



Small Circular Connector  
**JN1/2 Series**

CONNECTOR

MB-0054-4

2002/11

Receptacle

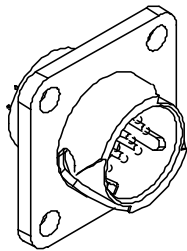
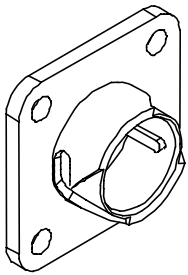
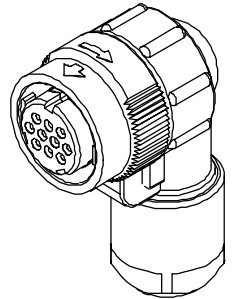
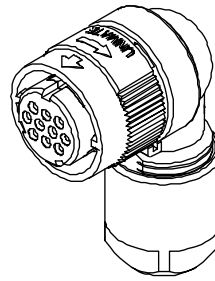
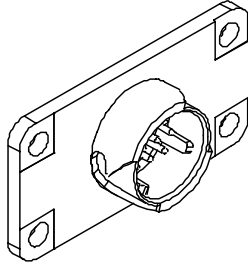
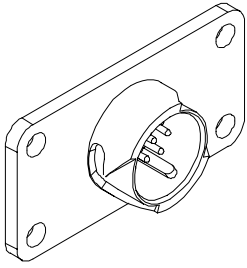
Angle Plug

[JN1]

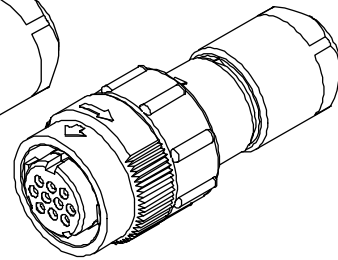
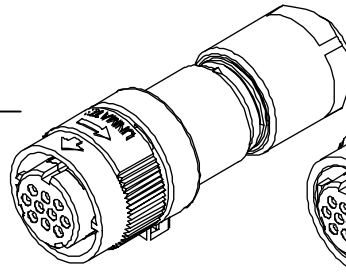
[JN2]

[JN1]

[JN2]

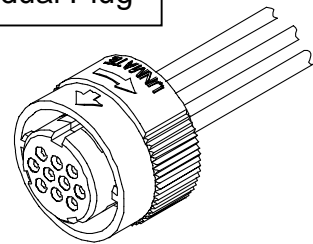
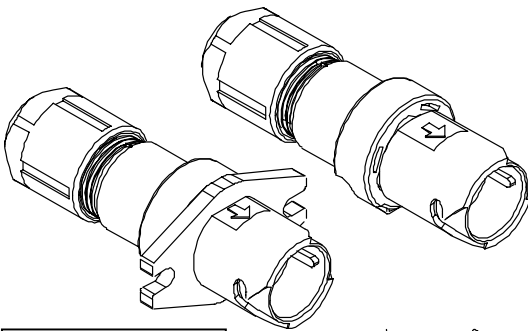


Straight Plug

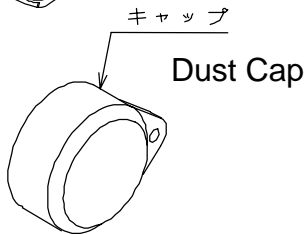


Cable Connecting Receptacle

Individual Plug



Wall Mounting Receptacle



This product is a waterproof circular connector with one-touch lock mechanism developed as an interface for industrial devices. Available in all-plastic type JN1 and metal material partially used robust type JN2. Both are in compact design and are suitable for all kinds of electronic devices . (patent, registration of design have filed)

<b>Features</b>
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- [JN1]**
- All plastic lightweight connector
  - Easy and sure mating with push-and-twist type one-touch lock mechanism
  - Receptacle is available in 2types. Through-hole type and soldering type. Through-hole type can be mounted directly on the board. Plug is available in soldering type and crimp connection type.
  - Relay receptacle (crimp connection type) is available in cable connecting type and wall mounting receptacle type.
  - Plug is available in straight, angle and individual type. The direction of the cable leader of the angle plug can be set in four directions by rotating the plug 90 degrees in each direction.
  - Body earth structure is employed for receptacle of 4pins.
  - Mating height of angle plug is 30.8mm (from cabinet surface). Individual plug is low profile 16.9mm.
  - Waterproof and dustproof that conform to IP67 class.
  - Superb environmental proof performance such as vibration proof and oil proof.
  - Applicable to conduit mounting
- [JN2]**
- Compatible to JN1, considerably reinforced by using metal material in part of the outer shell.(breaking strength three fold increase)
  - Crimp contact is in common with JN1.
  - Mating height of angle plug is low profile 31.3mm (from cabinet surface).
  - Waterproof and dustproof that conform to IP67 class.
  - Superb environmental proof performance such as vibration proof and oil proof.
  - Applicable to conduit mounting

<b>General Specifications</b>
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**[JN1]**

Item	Specifications and performance	
No. of contacts	10 pins	4pins
Rated current	3A/ pins (#22 size contact)	5A/ pins (#20 size contact)
Rated voltage	200VAC	200VAC (degree of pollution 3, excess voltage category 3)
Withstanding voltage	900VAC(per minute)	2000VAC(per minute)
Insulation resistance	More than 1000M ohm(DC500V energized )	More than 1000M ohm (DC500V energized )
Waterproof	IP67	IP67
Airtightness (Individually waterproofed)	2.9 × 10 <sup>4</sup> PA ( per minute ) without leakage	2.9 × 10 <sup>4</sup> PA ( per minute ) without leakage
Operating temperature	-20 Deg. C to +125 Deg.C	-20 Deg. C to +125 Deg.C
Specification of wire connection	Receptacle: Through-hole, Soldering connection (Max.0.3mm <sup>2</sup> ) Plug: Crimp connection (AWG20 to 28)	Receptacle: Soldering connection (Max.0.75mm <sup>2</sup> ) Plug: Soldering connection (Max 1.25mm <sup>2</sup> )
Product specification	JACS-5111	JACS-5111-2
Instruction manual	JAHL-5111	JAHL-5111
Life time	500 times	500 times

