

Small Waterproof Connector

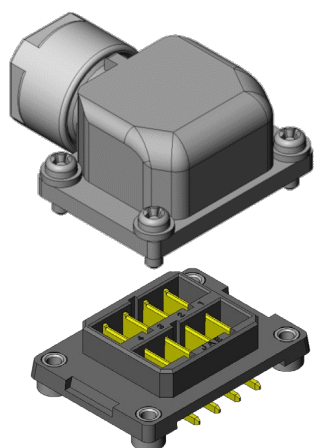
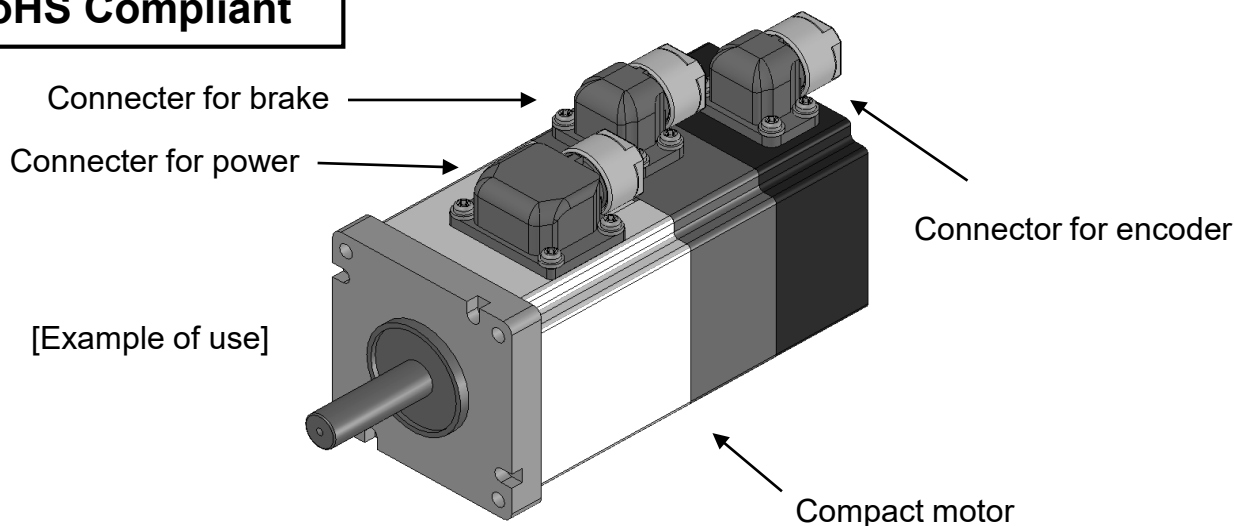
CONNECTOR

MB-0161-2

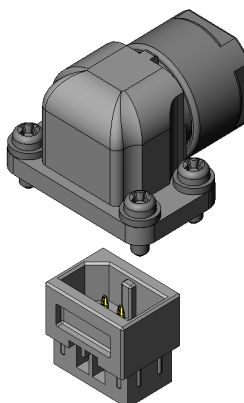
Dec 2021

JN6 Series

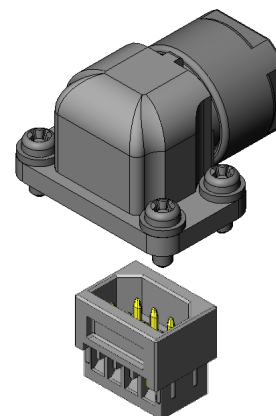
RoHS Compliant



4 pos. for power



2 pos. for brake



7 pos. for encoder

Connector for compact servo motors, with 4 power contacts, 2 brake contacts and 7 encoder contacts which are all reversible in 180 degree orientation.

