

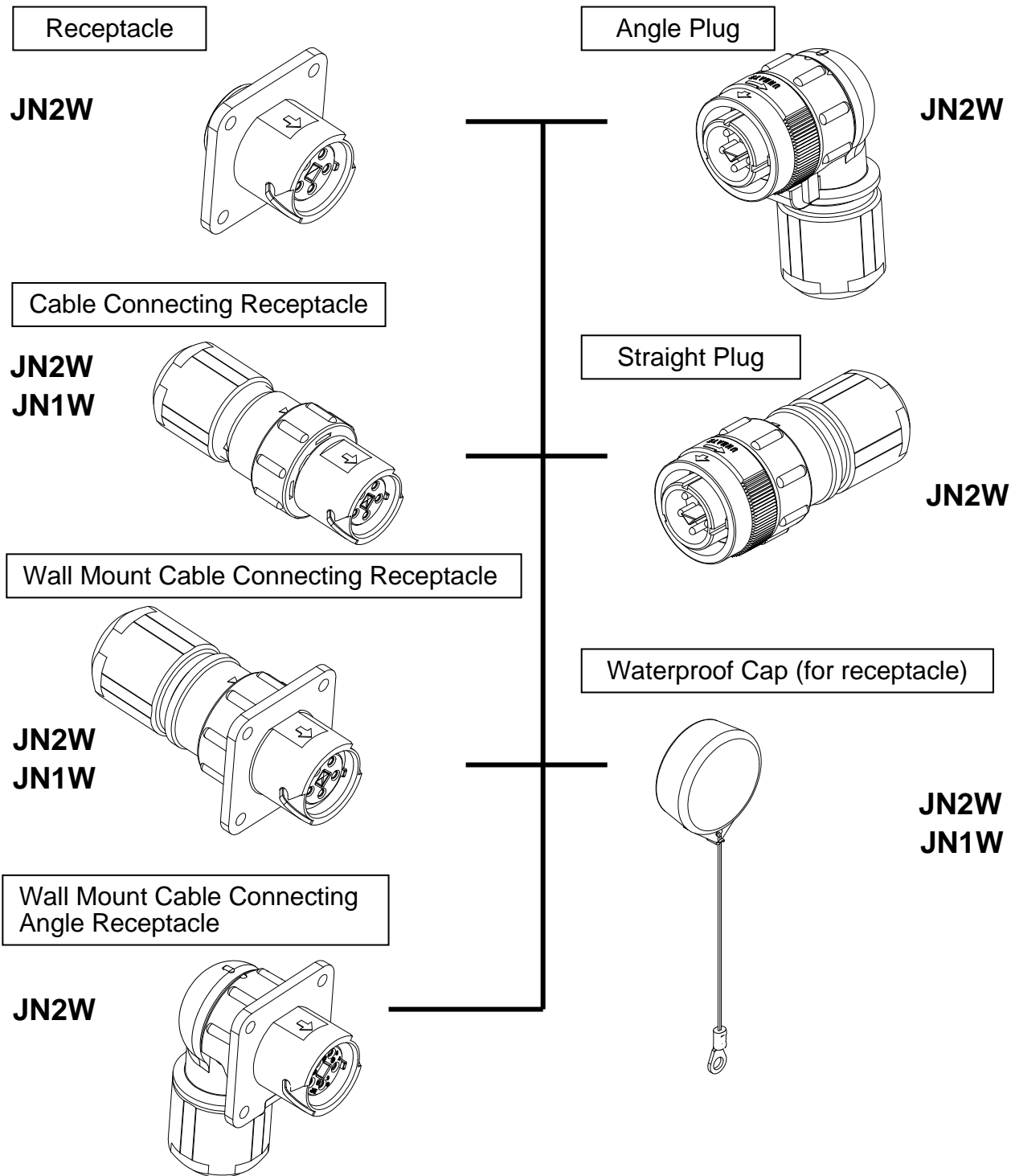
**NEW**

Small Circular Connector  
**JN1W / JN2W Series**

CONNECTOR

MB-0178-5

December 2012



This product series has been developed primarily for industrial device applications. It is available with either 5 contacts for power supply or 15 contacts for signal, and it is a larger size than the existing 4-contact and 10-contact JN1/JN2 Series. The 5-contact version is for 13 Amp, and the 15-contact version utilizes the same contacts (crimp) as that of the 10-contact version. This product series consists of waterproof circular connectors with a one-touch locking mechanism. (Patent and design registration applications have been filed). Please refer to MB-0226 for outdoor use JN2/W Series.

## Features

### JN1W

- 15-contact crimp type, available in cable connecting receptacle and flanged cable connecting receptacle versions.
- Easy and sure mating with push-in / twist-off type one-touch lock mechanism
- Waterproof and dustproof conforming to IP67 class.
- Superb environment resistant performance, such as vibration and oil resistance.
- Applicable to conduit mounting (attach O-ring to the connector to be waterproof).

### JN2W

- Compatible with JN1W (15-contact), the robustness is significantly improved by using metal for the outer shell (breaking strength is tripled).
- Uses the same crimp contacts as that of the JN1.
- 15-contact: Receptacle is crimp connection  
Plug is crimp or solder connection  
(socket contact for plug can be selected as crimp or soldering)
- 5-contact: All solder connection  
Note that 5-contact receptacle has a body grounding structure.
- 5-contact is a TUV certified product (application in process).
- Plug is available in straight and angle types. For angled type, the direction of the cable leader of the plug can be set in one of four directions in 90 degrees increments.
- For angled plug, 50.5 mm (5-contact) and 42.5 mm (15-contact) mating height from the panel surface.
- Waterproof and dustproof that conforms to IP67 class.
- Superb environment resistant performance, such as vibration and oil resistance.
- Applicable to conduit mounting (Attach O-ring to the connector to be waterproof).
- Mis-mating prevention key can be re-set in one of four positions (5-contact).

## General Specifications

### JN1W

Item	Specifications and Performance
	15 pos. (cable connecting type, wall mount cable connecting type)
Rated Current	3A/ pos. (#22 size contact)
Rated Voltage	200 VAC
Dielectric Withstanding Voltage	900 VAC (per minute)
Insulation Resistance	1000 M ohm min. (DC500V energized )
Waterproof	IP67
Specification of Wire Connection	Crimp connection (AWG #20 to 28)
Product Specification	JACS-5111
Instruction Manual	JAHL-5119-4
Durability	500 mating cycles

Please refer to the drawings for each product for further information.

**JN2W**

Item	Specifications and Performance	
No. of Contacts	15 position	5 position
Rated Current	3A/ pos. (#22 size contact)	13A/ pos. (#16 size contact)
Rated Voltage	200 VAC	400 VAC (pollution level 2, over-voltage category II)
Dielectric Withstanding Voltage	900 VAC (per minute)	2000 VAC (per minute)
Insulation Resistance	1000M ohm min. (DC500V energized)	1000M ohm min. (DC500V energized)
Waterproof	IP67	IP67
Specification of Wire Connection	Receptacle: Crimp connection 20 to 28 AWG Plug: Crimp connection 20 to 28 AWG Soldering connection 20 AWG max.	All Soldering connection (AWG #14 max.)
Product Specification	JACS-5119	JACS-5119-4
Instruction Manual	JAHL-5119-4	JAHL-5119-4
Durability	500 mating cycles	500 mating cycles

Please refer to the drawings for each product for further information.  
Please refer to MB-0226 for outdoor use JN2/W Series.

