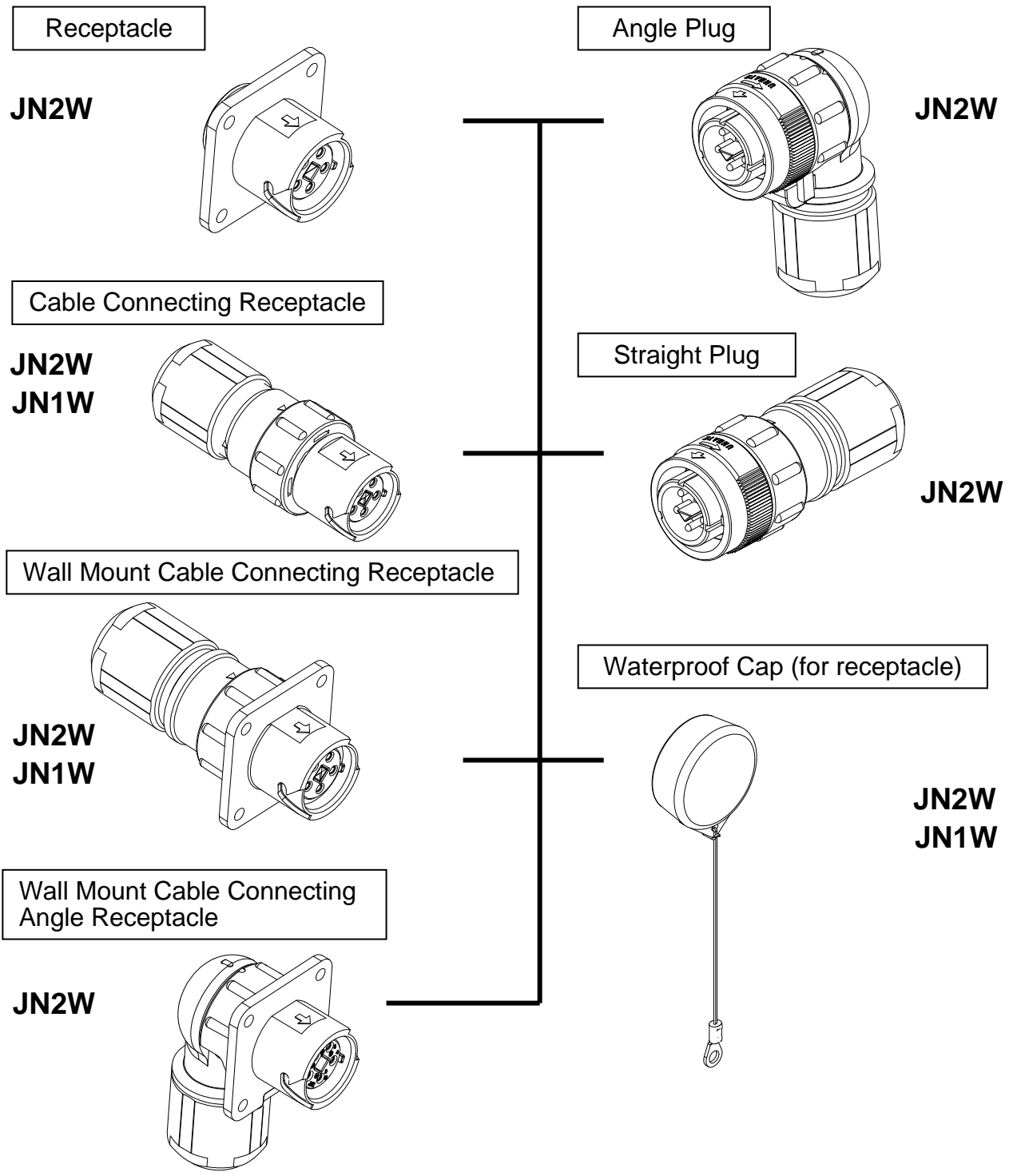


NEW

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 | J AHL-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 |
| | Sraight 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)

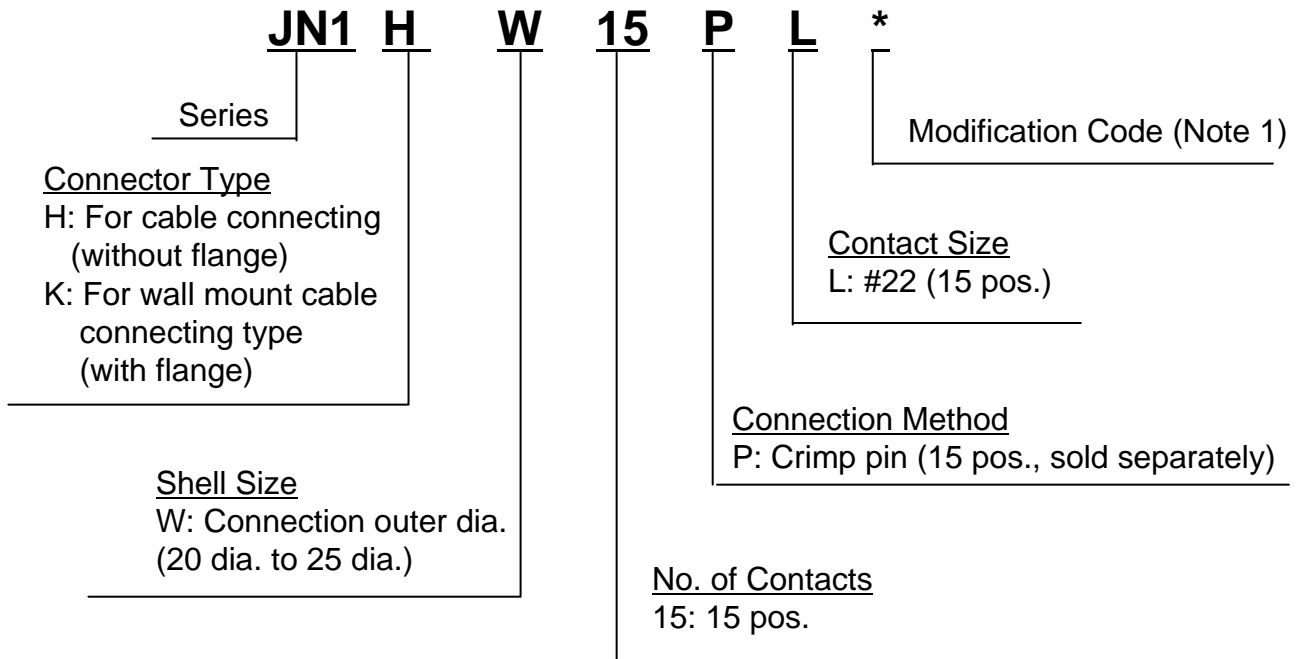
Please refer to the list below for part number and applicable cable.

