

JL10 Series

Circular Waterproof Connector

Connector Training Module

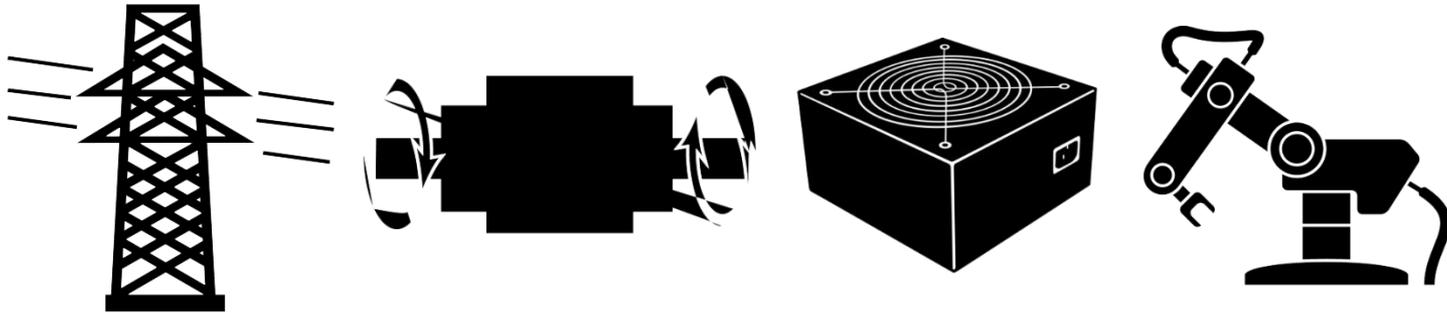
Technology to Inspire Innovation



JAE JL10 Series Circular Waterproof Connector

Application Examples

- Industrial machineries
- Servo Motors
- Robots
- Semiconductor-fabrication equipment
- Communication devices
- Measuring devices
- Broadcast devices and others



JL10 Series Overview

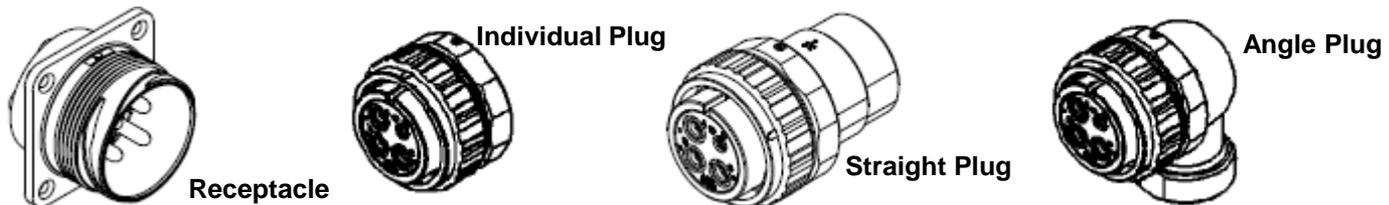
JAE's JL10 Series are circular waterproof connectors for industrial machines. They are approved by TÜV as connectors satisfying European safety standards. The adopted single-touch locking mechanism has a superior mating and unmating operability with easy coupling work. The JL10 receptacle is also a single-action / 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).