**[JN2]**

Item	Specifications and performance	
No. of contacts	10 pins	4pins
Rated current	3A/ pins (#22 size contact)	5A/ pins (#20 size contact)
Rated voltage	200VAC	200VAC (degree of pollution 3, excess voltage category 3)
Withstanding voltage	900VAC(per minute)	2000VAC(per minute)
Insulation resistance	More than 1000M ohm(DC500V energized )	More than 1000M ohm (DC500V energized )
Waterproof	IP67	IP67
Airtightness (Individually waterproofed)	-	2.9 × 10 <sup>4</sup> PA ( per minute ) without leakage
Operating temperature	-20 Deg. C to +100 Deg.C	-20 Deg. C to +100 Deg.C
Specification of wire connection	Receptacle: Through-hole, Plug: Crimp connection (AWG #20 to 28)	Receptacle: Soldering connection (Max.0.75mm <sup>2</sup> ) Plug: Soldering connection (Max.1.25mm <sup>2</sup> )
Product specification	JACS-5119	JACS-5119-2
Instruction manual	JAHL-5119	JAHL-5119
Life time	500 times	500 times

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

## Materials and finishes

**[JN1]**

	Components	Materials and finishes
Receptacle	Pin insulator	Synthetic resin
	Pin contact	Copper alloy/Au plating (10 pins), Silver plating (4 pins.)
Relay receptacle	Insulator	Synthetic resin
	Assembly nut	Synthetic resin
	Straight endbell	Synthetic resin
	O Ring	Synthetic rubber
	Bushing	Synthetic rubber (Color: black/gray)
	Grand nut	Synthetic resin
	Pin contact (#22)	Au plating
	Pin contact (#20)	Silver plating
Plug	Front insulator	Synthetic resin
	Rear insulator	Synthetic resin
	Coupling nut	Synthetic resin
	Assembly nut	Synthetic resin
	Angle endbell	Synthetic resin
	Straight endbell	Synthetic resin
	O Ring	Synthetic rubber
	Bushing	Synthetic rubber (Color: black/gray)
	Grand nut	Synthetic resin
	Spring	Stainless steel
	Spring pin	Stainless steel
	Socket contact	Copper alloy/ Au plating(10pins), Silver plating (4pins)

**[JN2]**

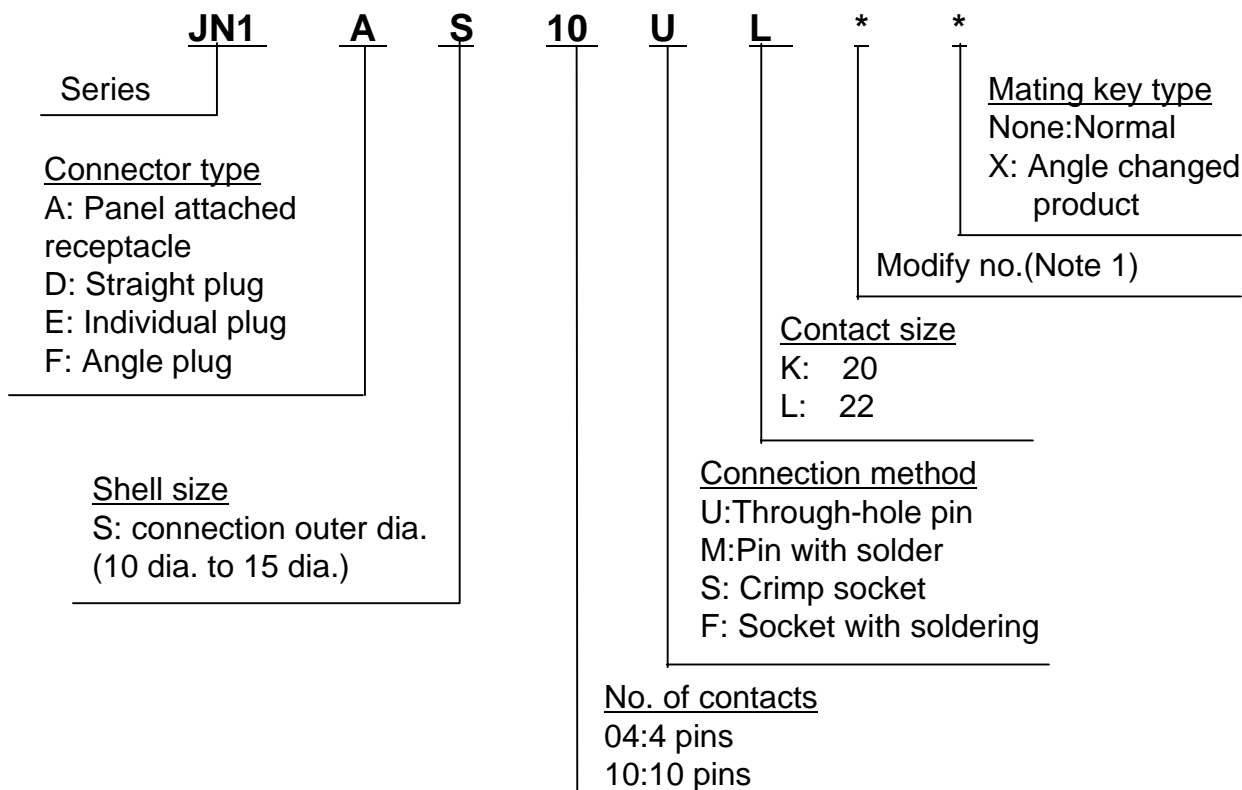
	Components	Materials and finishes
Receptacle	Pin insulator	Synthetic resin
	Shell	Zinc spelter die-cast/Zinc plating
	Pin contact	Copper alloy/Au plating (10 pins), Silver plating (4 pins.)
Plug	Front insulator	Synthetic resin
	Rear insulator	Synthetic resin
	Coupling nut	Zinc spelter die-cast/Zinc plating (Black)
	Assembly nut	Zinc spelter die-cast/Zinc plating (Black)
	Angle endbell	Synthetic resin
	Straight endbell	Synthetic resin
	O Ring	Synthetic rubber
	Bushing	Synthetic rubber (Color: black/gray)
	Grand nut	Synthetic resin
	Spring	Stainless steel
	Spring pin	Stainless steel
Socket contact	Copper alloy/ Au plating(10pins), Silver plating (4pins)	