| 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

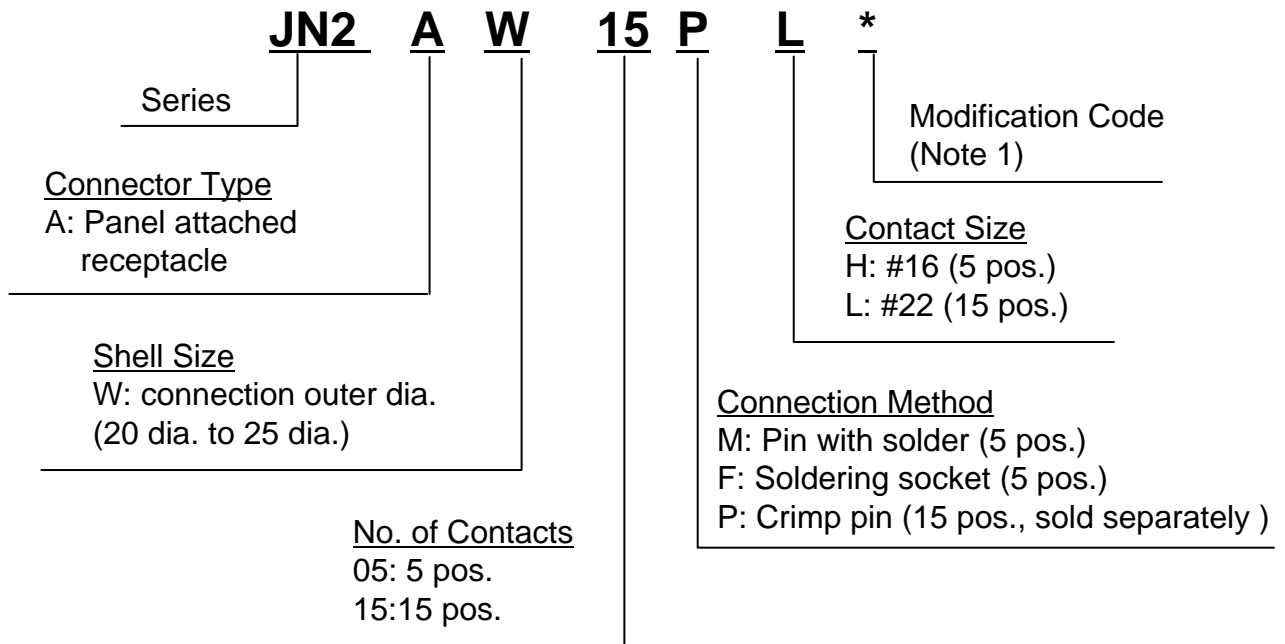
Cable Connecting Receptacle



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

JN2W

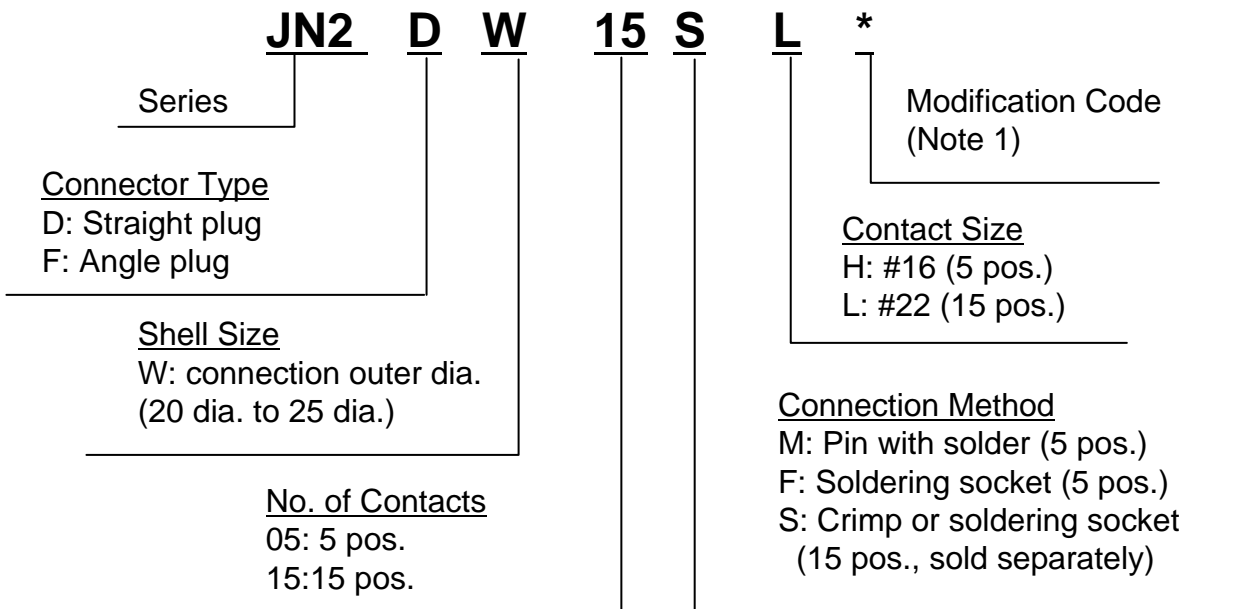
Receptacle



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

