

NEW

One-touch / Screw Mating Compatible
Circular Waterproof Connector

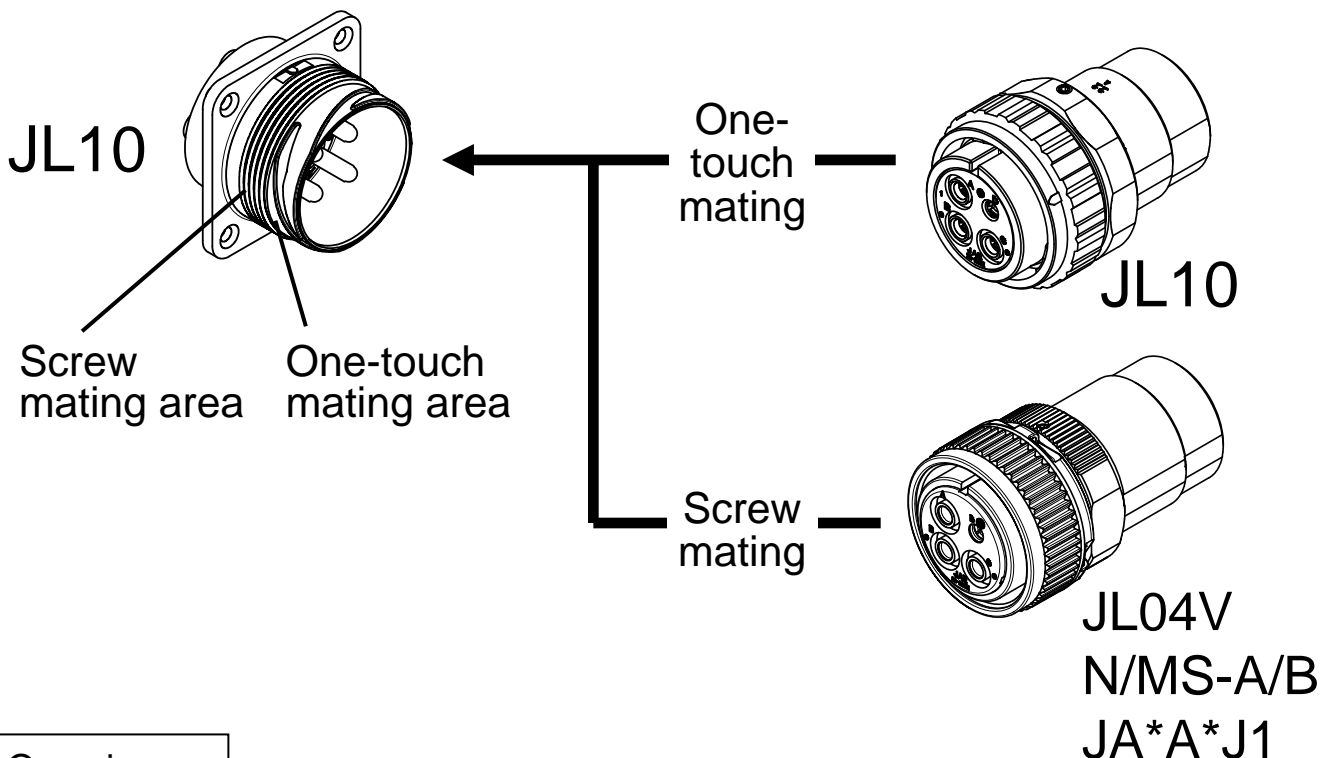
CONNECTOR
MB-0263-1
July 2013

JL10 Series

RoHS Compliant

Receptacle

Plug



Overview

The JL10 Series are one-touch locking circular waterproof connectors for industrial machines approved by TUV as connectors satisfying European safety standards.

The adopted one-touch lock mechanism has a superior mating and unmating operability and it is a product that contributes to ease mating work. Also the JL10 receptacle is a one-touch / screw mating dual connector that has mating compatibility with the conventionally used MIL standard MS connectors and with our screw mating plugs (JL04V, N/MS, JA).

Applications

Industrial machineries, servo motors, robots, semiconductor-fabrication equipment, communication devices, measuring devices, broadcast devices, and others

Features

- Adopts a one-touch bayonet lock method for mating and can be mated securely even when it is hard to confirm mating area by sight and in narrow spaces.
With superior mating and unmating operability it improves mating and unmating work (improved screw fastening work, and no need for torque control)
- JL10 Receptacle is a one-touch / screw mating dual type.
One-touch mating: when using JL10 plug
Screw mating: MIL standard MS connector and our general type N/MS-A/B Series, JL04V Series, JA*A Series using J1 type plug
- With guide mark (color: white) on JL10 Series receptacle and plug mating condition can be confirmed by sight.
- Low-profile compact design and direction of the cable leader of angled type can be set in arbitrary 8 directions in 45 degrees increments.
- Cable clamp is the same as JL04V.
- UL and TÜV approval obtained products.
- IP67 waterproof and dustproof.
Receptacle is individually water-proofed.
- Environmental resistance with superior vibration and oil resistance.

