

## Small Waterproof Connector

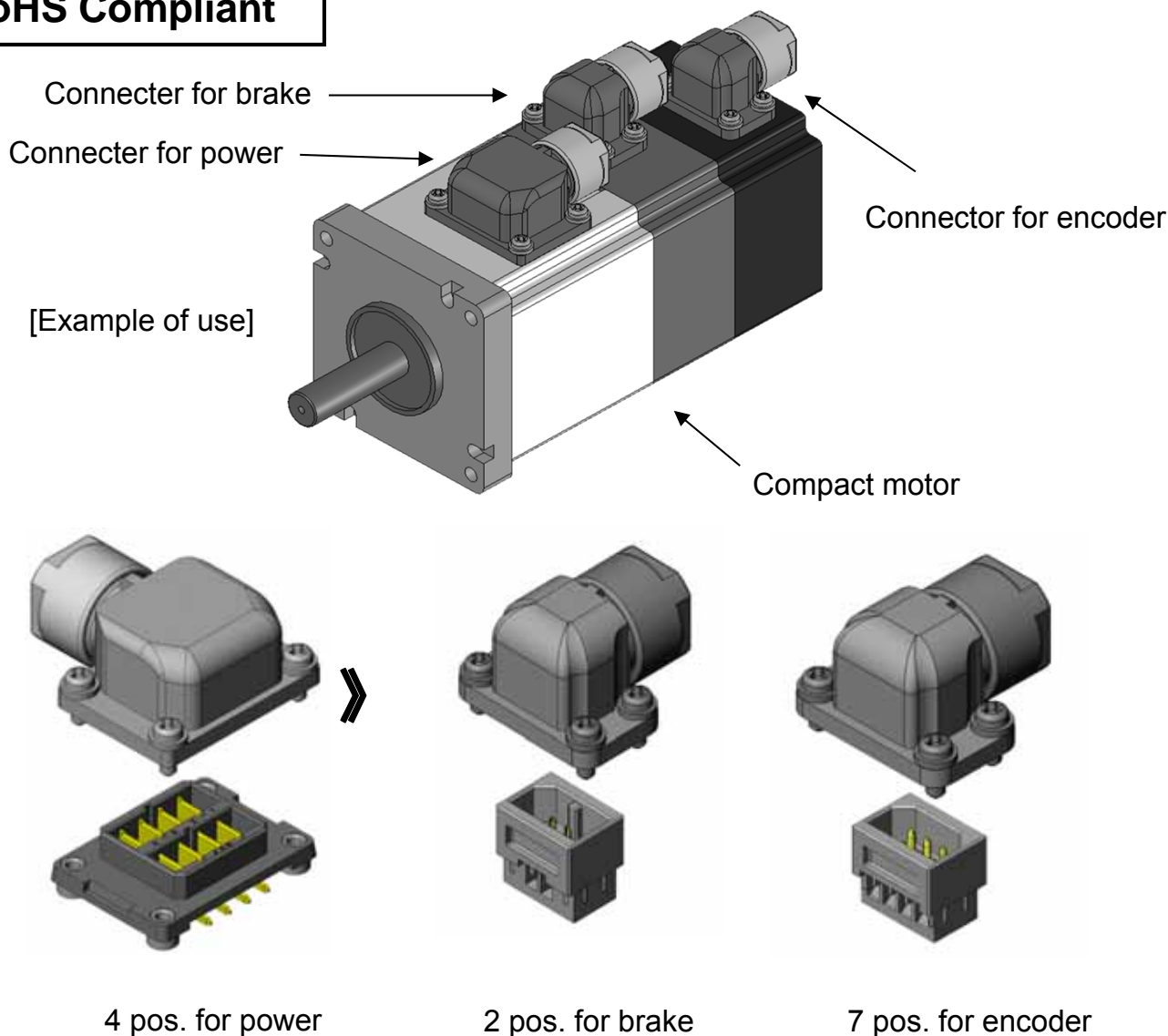
## CONNECTOR

MB-0161-3

Jun 2023

# JN6 Series

## RoHS Compliant



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

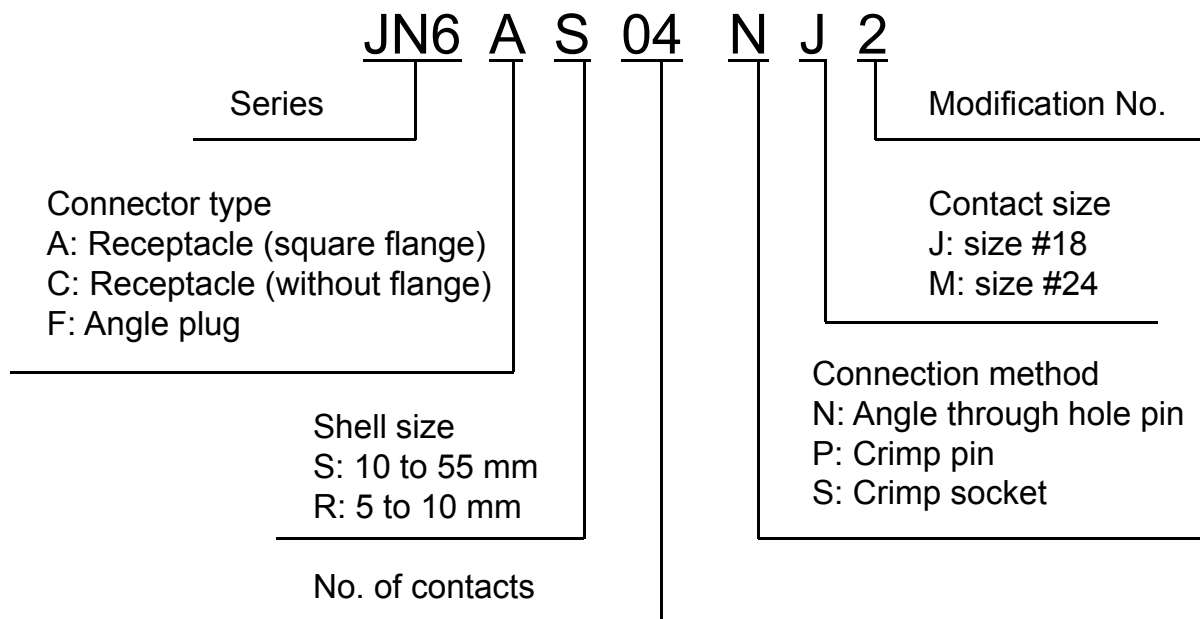
### 1) Receptacle

	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: Stainless steel	-

### 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	JN6AS04NJ2	SJ119317	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	JN6AS04NJ2	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

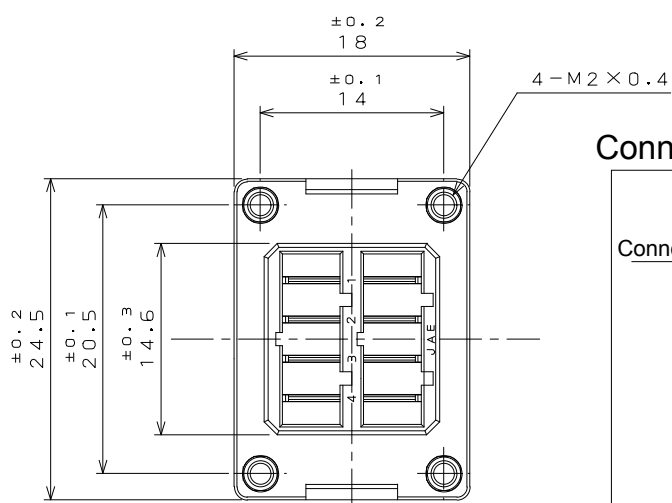
## Crimping tools

Use crimp tools below for contact crimping.