JN2W

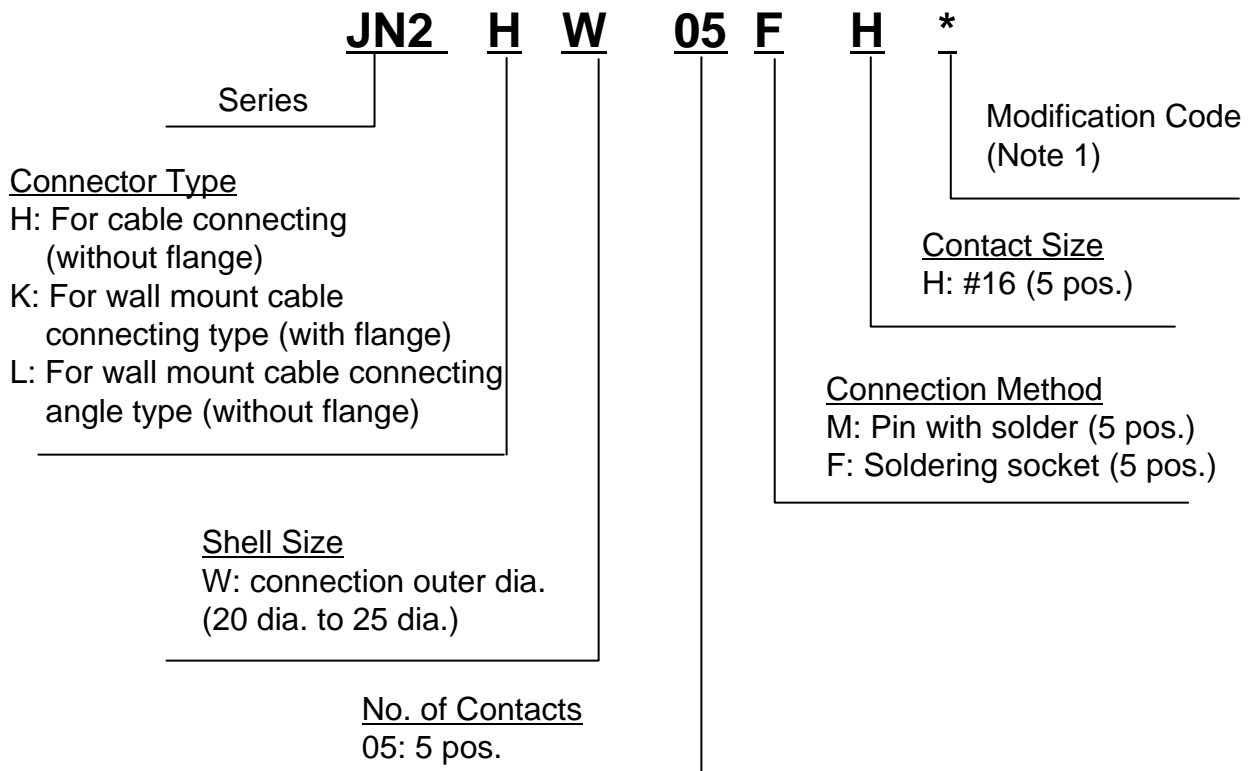
Plug



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 |
|----------------------|

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. |

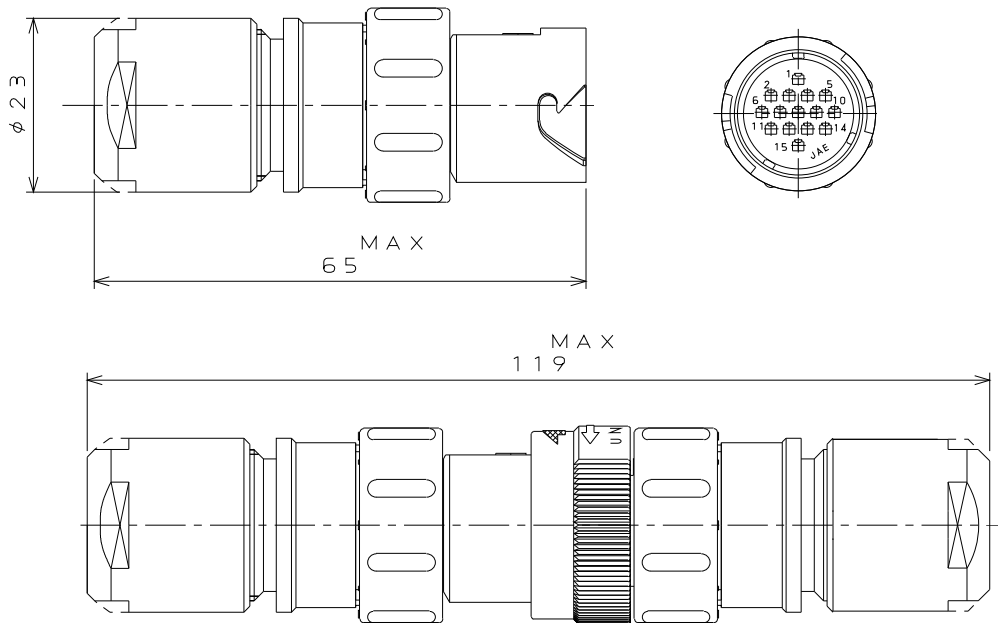
Note 1: Contact for 15-contact type JN1W and JN2W is same as JN1.

