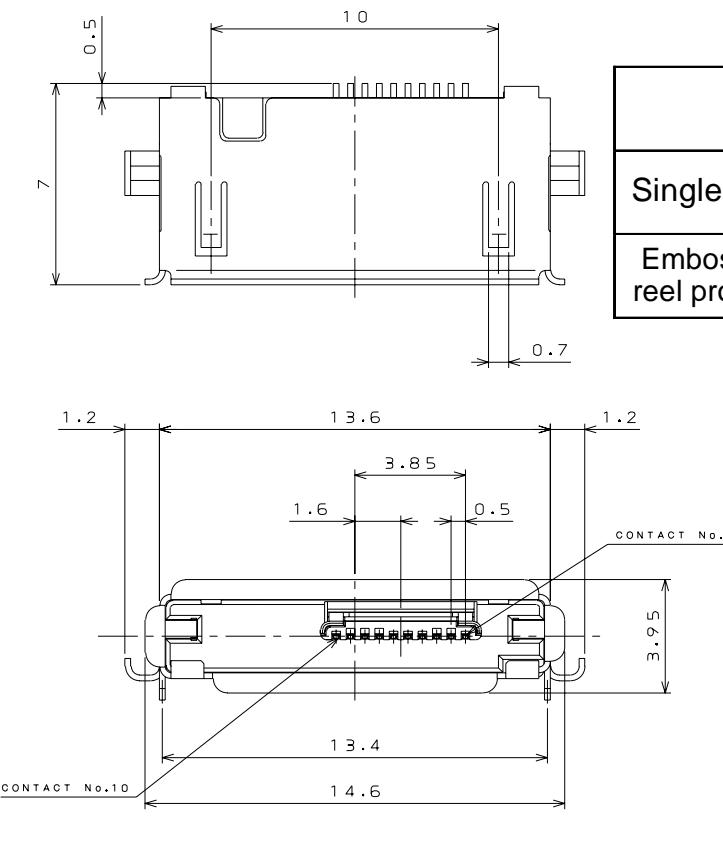
GND1: Receptacle coaxial external C/T

GND2 : Plug coaxial external C/T

AC/T : Detection C/T

■ Part Number

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

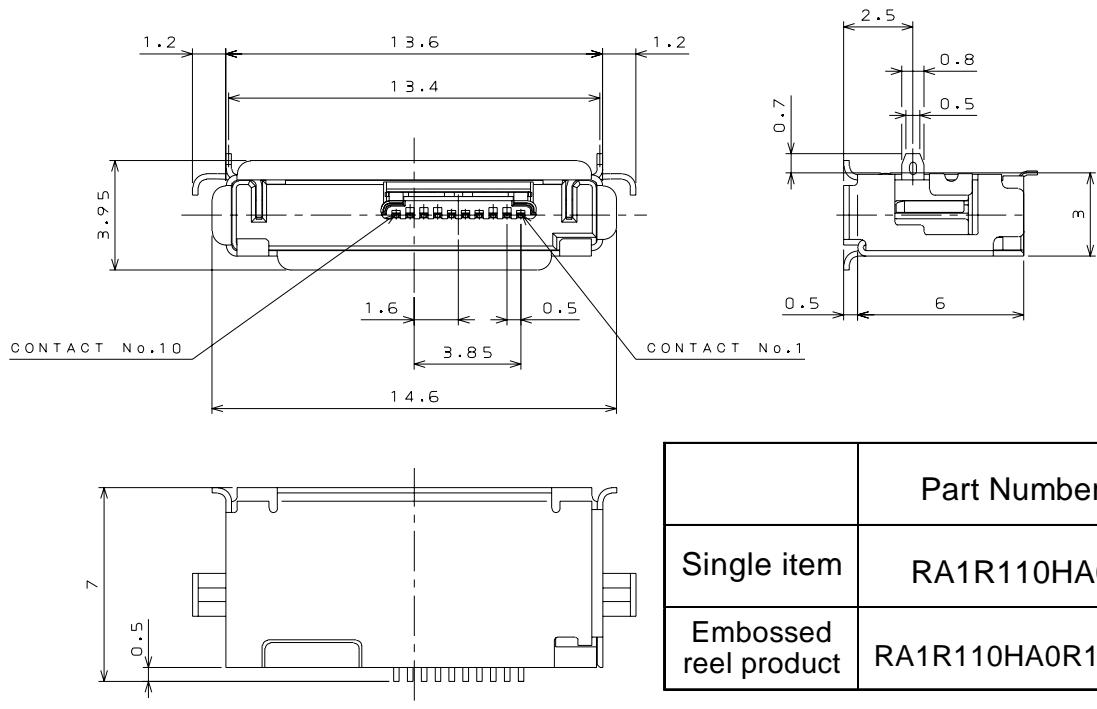


	Part Number	SJ Drawing
Single item	RA1R010H1A	SJ100588
Embossed reel product	RA1R010H1AR1000	SJ100613

(Unit: mm)

■ Part Number