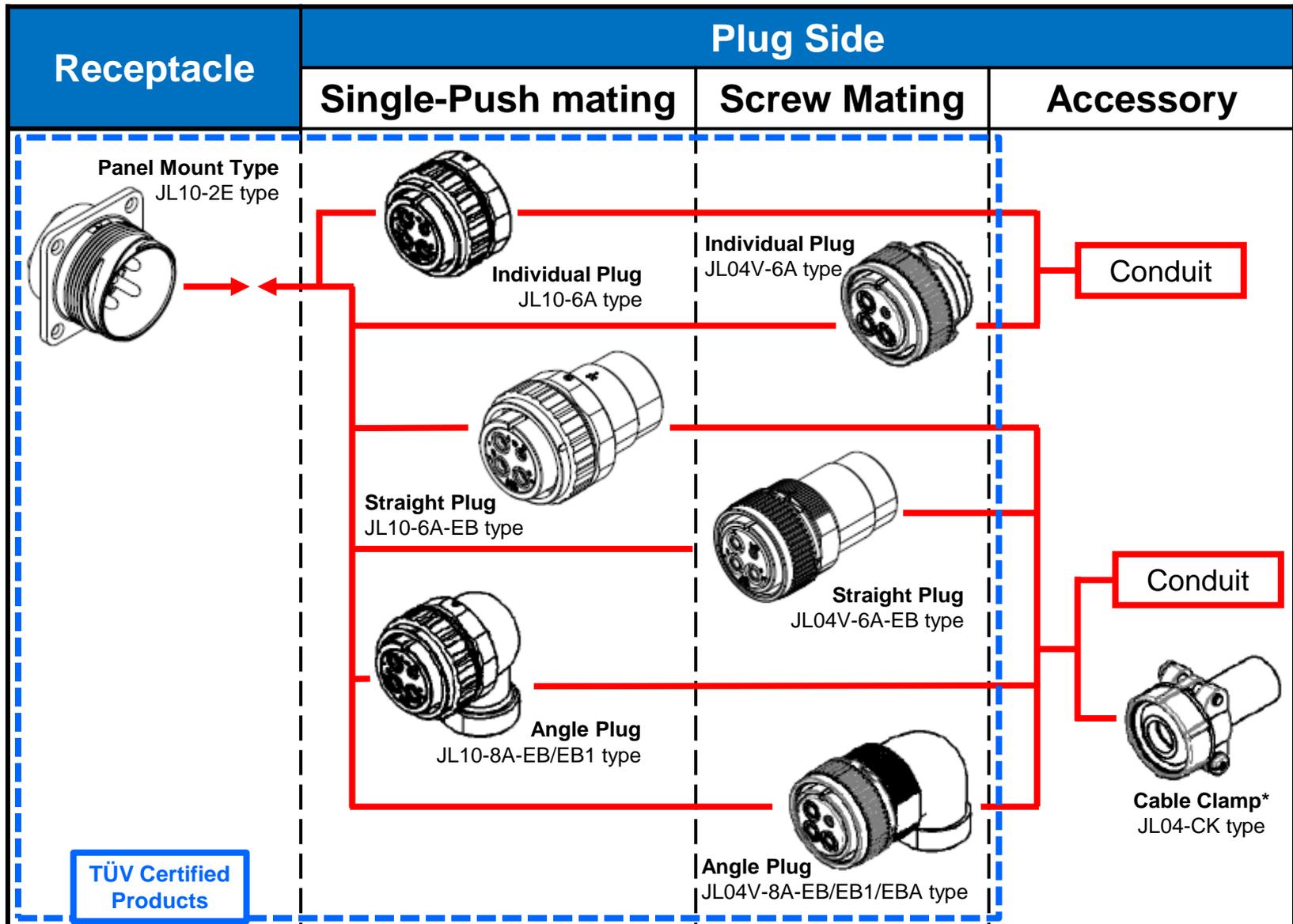
JL10 Series Features

Low-profile compact design with one-touch mating

- Adopts a one-touch bayonet locking method for mating
- JL10 Receptacle is a single-action / screw mating dual type.
 - Single-push 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
- The angled types cable leader can be set in 8 arbitrary directions by 45 degrees increments.
- Cable clamp is the same as JL04V
- UL and TÜV approval obtained products
- IP67 waterproof and dustproof
 - Receptacle is individually waterproof
- Environmental resistance with superior vibration and oil resistance.



