

One-touch / Screw Mating Compatible  
Circular Waterproof Connector

CONNECTOR

MB-0263-9

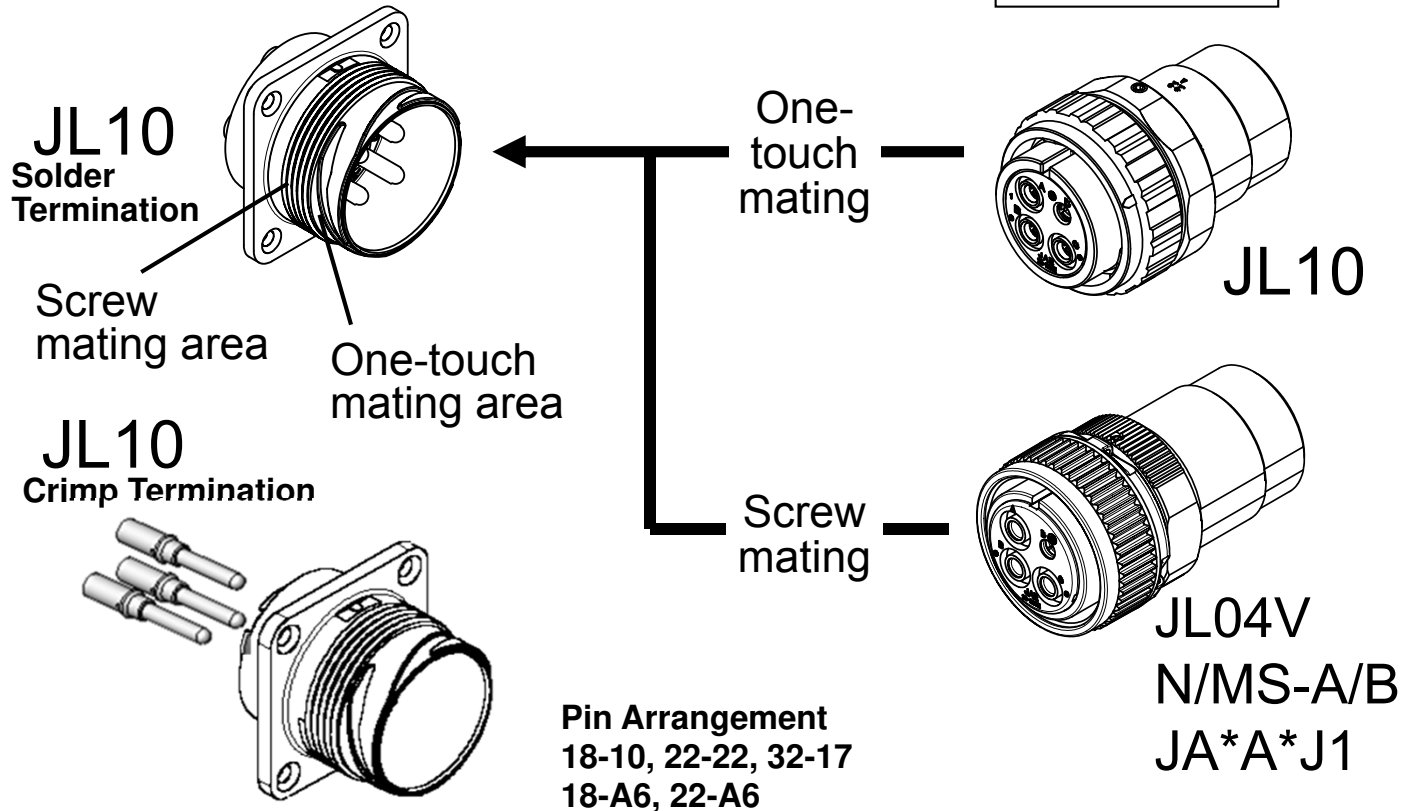
Dec.2022

# JL10 Series

**RoHS Compliant**

Receptacle

Plug



The JL10 Series are TUV approved and UL recognized, one-touch locking, circular, waterproof connectors for industrial machinery, satisfying European safety standards. The adopted Bayonet-style one-touch lock mechanism has a superior mating and unmating operability and the product contributes to an easy mating function.

The JL10 receptacle offers a hybrid, one-touch and threaded locking, dual function mating. The connector offers mating compatibility with conventional MIL standard, MS connectors and with our screw mating plugs (JL04V, N/MS, JA).

On top of the existing solder termination, a crimp termination option has been added to the 18-10, 22-22, 32-17, 18-A6 and 22-A6 pin arrangement receptacles. (18-A6, 22-A6 are of JAE-original contact arrangements and are not compatible with MIL-compliant products.)