General Specifications

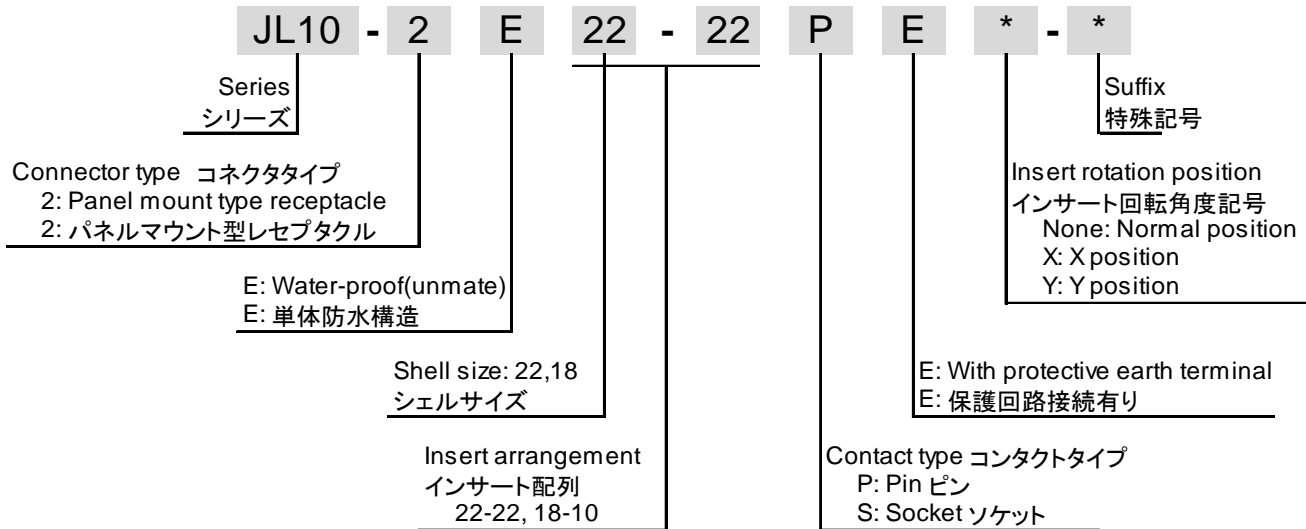
Items	Specification and Performance	
Array	18-10 (#12 size contact X 4 pos.)	22-22 (#8 size contact X 4 pos.)
Rated Current	23A / position max.	46A / position max. 57A / position max. (applicable wire 8 to 10mm ²)
Rated Voltage	500VAC (pollution level: 2 / over-voltage category II) 250VAC (pollution level: 3 / over-voltage category III)	500VAC (pollution level: 2 / over-voltage category II) 250VAC500VAC (pollution level: 3 / over-voltage category III)
Dielectric Withstanding Voltage	2000VAC (per minute)	2000VAC (per minute)
Insulation Resistance	1000MΩ min. (DC500V energized)	1000MΩ min. (DC500V energized)
Waterproof Performance	IP67	IP67
Termination	Soldering connection 3.5mm ² max.	Soldering connection 10mm ² max.
Product Specification	JACS-50101	JACS-50101
Handling Instruction	JAHL-50101	JAHL-50101
Durability	500 mating cycles	500 mating cycles

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

	Components	Material / Finish
Receptacle	Contact	Copper alloy / silver plating
	Earth Pin	Copper alloy / silver plating
	Front Insulator	Silicon rubber
	Rear Insulator	Synthetic resin
	Shell	Aluminum alloy / zinc plating
	Retaining Ring	Copper alloy / zinc plating
Individual Plug	Set Screw	Steel / zinc plating
	O Ring	Synthetic rubber
	Retaining Ring	Copper alloy / zinc plating
	Wave Spring	Stainless Steel
	C Type Ring	Stainless Steel
	Contact	Copper alloy / silver plating
	Front Insulator	Synthetic resin
	Rear Insulator	Synthetic resin
	Assembly Nut	Aluminum alloy / zinc plating
	Coupling Nut	Aluminum alloy / zinc plating
	Barrel	Aluminum alloy / zinc plating
Straight Plug Angle Plug	Endbell	Aluminum alloy / zinc plating
	Set Screw	Steel / zinc plating
	O Ring	Synthetic rubber
	Retaining Ring	Copper alloy / zinc plating
	Wave Spring	Stainless Steel
	C Type Ring	Stainless Steel
	Contact	Copper alloy / silver plating
	Front Insulator	Synthetic resin
	Rear Insulator	Synthetic resin
	Assembly Nut	Aluminum alloy / zinc plating
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	Barrel	Aluminum alloy / zinc plating