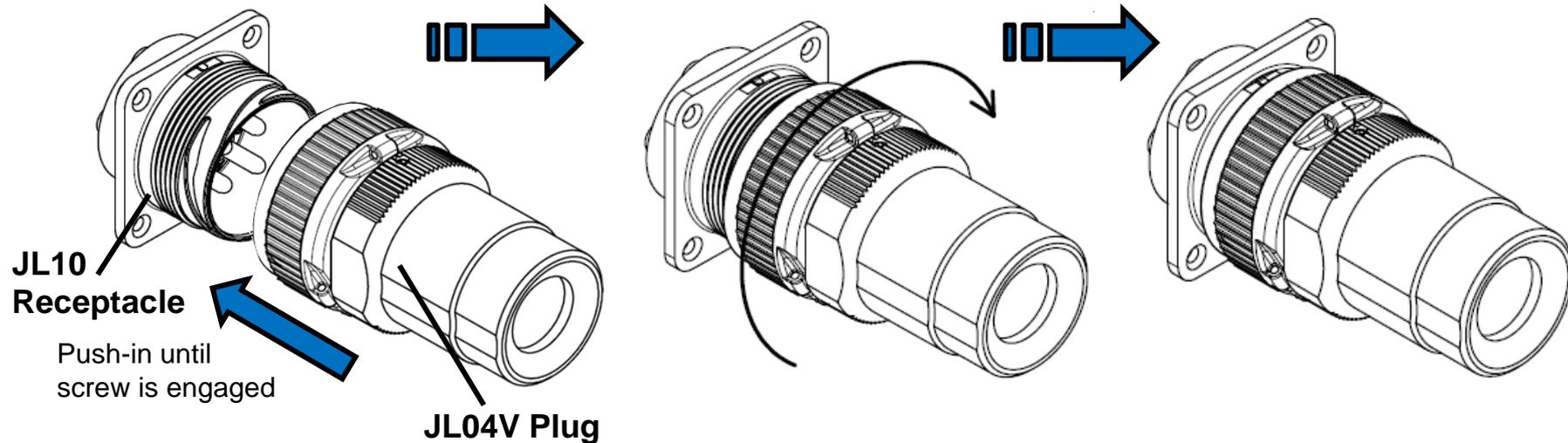
JL10 Series Line-up and Combinations



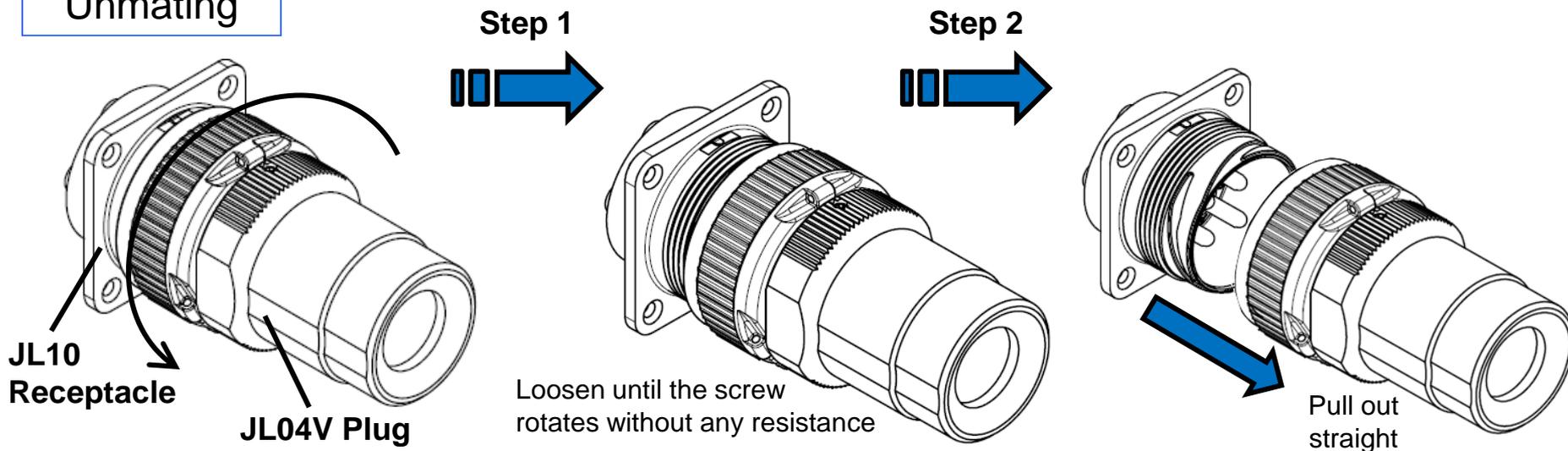
Note: Cable Clamp sold separately – Cable clamp is the same as JL04V Series

JL10 Series: Mating and Unmating

Mating



Unmating



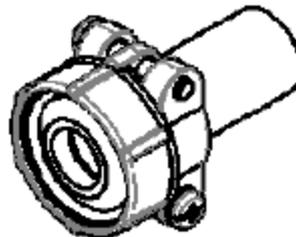
JL10/JL04 Series Line-Up and Combinations

Cable Clamp*

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	

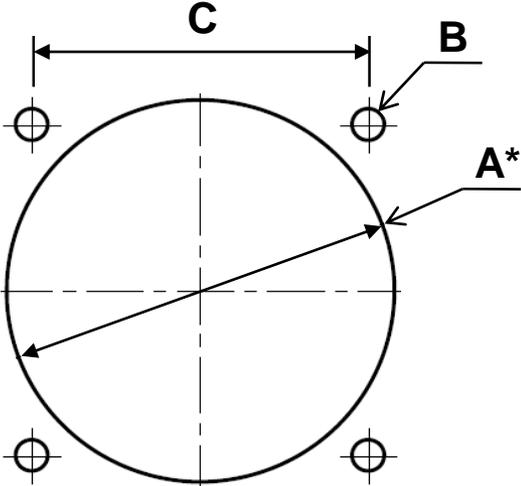
Note: Cable Clamp sold separately – Cable clamp is the same as JL04V Series

Cable Clamp
(JL04 Series)



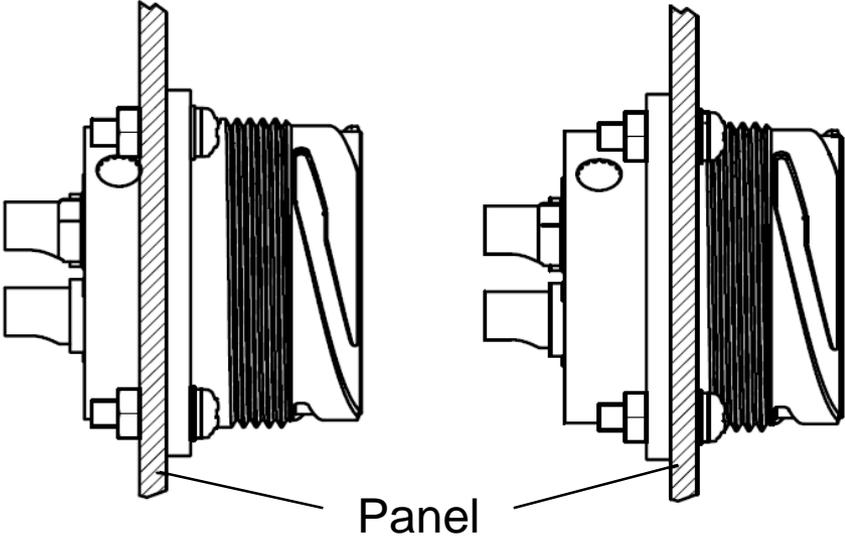
JL10 Series Panel Mount Options

Panel Mount



Front Mount

Rear Mount



Shell Size	A (diameter)	B (diameter)	C	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.