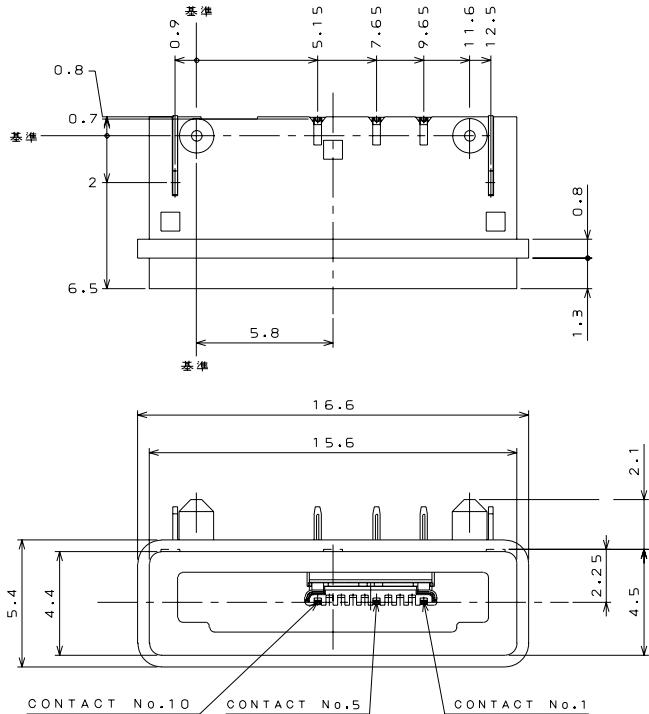
RA1R110HA0 (Receptacle for signal: without coaxial/ top-mount type)



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

■ Part Number

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

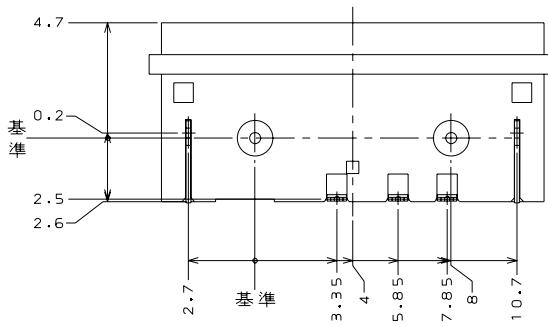
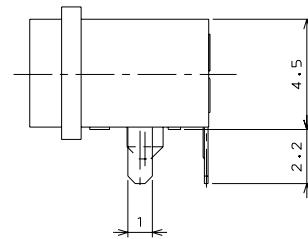
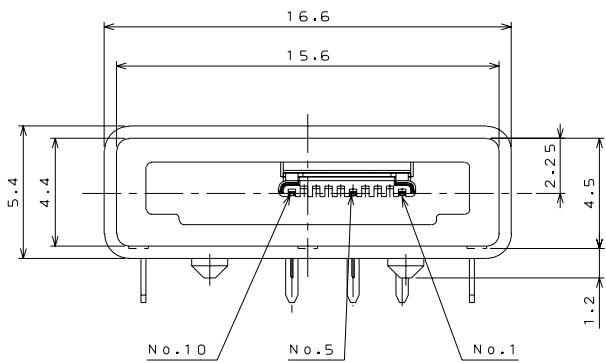


(Unit: mm)

