

**Small Circular One-touch Locking Waterproof Connector
With Enhanced Vibration Resistance**

CONNECTOR

MB-0343-1

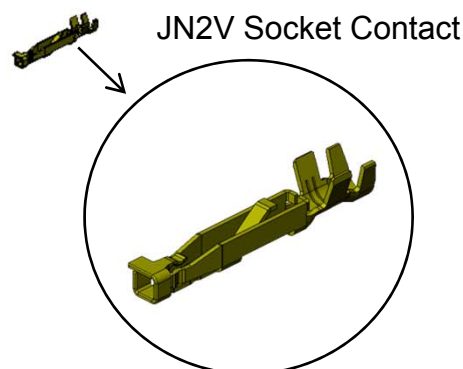
March 2019

JN1V/JN2V Series**RoHS Compliant**

JN2V Straight Plug



JN2V Right Angle Plug



JN1V/JN2V Series connectors come in the same form factor and dimensions as our conventional JN1/JN2 Series. The contact structure of this new series has been modified to improve the reliability under higher vibration. The five-point contact structure enhances the contact reliability and maintains a stable connection under vibrating conditions. Being able to withstand 245m/s² (25G), the JN1V/JN2V Series will withstand 2.5-times higher shock and vibration compared with the conventional JN2 Series connectors.

The JN1V/JN2V Series can be widely used as a compact waterproof I/O connector for servo motors for robots, automation machines, machine tools, and other industrial equipment, which are becoming diverse and required to have environmental performance.

Applicable Market

Servo motors, semiconductor manufacturing equipment, communication equipment, measurement, and various industrial equipment, such as robots, automation machines, machine tools, which all require vibration resistance and waterproofness.

Features

- Superior contact reliability achieved with a multi-contact structured socket contact with high vibration resistance.
- Compliant with 245 m /s² (25G) vibration condition
- Designed to mate with standard JN1/JN2 receptacle connectors
- Utilizes same semi-automatic crimping tool (applicator) as JN1/JN2 contacts (Requires manual crimping tool exclusive to JN2V)
- One-touch, push-and-twist, lock mechanism
- IP67 rated dust and waterproof (when mated)
- The right angle plug can be set in four different 90° increment cable orientations
- JN1V is an all-plastic type, and JN2V is an robust type partially using metal parts

General Specifications

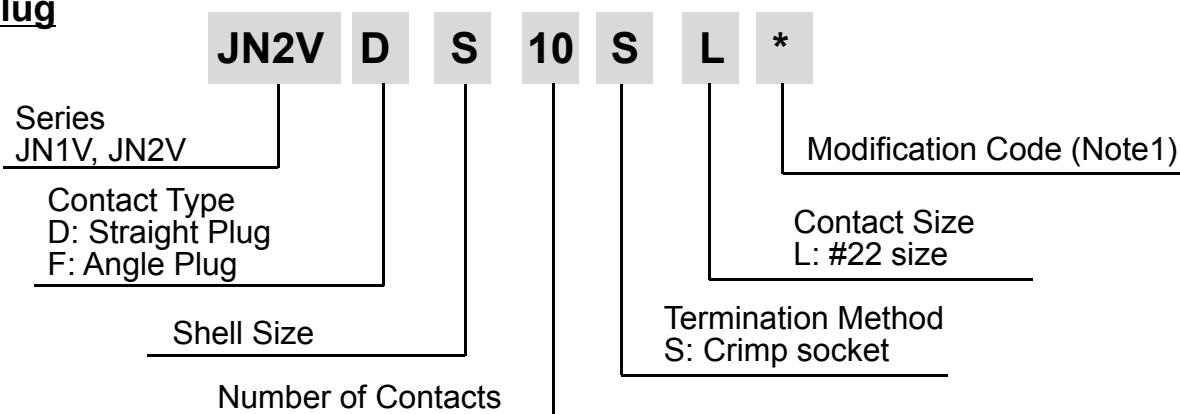
| Item | Specifications and Performance |
|---------------------------------|--|
| Rated Current | 3A / position max. |
| Rated Voltage | 230VAC |
| Dielectric Withstanding Voltage | 900VAC (1 minute) |
| Insulation Resistance | 1000MΩ min. (500VDC applied) |
| Operating Temperature Range | -20°C to + 125°C |
| Vibration Resistance | 245 m /s ² peaks, 10 to 500 Hz, 3 hours for each 3 axes (total 9 hours) |
| Durability | 500 cycles |
| Waterproof Performance | IP67 (in mated condition) |
| Specifications | JACS-50119 |
| Handling Instructions | JAHL-50119 |