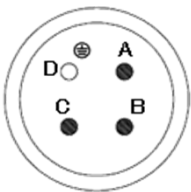
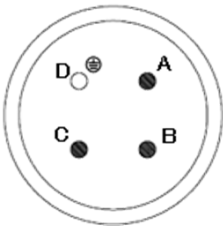
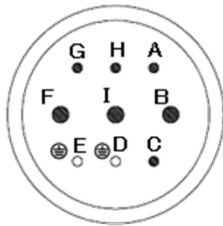
## Applicable Market

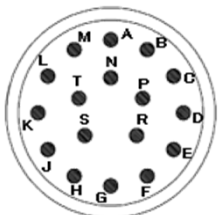
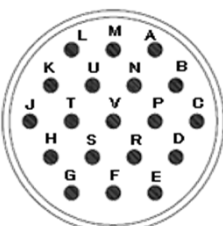
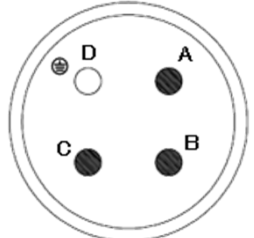
Industrial machineries, servo motors, robots, semiconductor-fabrication equipment, communication devices, measuring devices, broadcasting and various other equipment.

## Features

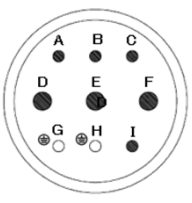
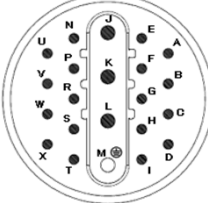
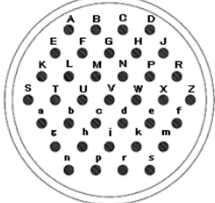
- Utilizes a one-touch bayonet lock style mating to allow secure mating even in narrow operating spaces or areas with poor visibility.  
Superior connector operability improves mating and unmating function (reduced screw-down fastening, and eliminating torque control).
- JL10 Receptacle is a one-touch / screw mating hybrid type.  
One-touch mating: When mated with JL10 plug  
Screw mating: MIL-standard MS connector and our standard N/MS-A/B Series, JL04V Series, JA\*A Series using J1 type plug.
- Receptacle's cable connection is available as soldering termination (for all receptacle) and crimp termination (for pin arrangements 18-10, 22-22, 32-17, 18-A6 and 22-A6)
- Mating assurance confirmation through aligned guide mark (white arrows) of plug and receptacle.
- Low-profile compact design, and direction of the cable leader of angled type can be set in arbitrary 8 orientation in 45 degrees increments.
- Uses common cable clamp as for JL04V Series.
- UL recognized and TÜV approved product.
- IP67 waterproof and dustproof  
For the receptacles there are individually waterproof (denoted as -2E) and waterproof in mated condition (denoted as -2A).
- Superior environmental performance against vibration and oil.
- The 18-A6 and 22-A6 contact arrangements are hybrid types with 4 power and 2 signal poles. Please note that these two products are JAE's original arrangements and are not compatible with MIL-DTL-5015 compliant products.

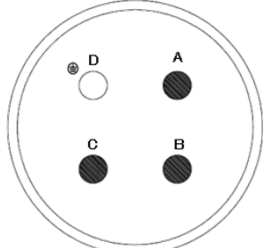
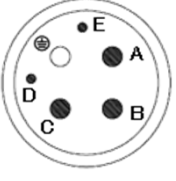
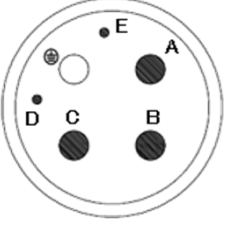
## Arrangements and General Specifications

| Arrangement                     | 18-10   |        | 20-4   |        | 20-18   |            |
|---------------------------------|---|--------|--|--------|---|------------|
| Contact Arrangement             |  |        |  |        |  |            |
| Size x Number of Contact        | #12 x 4   |        | #12 x 4  |        | #12 x 3   | #16 x 6    |
| Rated Current                   | 23A / pos.  |        | 23A / pos.   |        | 23A / pos.  | 13A / pos. |
| Rated Voltage                   | 250VAC  | 500VAC | 250VAC   | 500VAC | 250VAC  | 100VAC     |
| Overvoltage Category            | III   | II     | III  | II     | II  |            |
| Pollution Level                 | 3   | 2      | 3  | 2      | 2   |            |
| Dielectric Withstanding Voltage | 2000VAC (per minute)  |        | 2000VAC (per minute)   |        | 2000VAC (per minute)  |            |
| Insulation Resistance           | 1000MΩ min.<br>(DC500V energized)   |        | 1000MΩ min.<br>(DC500V energized)  |        | 1000MΩ min.<br>(DC500V energized)   |            |
| Waterproof Performance          | IP67  |        | IP67   |        | IP67  |            |
| Termination Method              | Receptacle: Solder, crimp<br>Plug: Solder   |        | Solder   |        | Solder  |            |
| Durability                      | 500 times   |        | 500 times  |        | 500 times   |            |