\*Color of bushing is decided by applicable wire size. (JN1, JN2 common use)  
(5.7 dia. to 7.3 dia. type: black, 6.5 dia. to 8.0 dia. type: gray)

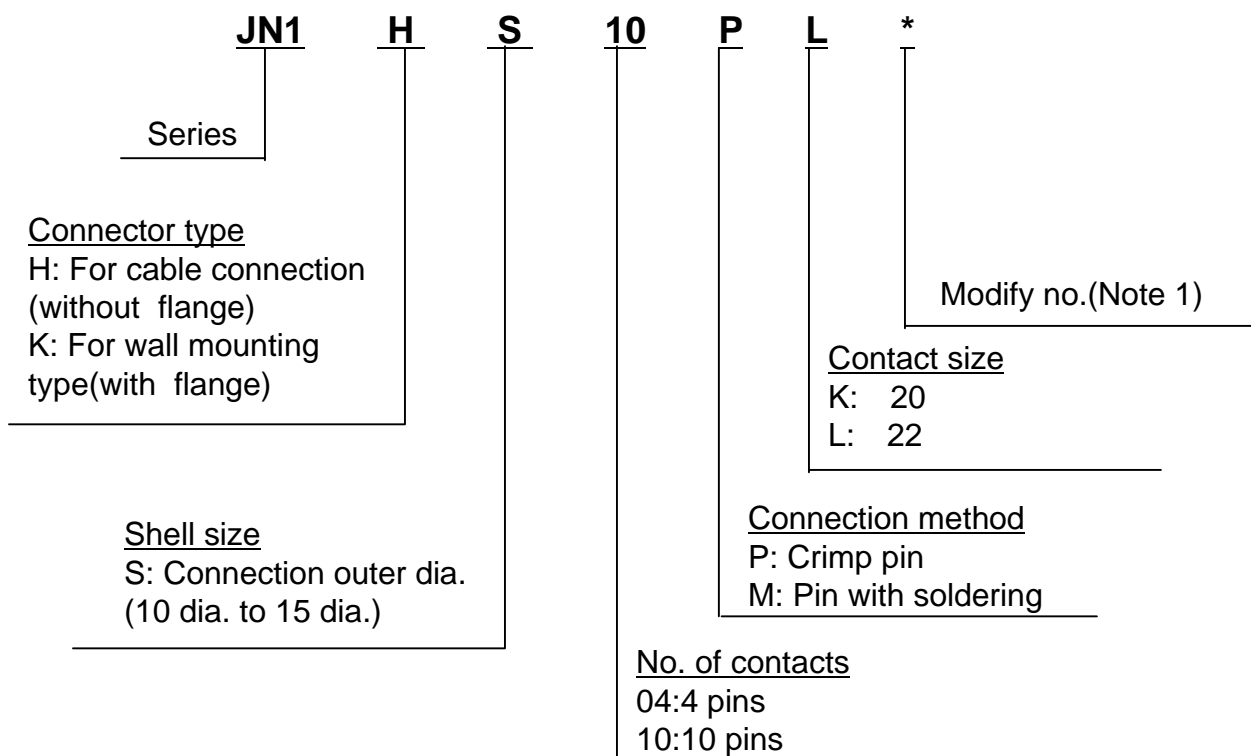
Ordering Information

**[JN1]**

Receptacle/Plug

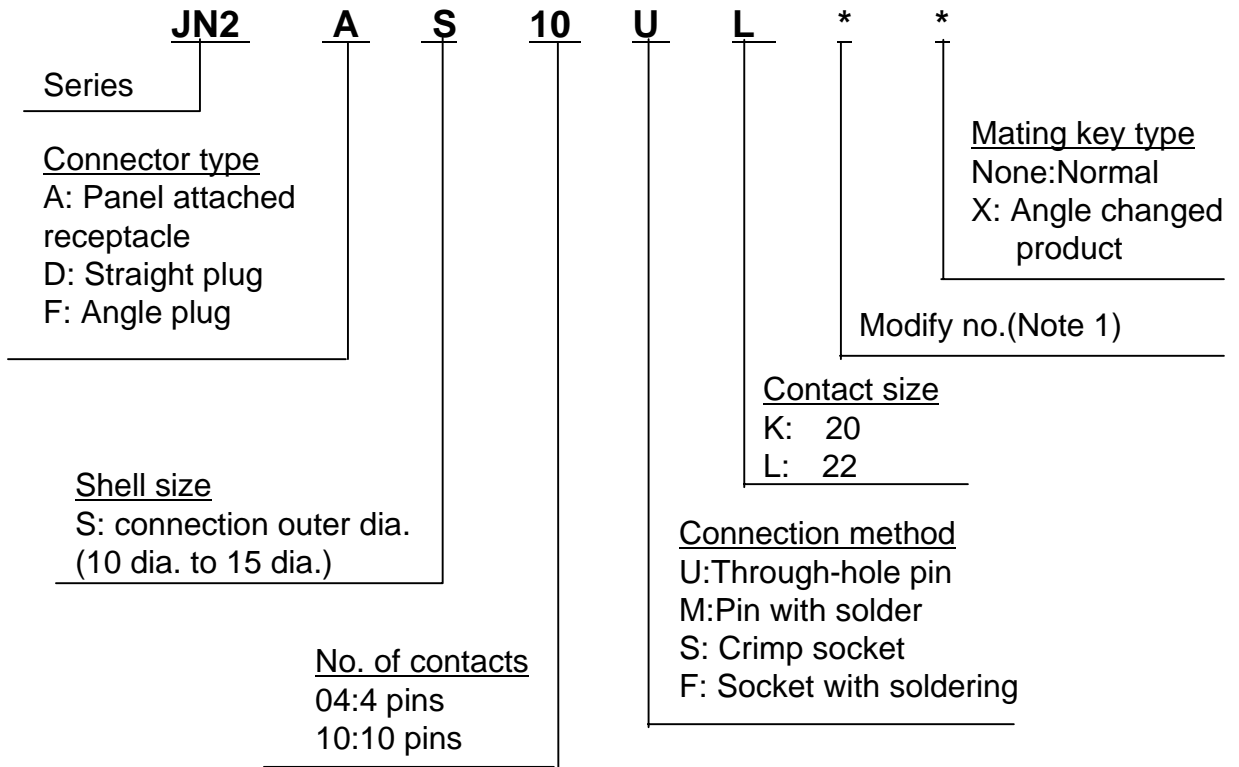


Relay receptacle



**[JN2]**

Receptacle/Plug



Note1: Please refer to product drawings for modify no.