Features

1. All plastic --- lightweight, low cost
2. Compact and low profile --- 4 pos.; plug overall length 28mm, plug height 11.4mm
3. Receptacle attachment --- 4 pos.; molded in to motor
2 pos., 7pos.; crimp attached to motor
4. Connection method --- 4pos. receptacle; board through-hole type
4pos. plug and other 2pos., 7pos.; crimp type
5. Secure mating --- enables secure mating by screw fixing 4points
6. Waterproof --- IP67 class
7. Cable exit orientation --- selectable from two orientation (180 degrees)

General Specifications

| | Items | Specification and performance | |
|---|--------------------------|---|--|
| | | for Power (4pos.) | for Brake(2pos.)/ for Encorder (7pos.) |
| 1 | Rated current | 7A max. (per pos.) | 1A max. (per pos.) |
| 2 | Rated voltage | 200VAC | 100VAC |
| 3 | Withstanding voltage | 1500VAC | 500VAC |
| 4 | Insulation resistance | 1000M ohm min. (500V energized) | 1000M ohm min. (500V energized) |
| 5 | Waterproof | IP67 (when mated) | IP67 (when mated) |
| 6 | Operating temperature | -40 to +125 Deg. C | -40 to +125 Deg. C |
| 7 | Connection specification | Receptacle: Angle through-hole Plug: crimp (AWG#20 to #18) | Receptacle: crimp (AWG#28 to #22) Plug: crimp (AWG#28 to #22) |
| 8 | Plug applicable cable | Cable outer dia.: dia.6±0.5 | Cable outer dia.: dia.5±0.5 |

Materials and Finishes

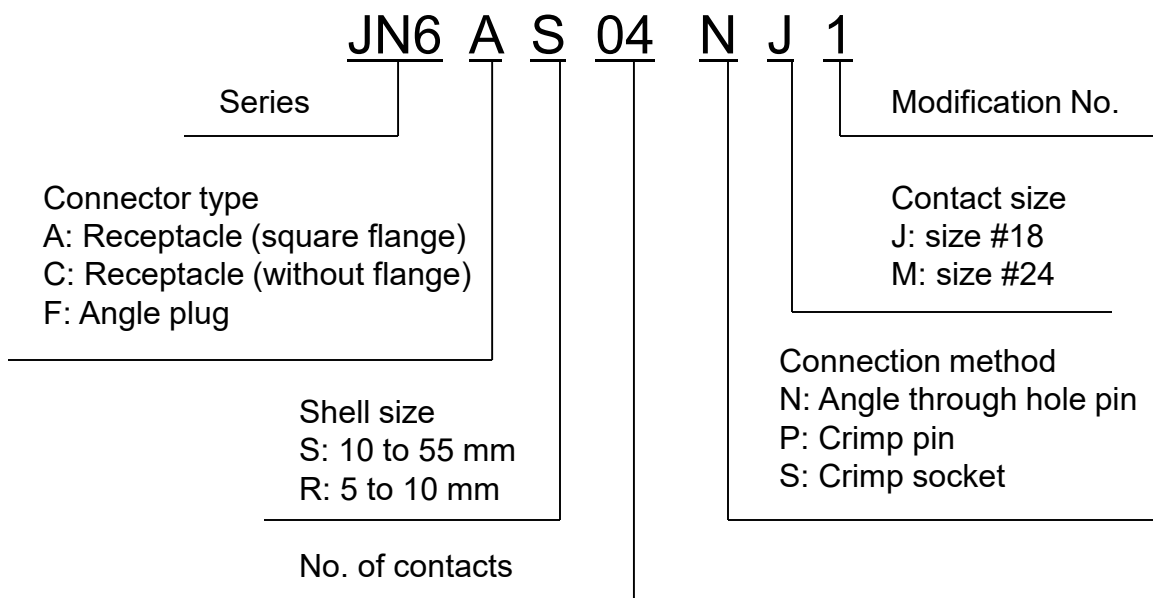
1) Receptacle

| | Name of parts | Materials | Finishes |
|---|--------------------------|---------------------------|--|
| 1 | Pin contact | Copper alloy | Au plating |
| 2 | Pin insulator | Resin (black) | - |
| 3 | Insert nut (4 pos. only) | 4 pos. only: copper alloy | Zinc plating (black chromate finish, chromium hexavalent free) |