Materials and Finishes
------------------------

**JN1W**

	Component	Material / Finish
Cable Connecting Receptacle	Insulator	Synthetic resin
	Assembly nut	Synthetic resin
	Straight endbell	Synthetic resin
	O-Ring	Synthetic rubber
	Bushing (*)	Synthetic rubber (color: black)
	Grand nut	Synthetic resin
	Pin contact (#22)	Copper alloy / Au plating

	Component	Material / Finish
Waterproof Cap	Cap	Synthetic rubber
	Wire	Stainless steel
	Crimp terminal	Copper alloy / Sn plating

\* Waterproof cap (for receptacle) is the same for JN1W and JN2W.

**JN2W**

	Component	Material / Finish
Receptacle	Insulator	Synthetic resin
	Shell	Zinc die-cast / Zinc plating
	Contact	Copper alloy / Au plating (15 pos.), Silver plating (5 pos.)
	O-Ring	Synthetic rubber (5 pos.)
	Mis-mating prevention key	Synthetic resin (5 pos.)
Cable Connecting Receptacle	Insulator	Synthetic resin
	Shell	Zinc die-cast / Zinc plating
	Contact	Copper alloy / Silver plating (5 pos.)
	Assembly nut	Zinc die-cast / Zinc plating (Angle endbell) Synthetic resin
	Angle endbell	Synthetic resin
	Straight endbell	Synthetic resin
	O-Ring	Synthetic rubber
	Bushing (*)	Synthetic rubber (color: black)
	Grand nut	Synthetic resin
	Mis-mating prevention key	Synthetic resin (5 pos.)
Plug	Cover insulator	Synthetic resin (15 pos.)
	Insulator	Synthetic resin
	Coupling nut	Zinc die-cast / Zinc plating
	Assembly nut	Zinc die-cast / Zinc plating (Angle endbell) Synthetic resin (Straight endbell)
	Angle endbell	Synthetic resin
	Straight endbell	Synthetic resin
	O-Ring	Synthetic rubber
	Bushing (*)	Synthetic rubber (color: black)
	Grand nut	Synthetic resin
	Spring	Stainless steel
	Spring pin	Copper alloy / Ni plating (15 pos.)
	Contact	Copper alloy/ Au plating (15 pos.), Silver plating (5 pos.)
	Mis-mating prevention key	Synthetic resin (5 pos.)

\*The modification code shown on the part number stands for the applicable wire.  
(JN1W, JN2W common use)

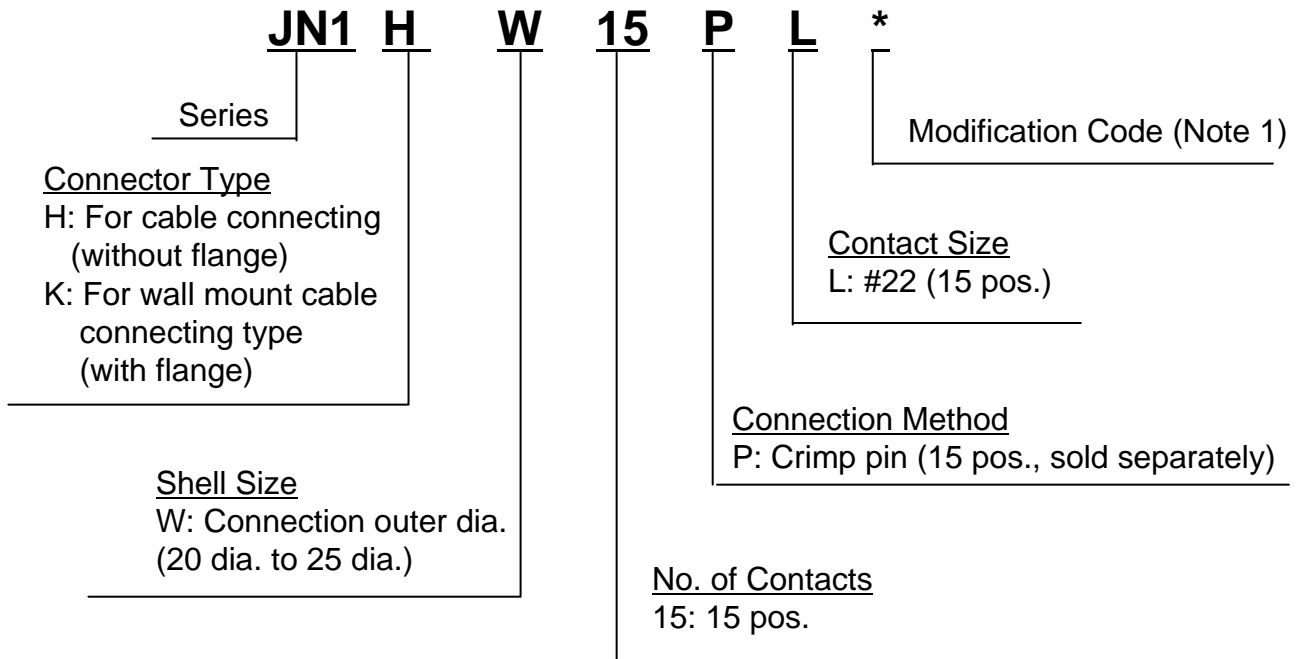
Please refer to the list below for part number and applicable cable.

Modification Code	Applicable Cable
	5 pos., 15 pos.
1	8 to 10 Dia.
2	10 to 12 Dia.
3	4 to 6 Dia.

Ordering Information

**JN1W**

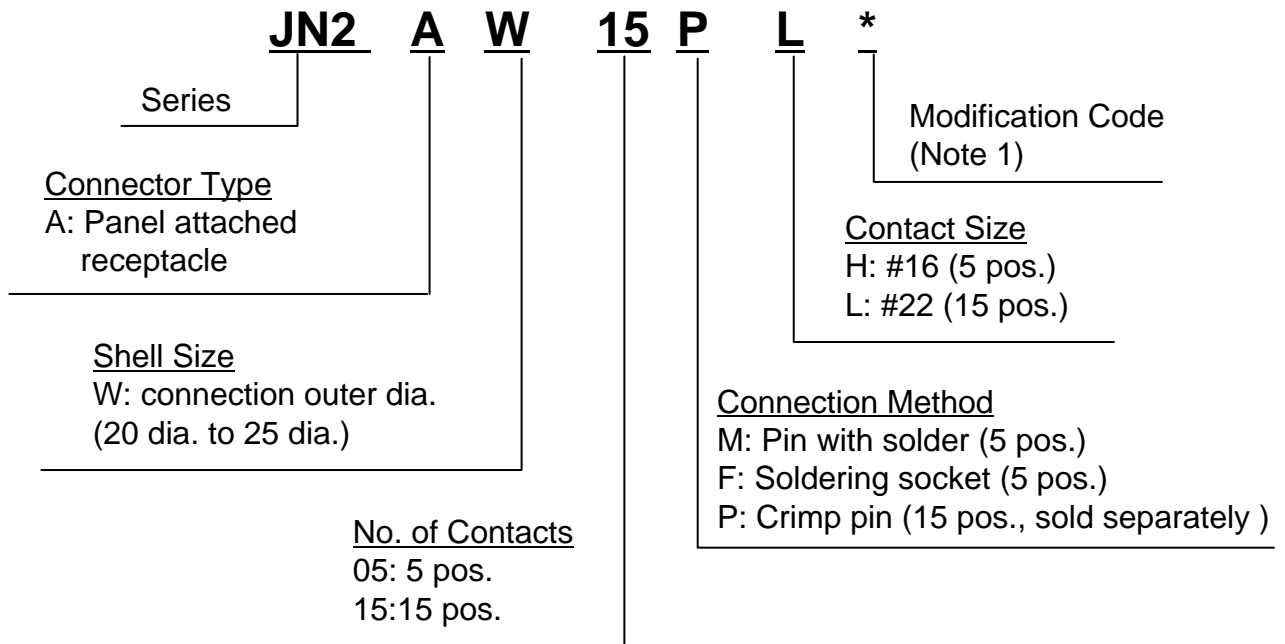
Cable Connecting Receptacle



Note1 The modification code meaning is different for each product.  
Please refer to drawing of each product for details.