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

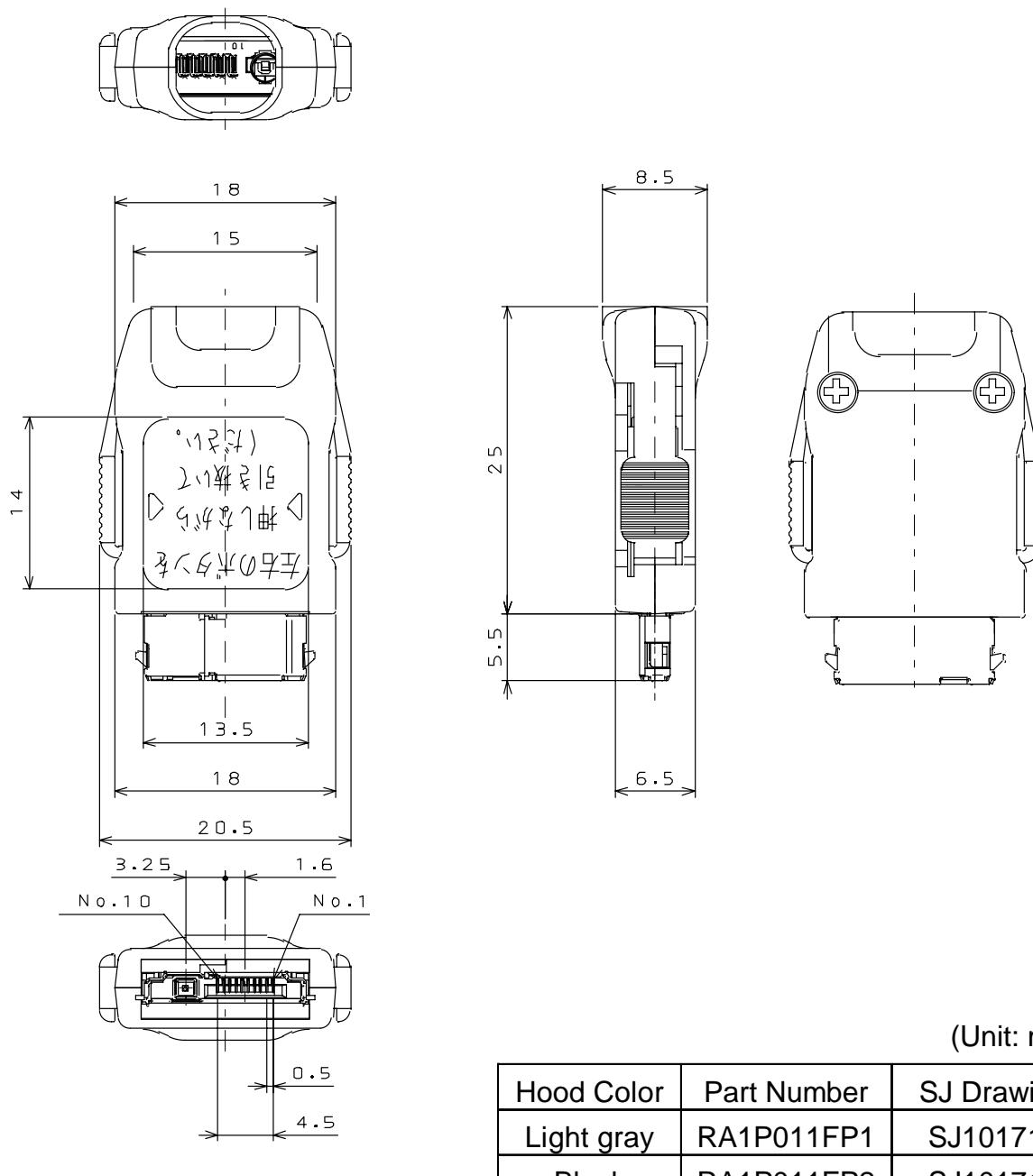
■ Part Number

RA1P011FP* (Standard plug/ solder connection type)

Applicable wire: AWG#28 max.

Applicable cable diameter: 5.0 mm dia. max.

Coaxial cable: 1.5D equivalent



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.