2) Plug

| | Name of parts | Materials | Finishes |
|---|------------------|----------------------------|--|
| 1 | Socket contact | Copper alloy | Au plating |
| 2 | Socket insulator | Resin (black) | - |
| 3 | Hood | Resin (black) | - |
| 4 | Grand nut | Resin (black) | - |
| 5 | Gasket | NBR (black) Heat resistant | - |
| 6 | Bushing | NBR (black) Heat resistant | - |
| 7 | Spring | Stainless steel | - |
| 8 | Screw | Steel | Zinc plating (black chromate finish, chromium hexavalent free) |

Ordering Information



Part Number List

| | Part Number | SJ Drawing | Remarks |
|-------------------------|------------------------------------|------------|-------------------------------|
| 1. Part Number | JN6AS04NJ1 | SJ105512 | Receptacle (4pos.) |
| | JN6FS04SJ* | SJ105513 | Angle plug (4pos.) |
| | JN6CR02PM1 | SJ105514 | Receptacle (2pos.) |
| | JN6FR02SM1 | SJ105515 | Angle plug (2pos.) |
| | JN6CR07PM1 | SJ105516 | Receptacle (7pos.) |
| | JN6FR07SM1 | SJ105517 | Angle plug (7pos.) |
| | ST-JN5-S-C1B-2500-(A534G) | SJ101308 | #18 crimp socket contact |
| | JN6-P-C1-10000 | SJ105897 | #24 crimp pin contact (C1) |
| | JN6-P-C2-10000 | SJ105898 | #24 crimp pin contct (C2) |
| | LY10-C1-A1-10000 | SJ100704 | #24 crimp socket contact (C1) |
| | LY10-C2-A1-10000 | SJ100705 | #24 crimp socket contact (C2) |
| 2. Specification | JN6 Connector Specification | JACS-50014 | |
| 3. Handling Instruction | JN6 Connector Handling Instruction | JAHL-50014 | |

Connector

| | Part Number | Type | Remarks |
|---|-------------|---------------------|---|
| 1 | JN6AS04NJ1 | Receptacle (4 pos.) | for Power angle through-hole type |
| 2 | JN6FS04SJ1 | Angle plug (4 pos.) | for Power crimp socket type (Standard type) |
| | JN6FS04SJ2 | | for Power crimp socket type (Reverse type) |
| 3 | JN6CR02PM1 | Receptacle (2 pos.) | for Brake crimp pin type |
| 4 | JN6FR02SM1 | Angle plug (2 pos.) | for Brake crimp socket type (Standard/ Reverse type both in common) |
| 5 | JN6CR07PM1 | Receptacle (7 pos.) | for Encoder crimp pin type |
| 6 | JN6FR07SM1 | Angle plug (7 pos.) | for Encoder crimp socket type (Standard/ Reverse type both in common) |

*Cable pulling out direction of plug is reversible.
Select standard or reverse due to the pulling out direction.

Crimp contact

Crimp contact is sold separately. Refer below for part number.

| Contact Type | Packaging | Contact Part Number | Drawing Number | Applicable Cable (AWG) | Insulation O.D. | Applicable Connector |
|--------------|----------------------|---------------------------|----------------|------------------------|-----------------|--------------------------|
| #18 Socket | Reeled (2500PCS) | ST-JN5-S-C1B-2500-(A534G) | SJ101308 | #22~#18 | φ1.3~φ1.8 | JN6FS04SJ1 JN6FS04SJ2 |
| | Loose Piece (100PCS) | ST-JN5-S-C1B-100-(A534G) | SJ101309 | | | |
| #24 Pin | Reeled (10000PCS) | JN6-24P-C1-10000 | SJ105897 | #24~#22 | φ1.0~φ1.2 | JN6CR02PM1 |
| | | JN6-24P-C2-10000 | SJ105898 | #28~#26 | φ1.0~φ1.2 | |
| | | JN6-24P-C1-10000 | SJ105897 | #24~#22 | φ0.8~φ1.0 | JN6CR07PM1 |
| | | JN6-24P-C2-10000 | SJ105898 | #28~#26 | φ0.7~φ1.0 | |
| #24 Socket | Reeled (10000PCS) | LY10-C1-A1-10000 | SJ100704 | #26~#22 | φ0.8~φ1.3 | JN6FR02SM1 |
| | | LY10-C2-A1-10000 | SJ100705 | #30~#26 | φ0.7~φ1.2 | JN6FR07SM1 |