| Arrangement                     | 20-29   | 22-14  | 22-22   |        |
|---------------------------------|---|--|---|--------|
| Contact Arrangement             |  |  |  |        |
| Size x Number of Contact        | #16 x 17  | #16 x 19   | #8 x 4  |        |
| Rated Current                   | 13A / pos.  | 13A / pos.   | 46A, 57A (Note 1) / pos.  |        |
| Rated Voltage                   | 500VAC  | 500VAC   | 250VAC  | 500VAC |
| Overvoltage Category            | ---   | ---  | III   | II     |
| Pollution Level                 | ---   | ---  | 3   | 2      |
| Dielectric Withstanding Voltage | 1000VAC (per minute)  | 1000VAC (per minute)   | 2000VAC (per minute)  |        |
| Insulation Resistance           | 1000MΩ min.<br>(DC500V energized)   | 1000MΩ min.<br>(DC500V energized)  | 1000MΩ min.<br>(DC500V energized)   |        |
| Waterproof Performance          | IP67  | IP67   | IP67  |        |
| Termination Method              | Solder  | Solder   | Receptacle: Solder, crimp<br>Plug: Solder   |        |
| Durability                      | 500 times   | 500 times  | 500 times   |        |

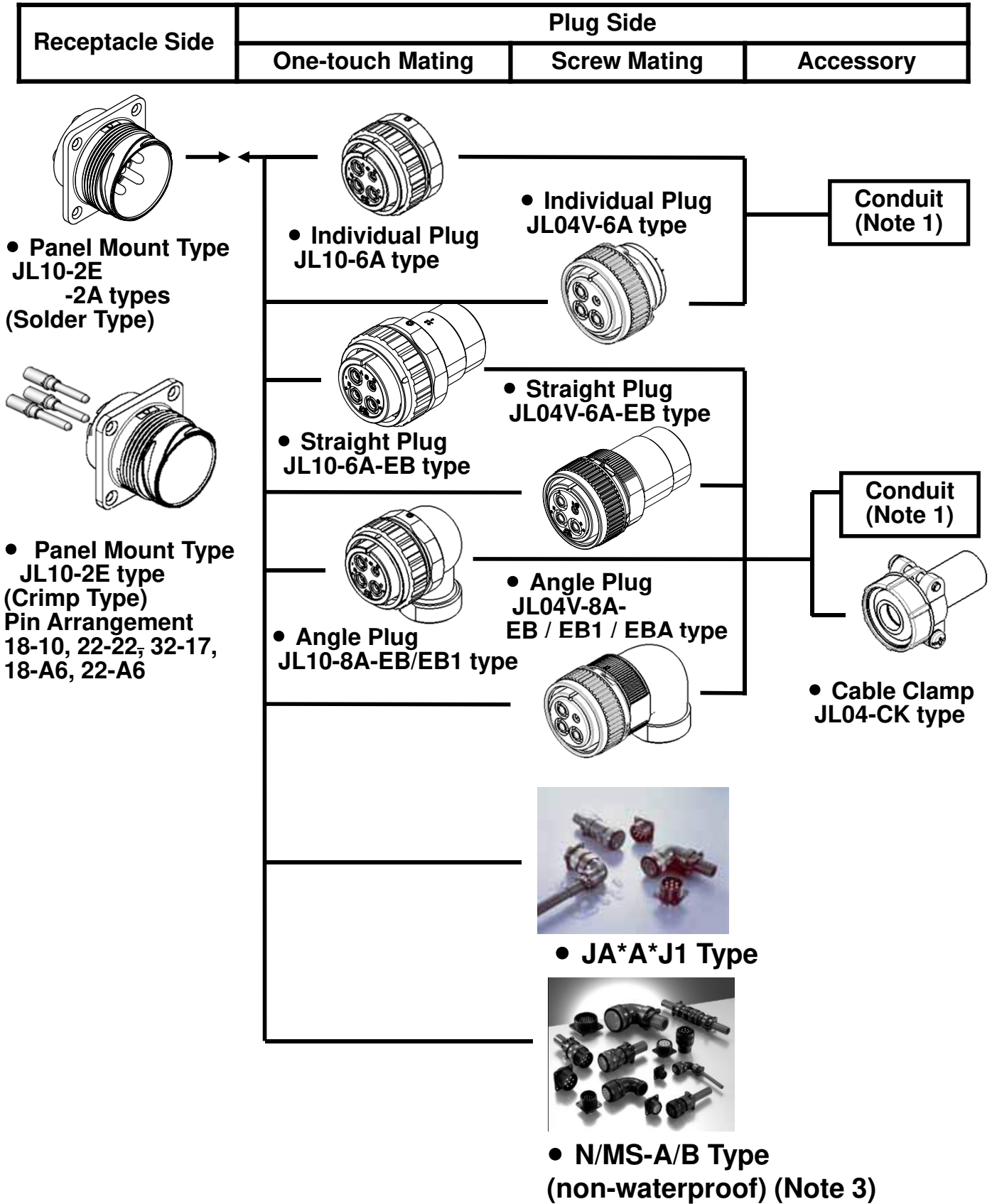
Note 1: Rated current when using 8mm<sup>2</sup> or 10mm<sup>2</sup> wire for arrangement 22-22 (Soldering Type).