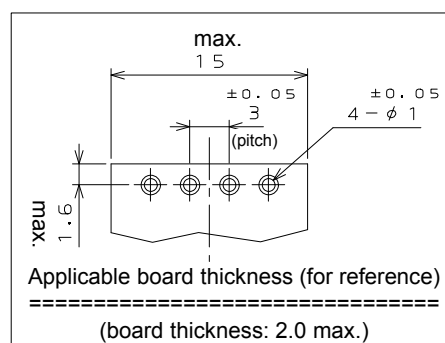
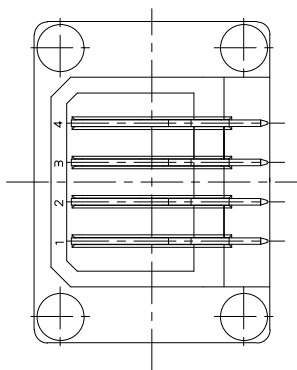
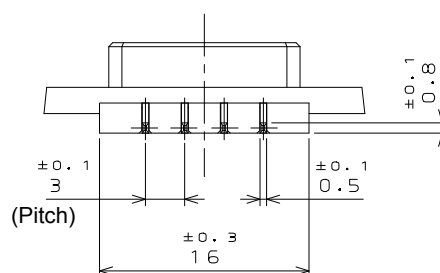
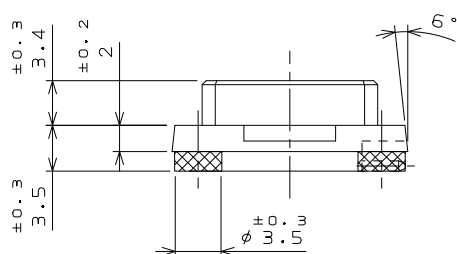
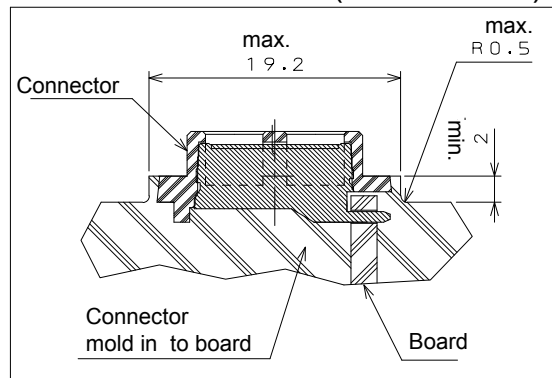
Contact Type	Contact Part Number	Crimp Tool Type	Applicable Cable (AWG)	Applicable Tools	Manual
#18 Socket	ST-JN5-S-C1B-2500-(A534G)	Semi-automatic crimp	#22 ~ #18	3502-JN5-2	T703332
	ST-JN5-S-C1B-100-(A534G)	Hand crimp	#22 ~ #18	CT160-3-JN5	T700263
#24 Pin	JN6-24P-C1-10000	Semi-automatic crimp	#24 ~ #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. 3502-LY1-2 is common with JN6-24P-C1-10000 , JN6-24P-C2-10000 and LY10-C1-A1-10000 contacts.

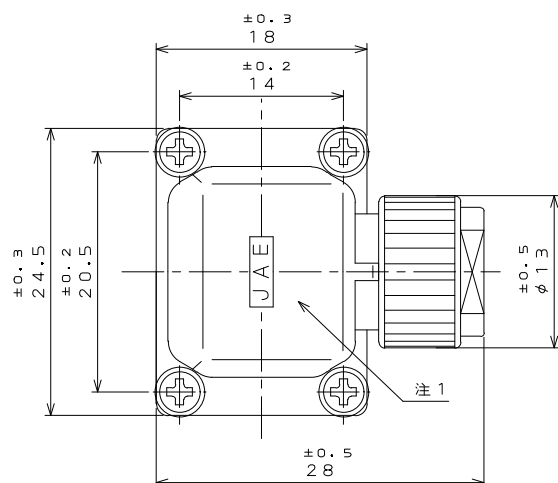
[Receptacle/ 4pos. ]