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

Please refer to the connector handling instructions concerning removal.

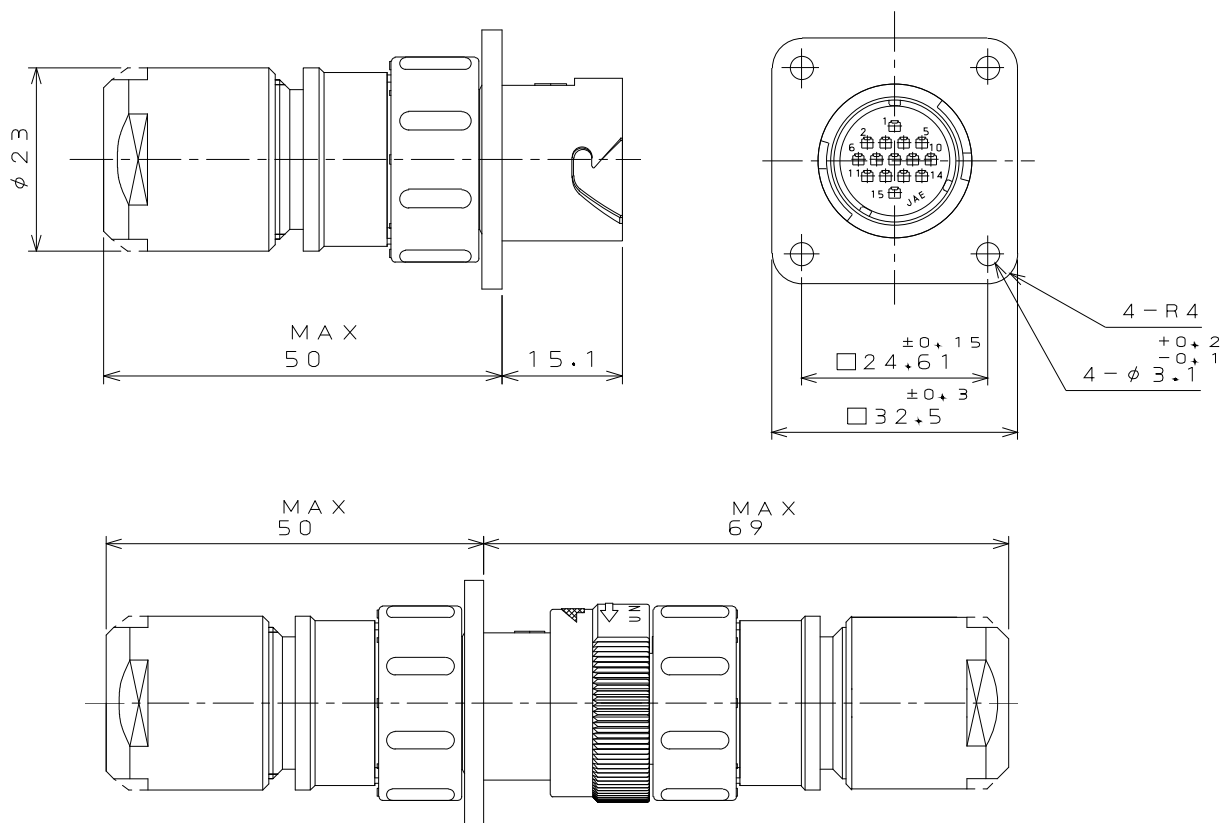
JN1W 15-Contact

■ Cable Connecting Receptacle JN1HW15PL*



Drawing (when mated)

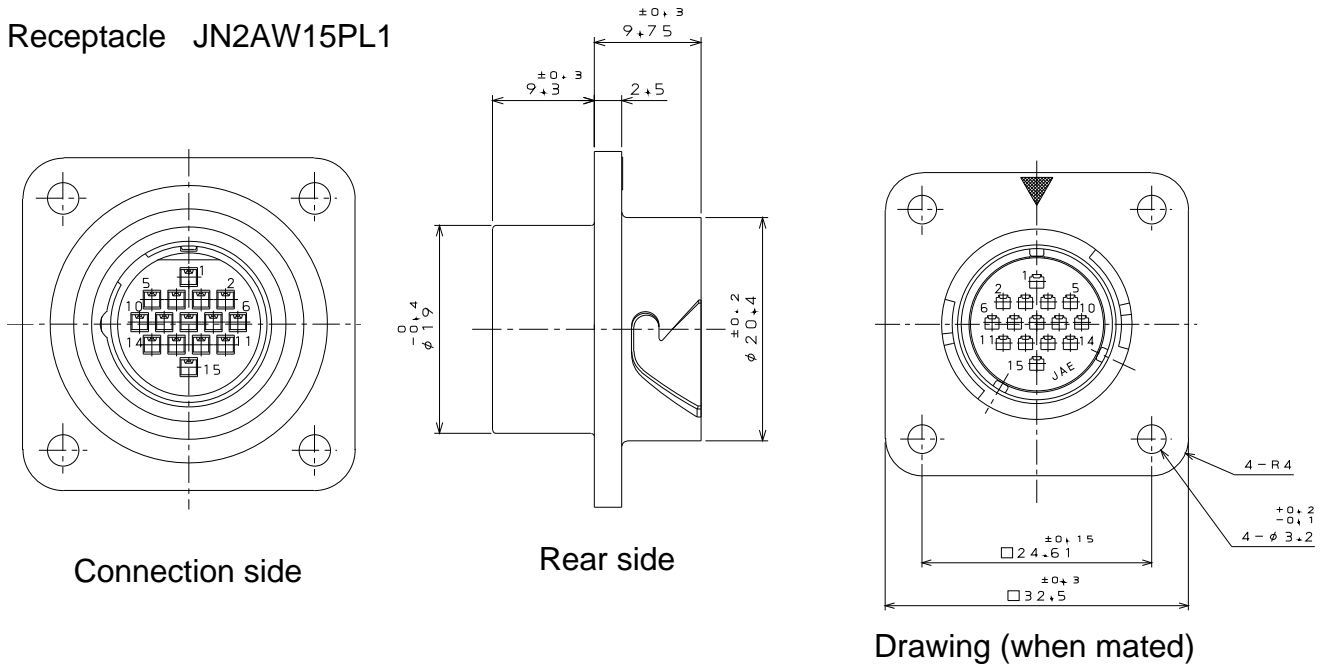
■ Wall Mount Cable Connecting Receptacle JN1KW15PL*