Materials and Finishes

| Components | Materials and Finishes |
|-------------------------------------|--|
| Socket Contact | Copper alloy / Contact area: Au plating over Ni Terminal area: Sn plating |
| Insulator | Synthetic resin |
| Gland Nut | JN1V: Synthetic resin / JN2V: Synthetic resin |
| Endbell (for straight plug) | JN1V: Synthetic resin / JN2V: Synthetic resin |
| Endbell (for right angle plug) | JN1V: Synthetic resin / JN2V: Synthetic resin |
| Assembly Nut (for straight plug) | JN1V: Synthetic resin / JN2V: Synthetic resin |
| Assembly Nut (for right angle plug) | JN1V: Synthetic resin / JN2V: Zinc alloy / Zn plating |
| Coupling Nut | JN1V: Synthetic resin / JN2V: Zinc alloy / Zn plating |
| O Ring | Synthetic rubber |
| Bushing | Synthetic rubber |
| Spring | Stainless steel |

Ordering Information

Plug



Note1: The modification code is defined differently for each product.
Please refer to the drawings for detailed product information

Part Number - Connector

| Series | Part Number | Drawing Number | Applicable Cable Diameter |
|--------|-------------|----------------|---------------------------|
| JN1V | JN1VDS10SL1 | SJ116286 | φ5.7~7.3 |
| | JN1VDS10SL2 | SJ116287 | φ6.5~8.0 |
| | JN1VFS10SL1 | SJ116288 | φ5.7~7.3 |
| | JN1VFS10SL2 | SJ116289 | φ6.5~8.0 |
| JN2V | JN2VDS10SL1 | SJ116290 | φ5.7~7.3 |
| | JN2VDS10SL2 | SJ116291 | φ6.5~8.0 |
| | JN2VFS10SL1 | SJ116292 | φ5.7~7.3 |
| | JN2VFS10SL2 | SJ116293 | φ6.5~8.0 |

Part Number - Contact

| Type | Packaging | Applicable Contact | Drawing Number | Applicable Wire Size |
|----------------|--------------------------|---------------------|----------------|----------------------|
| Socket Contact | In reel (10,000 pcs.) | JN2V-22-20S-10000 | SJ116974 | AWG#20~#21 |
| | | JN2V-22-22S-10000 | SJ116972 | AWG#21~#25 |
| | | JN2V-22-26S-10000 | SJ116973 | AWG#26, #28 |
| Pin Contact | In pieces (100 pcs.) | JN1-22-20P-R-PKG100 | SJ037430 | AWG#20~#21 |
| | | JN1-22-22P-PKG100 | | AWG#21~#25 |
| | | JN1-22-26P-PKG100 | | AWG#26, #28 |
| | In reel (10,000pcs.) | JN1-22-20P-R-10000 | SJ037431 | AWG#20~#21 |
| | | JN1-22-22P-10000 | | AWG#21~#25 |
| | | JN1-22-26P-10000 | | AWG#26, #28 |

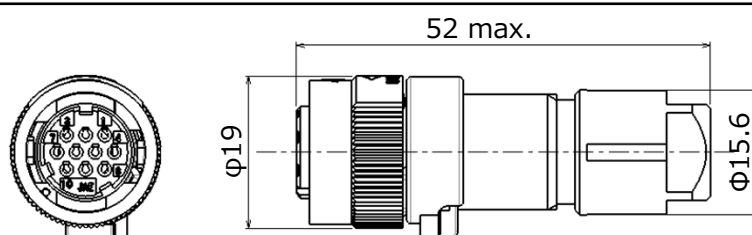
Tools

| Contact Size | Type of Tool | Applicable Wire | Applicable Tooling | Instruction Manual for Tooling |
|--------------|--|-----------------|---------------------------|--------------------------------|
| #22 | Hand Crimp (for contacts in pieces) | AWG#20,#21 | CT150-2C-JN2V | T700406 |
| | | AWG#22,#24 | CT150-2B-JN2V | |
| | | AWG#26,#28 | CT150-2-JN2V | |
| | Semi-automatic Applicator (for reel contacts) | AWG#20~#28 | 350-JN1-2C 3502-JN1-2C | T703294 T703413 |

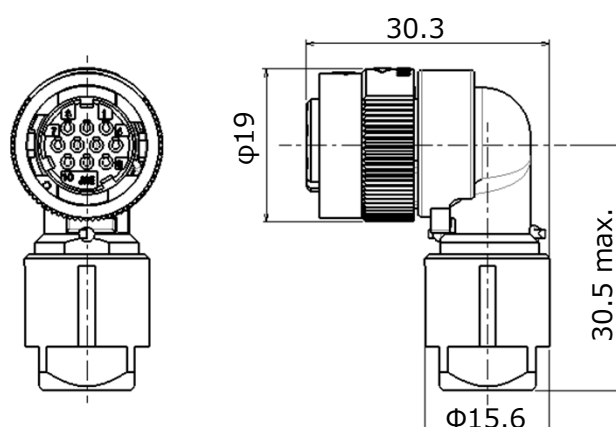
| Contact Size | Type of Tool | Applicable Tooling |
|--------------|-----------------|--------------------|
| #22 | Extraction Tool | ET-JN1 |