Ordering Information and Line-up

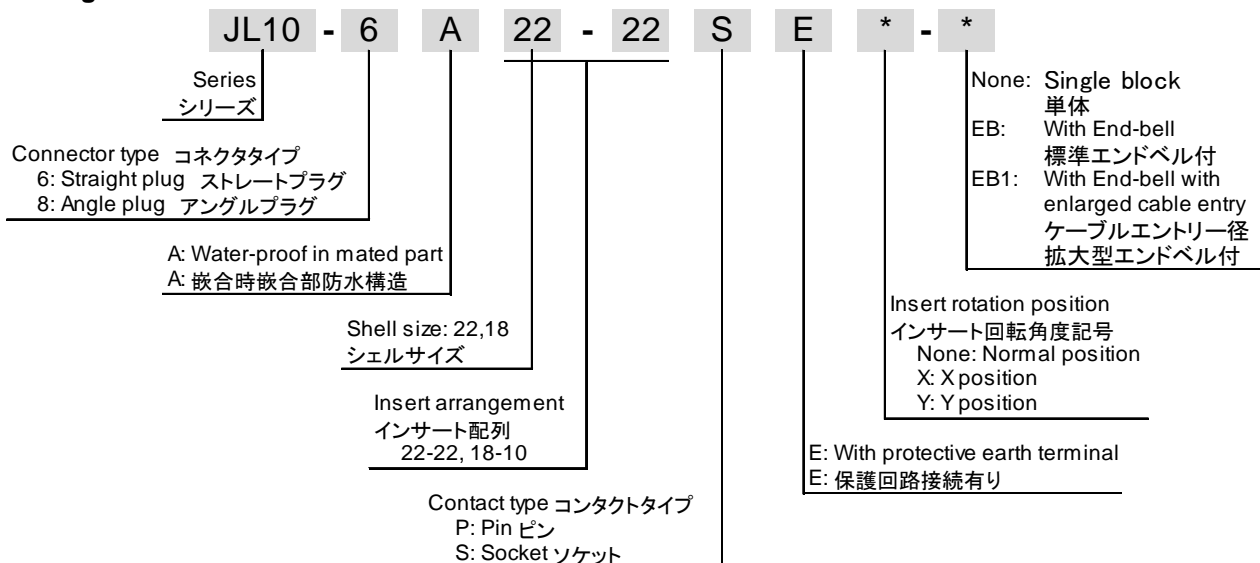
<<Receptacle>>



Connector Type	Part Number	Array	Contact Type	Waterproof Type	SJ Drawing No.
Receptacle	JL10-2E18-10PE	18-10	Pin	Individually Waterproofed	SJ112315
	JL10-2E22-22PE	22-22	Pin	Individually Waterproofed	SJ112313

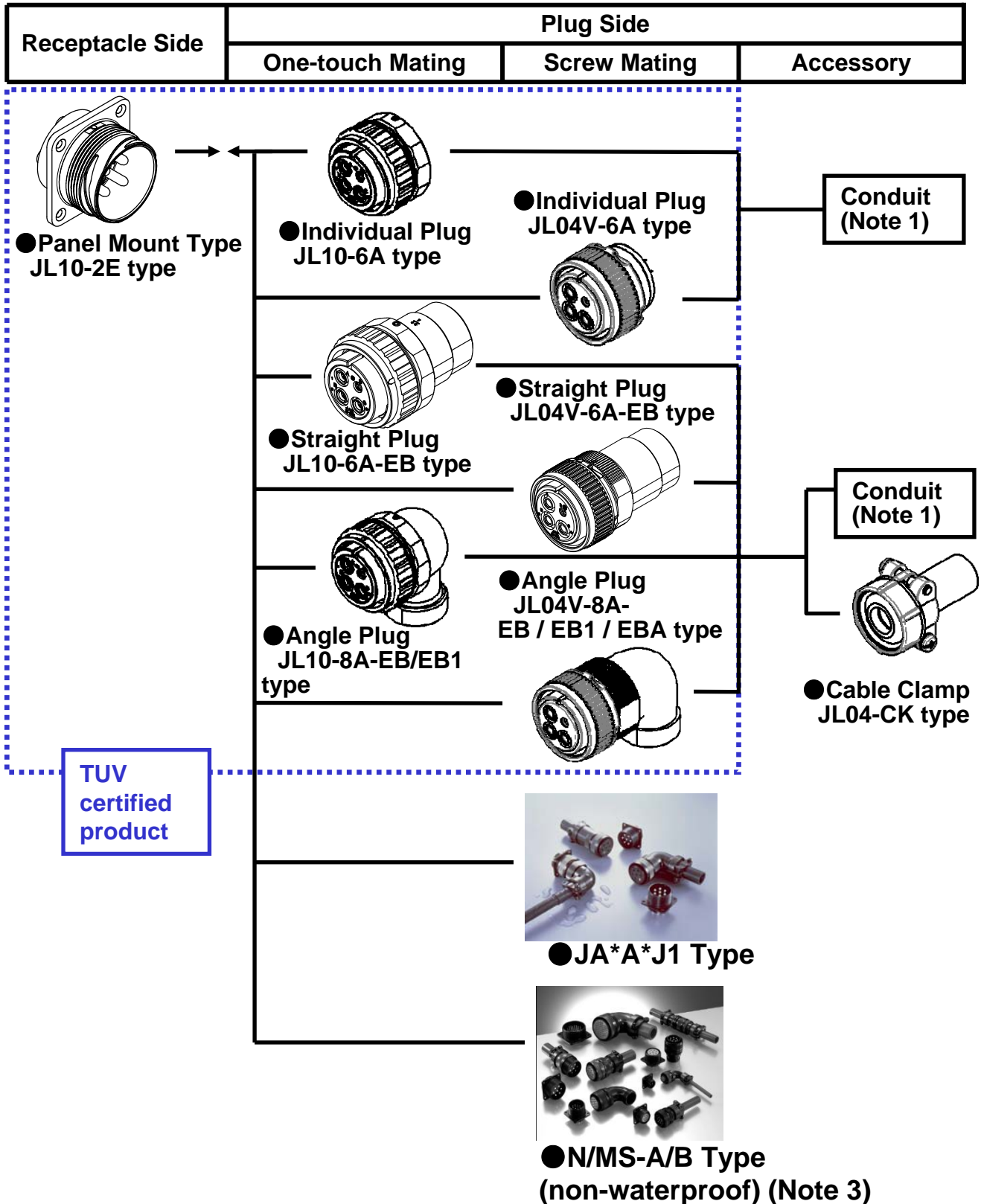
Please consult us when concerning receptacle.