Note: Dimensions for "A" are the same for front mount and rear mount.

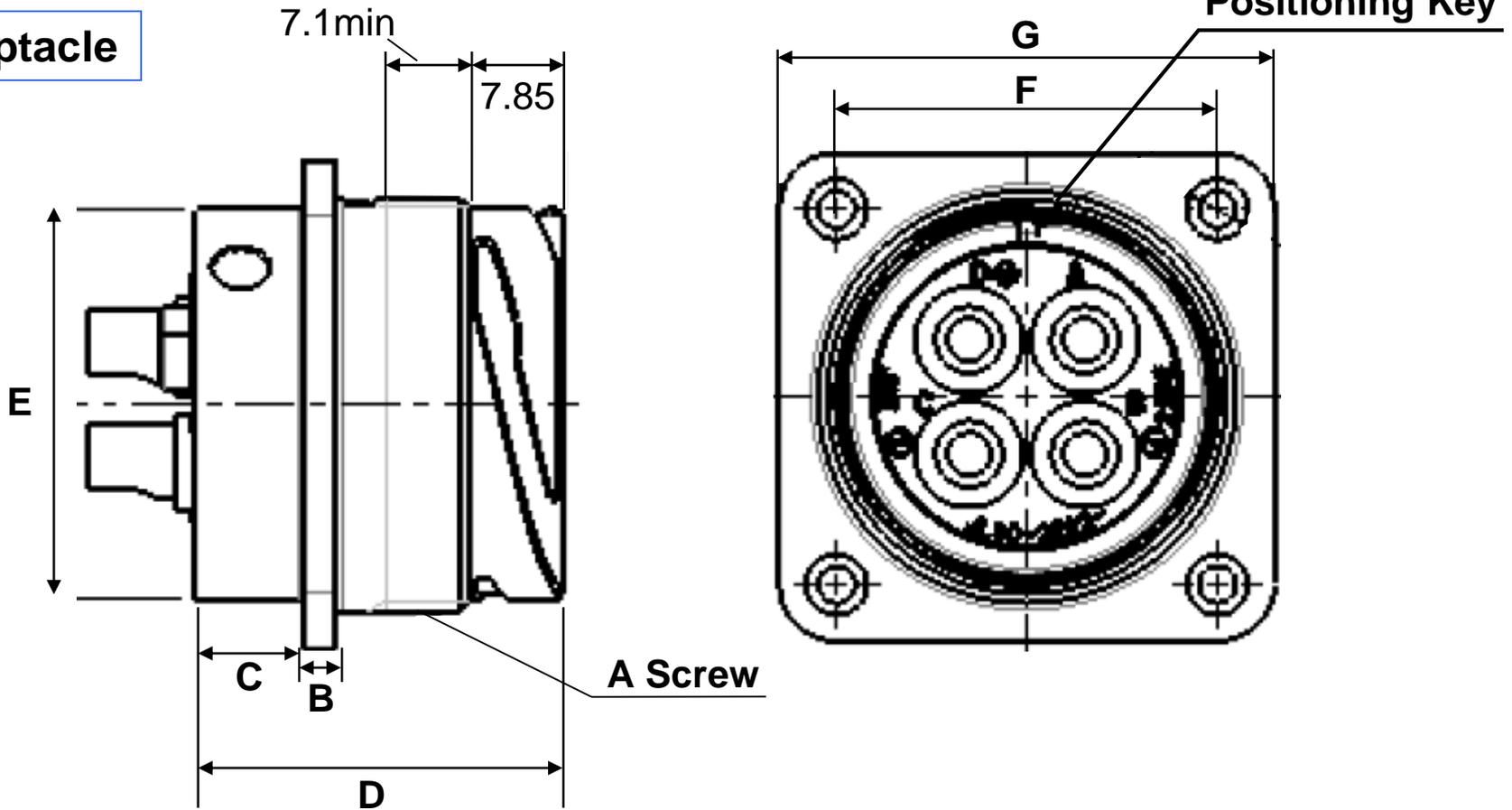
General Specifications

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

Basic Dimensions

*All units in mm

Receptacle

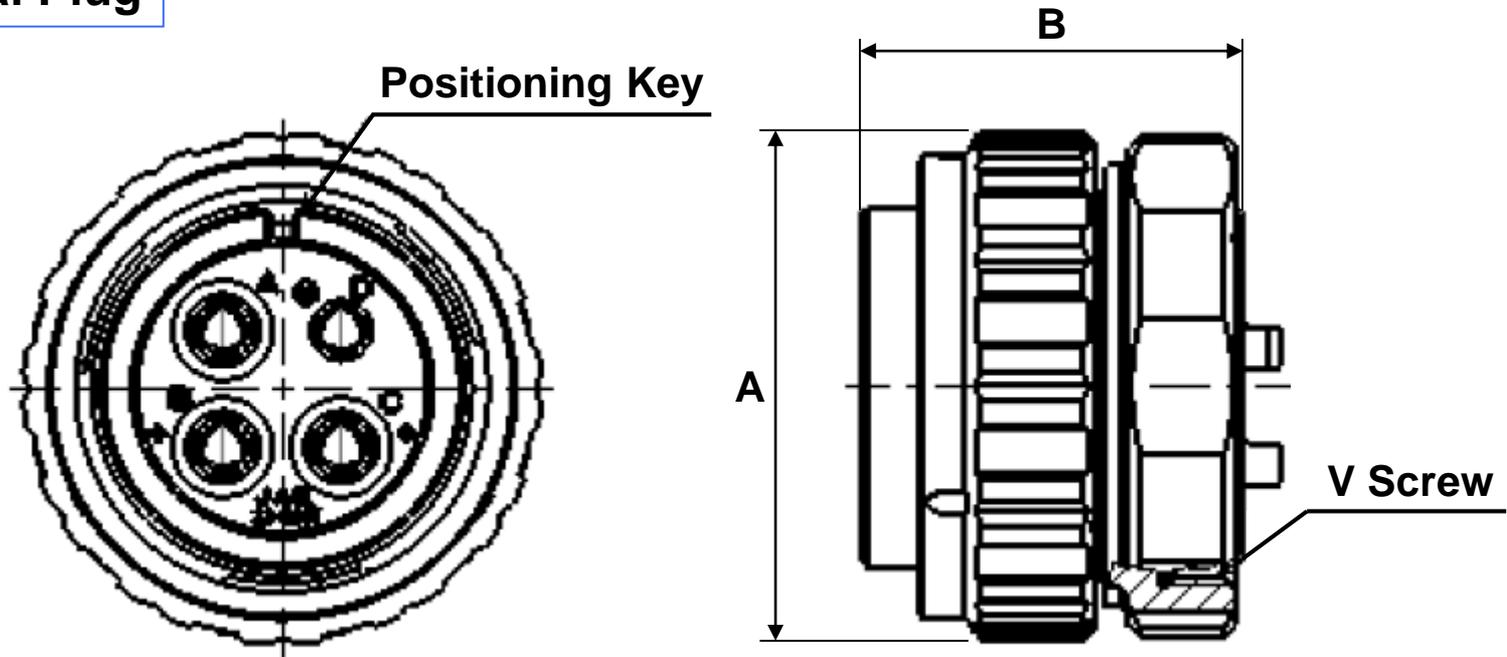