## ■ Part Number List

### [JN1]

No. of Contacts	Type	Part Number	SJ No.	Performance/Shape
4	Square flange receptacle	JN1AS04MK1	035649	Individually waterproofed, solder pin
		JN1AS04MK1X	035649	Individually waterproofed, solder pin, X position
		JN1AS04MK2	035650	Individually waterproofed, solder pin, body earth structure
	Cable connecting receptacle	JN1HS04MK1	037295	Waterproof (when mated), solder pin, cable 5.7dia. to 7.3dia.
		JN1HS04MK2	037265	Waterproof (when mated), solder pin, cable 6.5dia. to 8.0dia.
	Wall mounting receptacle	JN1KS04MK1	037296	Waterproof (when mated), solder pin, cable 5.7dia. to 7.3dia.
		JN1KS04MK2	037296	Waterproof (when mated), solder pin, cable 6.5dia. to 8.0dia.
	Straight plug	JN1DS04FK1	035666	Waterproof(when mated), solder socket, cable 5.7dia. to 7.3dia.
		JN1DS04FK1X	035666	Waterproof(when mated), solder socket cable 5.7dia. to 7.3dia., X position
		JN1DS04FK2	035666	Waterproof(when mated), solder socket cable 6.5 dia. to 8.0dia.
		JN1DS04FK2X	035666	Waterproof(when mated), solder socket cable 6.5 dia. to 8.0dia., X position
		JN1DS04FKK	035969	Waterproof(when mated), solder socket , kit type (with 2 types of rubber bushing)
		JN1DS04FKKX	035969	Waterproof(when mated), solder socket , kit type (with 2 types of rubber bushing) , X position
	90 Degree angle plug	JN1FS04FK1	035610	Waterproof(when mated), solder socket cable 5.7dia. to 7.3dia.
		JN1FS04FK1X	035610	Waterproof(when mated), solder socket cable 5.7dia. to 7.3dia., X position
		JN1FS04FK2	035610	Waterproof(when mated) , solder socket cable 6.5dia. to 8.0dia.
		JN1FS04FK2X	035610	Waterproof(when mated) , solder socket cable 6.5dia. to 8.0dia. , X position
		JN1FS04FKK	035968	Waterproof(when mated) , solder socket, kit type (with 2 types of rubber bushing)
		JN1FS04FKKX	035968	Waterproof(when mated) , solder socket , kit type (with 2 types of rubber bushing) , X position



**[JN1]**

No. of Contacts	Type	Part Number	SJ No.	Performance/Shape
10	Rectangle flange receptacle	JN1AS10UL1	034676	Waterproof (when mated), through-hole pin
	Square flange receptacle	JN1AS10ML1	036385	Waterproof (when mated), solder pin
		JN1AS10ML2	036386	Individually waterproofed, solder pin
	Cable connecting receptacle	JN1HS10PL1	037293	Waterproof (when mated), crimp pin, cable 5.7dia. to 7.3dia.
		JN1HS10PL2	037293	Waterproof (when mated), crimp pin, cable 6.5dia. to 8.0dia.
	Wall mounting receptacle	JN1KS10PL1	037294	Waterproof (when mated), crimp pin, cable 5.7dia. to 7.3dia.
		JN1KS10PL2	037295	Waterproof (when mated), crimp pin, cable 6.5dia. to 8.0dia.
	Individual plug	JN1ES10SL1	034677	Not waterproof, crimp socket, Individual block
	Straight plug	JN1DS10SL1	034679	Waterproof(when mated), crimp socket, cable 5.7dia. to 7.3dia.
		JN1DS10SL2	034679	Waterproof(when mated), crimp socket, cable 6.5 dia. to 8.0dia.
		JN1DS10SLK	034679	Waterproof(when mated), crimp socket, kit type (with 2 types of rubber bushing & 10 contacts)
	90 Degree angle plug	JN1FS10SL1	034678	Waterproof(when mated), crimp socket cable 5.7dia. to 7.3dia.
		JN1FS10SL2	034678	Waterproof(when mated) , crimp socket cable 6.5dia. to 8.0dia.
		JN1FS10SLK	034678	Waterproof(when mated) , crimp socket kit type (with 2 types of rubber bushing & 10 contacts)

**[JN1]**

No. of Contacts	Type	Part Number	SJ No.	Performance/Shape
10	Socket contact	JN1-22-22S-PKG100	035503	Socket contact, AWG#21 to #25 (some specifically available for #20)
		JN1-22-22S-10, 100	035504	Socket contact, AWG#21 to #25 (some specifically available for #20)
		JN1-22-26S-PKG100	035503	Socket contact, AWG#26 to #28
		JN1-22-26S-10, 000	035504	Socket contact, AWG#26 to #28
		JN1-22-20S-PKG100	035503	Socket contact, AWG#20
		JN1-22-20S-10, 000	035504	Socket contact, AWG#20
	Pin contact	JN1-22-22P-PKG100	037430	Pin contact, AWG#21 to #25 (some specifically available for #20)
		JN1-22-22P-10, 000	037431	Pin contact, AWG#21 to #25 (some specifically available for #20)
		JN1-22-26P-PKG100	037430	Pin contact, AWG#26 to #28
		JN1-22-26P-10, 000	035431	Pin contact, AWG#26 to #28
		JN1-22-20P-10, 000	035431	Pin contact, AWG#20
		JN1-22-20P-PKG100	03740	Pin contact, AWG#20
	Dust cap	J025-52209	035565	For JN1, 2 receptacle (not waterproof), IP67