| Arrangement                     | 24-11   |            | 28-11  |            | 28-21   |
|---------------------------------|---|------------|--|------------|---|
| Contact Arrangement             |  |            |  |            |  |
| Size x Number of Contact        | #8 x 3  | #12 x 6    | #12 x 4  | #16 x 18   | #16 x 37  |
| Rated Current                   | 46A / pos.  | 23A / pos. | 23A / pos.   | 13A / pos. | 13A / pos.  |
| Rated Voltage                   | 250VAC  | 500VAC     | 250VAC   | 100VAC     | 500VAC  |
| Overtoltage Category            | III   | II         | III  |            | ---   |
| Pollution Level                 | 3   | 2          | 2 (Note: mating area is 3)   |            | ---   |
| Dielectric Withstanding Voltage | 2000VAC (per minute)  |            | 2000VAC (per minute)   |            | 1000VAC (per minute)  |
| Insulation Resistance           | 1000MΩ min.<br>(DC500V energized)   |            | 1000MΩ min.<br>(DC500V energized)  |            | 1000MΩ min.<br>(DC500V energized)   |
| Waterproof Performance          | IP67  |            | IP67   |            | IP67  |
| Termination Method              | Soldering   |            | Soldering  |            | Soldering   |
| Durability                      | 500 times   |            | 500 times  |            | 500 times   |

| Arrangement                     | 32-17   |        | 18-A6  |           | 22-A6   |            |
|---------------------------------|---|--------|--|-----------|---|------------|
| Contact Arrangement             |  |        |  |           |  |            |
| Size x No. of Contact           | #4 x 4  |        | #12 x 4  | #20 x 2   | #8 x 4  | #20 x 2    |
| Rated Current                   | 80A / pos.  |        | 23A / pos.   | 1A / pos. | 46 A / pos.   | 1 A / pos. |
| Rated Voltage                   | 250VAC  | 500VAC | 250VAC   | 48VAC     | 250VAC  | 48VAC      |
| Overtoltage Category            | III   | II     | II   |           | II  |            |
| Pollution Level                 | 3   | 2      | 3  |           | 3   |            |
| Dielectric Withstanding Voltage | 2000VAC (per minute)  |        | 2000VAC  | 500VAC    | 2000VAC   | 500VAC     |
| Insulation Resistance           | 1000MΩ min.<br>(DC500V energized)   |        | 1000MΩ min.<br>(DC500V energized)  |           | 1000MΩ min.<br>(DC500V energized)   |            |
| Waterproof Performance          | IP67  |        | IP67   |           | IP67  |            |
| Termination Method              | Receptacle: Crimping<br>Plug: Soldering   |        | Receptacle: Crimping<br>Plug: Soldering  |           | Receptacle: Crimping<br>Plug: Soldering   |            |
| Durability                      | 500 times   |        | 500 times  |           | 500 times   |            |