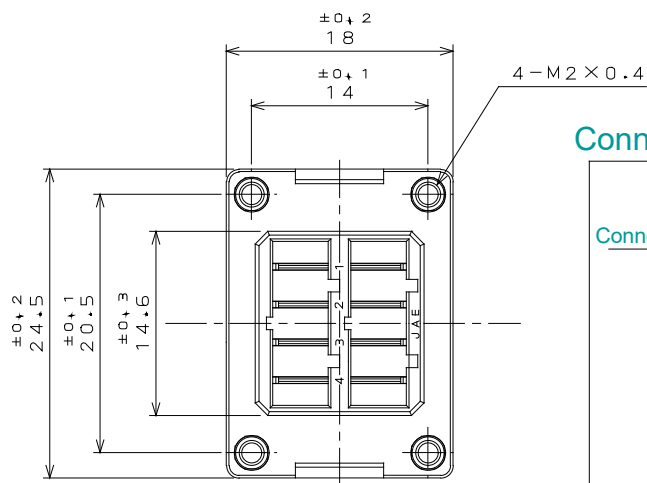
Crimping tools

Use crimp tools below for contact crimping.

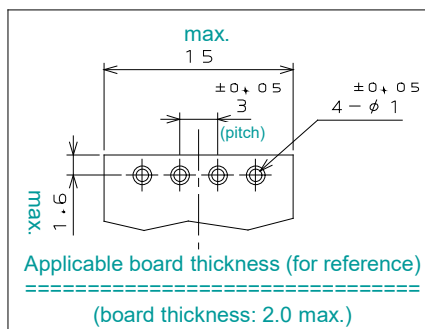
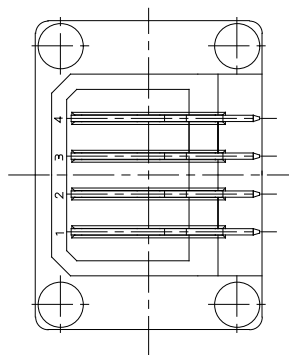
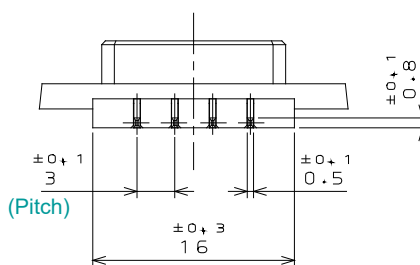
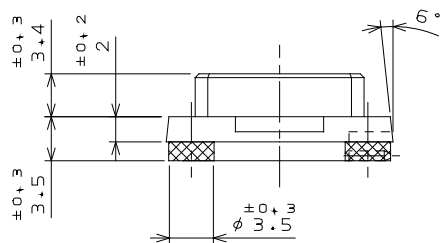
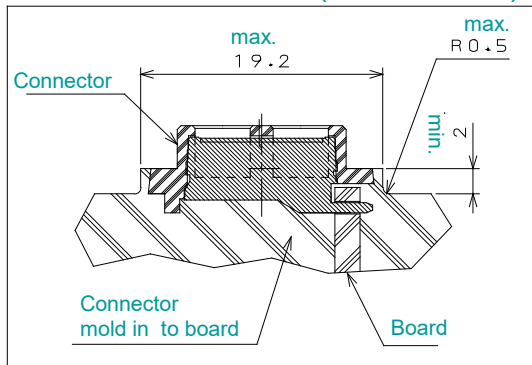
| Contact Type | Contact Part Number | Crimp Tool Type | Applicable Cable (AWG) | Applicable Tools | Manual |
|--------------|---------------------------|----------------------|------------------------|------------------|---------|
| #18 Socket | ST-JN5-S-C1B-2500-(A534G) | Semi-automatic crimp | #22~#18 | 3502-JN5-2 | T703332 |
| | ST-JN5-S-C1B-100-(A534G) | Hand crimp | #22~#18 | CT160-3-JN5 | T700263 |
| #24 Pin | JN6-24P-C1-10000 | Semi-automatic crimp | #24~#22 | 3502-LY1-2 | T703429 |
| | JN6-24P-C2-10000 | Semi-automatic crimp | #28~#26 | 3502-LY1-2 | T703429 |
| #24 Socket | LY10-C1-A1-10000 | Semi-automatic crimp | #26~#22 | 3502-LY1-2 | T703429 |
| | | Hand crimp | #26~#22 | CT150-4-LY1 | T700132 |
| | LY10-C2-A1-10000 | Semi-automatic crimp | #30~#26 | 3502-LY2-2 | T703364 |
| | | Hand crimp | #30~#26 | CT150-4-LY2 | T700132 |