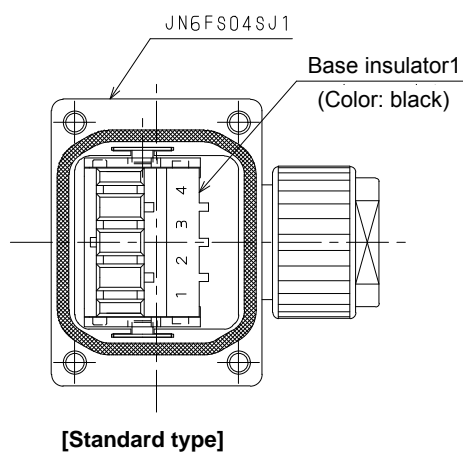
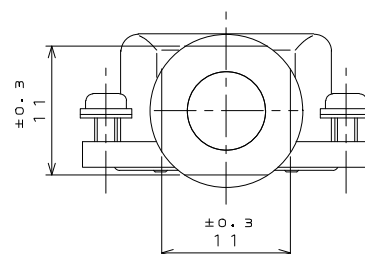
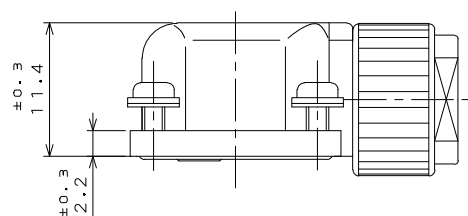
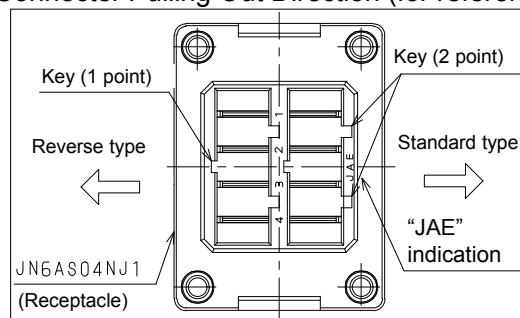
## Connector Attachment (for reference)



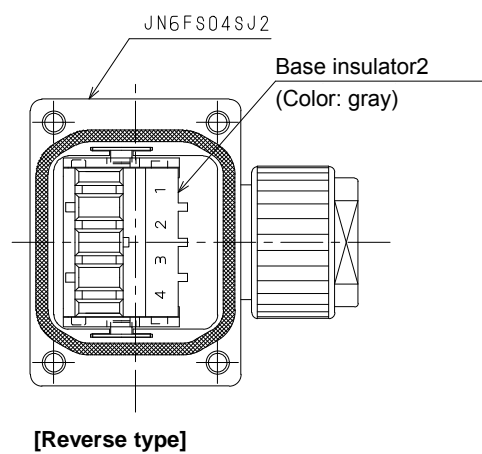
## [Angle plug 4pos. ]



## Connector Pulling Out Direction (for reference)

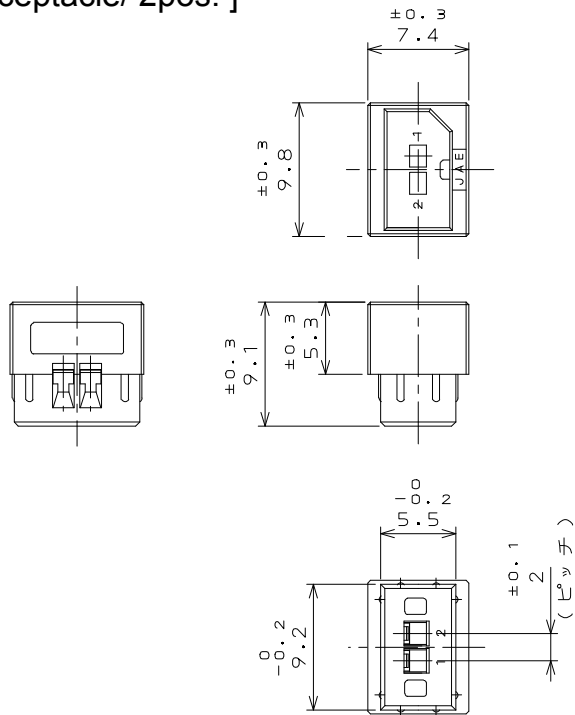


[Standard type]