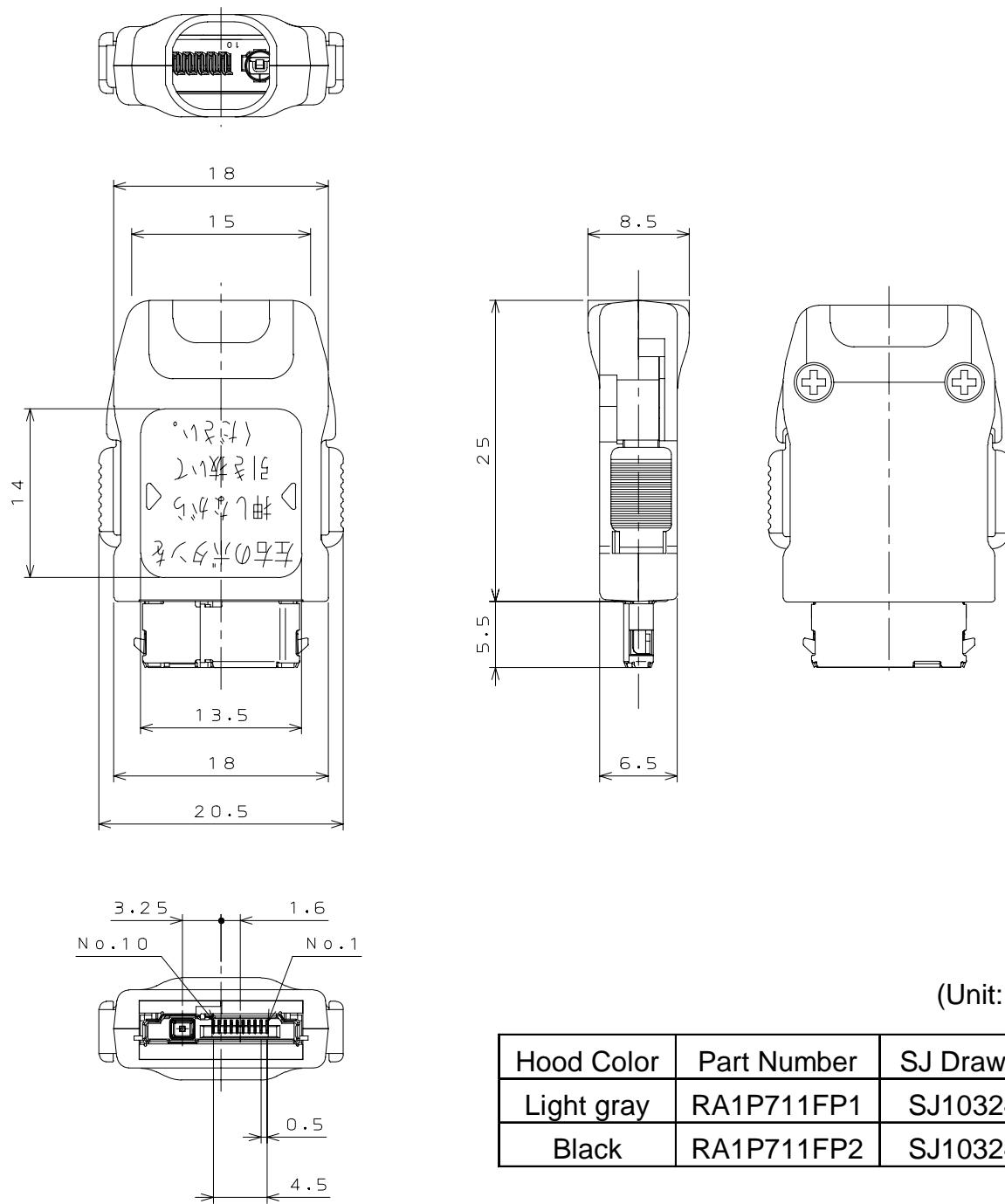
■ Part Number

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



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

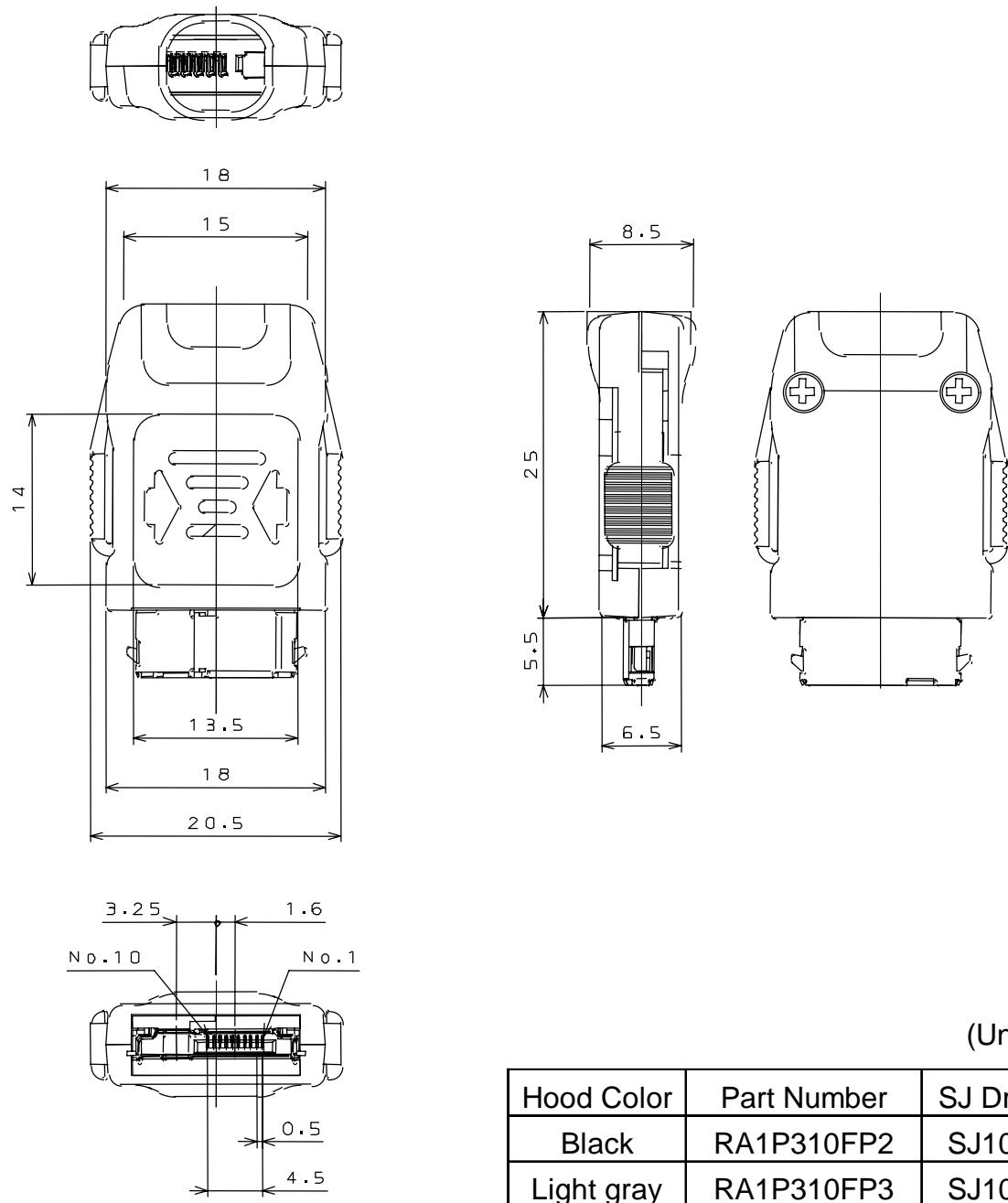
Please refer to Handling Instruction JAHL-3228 regarding connection, assembly process, bushing portion design and dimensions.

■ Part Number

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

Applicable wire: AWG#28 max.

Applicable cable diameter: 5.0 mm dia. max.