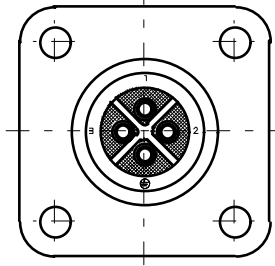
## ■ Part Number List

### [JN2]

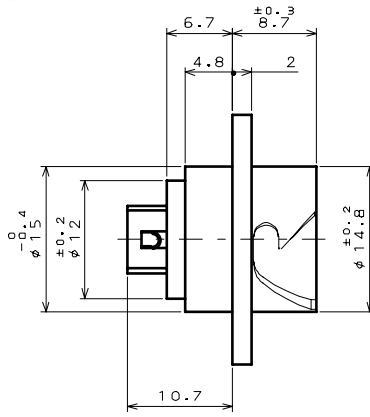
No. of Contacts	Type	Part Number	SJ No.	Performance/Shape
4	Square flange receptacle	JN2AS04MK2	037098	Individually waterproofed, solder pin, body earth structure
	Straight plug	JN2DS04FK1	037100	Waterproof (when mated), solder socket, cable 5.7dia. to 7.3dia.
		JN2DS04FK2	037100	Waterproof (when mated), solder socket, cable 6.5dia. to 8.0dia.
	Angle plug	JN2FS04FK1	037099	Waterproof (when mated), solder socket, cable 5.7dia. to 7.3dia.
		JN2FS04FK2	037099	Waterproof (when mated), solder socket, cable 6.5dia. to 8.0dia.
10	Rectangle flange receptacle	JN2AS10UL1	037092	Waterproof(when mated), through-hole pin
	Straight plug	JN2DS10SL1	037096	Waterproof(when mated), crimp socket cable 5.7dia. to 7.3dia.
		JN2DS10SL2	037096	Waterproof(when mated), crimp socket cable 6.5 dia. to 8.0dia.,
	Angle plug	JN2FS10SL1	037095	Waterproof(when mated), crimp socket cable 5.7dia. to 7.3dia.
		JN2FS10SL2	037095	Waterproof(when mated), crimp socket cable 6.5 dia. to 8.0dia.
	Dust cap	J025-52209	035565	For JN1, 2 receptacle (not waterproof), IP67

\*Contact for JN2 is same as JN1.

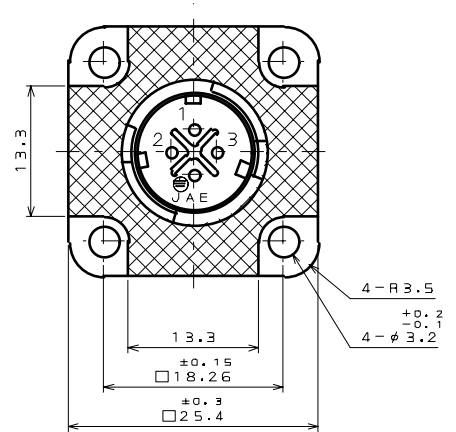
■ Receptacle JN1AS04MK1\*



Connection side

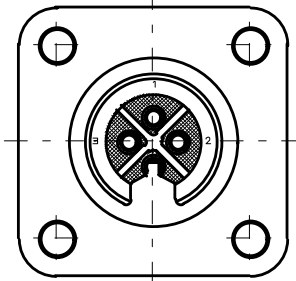


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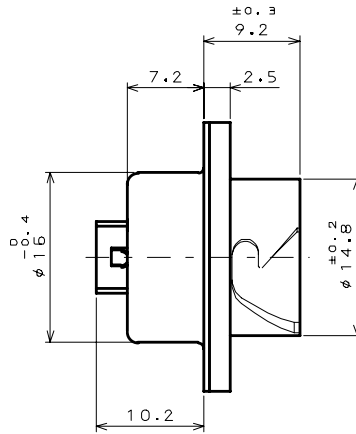


Mating side

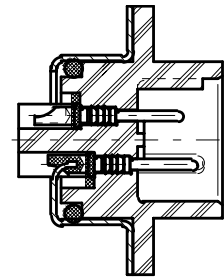
■ Receptacle JN1AS04MK2



Connection side

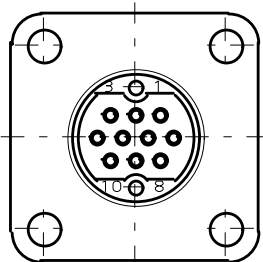


Rear side

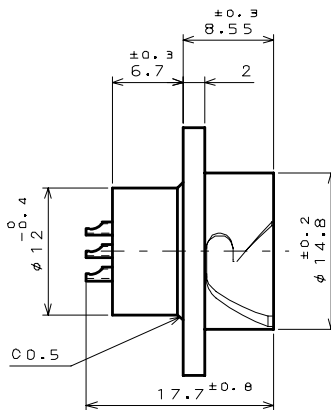


Rear side (cross section)

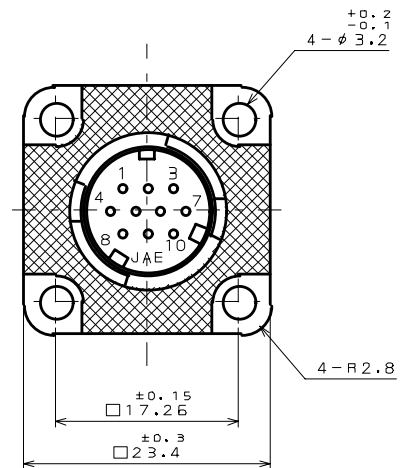
■ Receptacle JN1AS10ML1



Connection side

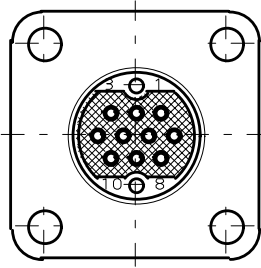


Rear side

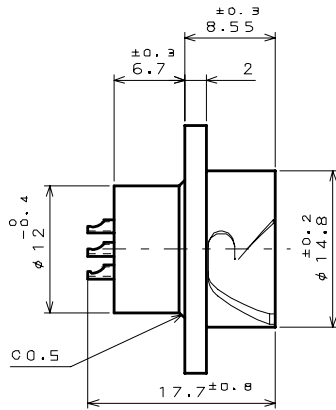


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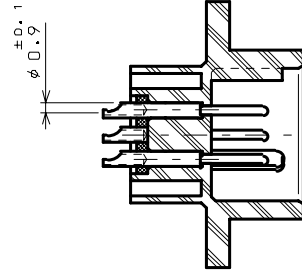
■ Receptacle JN1AS10ML2