Note. 350-LY1-2 is common with JN6-24P-C1-10000, JN6-24P-C2-10000 and LY10-C1-A1-10000 contacts.

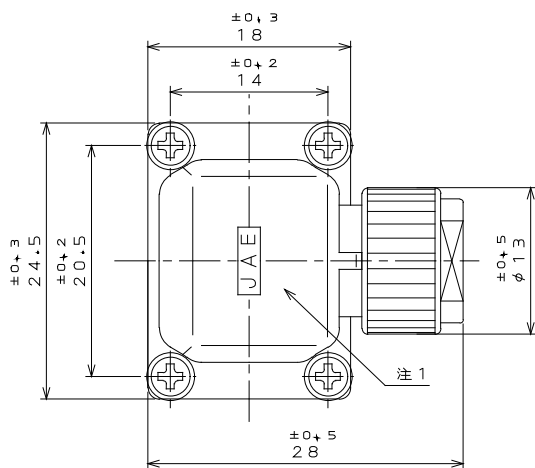
[Receptacle/ 4pos.]



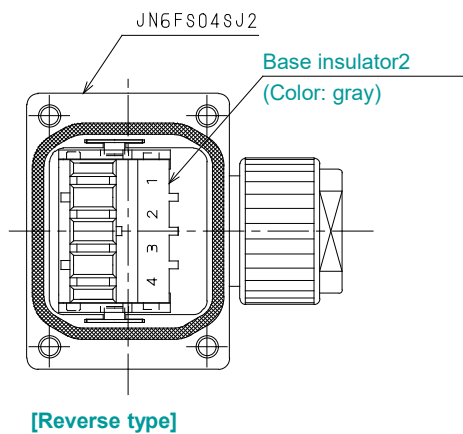
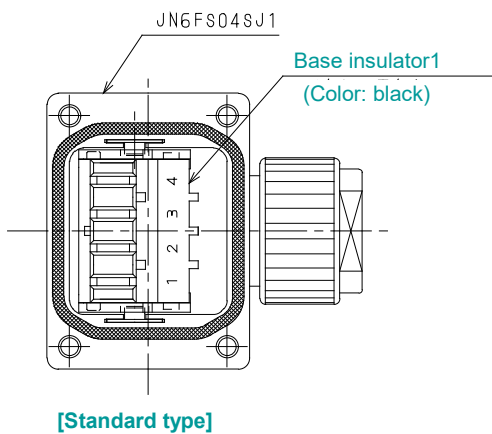
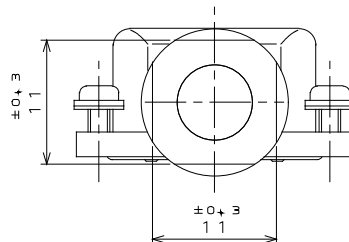
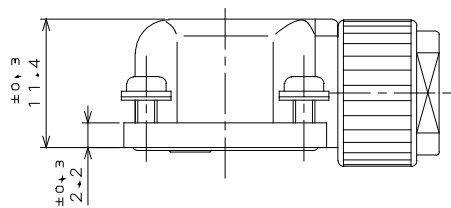
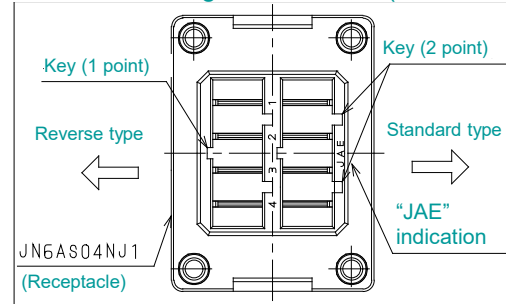
Connector Attachment (for reference)