**JN2W**

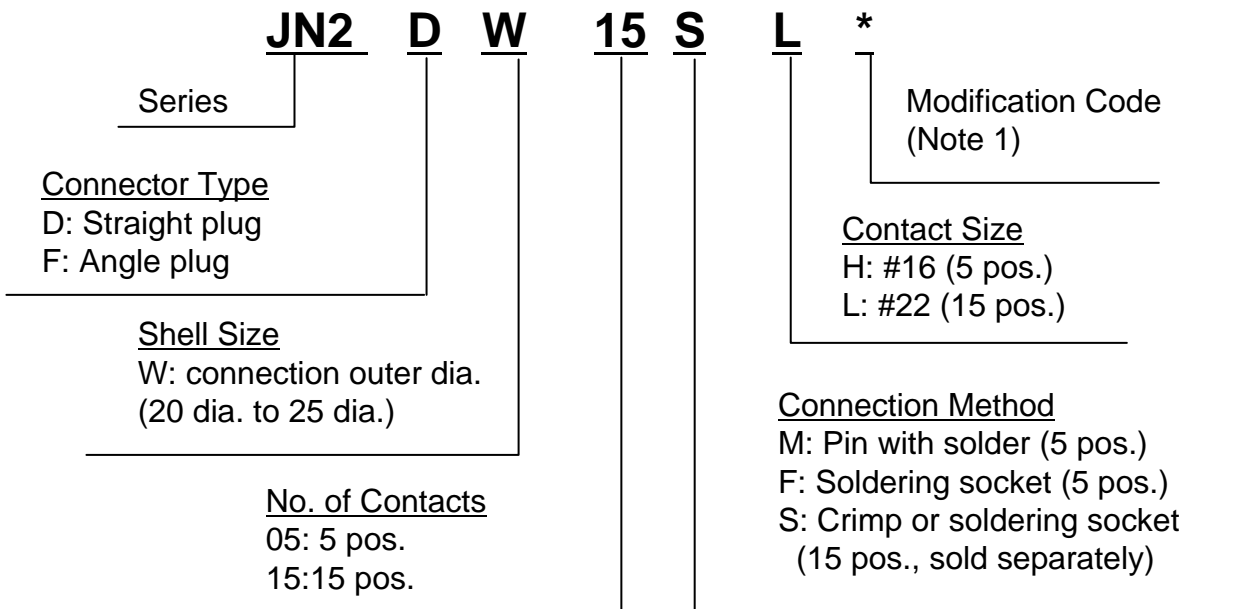
Receptacle



Note1 The modification code meaning is different for each product.  
Please refer to drawing of each product for details.

**JN2W**

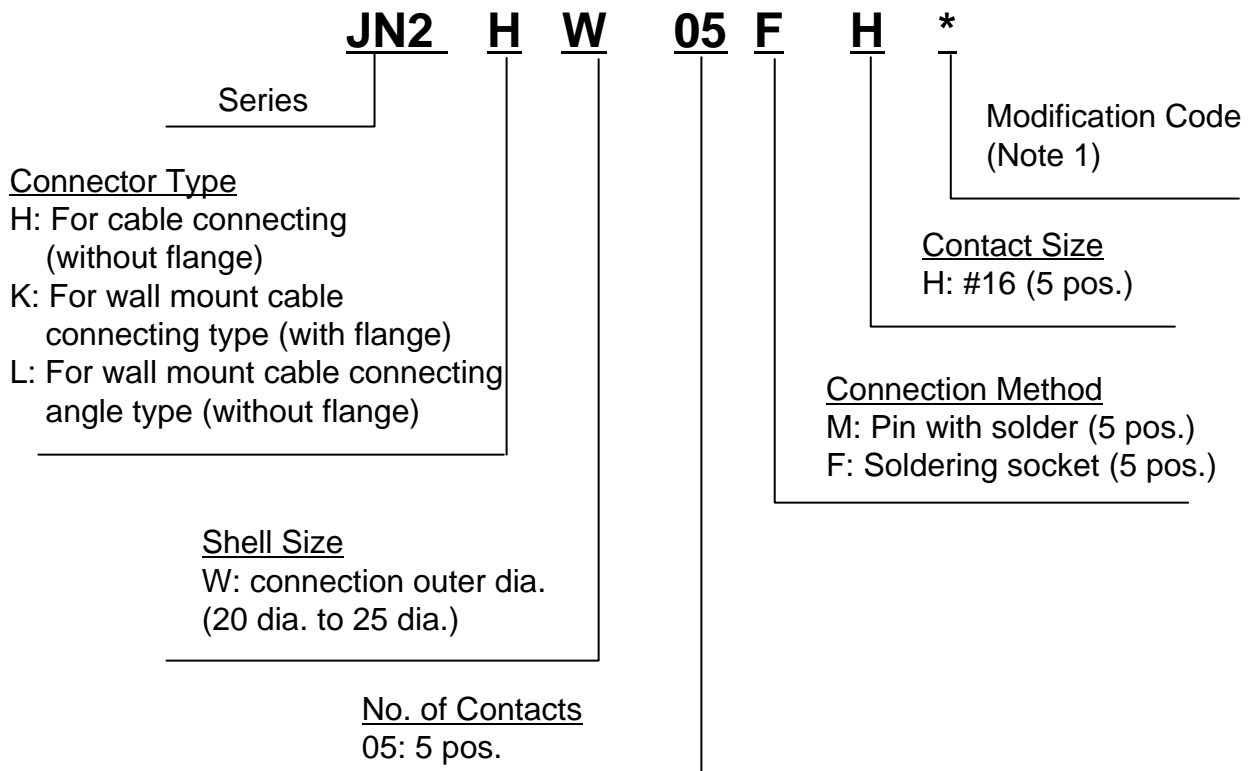
Plug



Note1 The modification code meaning is different for each product.  
Please refer to drawing of each product for details.

**JN2W**

Cable Connecting Receptacle



Note1 The modification code meaning is different for each product. Please refer to drawing of each product for details.



Ordering Information
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**JN1W 15-Contact**

	No. of Cont acts	Type	Part Number	SJ Drawing	Performance / Shape
JN1W	15	Cable Connecting Receptacle	JN1HW15PL1	SJ107690	Waterproof (when mated), crimp pin (sold separately), cable dia. 8 to 10
		Wall Mount Cable Connecting Receptacle	JN1KW15PL1	SJ107691	Waterproof (when mated), crimp pin (sold separately), cable dia. 8 to 10
		Waterproof Cap	JN2-AW-DC1	SJ108228	JN1, 2W-15 pos., JN2W-5 pos. for receptacle, IP67, with wire

\* Uses the same contact as JN1.