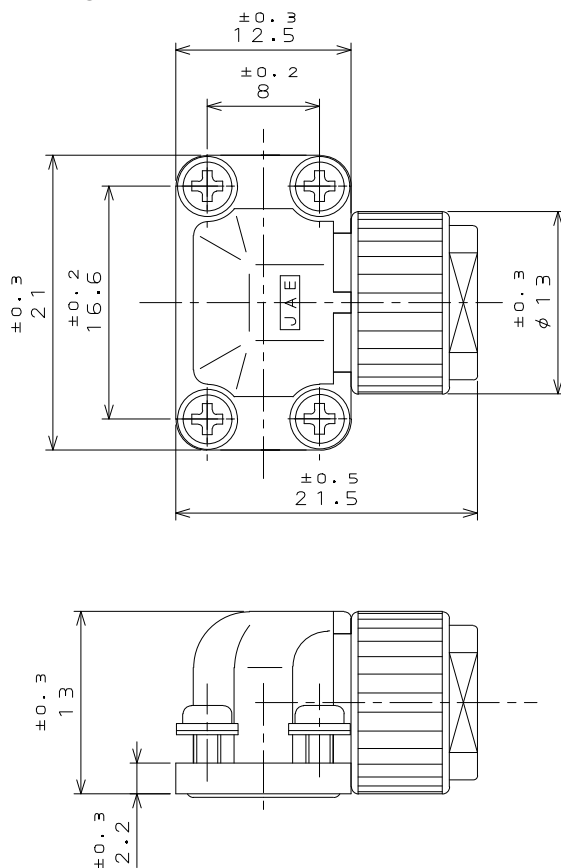


[Reverse type]

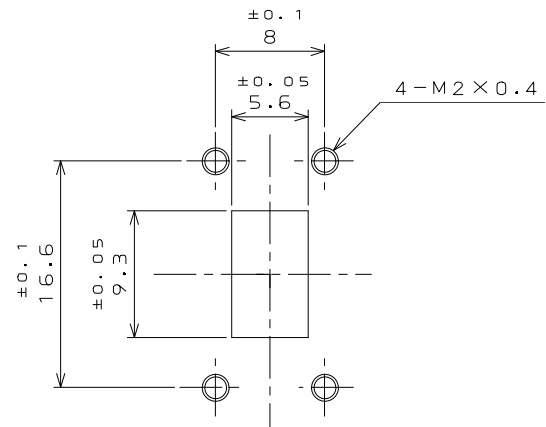
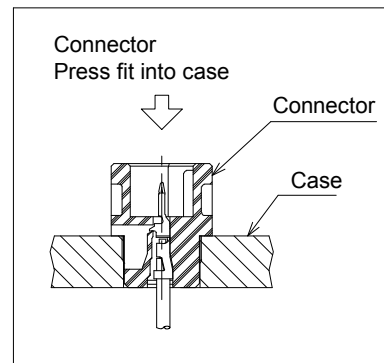
## [Receptacle/ 2pos. ]