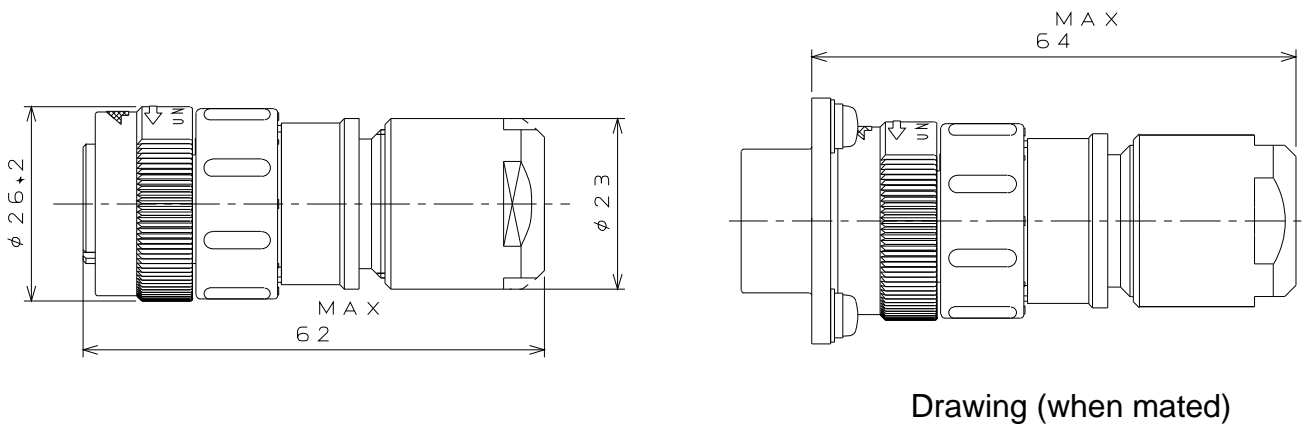
Drawing (when mated)