**JN2W 15-Contact**

	No. of Cont acts	Type	Part Number	SJ Drawing	Performance / Shape
JN2W	15	Receptacle	JN2AW15PL1	SJ105327	Waterproof (when mated), crimp pin (sold separately)
		Straight Plug	JN2DW15SL1	SJ105815	Waterproof (when mated), crimp or soldering socket (sold separately) cable dia. 8 to 10
		Angle Plug	JN2FW15SL1	SJ105328	Waterproof (when mated), crimp or soldering socket (sold separately) cable dia. 8 to 10
		Waterproof Cap	JN2-AW-DC1	SJ108228	JN1, 2W-15 pos., JN2W-5 pos. for receptacle, IP67, with wire

\* Uses the same contact as JN1.

## Ordering Information

## JN2W 5-Contact

	No. of Contacts	Type	Part Number	SJ Drawing	Performance/ Shape
JN2W	5	Receptacle	JN2AW05FH1	SJ107967	Waterproof (when mated), solder socket body grounding structure
			JN2AW05MH1	SJ108150	Waterproof (when mated), solder pin body grounding structure
		Cable Connecting Receptacle	JN2HW05FH1	SJ107970	Waterproof (when mated), solder socket cable dia. 8 to 10, body grounding structure
			JN2HW05MH1	SJ108152	Waterproof (when mated), solder pin cable dia. 8 to 10, body grounding structure
		Wall Mount Cable Connecting Receptacle	JN2KW05FH1	SJ107969	Waterproof (when mated), solder socket cable dia. 8 to 10, body grounding structure
			JN2KW05FH2	SJ107969	Waterproof (when mated), solder socket cable dia. 10 to 12, body grounding structure
			JN2KW05MH3	SJ108151	Waterproof (when mated), solder pin cable dia. 4 to 6, body grounding structure
		Wall Mount Cable Connecting Angle Receptacle	JN2LW05FH1	SJ109972	Waterproof (when mated), solder pin cable dia. 8 to 10, body grounding structure
		Straight Plug	JN2DW05MH1	SJ107971	Waterproof (when mated), solder pin cable dia. 8 to 10
			JN2DW05MH2	SJ107971	Waterproof (when mated), solder pin cable dia. 10 to 12
			JN2DW05MH3	SJ107971	Waterproof (when mated), solder pin cable dia. 4 to 6
			JN2DW05FH1	SJ108153	Waterproof (when mated), solder socket cable dia. 8 to 10
		Angle Plug	JN2FW05MH1	SJ107972	Waterproof (when mated), solder pin cable dia. 8 to 10
			JN2FW05FH1	SJ108154	Waterproof (when mated), solder socket cable dia. 8 to 10
		Waterproof Cap	JN2-AW-DC1	SJ108228	JN1, 2W-15 pos., JN2W-5 pos. for receptacle, IP67, with wire

	No. of Contacts	Type	Connection Type	Packaging	Part Number	SJ Drawing	Performance / Shape
JN1W JN2W	15	Socket Contact	Crimp	In pieces (100 pcs.)	JN1-22-20S-R-PKG100	SJ035503	20-21AWG Outer Dia. 1.5 max.
					JN1-22-22S-PKG100	SJ035503	21-25AWG Outer Dia. 1.5 max.
					JN1-22-26S-PKG100	SJ035503	26-28AWG Outer Dia. 1.1 max.
				In reels (10,000 pcs.)	JN1-22-20S-R-10000	SJ035504	20-21AWG Outer Dia. 1.5 max.
					JN1-22-22S-10000	SJ035504	21-25AWG Outer Dia. 1.5 max.
					JN1-22-26S-10000	SJ035504	26-28AWG Outer Dia. 1.1 max.
			Soldering	In pieces	JN1-22-22F-PKG100	SJ109855	In pieces (100 pcs.), 20AWG max. Outer Dia. 1.5 max.
					JN1-22-22F-PKG10	SJ109855	In pieces (10 pcs.), 20AWG max. Outer Dia. 1.5 max.
			Pin Contact	Crimp	In pieces (100 pcs.)	JN1-22-20P-R-PKG100	SJ037430
		JN1-22-22P-PKG100				SJ037430	21-25AWG Outer Dia. 1.5 max.
		JN1-22-26P-PKG100				SJ037430	26-28AWG Outer Dia. 1.1 max.
		In reels (10,000 pcs.)			JN1-22-20P-R-10000	SJ037431	20-21AWG Outer Dia. 1.5 max.
					JN1-22-22P-10000	SJ037431	21-25AWG Outer Dia. 1.5 max.
					JN1-22-26P-10,000	SJ037431	26-28AWG Outer Dia. 1.1 max.

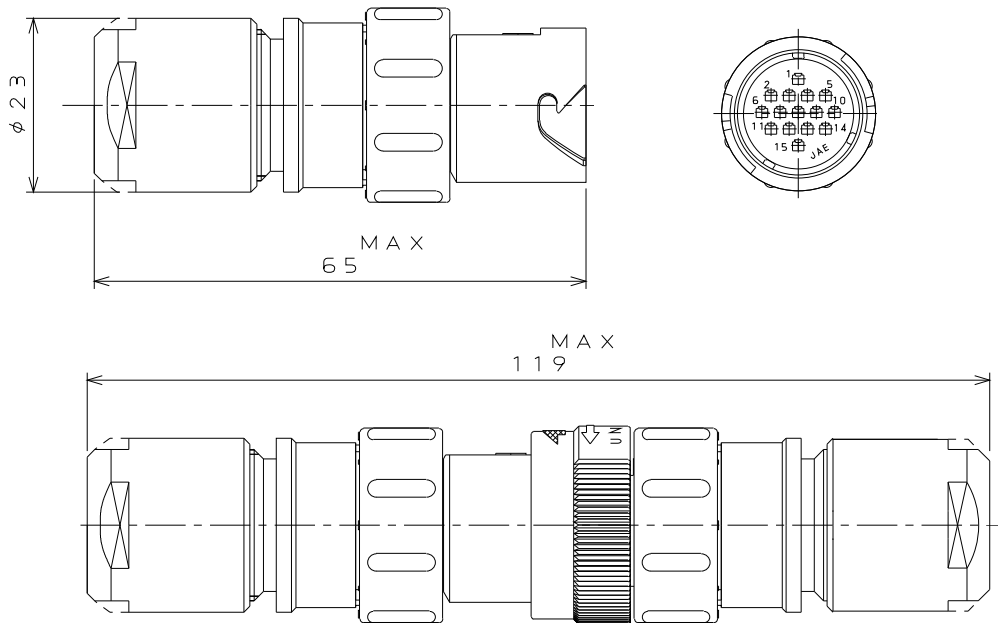
Note 1: Contact for 15-contact type JN1W and JN2W is same as JN1.

Note 2: Contact removal tool (Part Number: ET-JN1) is also available.

Please refer to the connector handling instructions concerning removal.