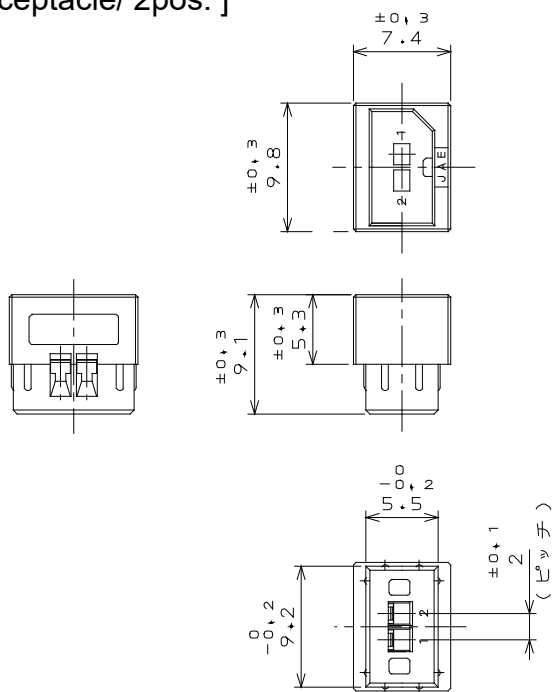
[Angle plug 4pos.]



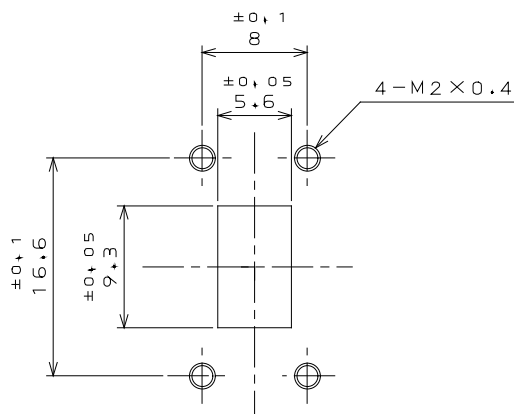
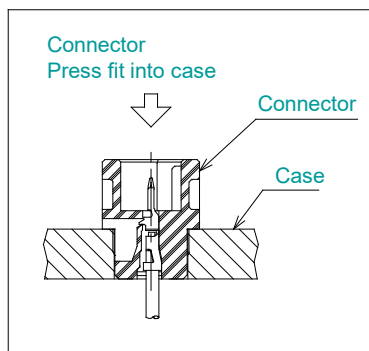
Connector Pulling Out Direction (for reference)



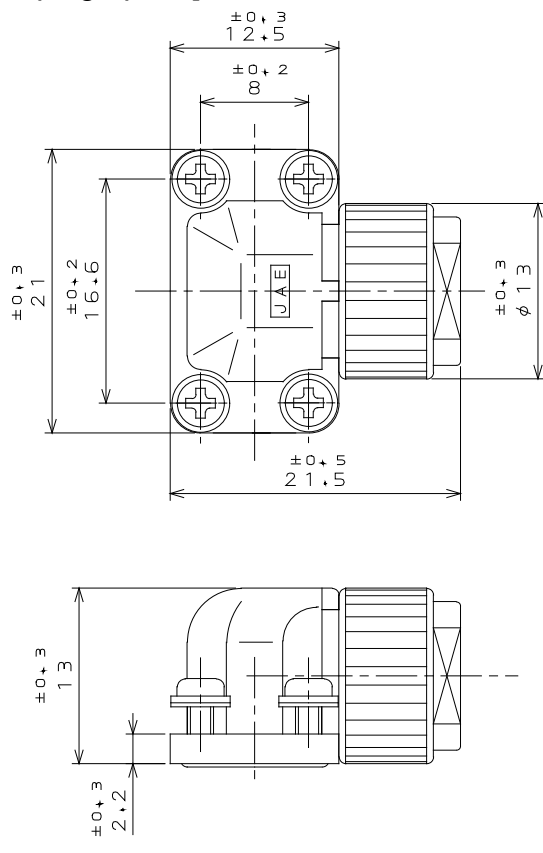
[Receptacle/ 2pos.]