<<Plug>>



Connector Type	Part Number	Array	Contact Type	SJ Drawing No.
Individual Plug	JL10-6A18-10SE	18-10	Socket	SJ112323
	JL10-6A22-22SE	22-22	Socket	SJ112320
Straight Plug	JL10-6A18-10SE-EB	18-10	Socket	SJ112322
	JL10-6A22-22SE-EB	22-22	Socket	SJ112317
Straight Plug (compatible with thick wire)	JL10-6A22-22SE-EB1	22-22	Socket	SJ112319
Angle Plug	JL10-8A18-10SE-EB	18-10	Socket	SJ112321
	JL10-8A22-22SE-EB	22-22	Socket	SJ112316
Angle Plug (compatible with thick wire)	JL10-8A22-22SE-EB1	22-22	Socket	SJ112318

Line-up and combinations

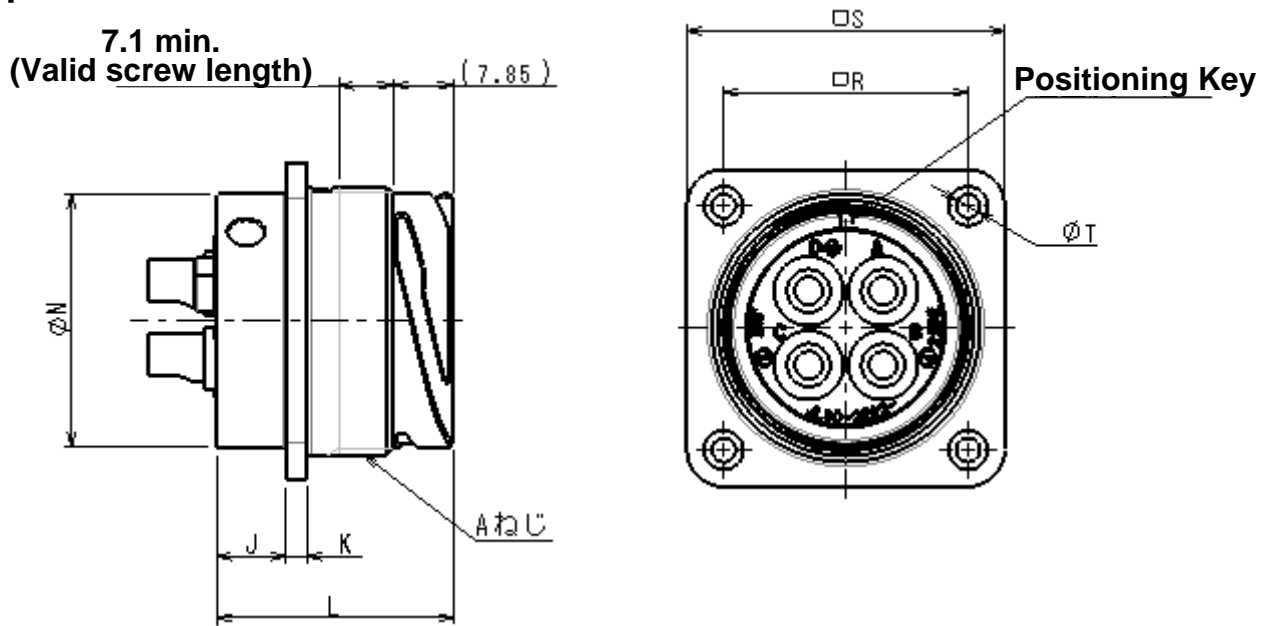


Note 1) Please contact us or the conduit manufacturer when regarding use of conduit.

Note 2) When concerning JL04V Series, N/MS-A/B Series, and J1 type JA*A Series please refer to the individual catalogs for each products.