JN2W 15-Contact

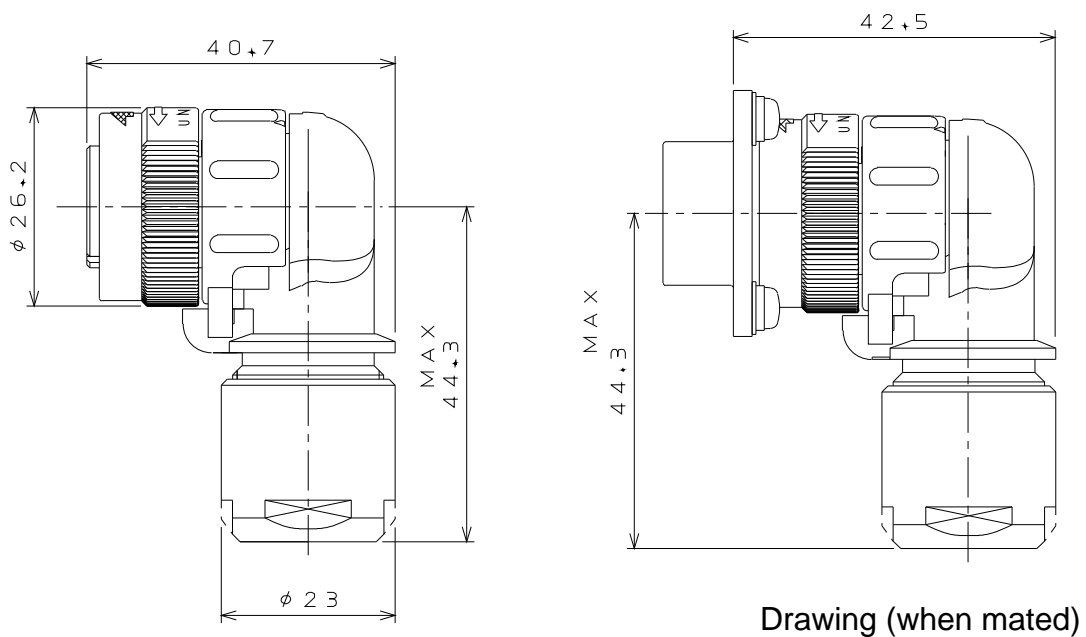
■ Receptacle JN2AW15PL1



■ Straight Plug JN2DW15SL*

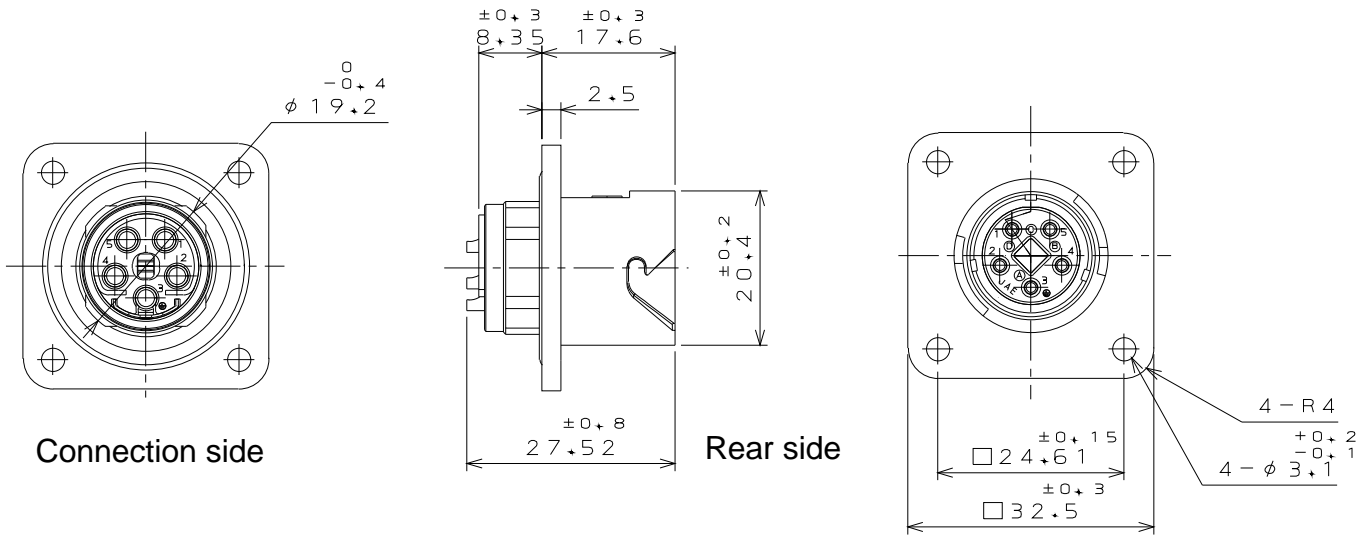


■ Angle Plug JN2FW15SL*

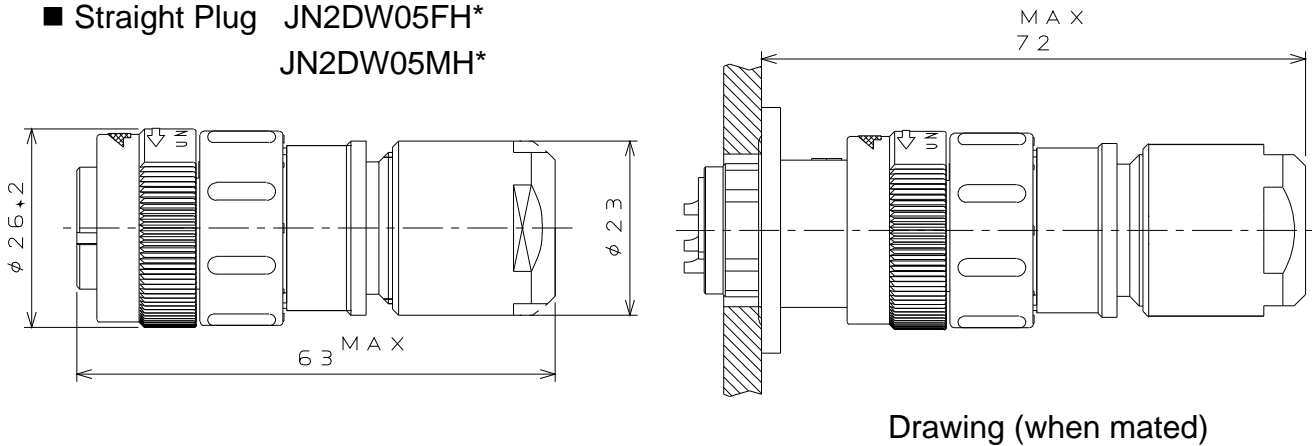


JN2W 5-Contact

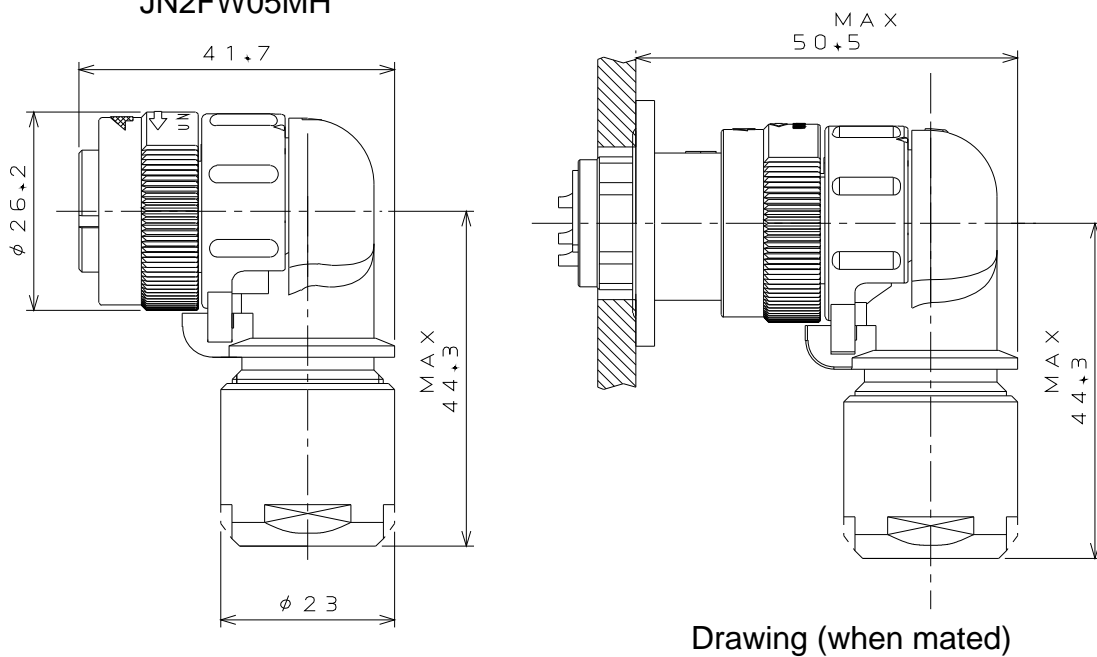