Connection side

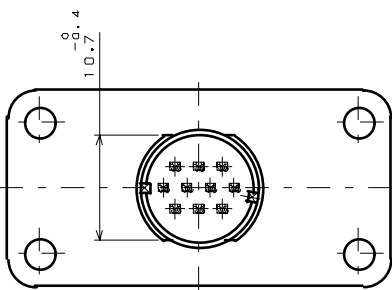


Rear side

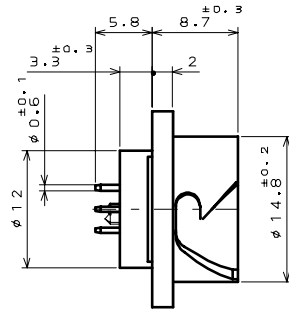


Rear side (cross section)

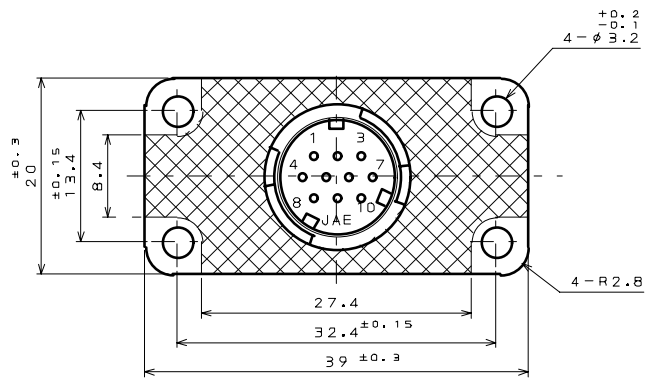
■ Receptacle JN1AS10UL1



Connection side

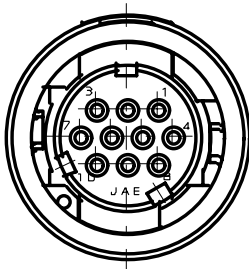


Rear side

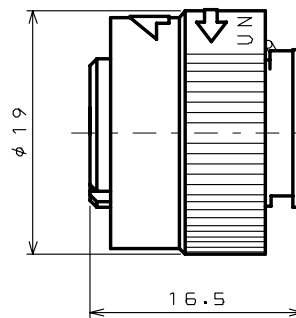


Mating side

■ Individual plug JN1ES10SL1

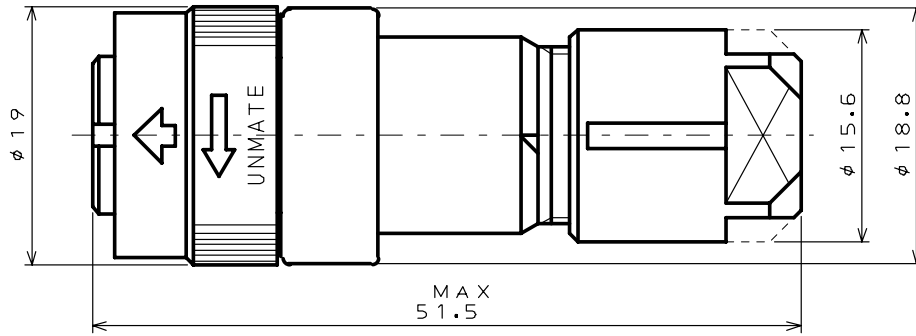


Mating side

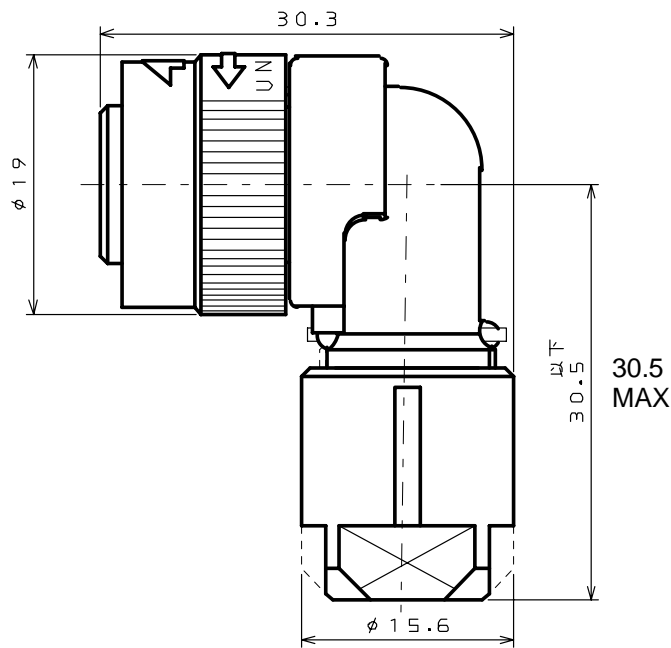


Rear side