Part Number	A Screw	B	C	D	E (diameter)	F	G
JL10-2E18-10PE	1 1/8-18UNEF-2A	2.7	8.25	30	27	26.97	34.9
JL10-2E22-22PE	1 3/8-18UNEF-2A	2.7	9.1	30.85	33	31.75	41.3

Basic Dimensions

*All units in mm

Individual Plug

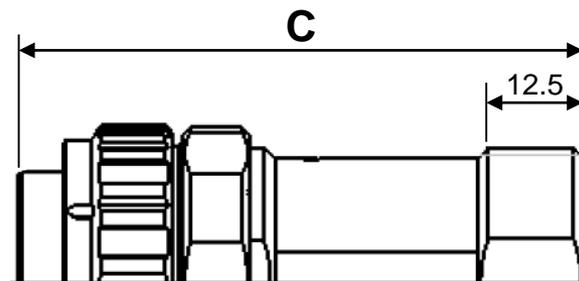
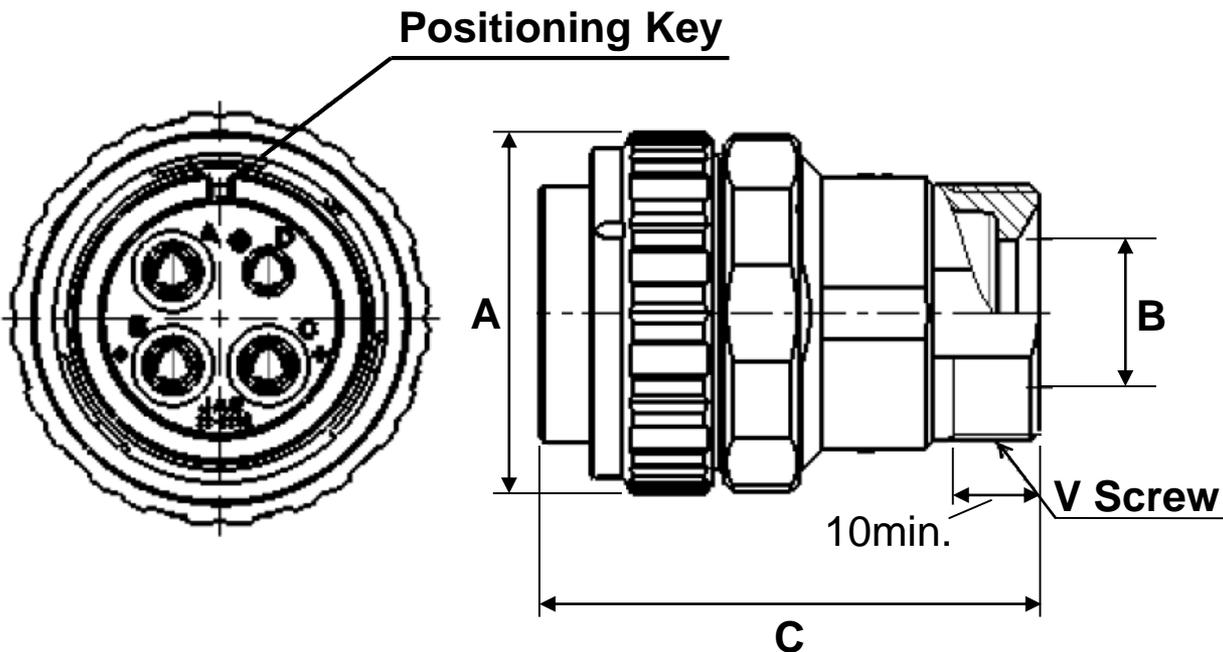