- Receptacle JN2AW05FH1
JN2AW05MH1



- Straight Plug JN2DW05FH*
JN2DW05MH*

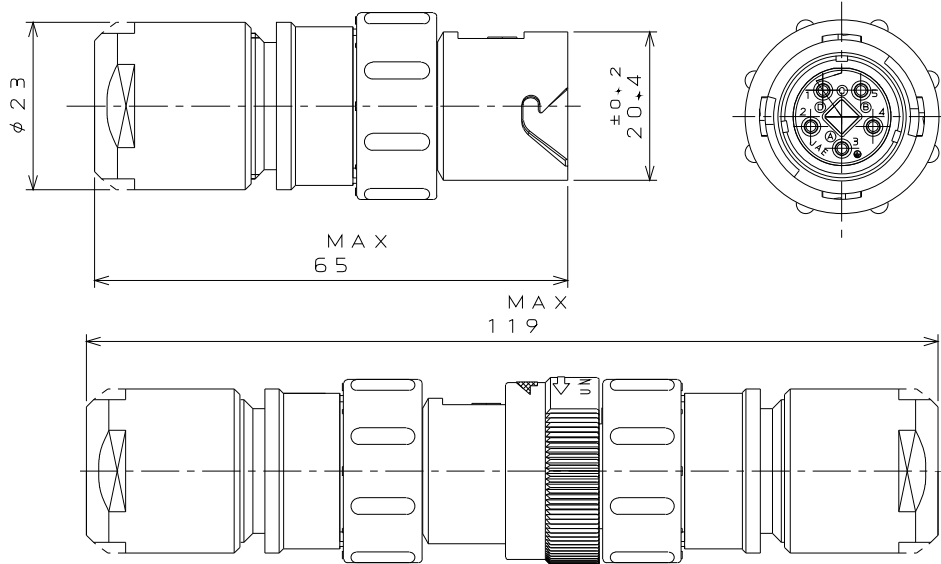


- Angle Plug JN2FW05FH*
JN2FW05MH*



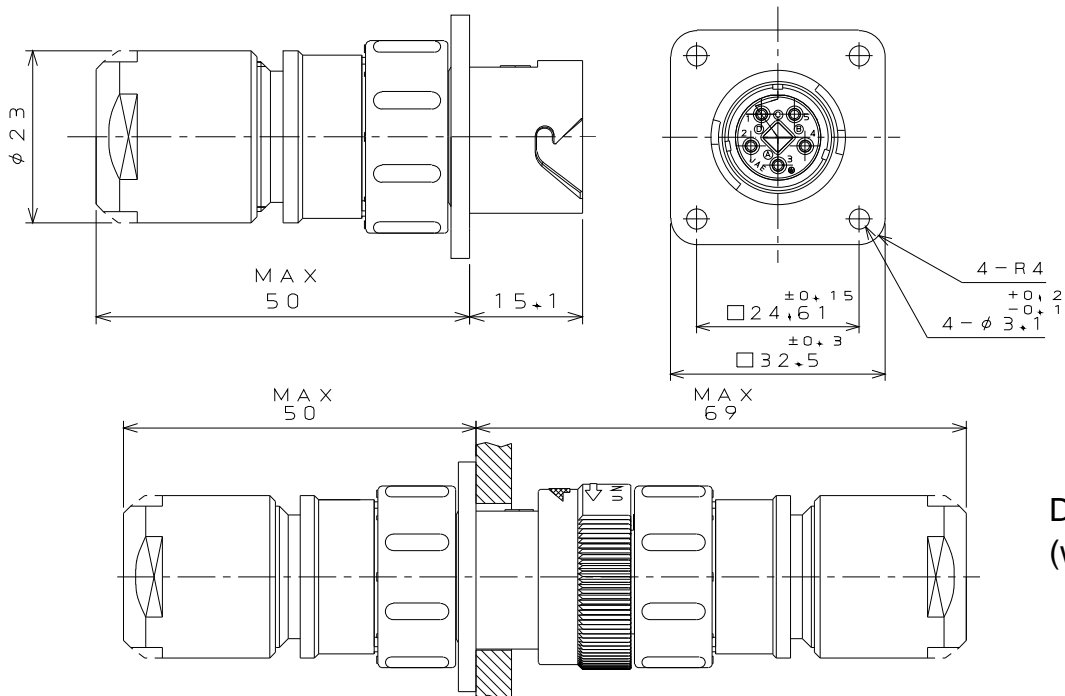
JN2W 5-Contact

- Cable Connecting Receptacle JN2HW05FH*
JN2HW05MH*



Drawing
(when mated)