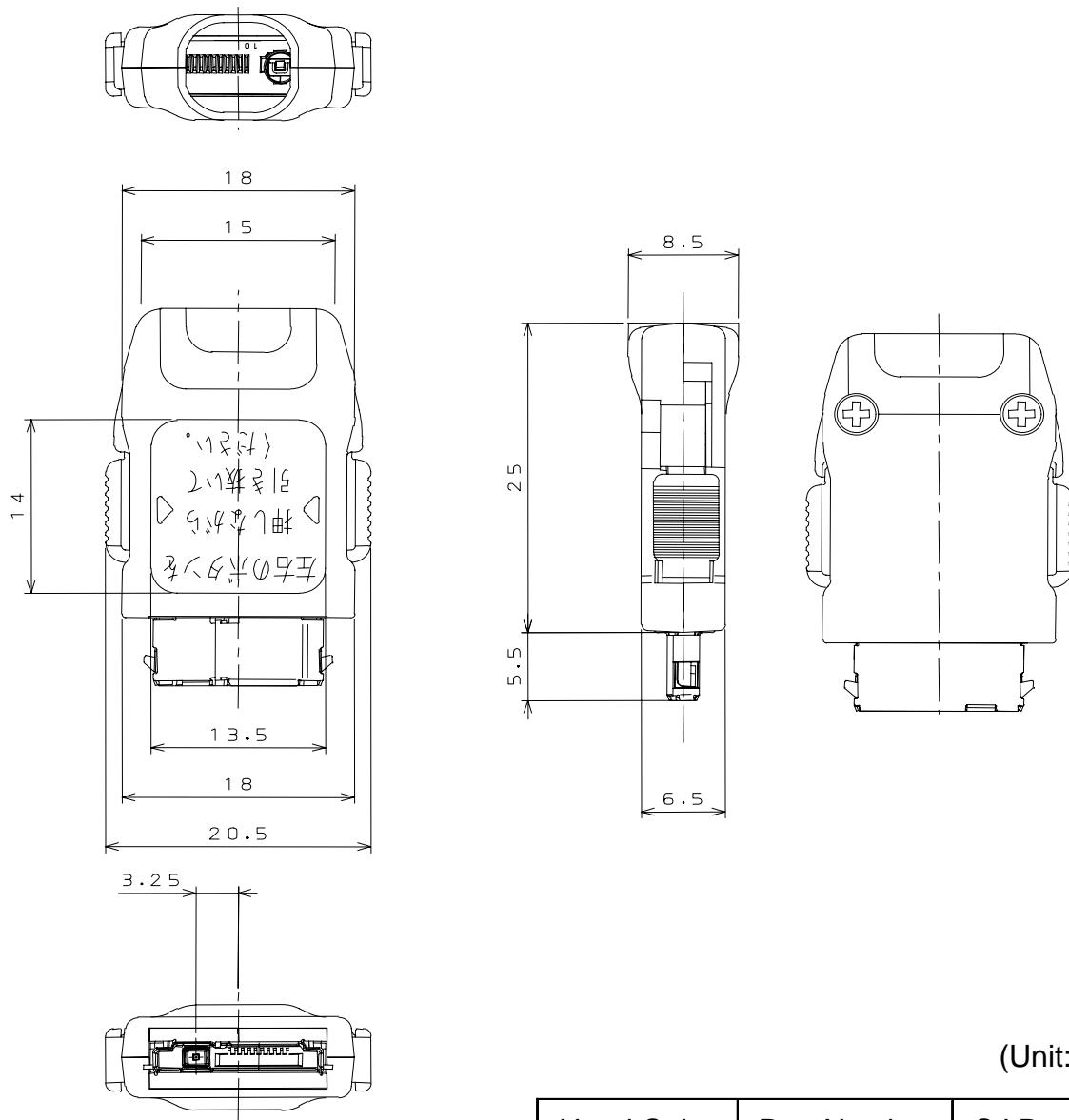
Note: This product does not include bushing and clamp barrel.