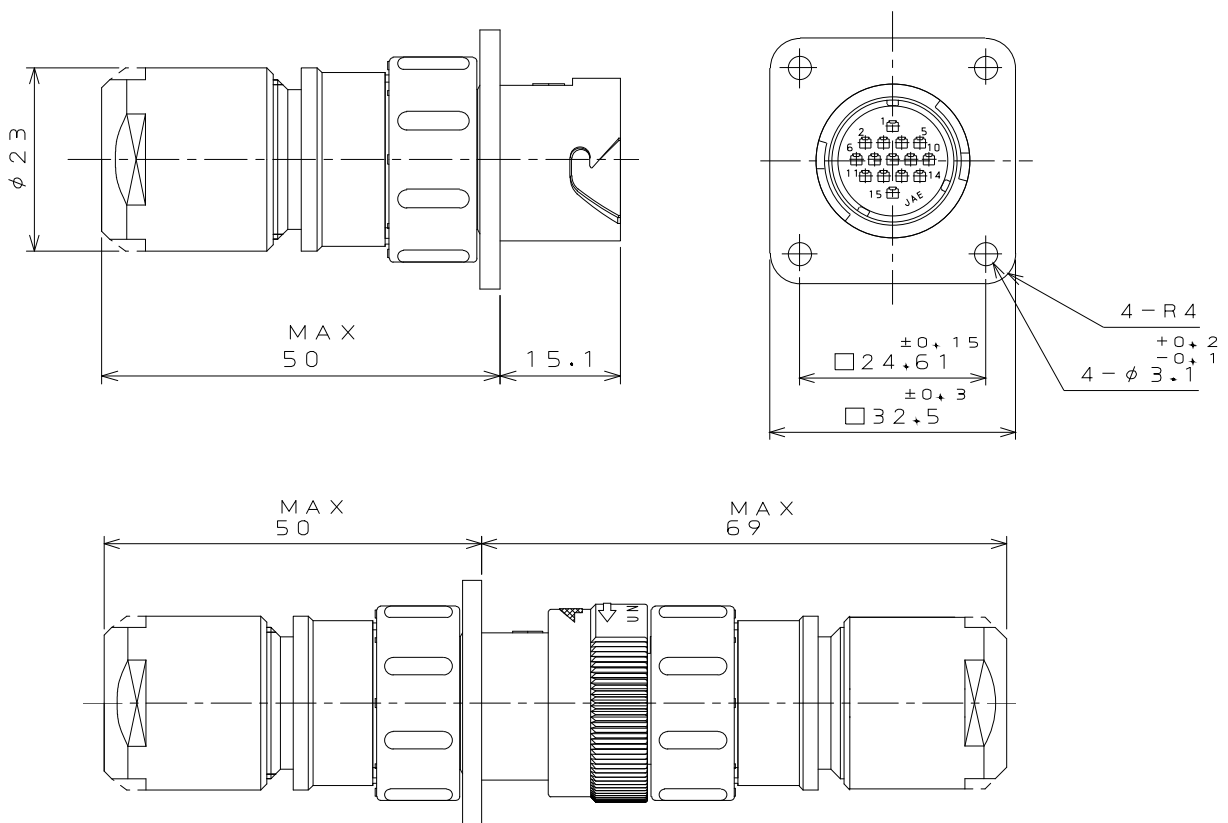
## JN1W 15-Contact

### ■ Cable Connecting Receptacle JN1HW15PL\*



Drawing (when mated)

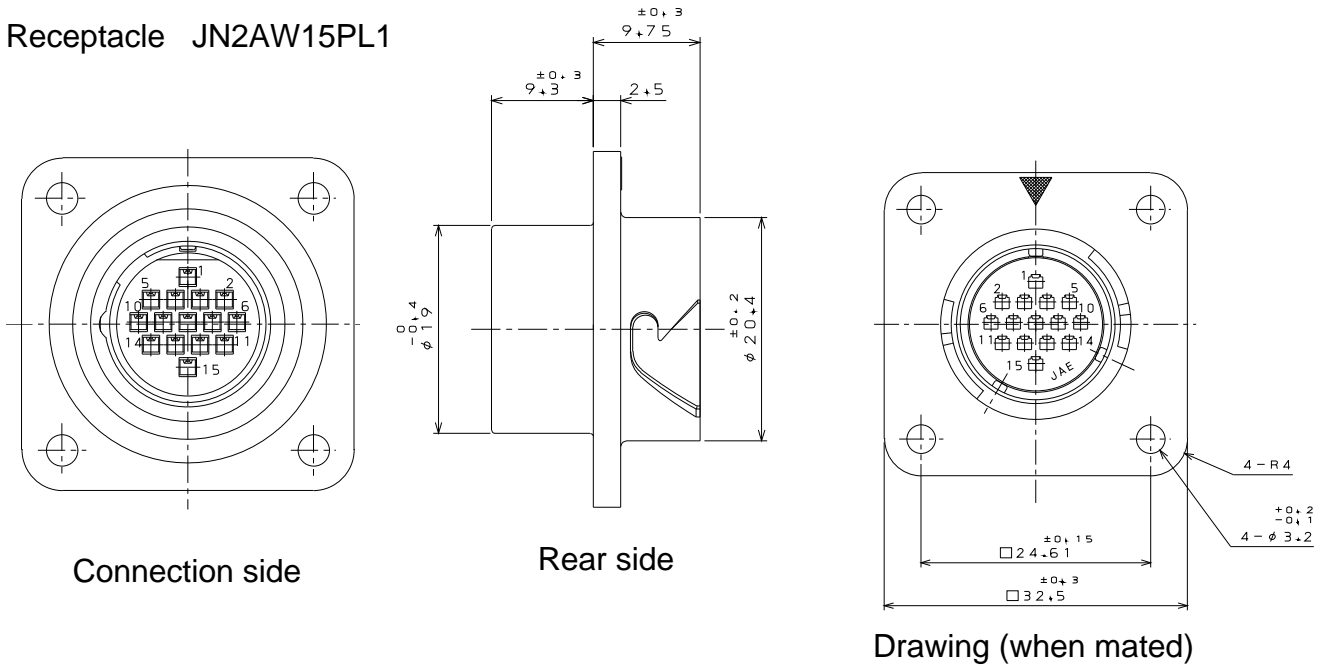
### ■ Wall Mount Cable Connecting Receptacle JN1KW15PL\*



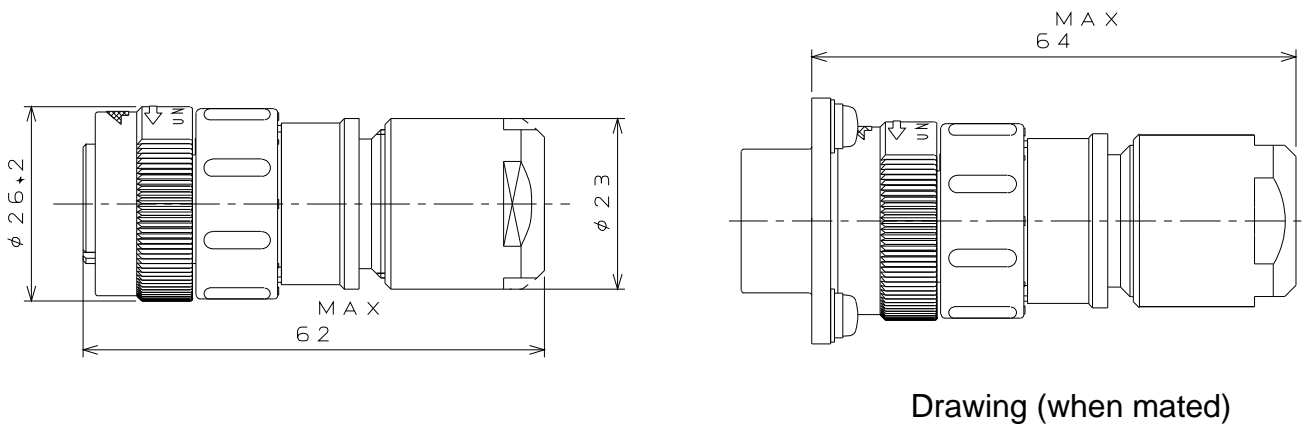
Drawing (when mated)