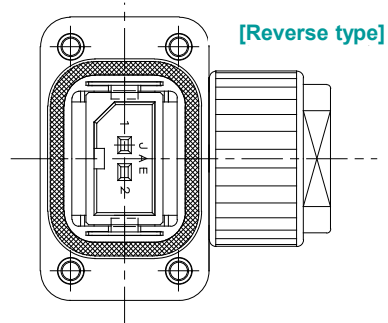
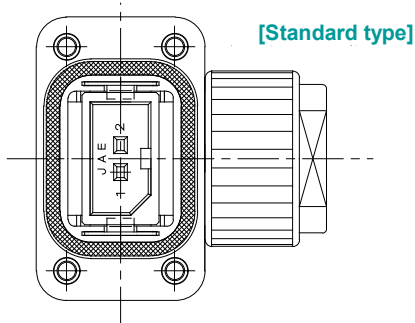
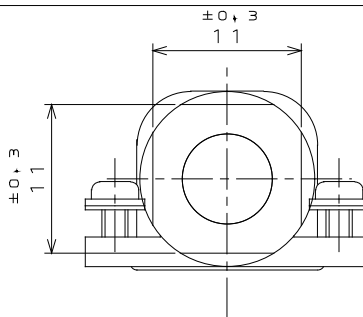
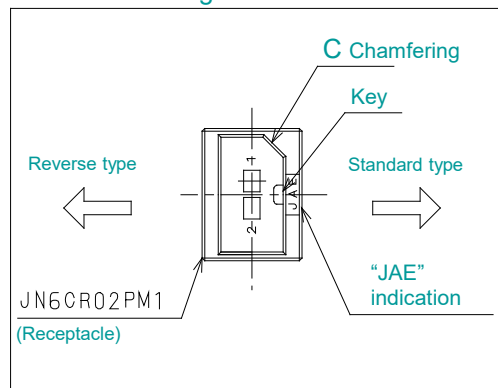
Connector Attachment



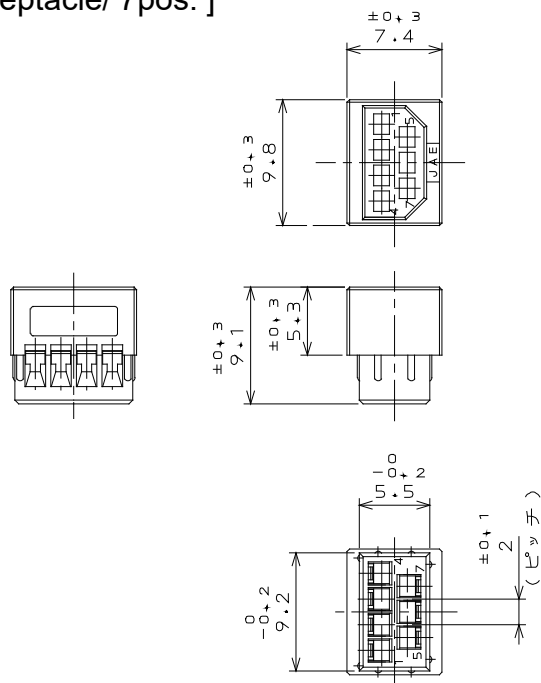
[Angle plug 2pos.]



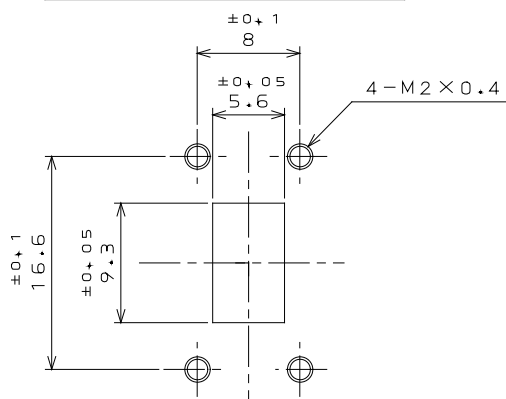
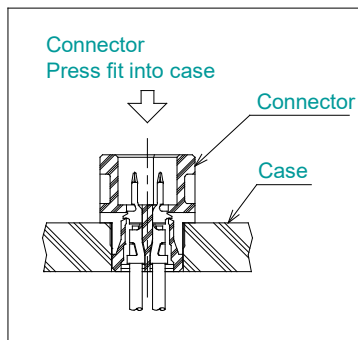
Connector Pulling Out Direction