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



Hood Color	Part Number	SJ Drawing
Light gray	RA1P701FP3	SJ104524

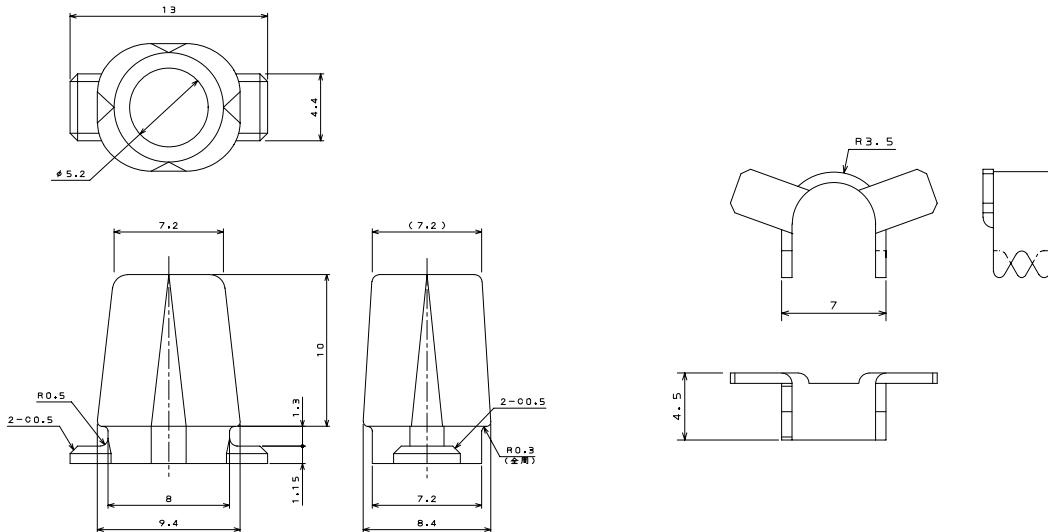
Note: This product does not include bushing and clamp barrel.