|                             | Components                    | Material / Finish             |
|-----------------------------|-------------------------------|-------------------------------|
| Receptacle<br>(Solder)      | Contact                       | Copper alloy / silver plating |
|                             | Ground / Earth Pin            | Copper alloy / nickel plating |
|                             | Front Insulator               | Silicone rubber               |
|                             | Rear Insulator                | Synthetic resin               |
|                             | Shell                         | Aluminum alloy / zinc plating |
|                             | Retaining Ring                | Copper alloy / zinc plating   |
| Receptacle:<br>(Crimp)      | Contact (Ground / Earth)      | Copper alloy / silver plating |
|                             | Ground / Earth Pin            | Copper alloy / nickel plating |
|                             | Front Insulator               | Synthetic resin               |
|                             | Center Insulator              | Silicone rubber               |
|                             | Rear Insulator                | Synthetic resin               |
|                             | Shell                         | Aluminum alloy / zinc plating |
| Receptacle<br>Crimp Contact | Contact                       | Copper alloy / silver 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<br>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 |
|                             | Coupling Nut                  | Aluminum alloy / zinc plating |
| Barrel                      | Aluminum alloy / zinc plating |                               |

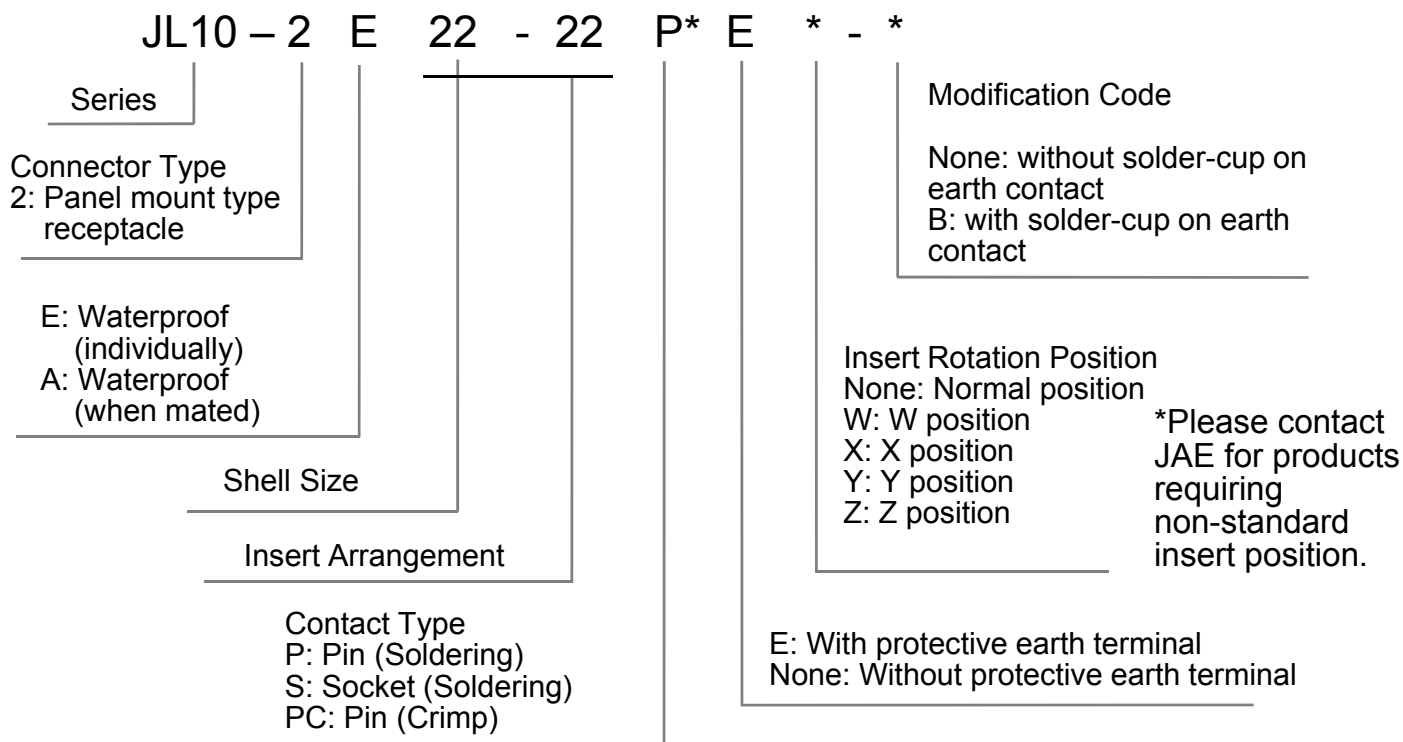
Line-up and Combinations



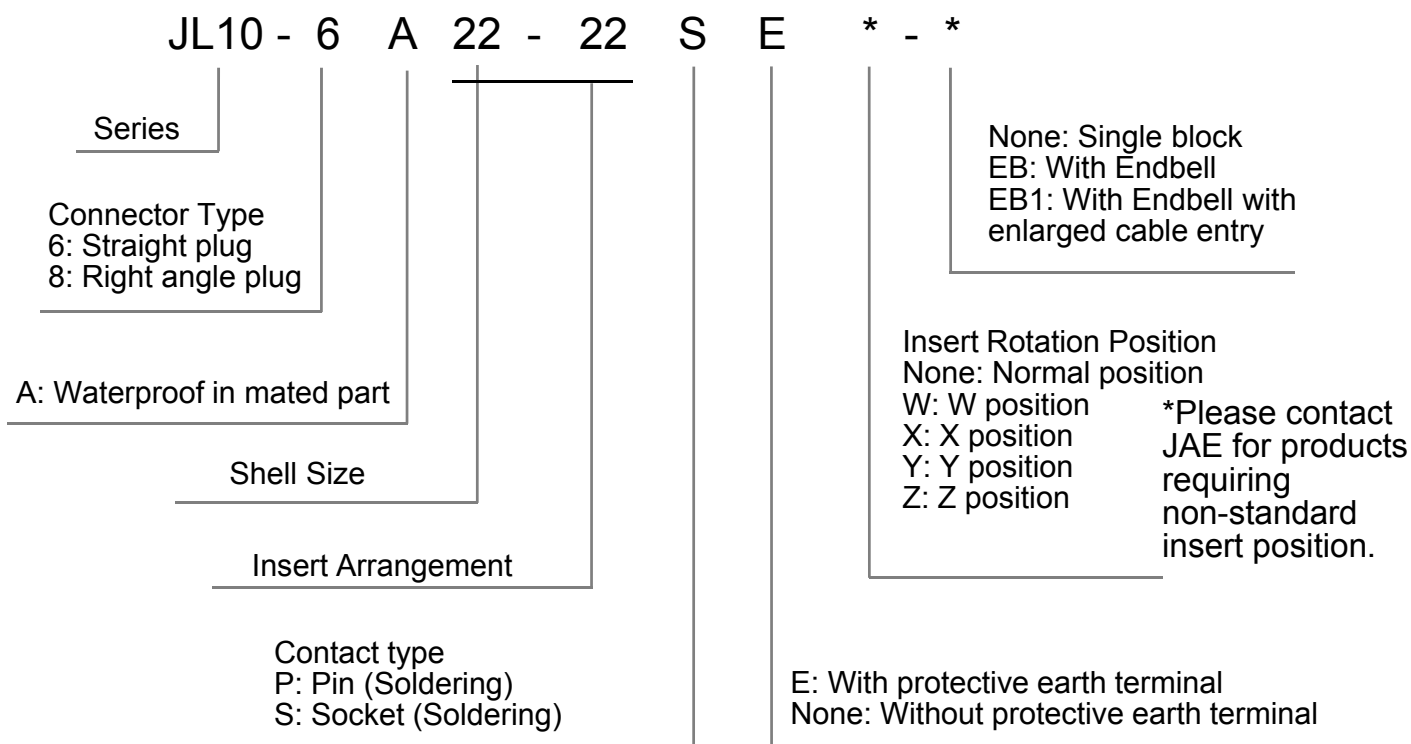
Note 1) Please contact us or conduit manufacturer for detailed use of a conduit.  
 Note 2) Please refer to individual catalogs for consideration of JL04V Series, N/MS-A/B Series, and J1 type JA\*A Series.  
 Note 3) Becomes non-waterproof when mated with N/MS-A/B type plug.

Ordering Information

**Receptacle**



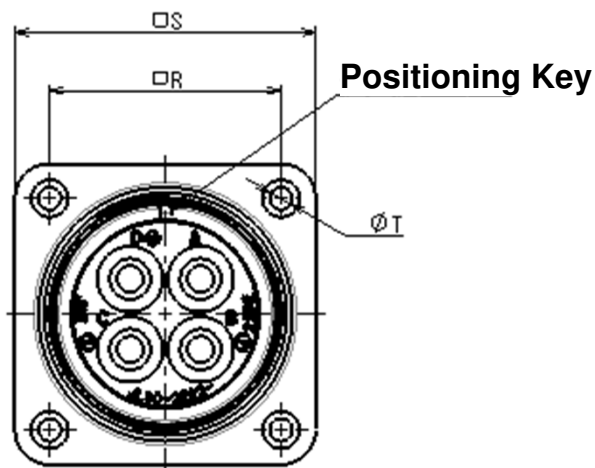
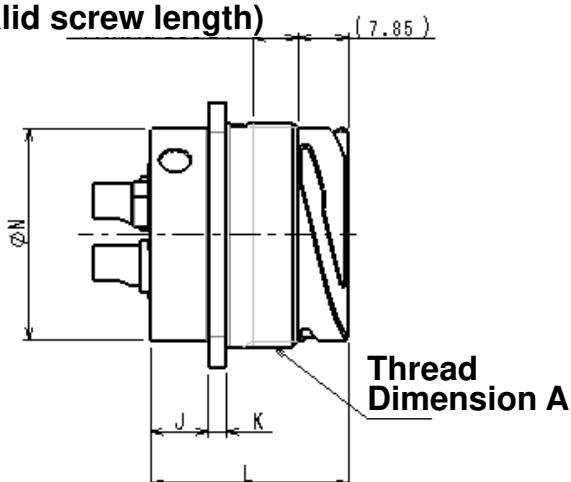
**Plug**