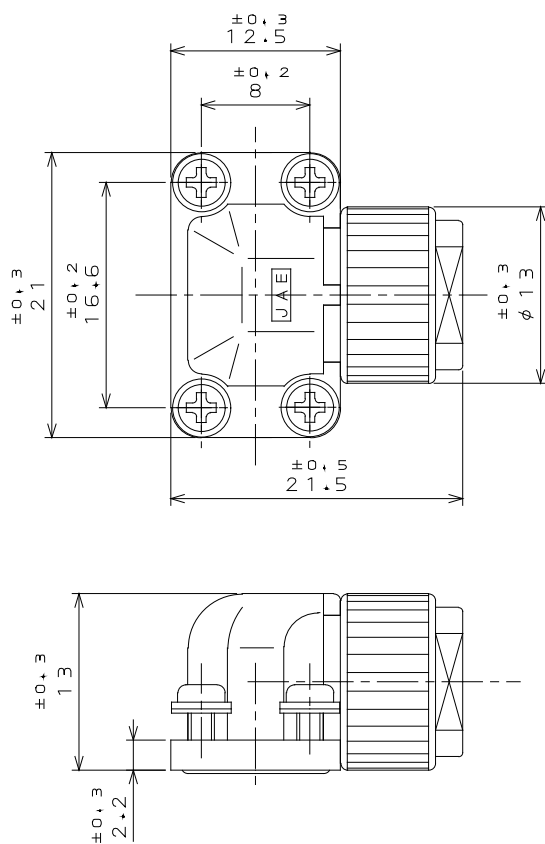
[Receptacle/ 7pos.]



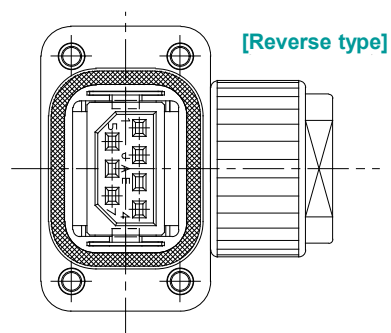
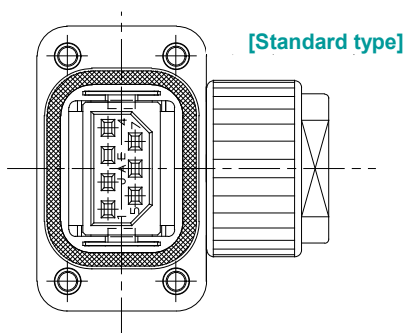
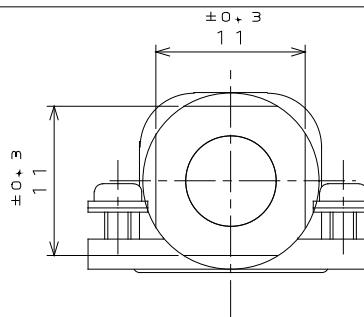
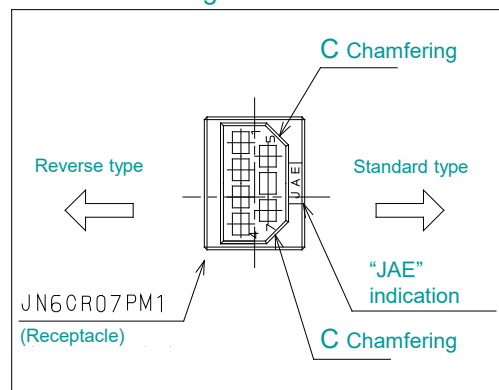
Connector Attachment



[Angle plug 7pos.]



Connector Pulling Out Direction



| |
|---------------------|
| Technical Documents |
|---------------------|

| | |
|----------------------|------------|
| Specification | JACS-50014 |
| Handling Instruction | JAHL-50014 |

Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

Japan Aviation Electronics Industry, Limited

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