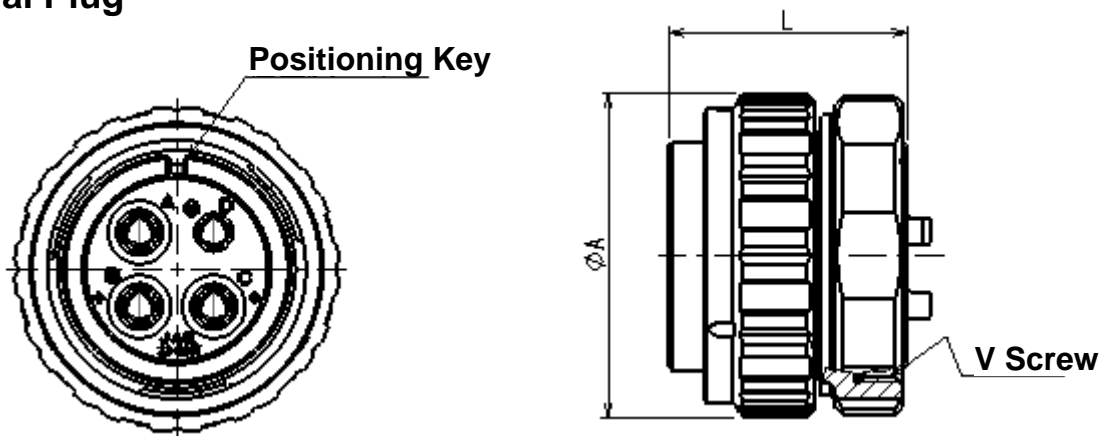
Note 3) Non-waterproof when assembled with N/MS-A/B type plug.

Receptacle



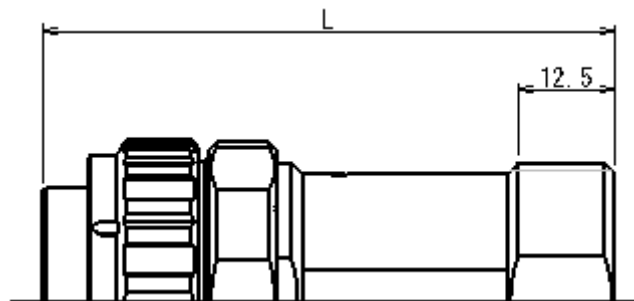
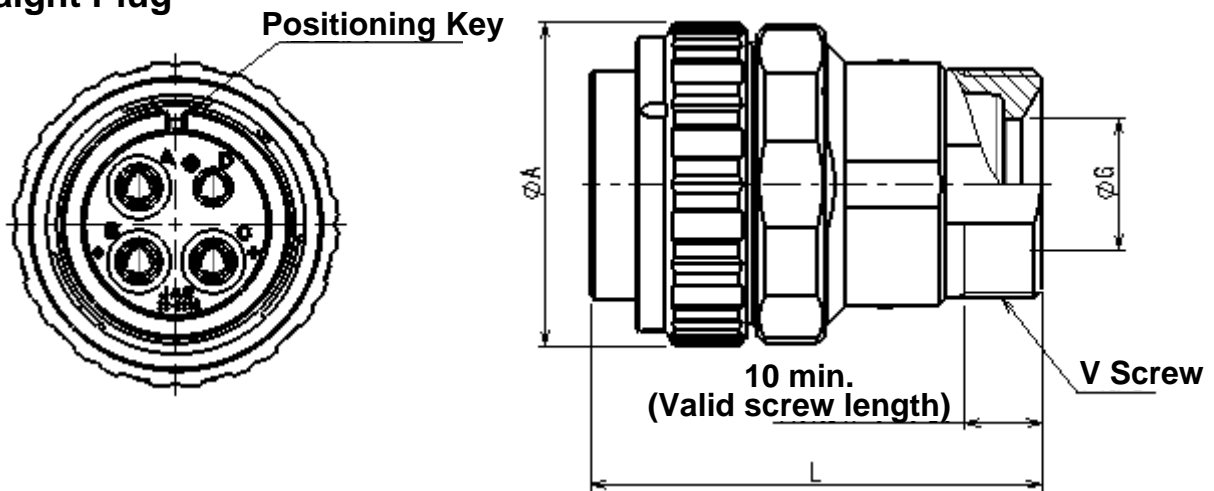
Part Number	A Screw	K ± 0.3	J ± 0.3	L ± 0.3	Dia. N 0 -0.4	$\square R$ ± 0.13	$\square S$ ± 0.79	Dia. T +0.2 -0.1
JL10-2E18-10PE	1 1/8-18UNEF-2A	2.7	8.25	30	27	26.97	34.9	3.1
JL10-2E22-22PE	1 3/8-18UNEF-2A	2.7	9.1	30.85	33	31.75	41.3	3.1

Individual Plug

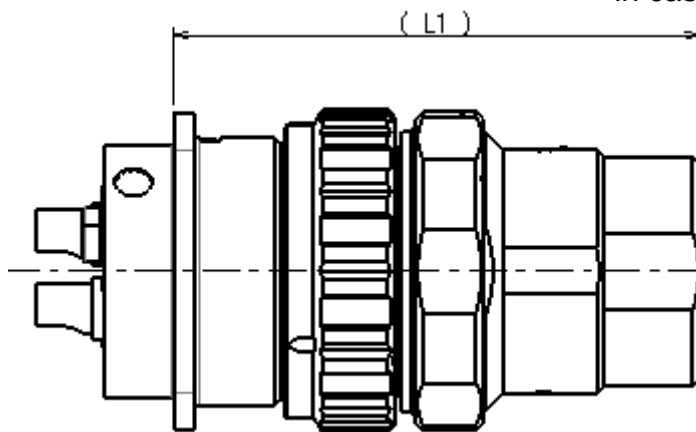


Part Number	Dia. A ± 0.8	L ± 0.4	V Screw
JL10-6A18-10SE	35.85	30	1 3/16-18UNEF-2B
JL10-6A22-22SE	42.2	31.05	1 7/16-18UNEF-2B