## JN2W 15-Contact

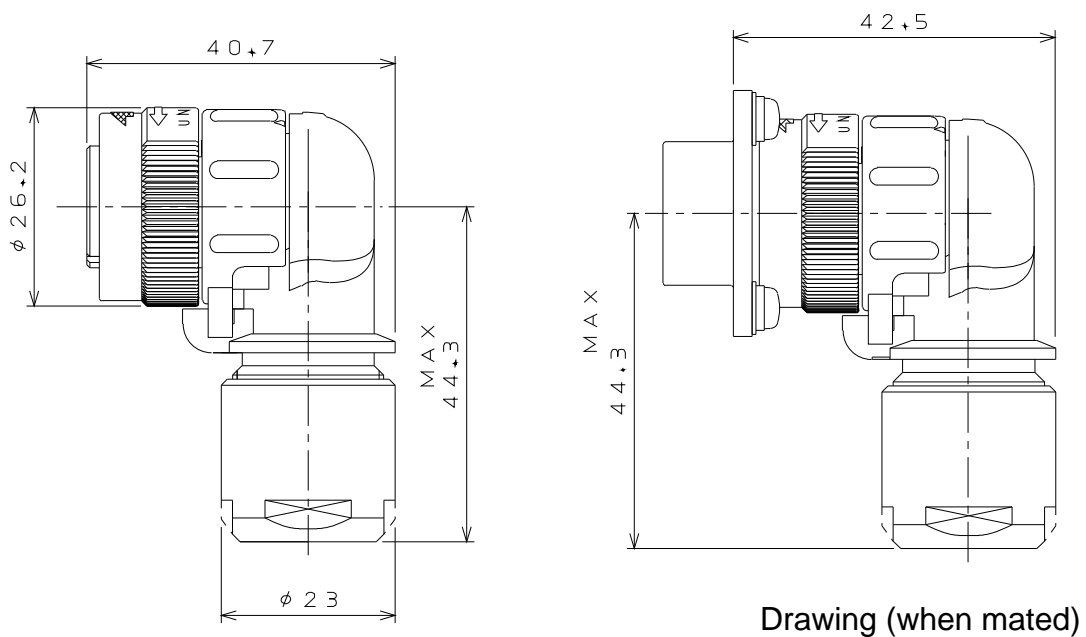
### ■ Receptacle JN2AW15PL1



### ■ Straight Plug JN2DW15SL\*

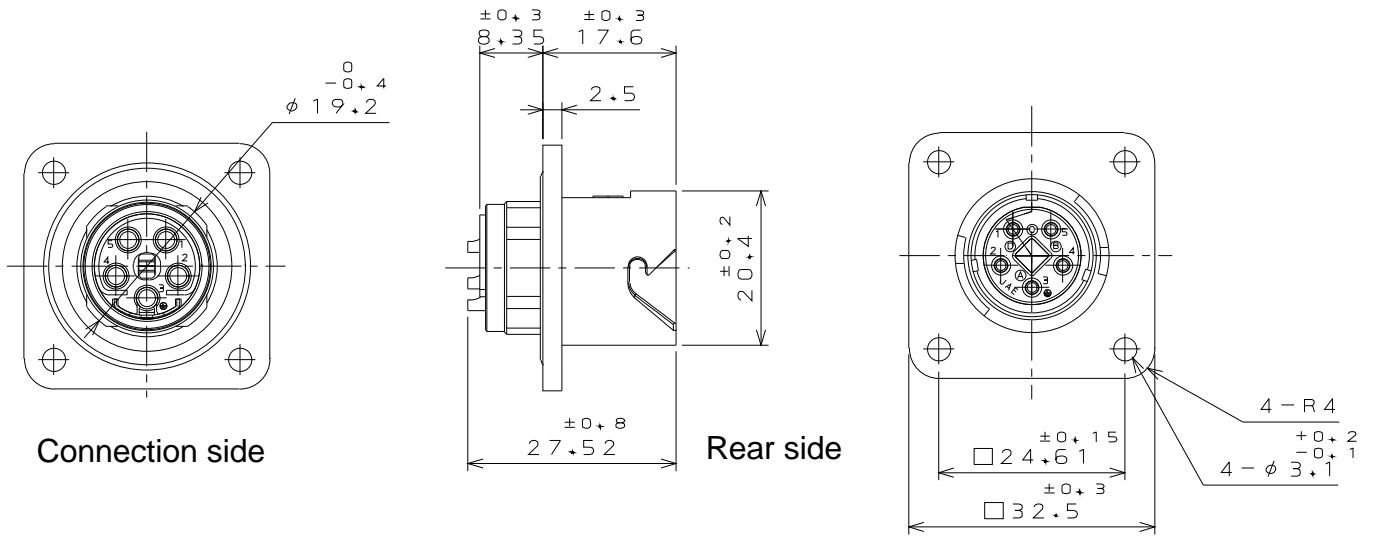


### ■ Angle Plug JN2FW15SL\*

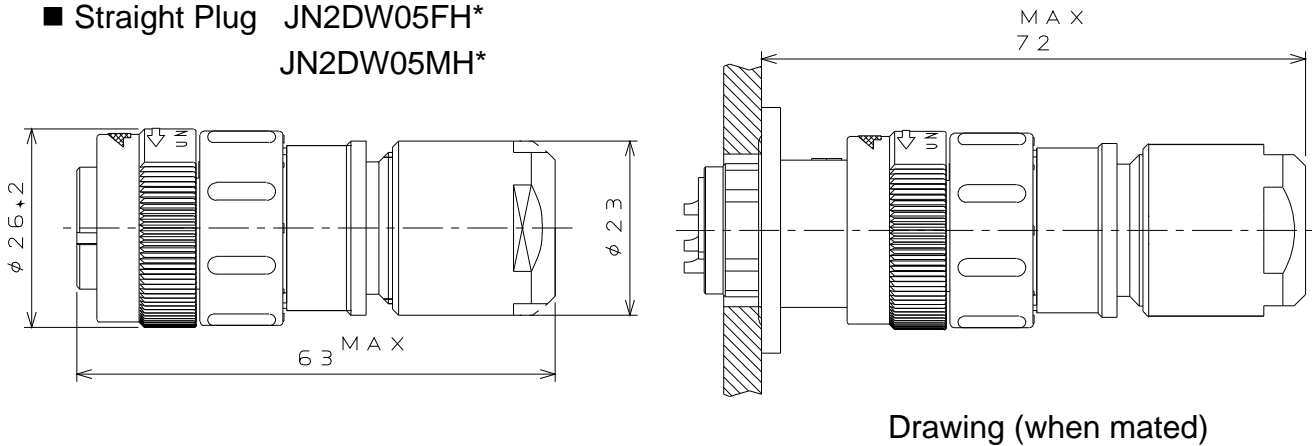


### JN2W 5-Contact

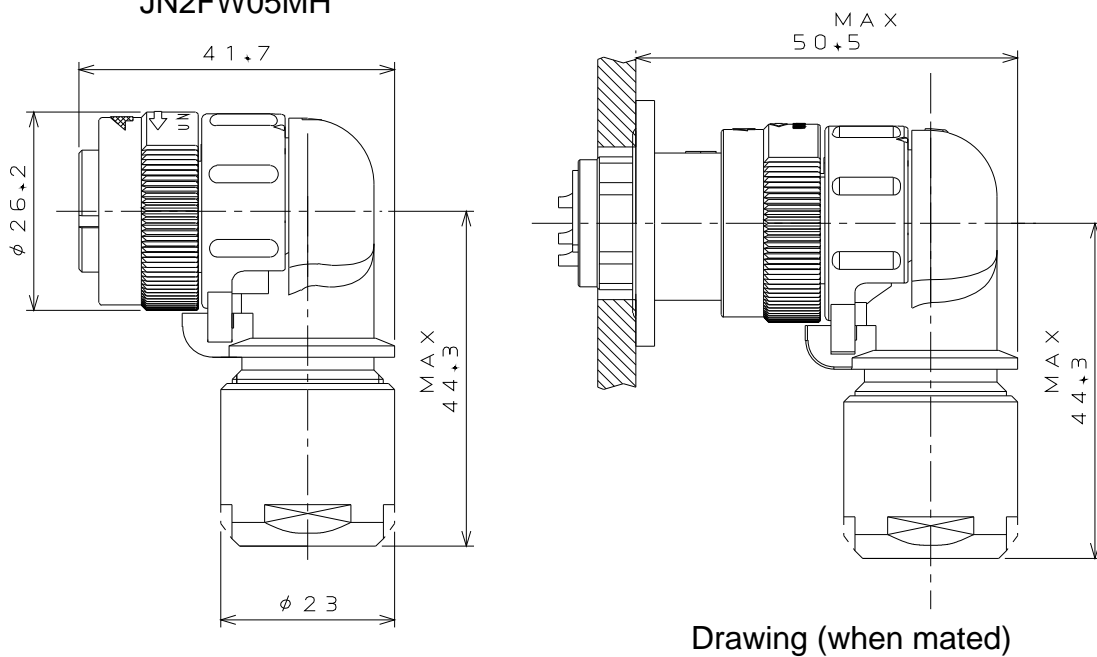
