

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

CONNECTOR

MB-0343-1

March 2019

## JN1V/JN2V Series

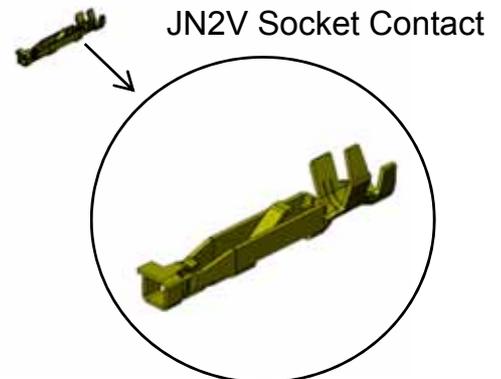
**RoHS Compliant**



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/s<sup>2</sup> (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 /s<sup>2</sup> (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**

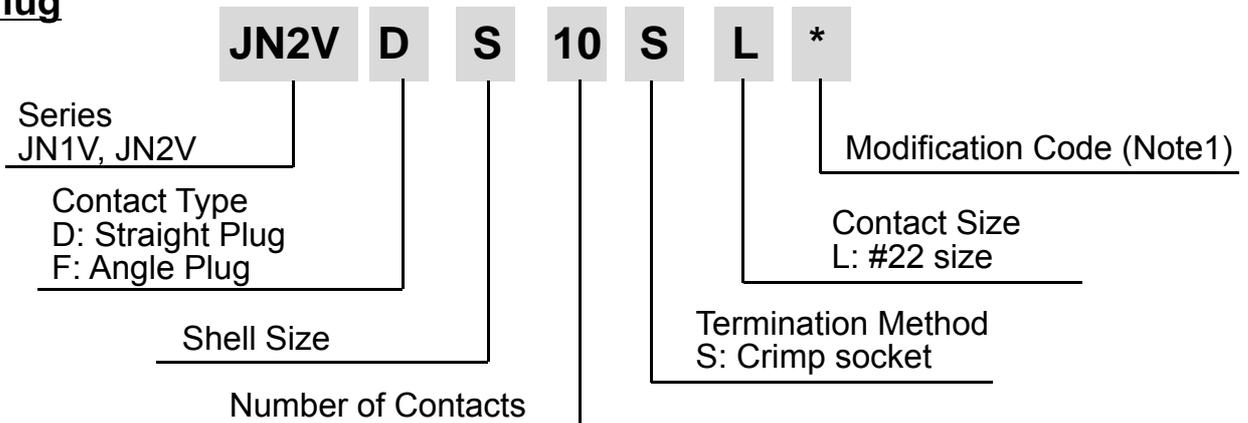
Item	Specifications and Performance
Rated Current	3A / position max.
Rated Voltage	230VAC
Dielectric Withstanding Voltage	900VAC (1 minute)
Insulation Resistance	1000MΩ min. (500VDC applied)
Operating Temperature Range	-20°C to + 125°C
Vibration Resistance	245 m /s <sup>2</sup> peaks, 10 to 500 Hz, 3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

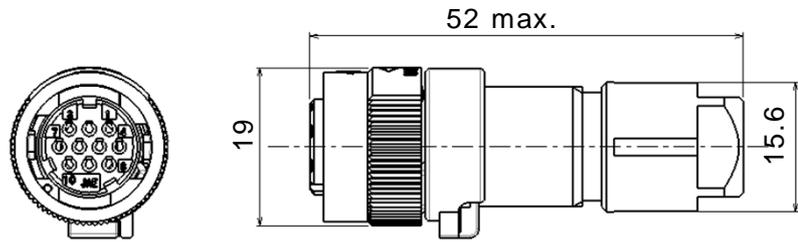
**Tools**

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

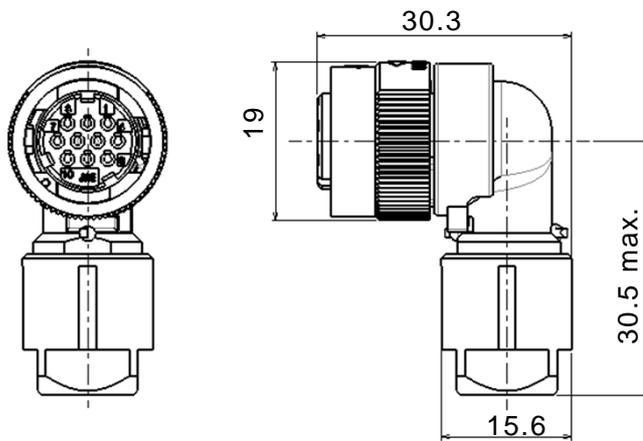
Contact Size	Type of Tool	Applicable Tooling
#22	Extraction Tool	ET-JN1