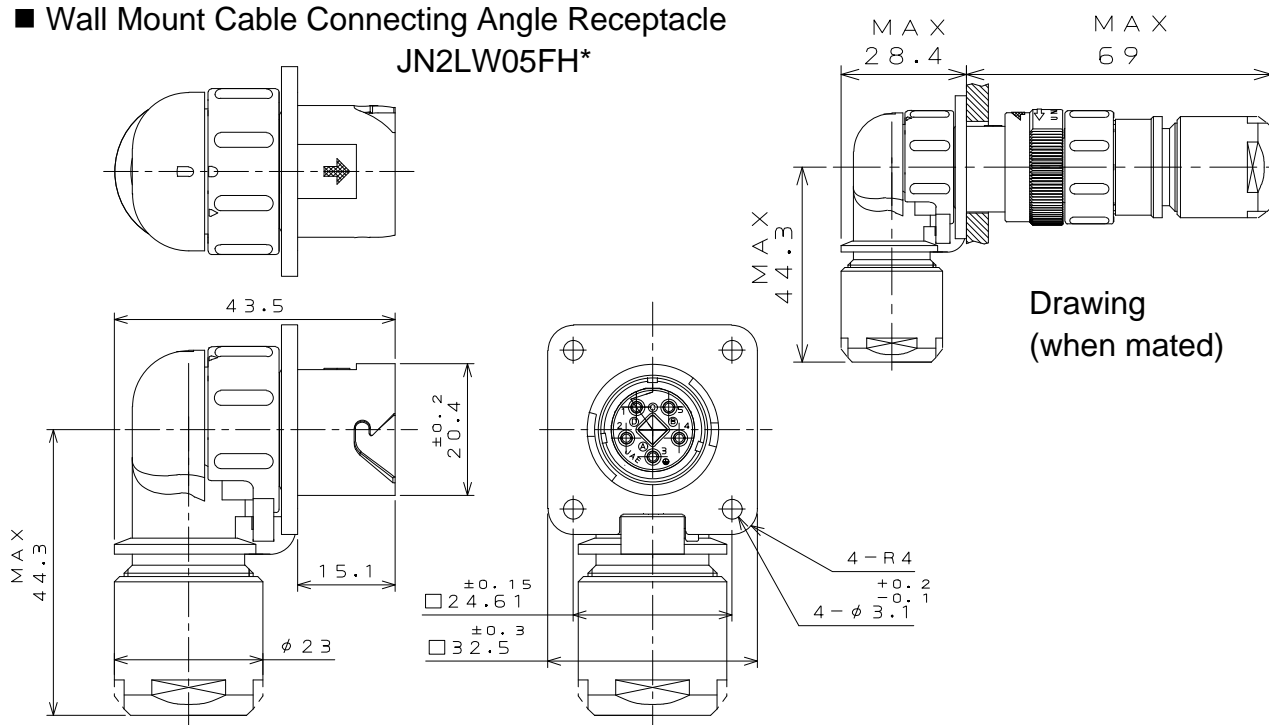
- Wall Mount Cable Connecting Receptacle JN2KW05FH*
JN2KW05MH*



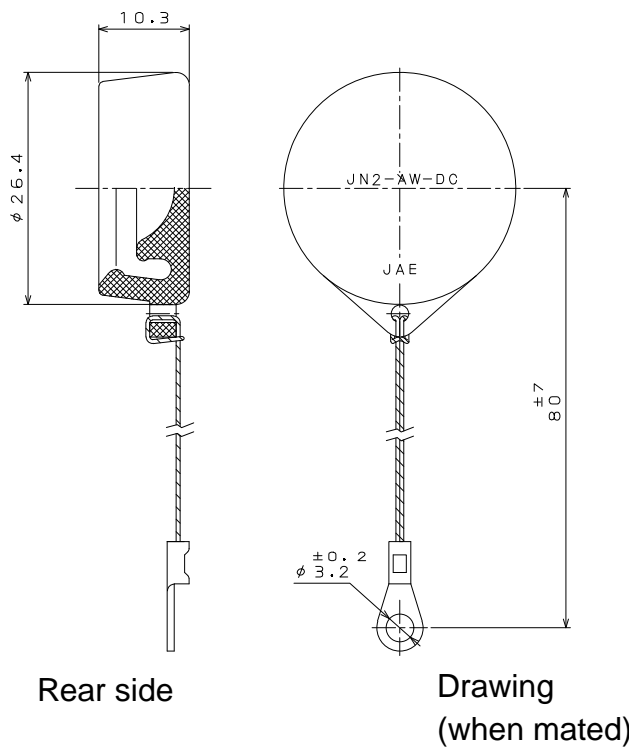
Drawing
(when mated)

JN2W 5-Contact

Wall Mount Cable Connecting Angle Receptacle JN2LW05FH*



Waterproof Cap JN2-AW-DC1



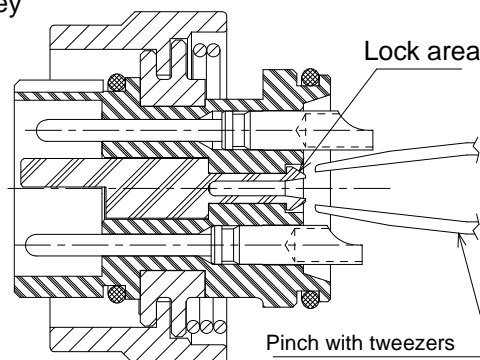
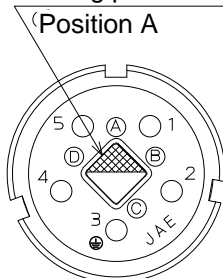
About The Mis-Mating Prevention Key

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.

Mouser Electronics

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