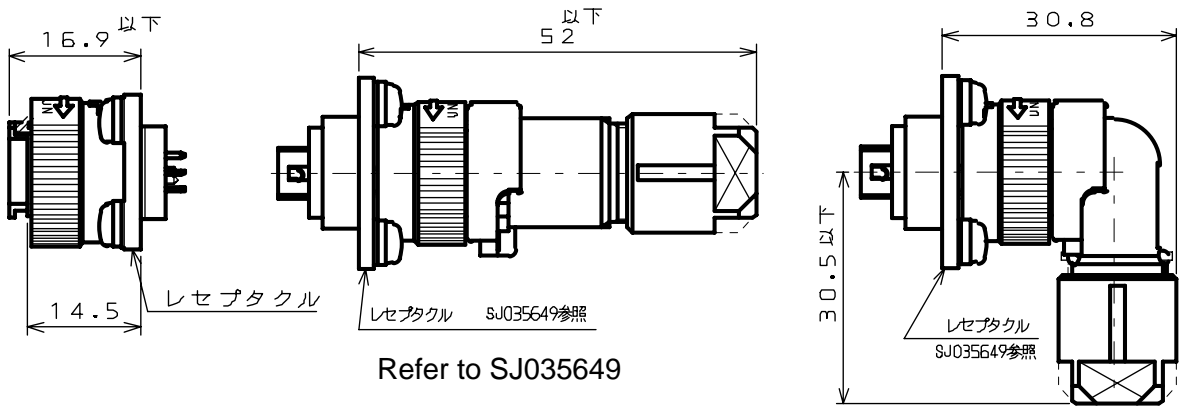
■ Straight plug JN1DS\*\*\*



■ Angle plug JN1FS\*\*\*



■ Drawing (when mated)

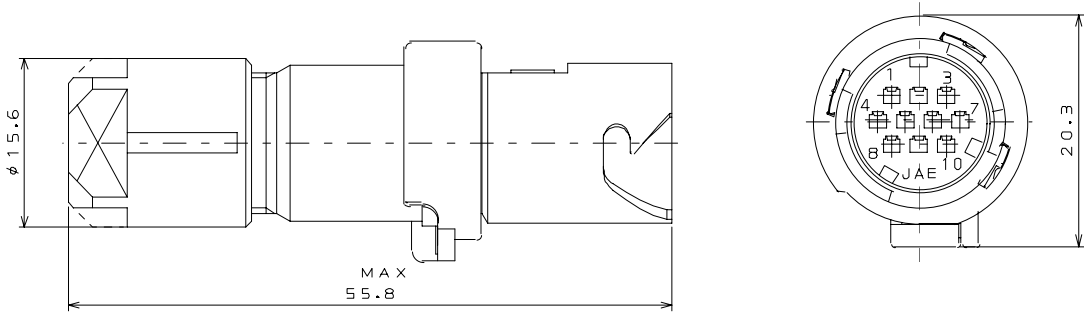


(Receptacle)  
+(Individual plug)

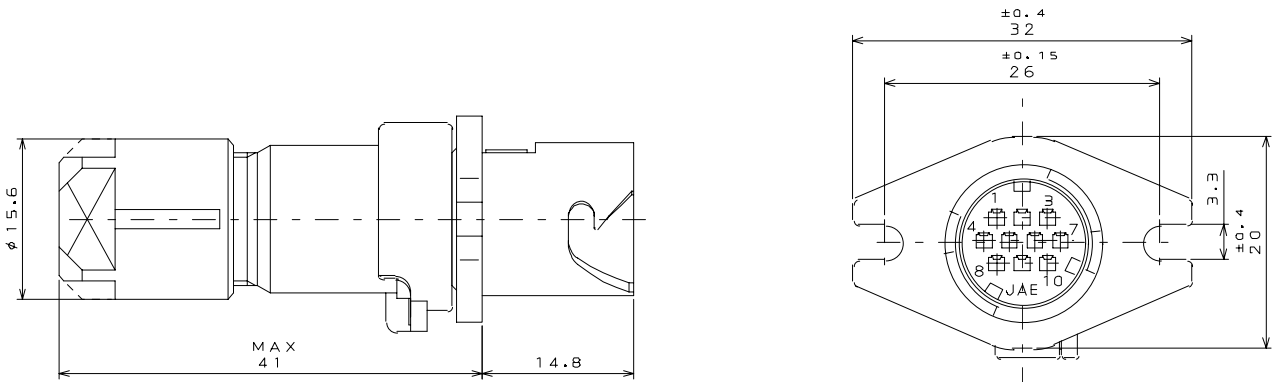
(Receptacle)  
+(Straight plug)

Refer to SJ035649  
(Receptacle)  
+(Angle plug)

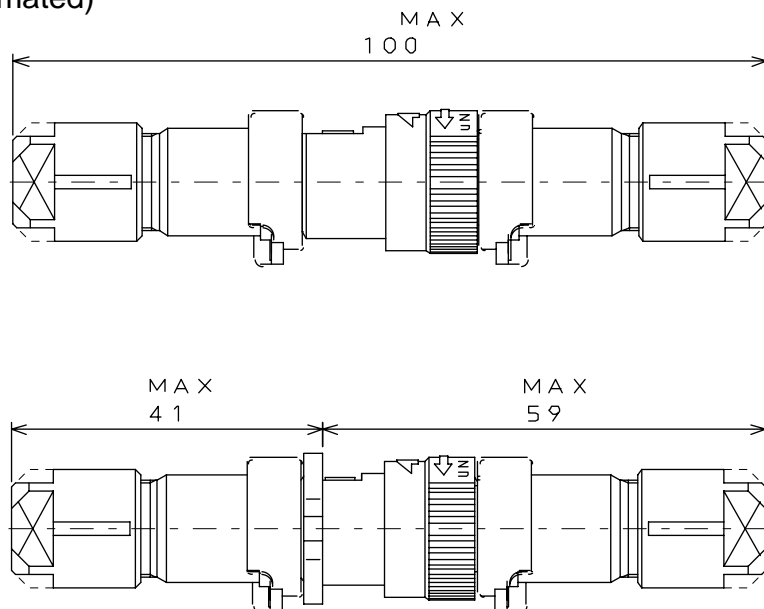
■ Cable connection receptacle JN1HS\*\*PL\*



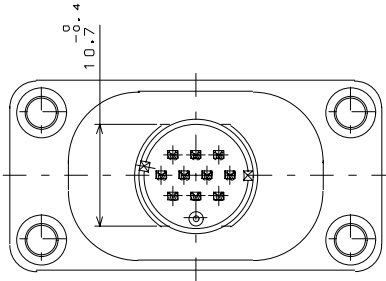
■ Wall mounting type receptacle JN1KS\*\*MK\*\*