- Receptacle JN2AW05FH1  
JN2AW05MH1



- Straight Plug JN2DW05FH\*  
JN2DW05MH\*

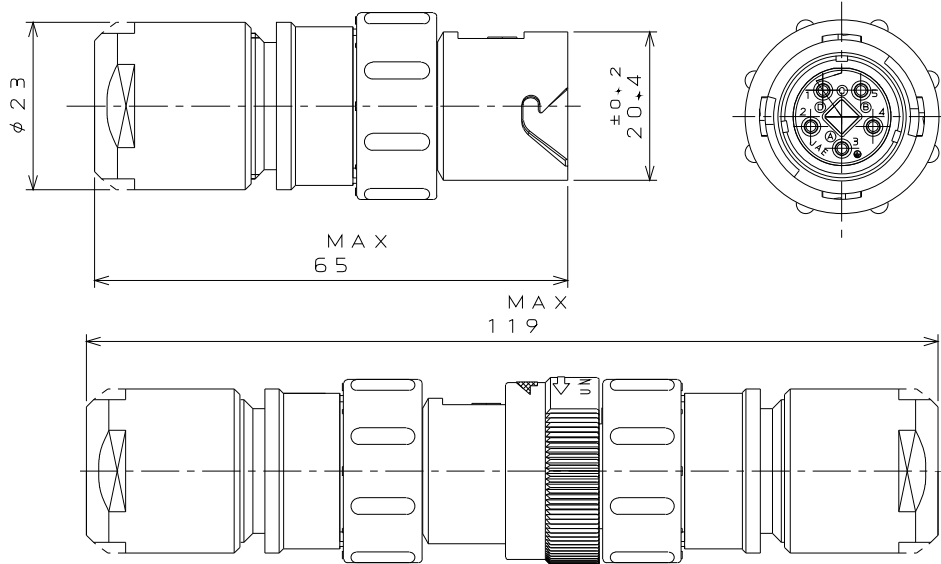


- Angle Plug JN2FW05FH\*  
JN2FW05MH\*



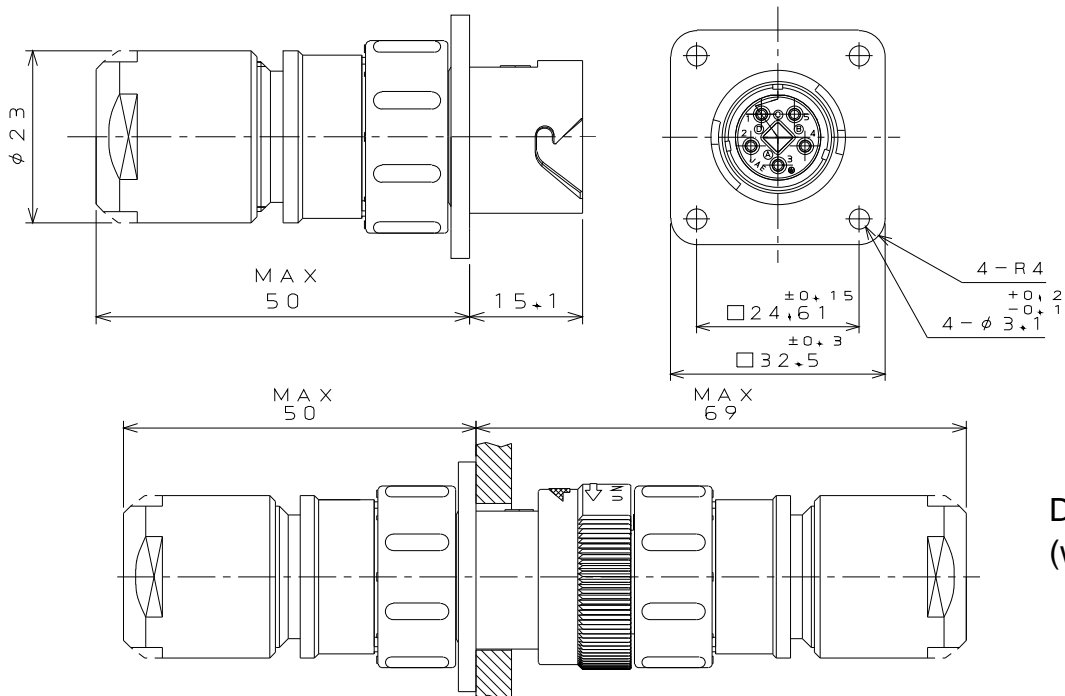
## JN2W 5-Contact

- Cable Connecting Receptacle JN2HW05FH\*  
JN2HW05MH\*



Drawing  
(when mated)