Part Number	A (diameter)	B	V Screw
JL10-6A18-10SE	35.85	30	1 3/16-18UNEF-2B
JL10-6A22-22SE	42.2	31.05	1 7/16-18UNEF-2B

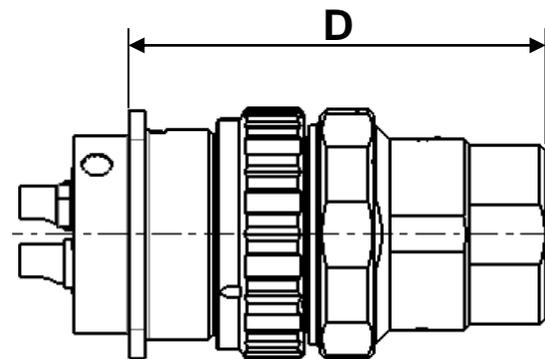
Basic Dimensions

*All units in mm

Straight Plug



*JL10-6A22-22SE-EB1



*JL10-6A22-22SE-EB

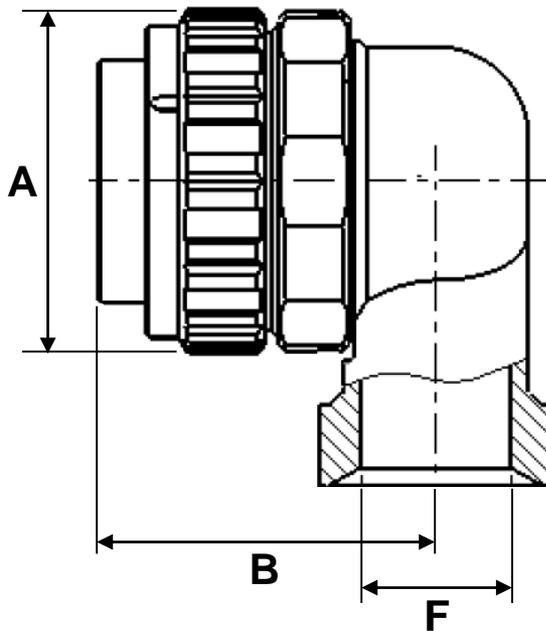
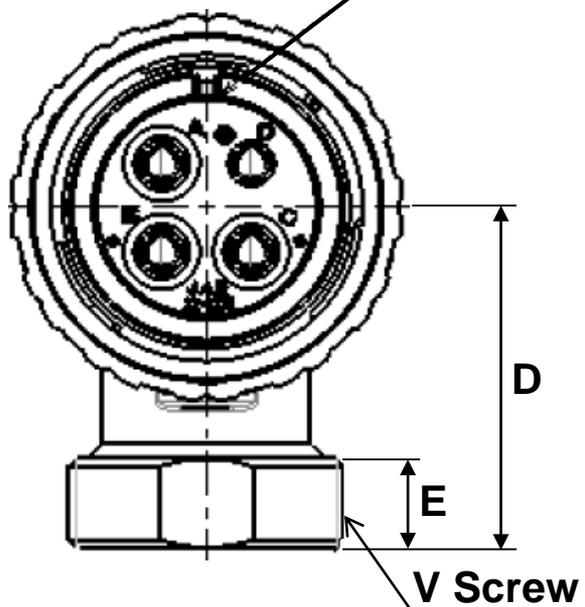
Part Number	A (diameter)	B (diameter)	C	D	V Screw
JL10-6A18-10SE-EB	35.85	15	51.05	60.58	1-20UNEF-2A
JL10-6A22-22SE-EB	42.2	17	58.65	68.45	1 3/16-18UNEF-2A
JL10-6A22-22SE-EB1	42.2	22	74.35	84.15	1 7/16-18UNEF-2A