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

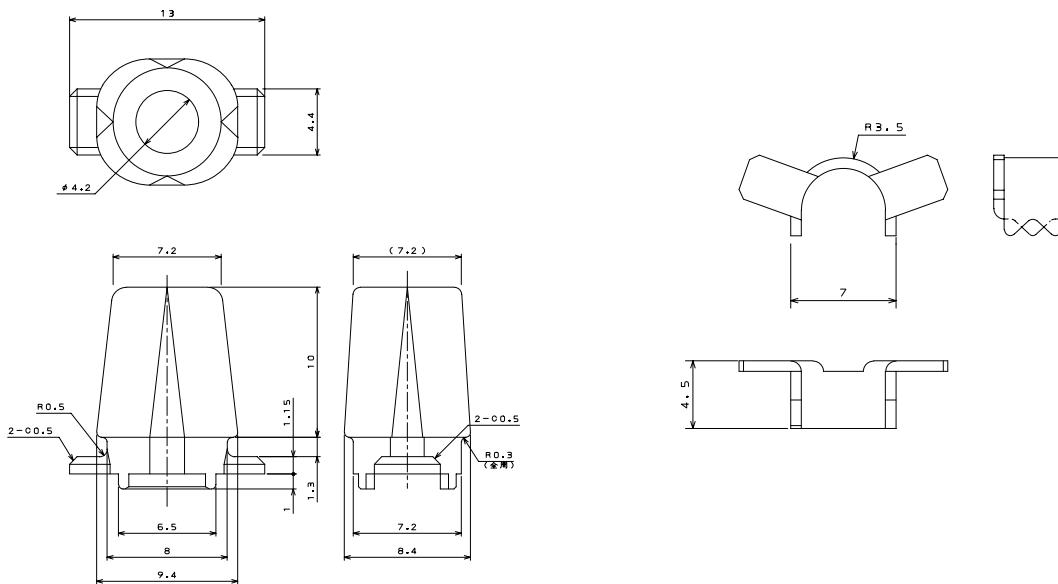
■Part Number

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

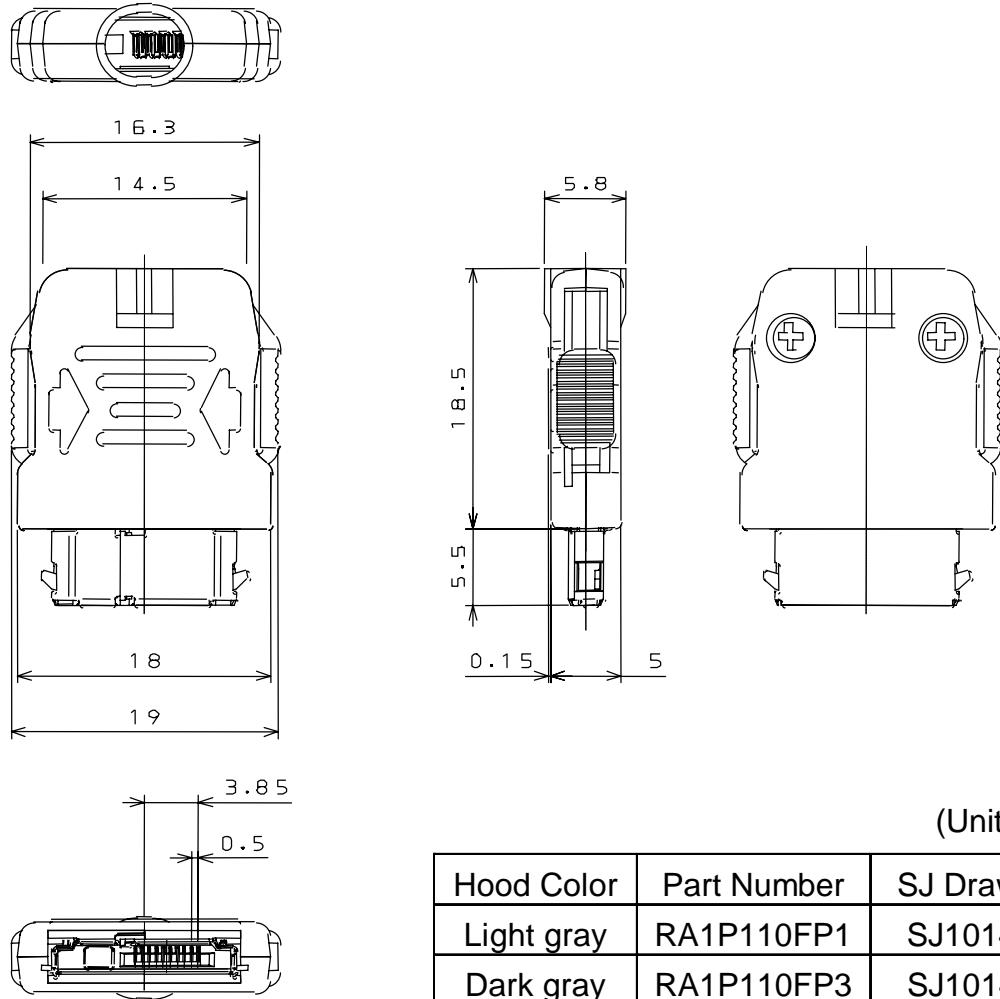
CT150-6B-RH07 --- Handling Instructions: T700160

■ 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.

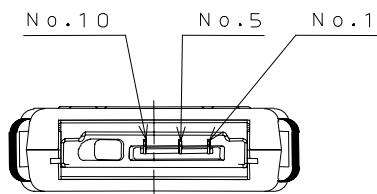
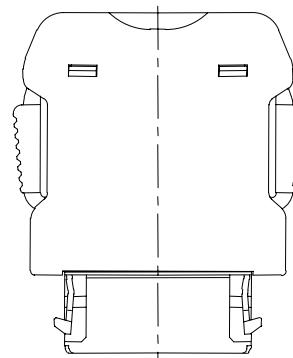
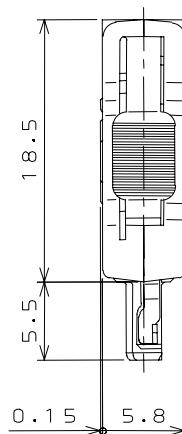
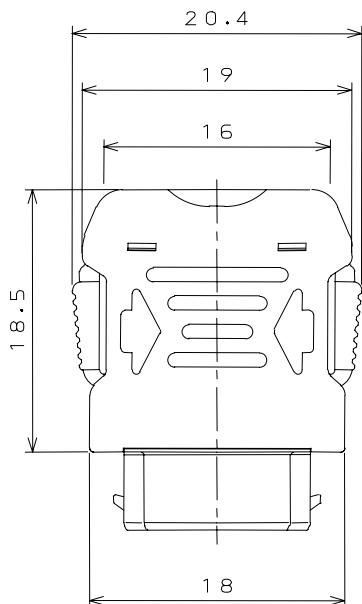
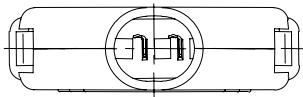
Please refer to Handling Instruction JAHL-3247 regarding connection, assembly process, bushing portion design and dimensions.

■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.



(unit: mm)

Hood Color	Part Number	SJ Drawing
Black	RA1P203F12-A	SJ104237
Dark gray	RA1P203F13-A	SJ104235

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.

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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