Outer Dimensions

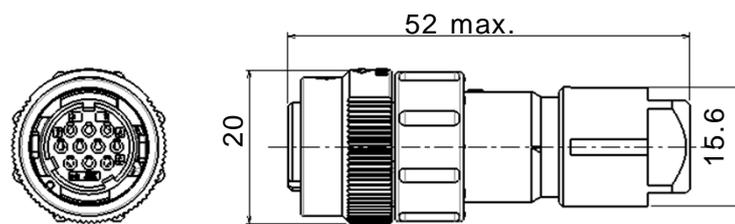
JN1V Straight Plug (JN1VDS10SL\*)



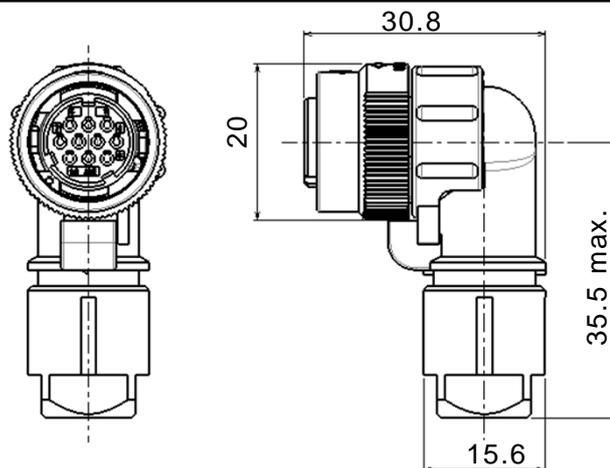
JN1V Right Angle Plug (JN1VFS10SL\*)



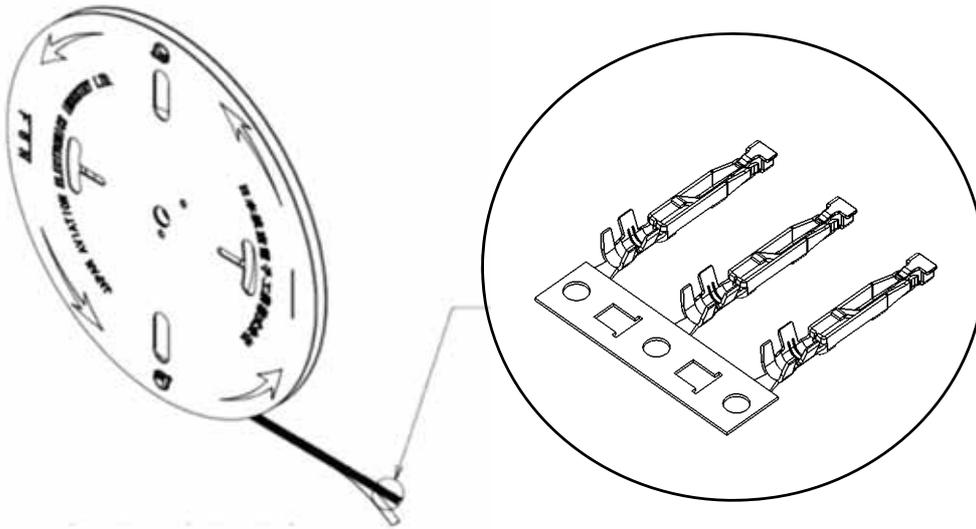
JN2V Straight Plug (JN2VDS10SL\*)



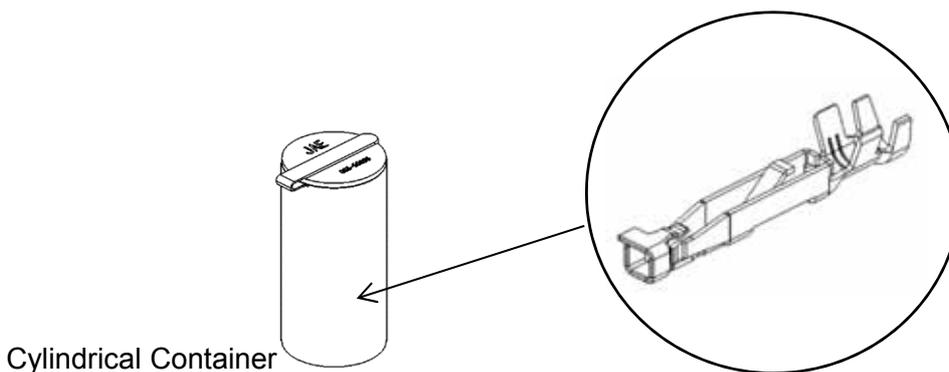
JN2V Right Angle Plug (JN2VFS10SL\*)



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



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



### **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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