Straight Plug



For reference:
in case of 22-22SE-EB1

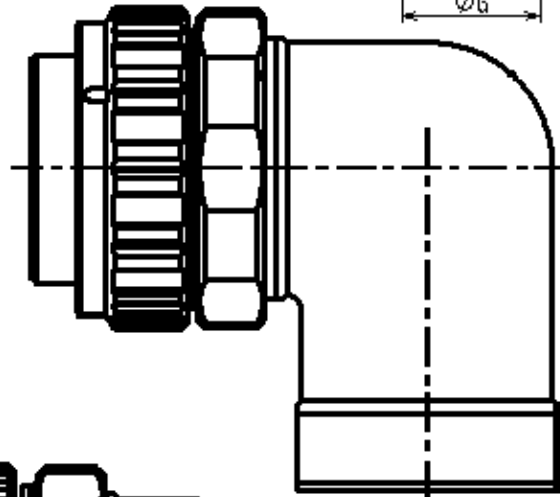
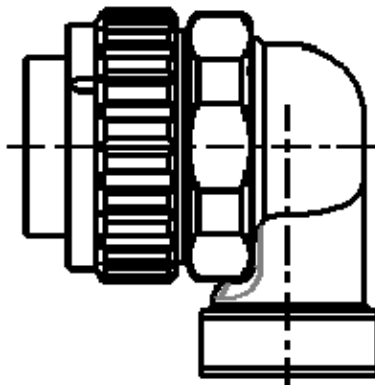
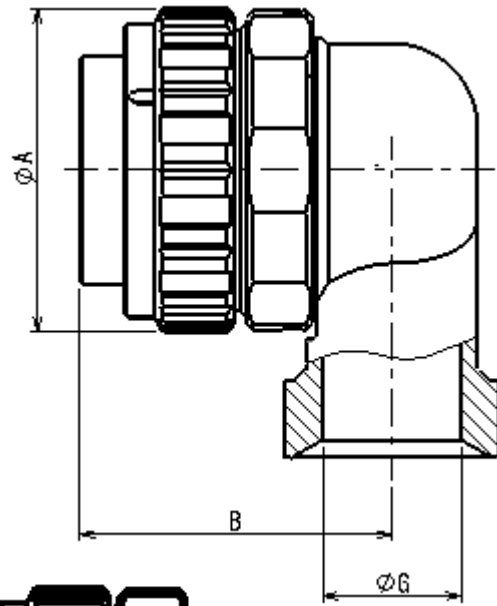
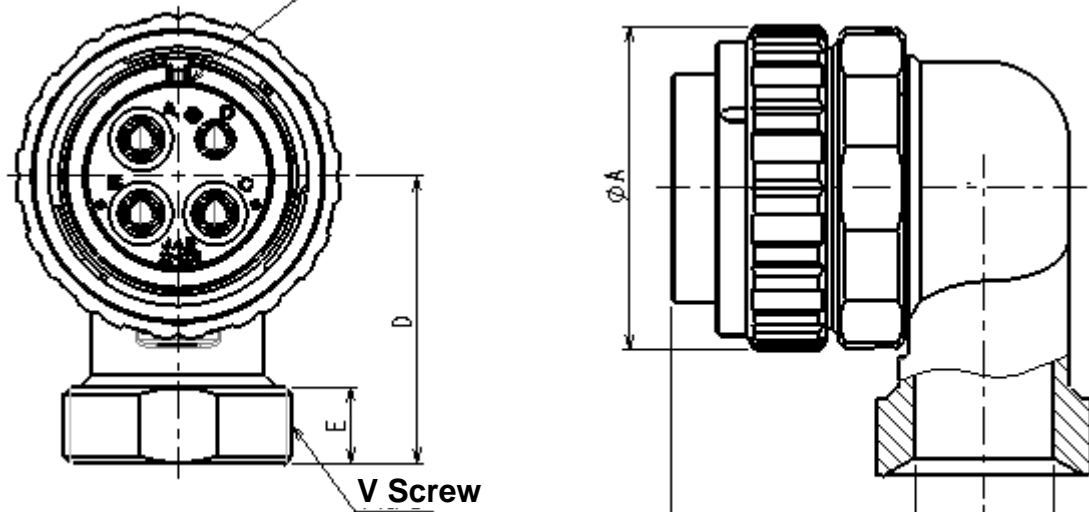