Receptacle

(Solder)

7.1 min.  
(Valid screw length)

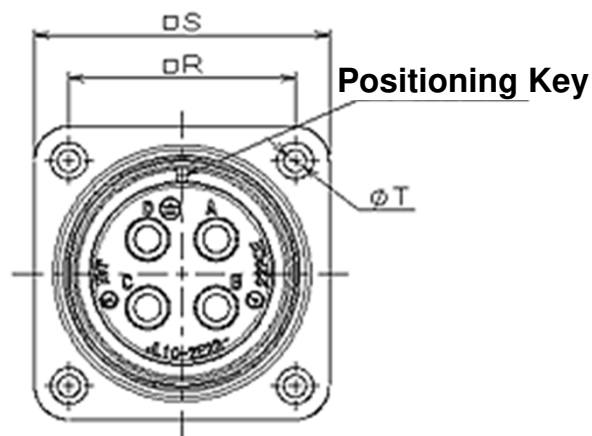
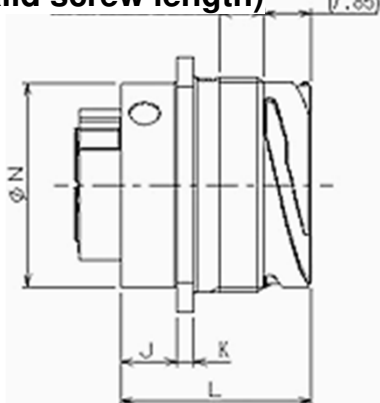


| Shell Size | Thread Dimension A | K<br>±0.3 | J<br>±0.3 | L<br>±0.3 | φN<br>+0<br>-0.4 | □ R<br>±0.13 | □ S<br>±0.79 | φT<br>+0.2<br>-0.1 |
|------------|--------------------|-----------|-----------|-----------|------------------|--------------|--------------|--------------------|
| 18         | 1 1/8-18UNEF-2A    | 2.7       | 8.25      | 30        | 27               | 26.97        | 34.9         | 3.1                |
| 20         | 1 1/4-18UNEF-2A    | 2.7       | 7.05      | 28.8      | 26.9             | 29.36        | 38.1         | 3.1                |
| 22         | 1 3/8-18UNEF-2A    | 2.7       | 9.1       | 30.85     | 33               | 31.75        | 41.3         | 3.1                |
| 24         | 1 1/2 -18UNEF-2A   | 2.7       | 9.1       | 32.45     | 36               | 34.92        | 44.4         | 3.73               |
| 28         | 1 3/4 -18UNES-2A   | 2.7       | 9.38      | 32.7      | 41.5             | 39.67        | 50.8         | 3.73               |

Receptacle

(Crimp)

7.1 min.  
(Valid screw length)

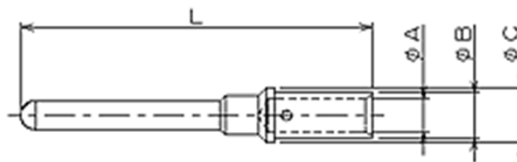


| Shell Size | Thread Dimension A | K<br>± 0.3 | J<br>± 0.3 | L<br>± 0.3 | φN<br>0<br>-0.4 | □ R<br>± 0.13 | □ S<br>± 0.79 | φT<br>+0.2<br>-0.1 |
|------------|--------------------|------------|------------|------------|-----------------|---------------|---------------|--------------------|
| 18         | 1 1/8-18UNEF-2A    | 2.7        | 8.25       | 30         | 27              | 26.97         | 34.9          | 3.1                |
| 22         | 1 3/8-18UNEF-2A    | 2.7        | 9.1        | 30.85      | 33              | 31.75         | 41.3          | 3.1                |

| Shell Size | Thread Dimension A | K<br>± 0.3 | J<br>± 0.6<br>-1 | L<br>± 0.4 | φN<br>0<br>-0.4 | □ R<br>± 0.13 | □ S<br>± 0.79 | φT<br>+0.2<br>-0.1 |
|------------|--------------------|------------|------------------|------------|-----------------|---------------|---------------|--------------------|
| 32         | 2-18UNS-2A         | 4          | 6.45             | 32.7       | 47.85           | 44.45         | 57.2          | 4.4                |