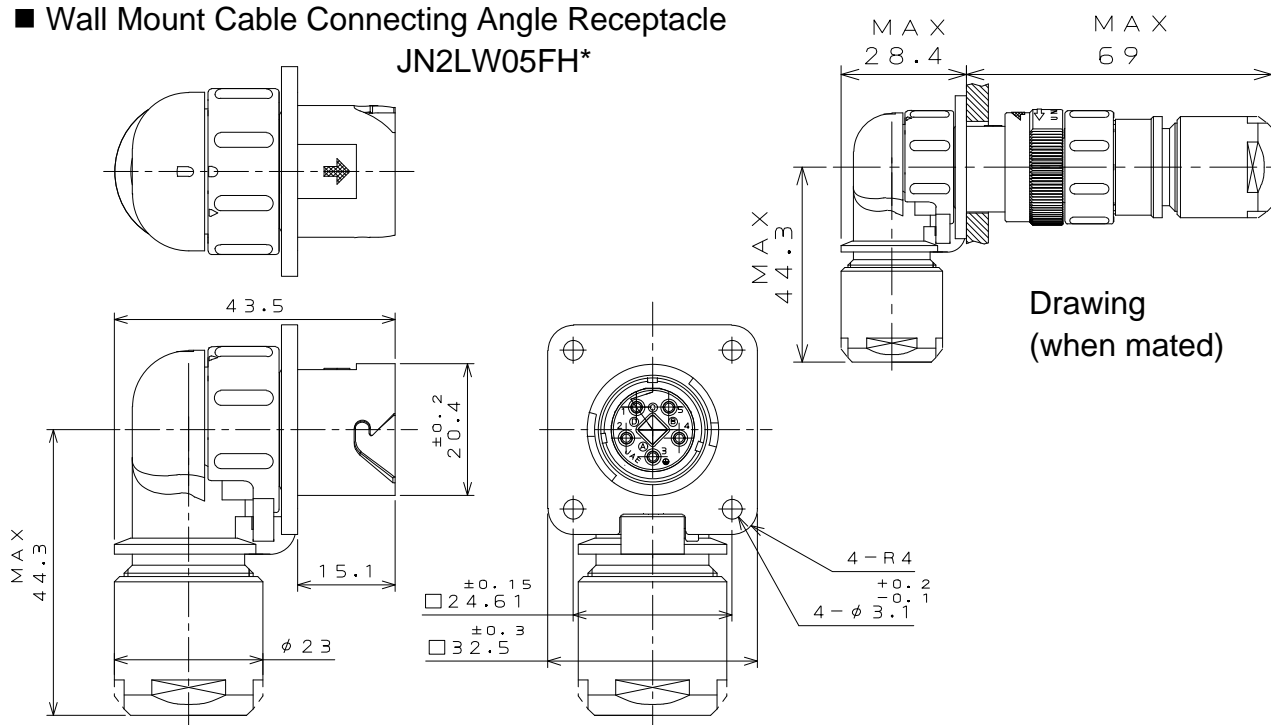
- Wall Mount Cable Connecting Receptacle JN2KW05FH\*  
JN2KW05MH\*



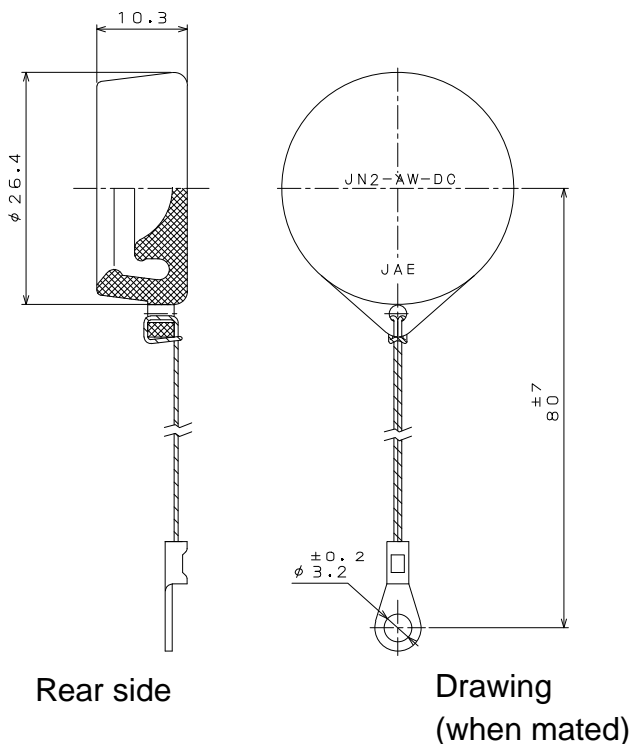
Drawing  
(when mated)

### JN2W 5-Contact

■ Wall Mount Cable Connecting Angle Receptacle  
JN2LW05FH\*



■ Waterproof Cap  
JN2-AW-DC1



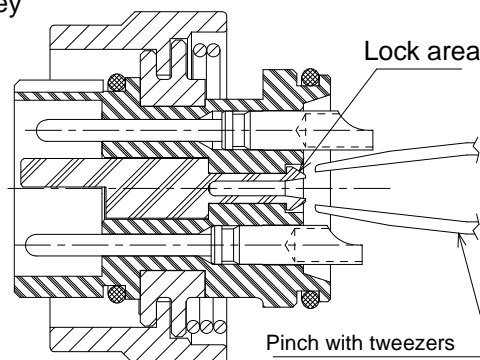
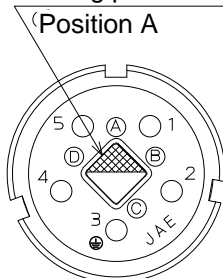
### About The Mis-Mating Prevention Key

Default setting of mis-mating prevention key is "position A" for the JN2W5 Series.

Release the lock of the mis-mating prevention key with a pair of tweezers to change the position to B, C or D.

(Refer to drawing on right side.)

Shaded area:  
Mis-mating prevention key





## Crimp Contact Part Number and Applicable Wires and Tooling

Type of Tool	Instruction Manual for Tooling	Applicable Tooling	Applicable Wire	Outer Diameter	Part Number of Applicable Contact (Note 1)
Hand Crimp (for contacts in pieces)	T700253	CT150-2-JN1-D	20, 21AWG	Dia. 1.3 to 1.5	JN1-22-20*-R-PKG100
			25AWG	Dia. 0.8 to 1.0	JN1-22-22*-PKG100
		CT150-2-JN1-E	21, 23AWG	Dia. 1.0 to 1.5	JN1-22-22*-PKG100
			25AWG	Dia. 0.8 to 1.0	
	T700238	CT150-2-JN1-B	22, 24AWG	Dia. 1.0 to 1.3	JN1-22-22*-PKG100
			26, 28AWG	Dia. 0.8 to 1.0	JN1-22-26*-PKG100
Semi-Automatic Crimp (for reel contacts)	T703294	350-JN1-2C (Old model) Note 4	20 to 28AWG	Dia. 0.8 to 1.5	JN1-22-20*-R-10000 JN1-22-22*-10000 JN1-22-26*-10000
	T703413	3502-JN1-2C (New model)			

Note 1: The \* in the part number will stand for P: Pin contact, S: Socket contact.

Note 2: Contact removal tool (Part Number: ET-JN1) is also available.

Please refer to the connector handling instructions concerning removal.

Note 3: Please contact us concerning connection tool, contact removal tool and the RoHS compliance of tools for the JN1W and 2W series.

Note 4: Part number for new model is 3502-JN1-2C.

Please note that production of the old model was stopped in March 2009.

#### ■ Suggested Conduit

Part Number	Application
N2KY20-SP491 (for SANFLEKI ROBO)	Flexible resin
KMKYP16-SP492 (for KEIFLEX)	Flexible metal

Please consult with Sankei Seisakusho regarding use of conduit.

**Notice:** Products shown in this brochure 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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\* The specifications in this brochure are subject to change without notice. Please contact JAE for information.

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