For reference:
in case of 22-22SE-EB

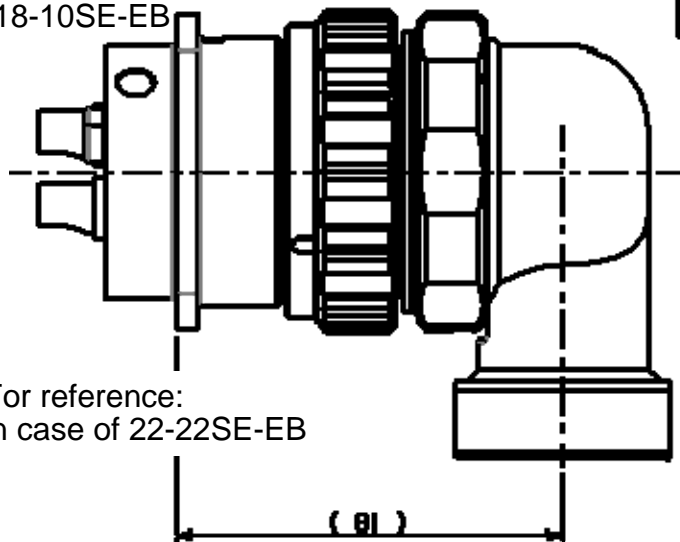
Part Number	Dia. A ± 0.8	Dia. G ± 0.5	L ± 0.8	(L1)	V Screw
JL10-6A18-10SE-EB	35.85	15	51.05	60.58	1-20UNEF-2A
JL10-6A22-22SE-EB	42.2	17	58.65	68.45	1 3/16-18UNEF-2A
JL10-6A22-22SE-EB1	42.2	22	74.35	84.15	1 7/16-18UNEF-2A

Angle Plug

Positioning Key



For reference:
in case of 18-10SE-EB



For reference:
in case of 22-22SE-EB1

For reference:
in case of 22-22SE-EB

Part Number	Dia. A ±0.8	B ±0.8	(B1)	D ±0.8	E ±0.5	Dia. G ±0.5	V Screw
JL10-8A18-10SE-EB	35.85	34.55	44.35	30	8.5	16	1-20UNEF-2A
JL10-8A22-22SE-EB	42.2	40.65	50.45	37.4	10	18	1 3/16-18UNEF-2A
JL10-8A22-22SE-EB1	42.2	51.6	61.4	42	10	22	1 7/16-18UNEF-2A

Accessory: Cable Clamp (sold separately)

Cable clamp is the same as our JL04V Series.

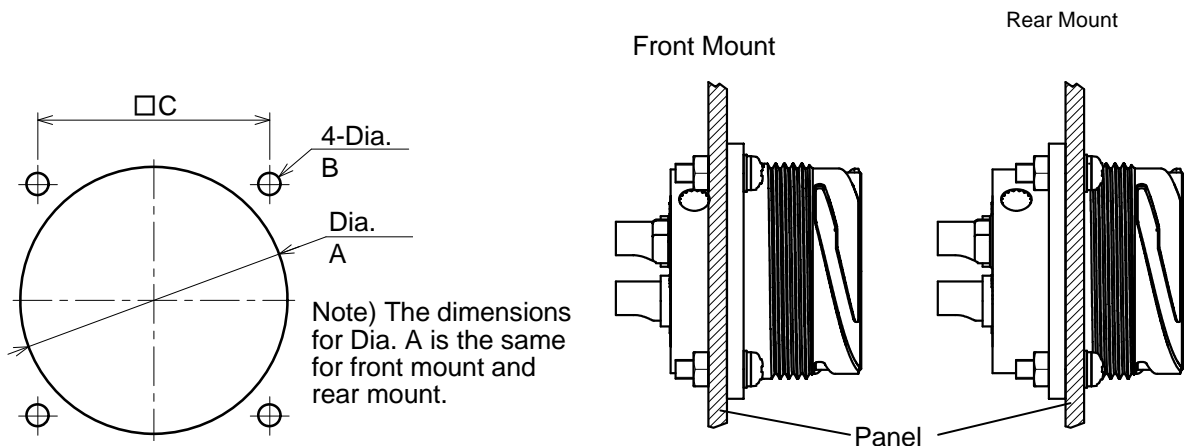
Cable Clamp Part Number	Applicable Cable Diameter	Applicable Connector
JL04-18CK(07)-*-R	Dia. 5 to Dia. 8	JL10-6A18-10SE-EB JL10-8A18-10SE-EB
JL04-18CK(13)-*-R	Dia. 11 to Dia. 14.1	
JL04-2022CK(09)-*-R	Dia. 6.5 to Dia. 9.5	JL10-6A22-22SE-EB JL10-8A22-22SE-EB
JL04-2022CK(12)-*-R	Dia. 9.5 to Dia. 13	
JL04-2022CK(14)-*-R	Dia. 12.9 to Dia. 16	
JL04-2428CK(11)-*-R	Dia. 9 to Dia. 12	JL10-6A22-22SE-EB1 JL10-8A22-22SE-EB1
JL04-2428CK(14)-*-R	Dia. 12 to Dia. 15	
JL04-2428CK(17)-*-R	Dia. 15 to Dia. 18	
JL04-2428CK(20)-*-R	Dia. 18 to Dia. 20	

Panel Mount Dimensions for Reference

(1) Front mount: Receptacle is attached to the front side of the panel and case. Cable termination side will be inside when attached.

(2) Rear mount: Receptacle is attached to the back side of the panel and case. Please be aware of the panel thickness when concerning this product.