Outer Dimensions

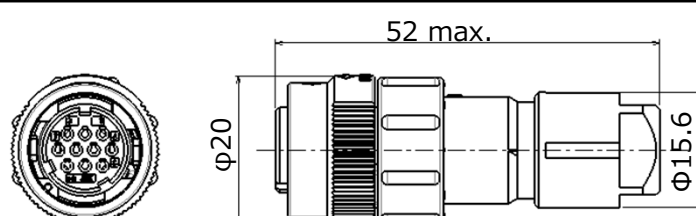
JN1V Straight Plug (JN1VDS10SL*)



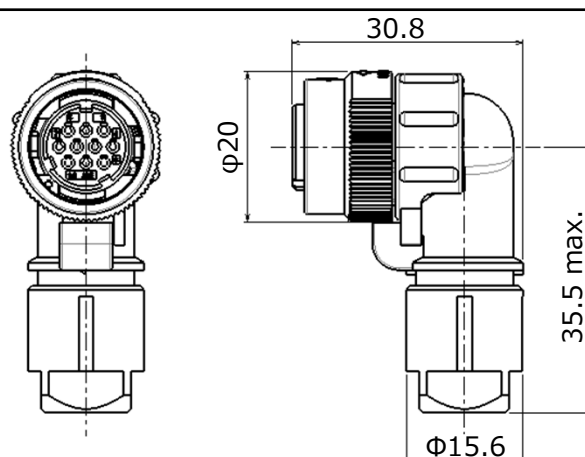
JN1V Right Angle Plug (JN1VFS10SL*)



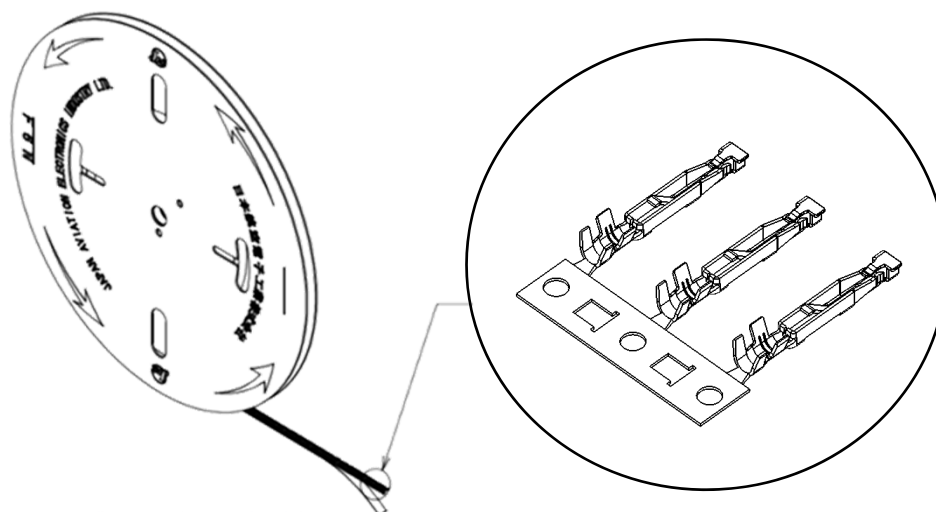
JN2V Straight Plug (JN2VDS10SL*)



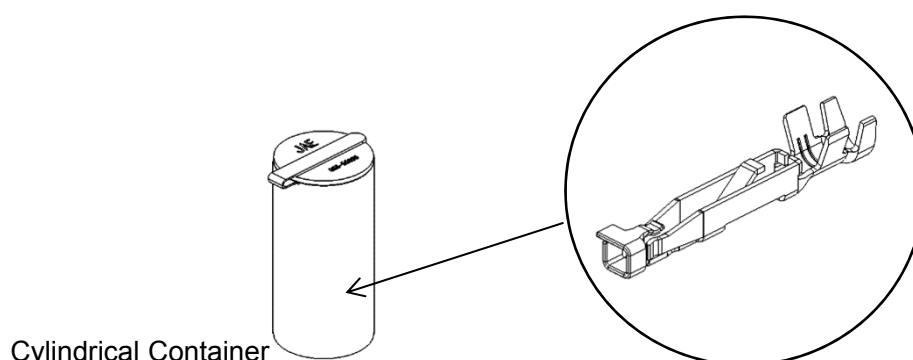
JN2V Right Angle Plug (JN2VFS10SL*)



JN2V Socket Contact / in reel (JN2V-22-2*-10000)



JN2V Socket Contact / in bulk (JN2V-22-2*-PKG100)



Cylindrical Container

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.

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