Basic Dimensions

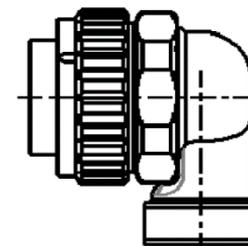
*All units in mm

Angle Plug

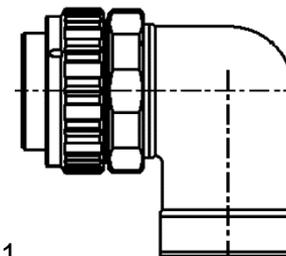
Positioning Key



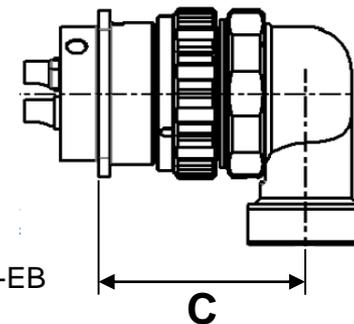
*JL10-8A18-10SE-EB



*JL10-8A22-22SE-EB1



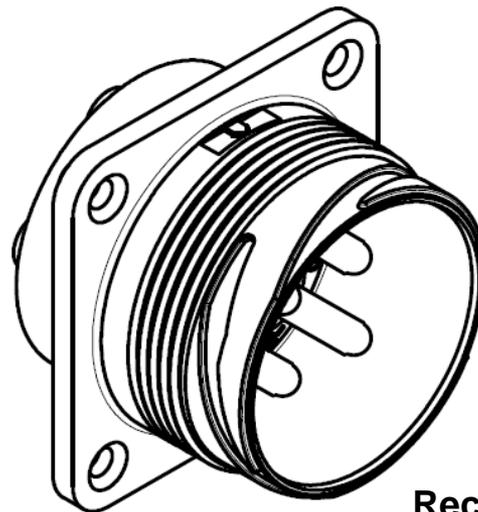
*JL10-8A22-22SE-EB



Part Number	A (diameter)	B	C	D	E	F (diameter)	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

Materials and Finishes

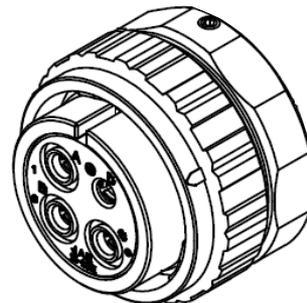
Part	Components	Material / Finish
<i>Receptacle</i>	Contact	Copper alloy / silver plating
	Earth Pin	Copper alloy / silver plating
	Front Insulator	Silicon rubber
	Rear Insulator	Synthetic resin
	Shell	Aluminum alloy / zinc plating
	Retaining Ring	Copper alloy / zinc plating



Receptacle

Materials and Finishes

Part	Components	Material / Finish
<i>Individual Plug</i>	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

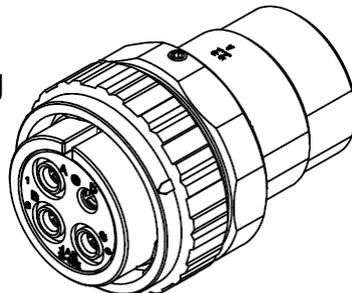


Individual Plug

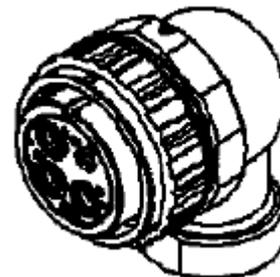
Materials and Finishes

Part	Components	Material / Finish
<i>Straight Plug</i> <i>Angle Plug</i>	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
	Coupling Nut	Aluminum alloy / zinc plating
	Barrel	Aluminum alloy / zinc plating