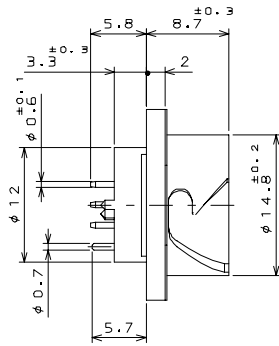
■ Drawing (when mated)



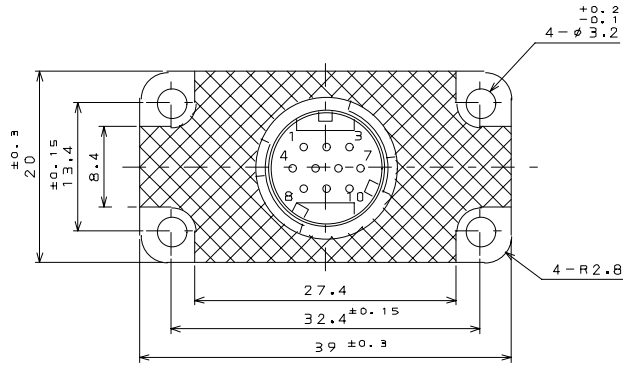
■ Receptacle JN1AS10UL1\*



Connection side

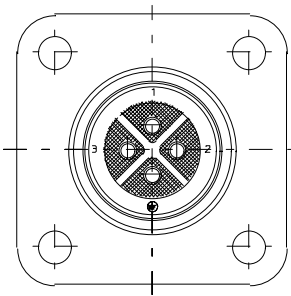


Rear side

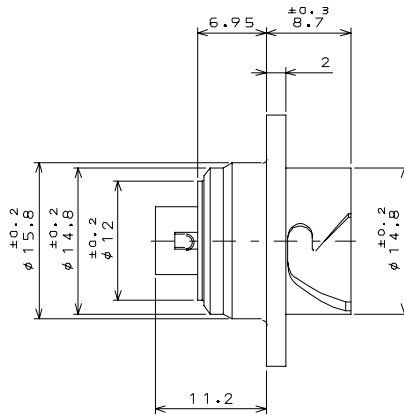


Mating side

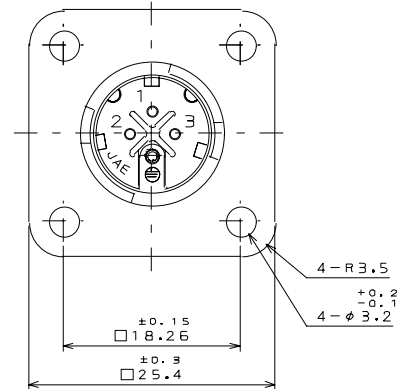
■ Receptacle JN2AS04MK2



Connection side

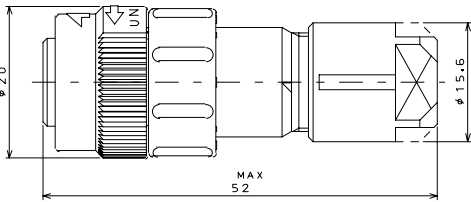


Rear side

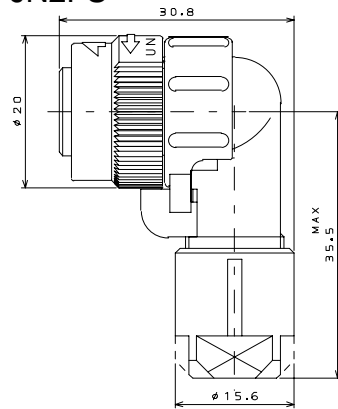


Mating side

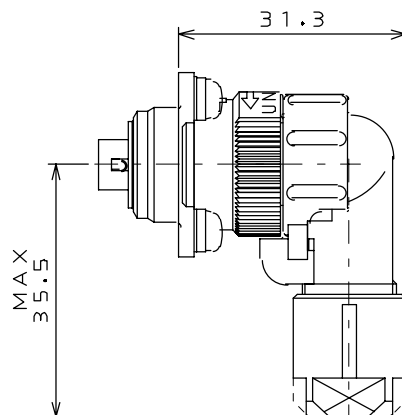
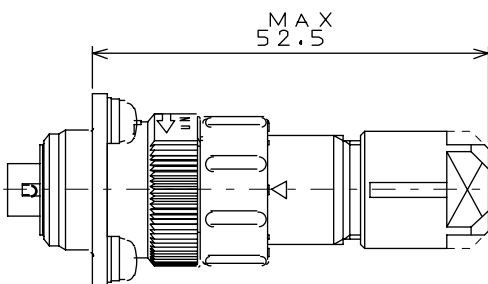
■ Straight plug JN2DS\*\*\*



■ Angle plug JN2FS\*\*\*



■ Drawing (when mated)





[ Chart of applicable wires and tooling ]

Type of Contact	Figuration	Applicable contact Part Number	Type	Applicable wire AWG No.	Tool	Applicable tooling & wire		Instruction manual for tooling
#22	In pieces (100 pcs.)	JN1-22-20*-PKG100	Press	#20, #21	Hand	CT150-2-JN1-D	#20, #21, #25	T700238
		JN1-22-22*-PKG100		#21 to #25 (Note2)		CT150-2-JN1-E	#21, #23, #25	
		JN1-22-26*-PKG100		#26 to #28		CT150-2-JN1-B	#22 to #24, #26 to #28	
	In reels (10,000 pcs.)	JN1-22-20*-10000		#20	Semi-automatic	350-JN1-2C	#20 to #28	T703294
		JN1-22-22*-10000		#21 to #25 (Note2)				
		JN1-22-26*-10000		#26 to #28				

\*P: Pin contact, S: Socket contact

Note2: Please refer to "Instruction manual" concerning applicable wire for AWG#21 crimp connection.

■ Suggested conduit

	Model
Neoflex	RQJN-M13-9, 12QJN-M13-16
Daiwa Dengyo	PCJN-12-M13F
Sannchu Seisakusho	N2KY16-FN3

Please consult with conduit manufacturer regarding use of each conduit.

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**Notice:** Products shown in this leaflet 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.