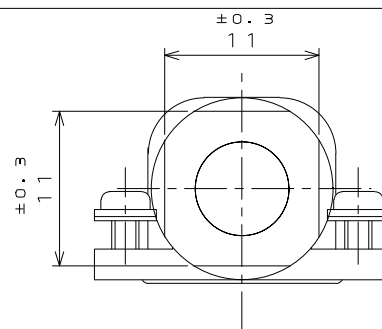
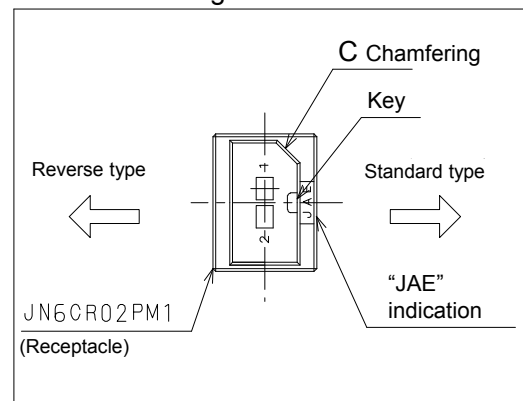
## [Angle plug 2pos. ]



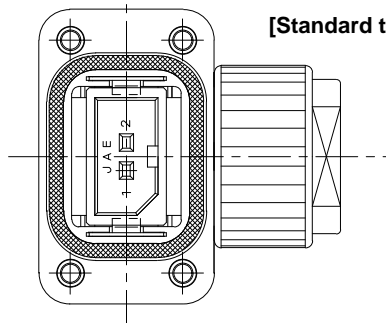
## Connector Attachment



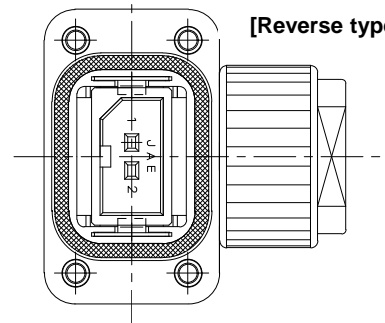
## Connector Pulling Out Direction



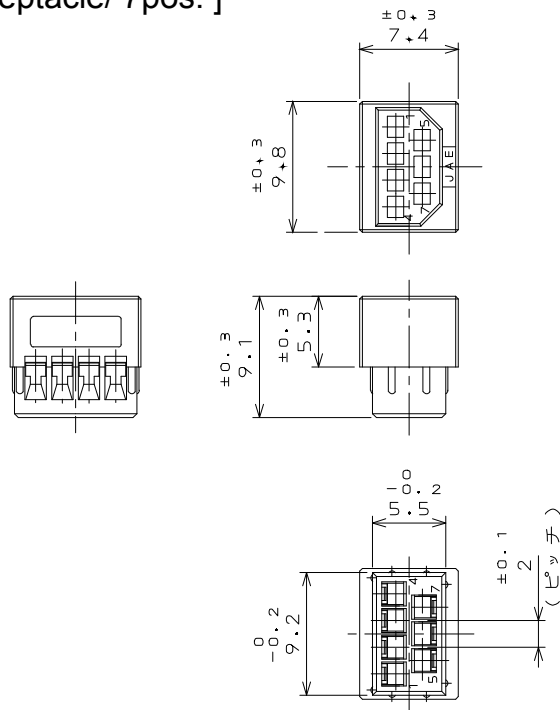
## [Standard type]



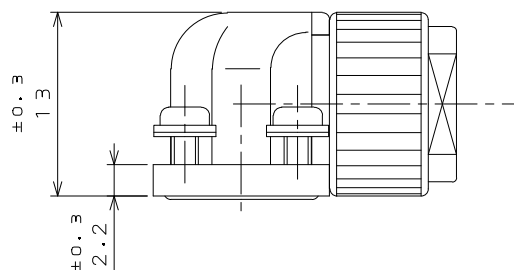
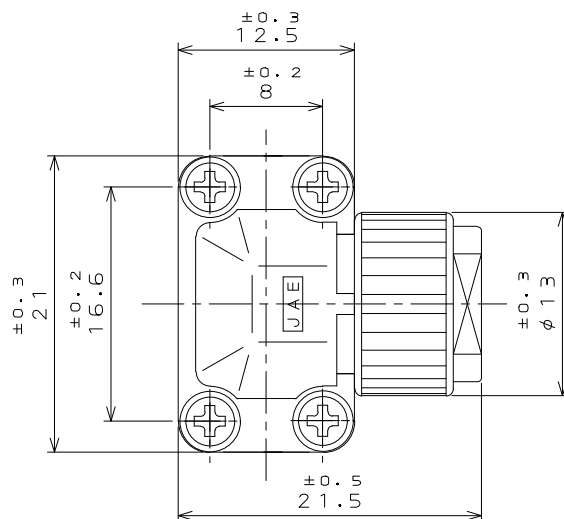
## [Reverse type]