Straight Plug

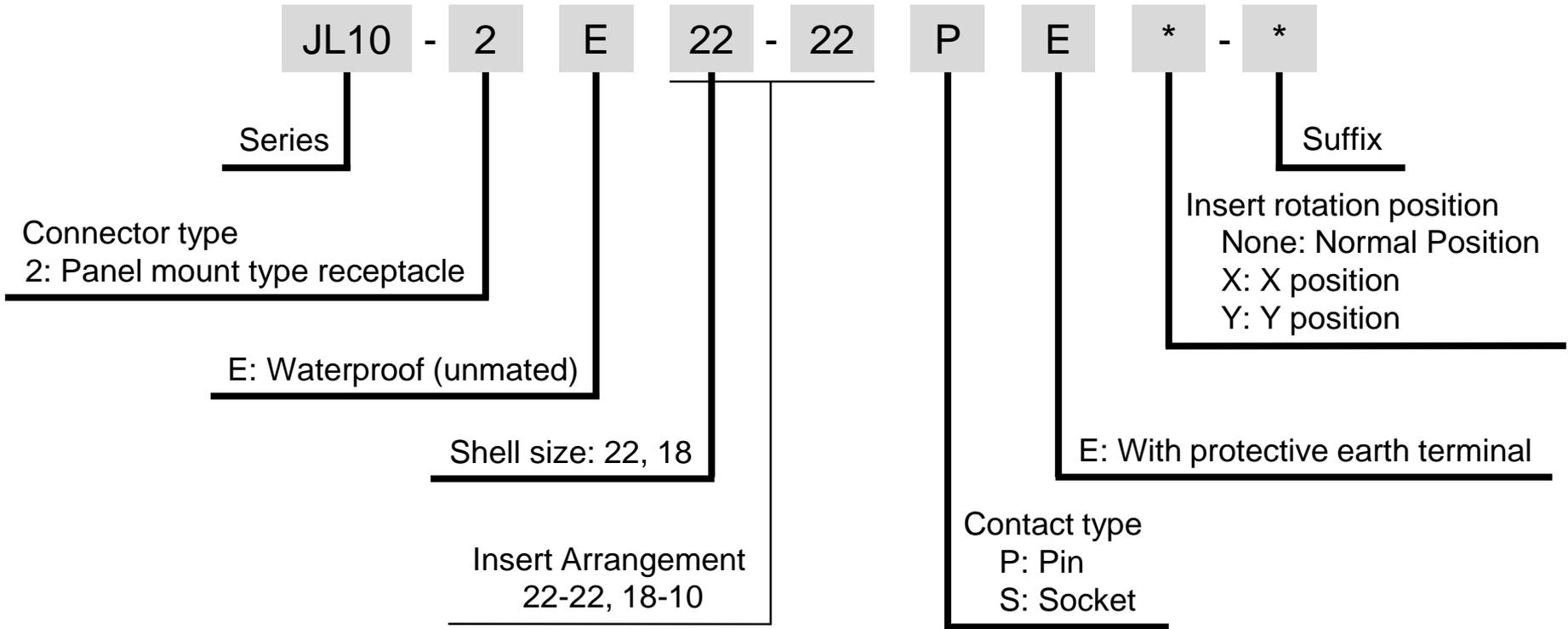


Angle Plug



Ordering Information

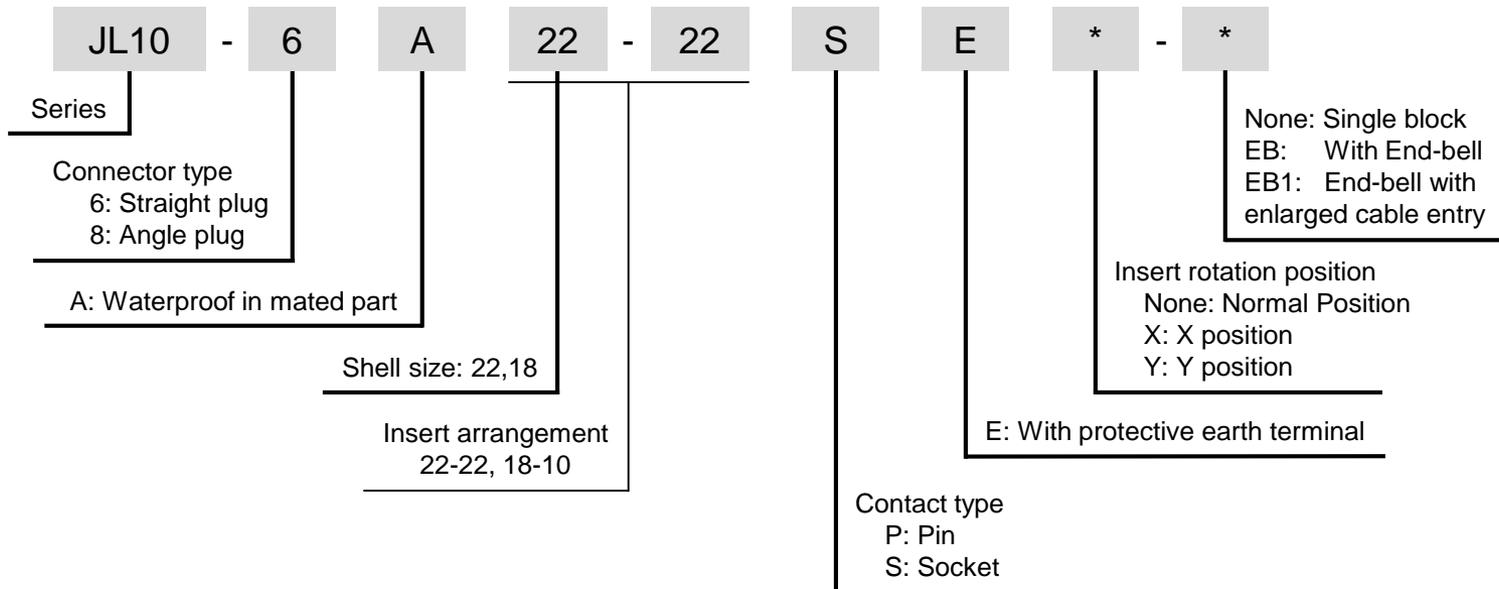
Receptacle



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

Ordering Information

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

Summary

- Low-profile compact design with single-action mating
- Adopts a single-touch bayonet locking method for mating
- JL10 Receptacle is a single-action / screw mating dual type.
- Angled type cables can be set in 8 directions by 45 degree increments.
- Cable clamp is the same as JL04V
- UL and TÜV approval obtained products
- Environmental resistance with superior vibration and oil resistance.



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