* Attachment dimensions are the same as our JL04V Series.



Shell Size	Dia. A ±0.5	Dia. B	□C±0.13	Attachment Screw (for reference)		Max Thickness of Rear Mount Panel
				Metric screw thread	Unified screw thread	
18	30.2	3.3	26.97	M3	#4-40	3mm max.
22	36.6	3.3	31.75	M3	#4-40	3mm max.

Accessory: Gasket (Sold separately)

There is a gasket to prevent water immersion from the holes on main case when receptacle is attached to panel (case). Gasket is the same as our JL04V Series.

Note 1) For the screw hole area there is a need for water immersion countermeasure other than the gasket. Please prepare countermeasures at customers.

Shell Size	Gasket No.	SJ Drawing
18	075-50157	SJ009289
22	075-50159	SJ009289

Cautions

<<JL10 Caution 1>>



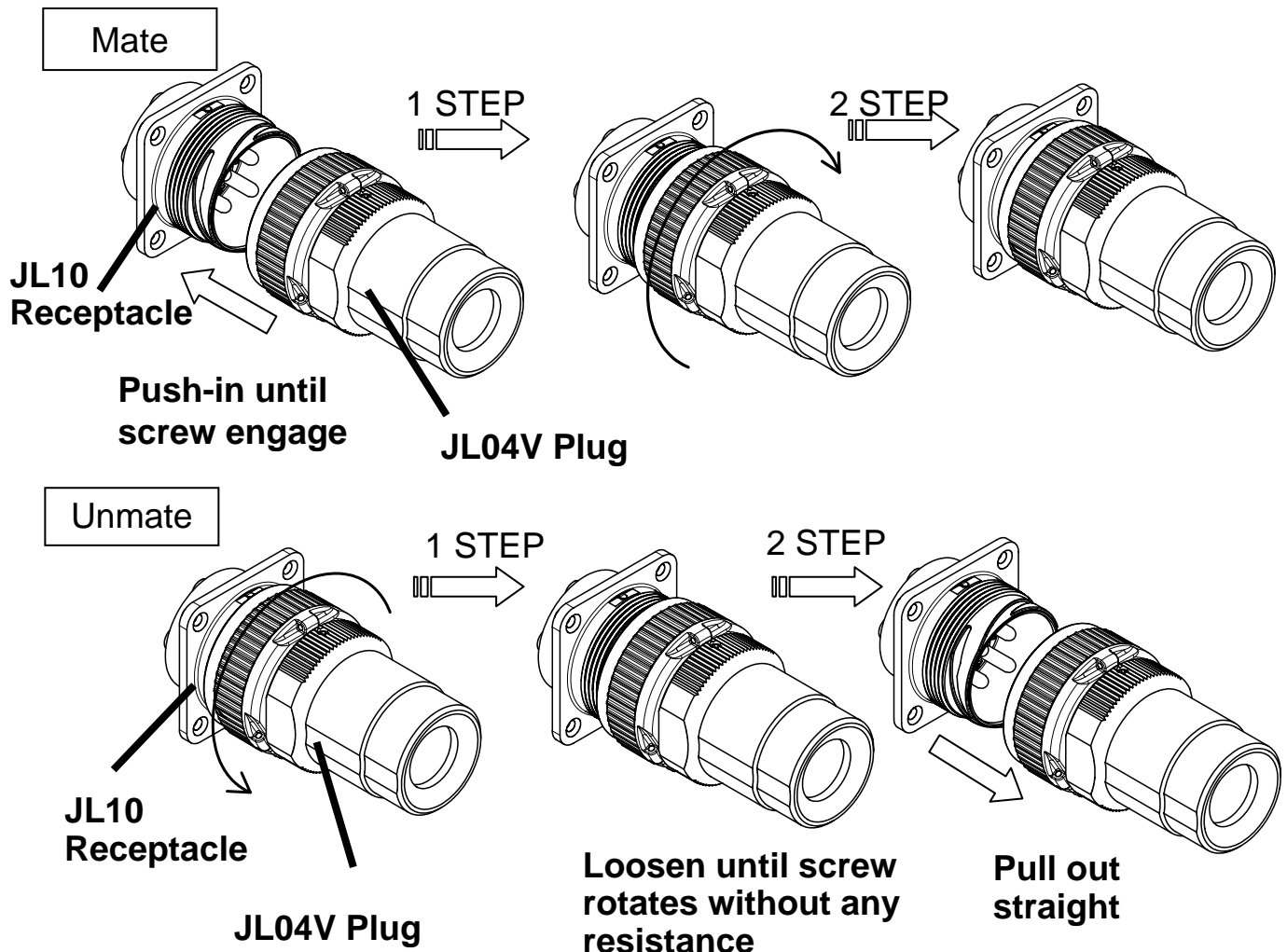
Please note that JL10 plug cannot be mated with JL04V receptacle.

	Receptacle	Plug	Mating
Combinations	JL04V	JL10	NG
	JL04V	JL04V	OK
	JL10	JL04V	OK
	JL10	JL10	OK

<<JL10 Caution 2>>



When using JL10 receptacle and JL04 plug, mating and unmating operation will be the two steps as shown below.



Memo

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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