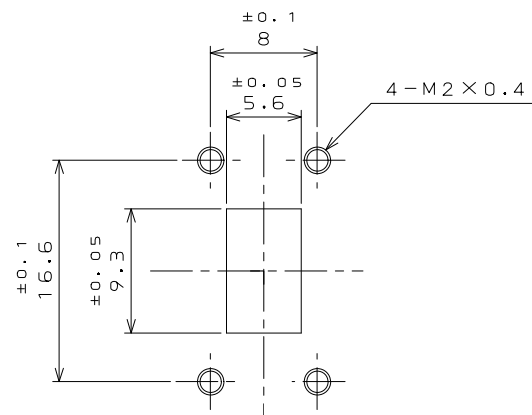
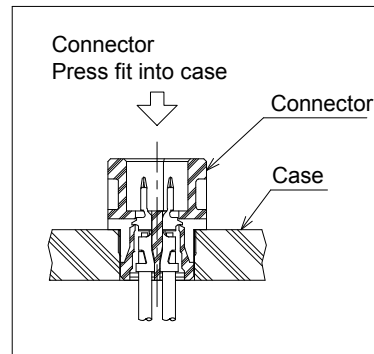
## [Receptacle/ 7pos. ]



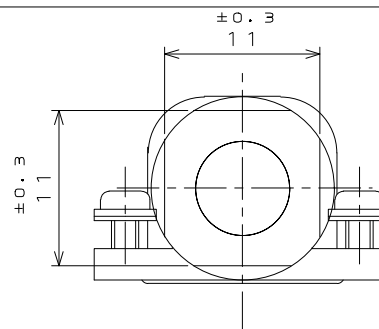
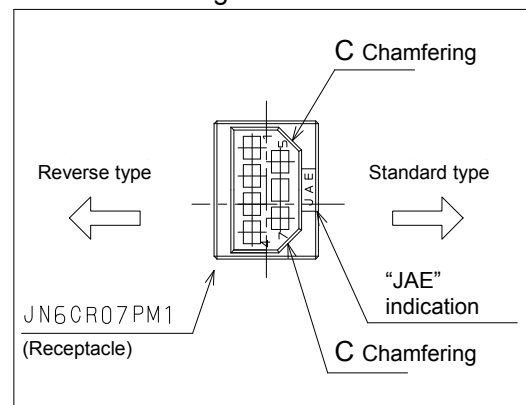
## [Angle plug 7pos. ]



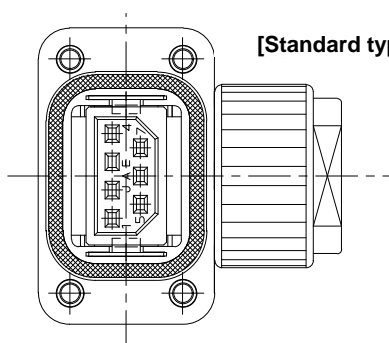
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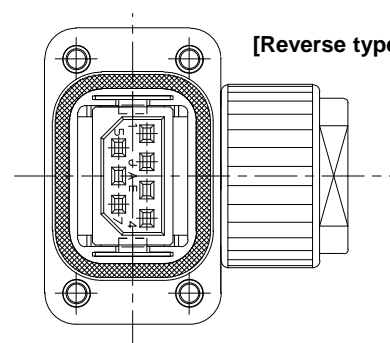
## Connector Pulling Out Direction



## [Standard type]



## [Reverse type]





**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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