## Crimp Contact Dimensions



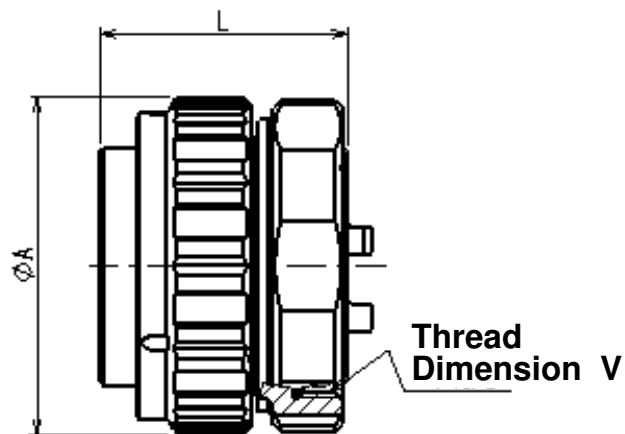
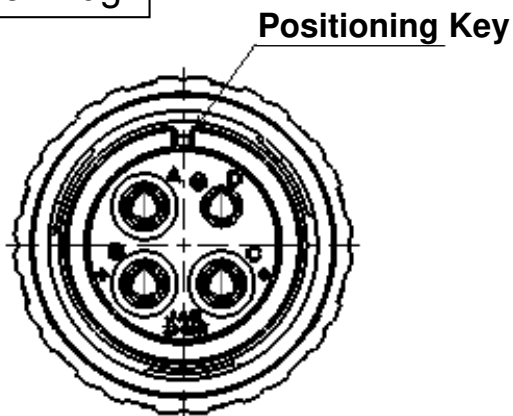
| Contact Size | Applicable Crimp Contact  | L<br>± 0.5 | A<br>± 0.2 | B<br>± 0.2 | C<br>± 0.2 |
|--------------|---------------------------|------------|------------|------------|------------|
| #20          | CONT-JL10-20P-C1-PKG100   | 20.7       | φ1.13      | φ1.84      | φ2.5       |
| #12          | CONT-JL10-12P-C1-PKG100   | 28.65      | φ2.77      | φ3.77      | φ4.57      |
|              | CONT-JL10-12P-C2-PKG100   | 28.65      | φ2.1       | φ2.9       | φ4.57      |
|              | CONT-JL10-12P-C2-1-PKG100 | 28.65      | φ2.1       | φ2.9       | φ3.77      |
| #8           | CONT-JL10-08P-C1-PKG100   | 32.85      | φ4.3       | φ5.6       | φ6.5       |
|              | CONT-JL10-08P-C2-PKG100   | 32.85      | φ3.5       | φ4.5       | φ6.5       |
|              | CONT-JL10-08P-C3-PKG100   | 32.85      | φ2.77      | φ3.77      | φ6.5       |
| #4           | CONT-JL10-04P-C1-PKG100   | 42.9       | φ7.18      | φ9.53      | φ10.9      |
|              | CONT-JL10-04P-C2-PKG100   | 42.9       | φ4.61      | φ6.76      | φ10.9      |

## Crimp Contact and Cable Sizes

| Inset Arrangement | Contact Size | Applicable Crimp Contact | Applicable Cable Size |
|-------------------|--------------|--------------------------|-----------------------|
| 18-10             | #12          | CONT-JL10-12P-C1-PKG100  | #12~#14 AWG           |
|                   |              | CONT-JL10-12P-C2-PKG100  | #14 ~ #18 AWG         |
| 22-22             | #8           | CONT-JL10-08P-C1-PKG100  | #8 ~ #10 AWG          |
|                   |              | CONT-JL10-08P-C2-PKG100  | #10 ~ #12 AWG         |
|                   |              | CONT-JL10-08P-C3-PKG100  | #12 ~ #14 AWG         |
| 32-17             | #4           | CONT-JL10-04P-C1-PKG100  | #4 AWG                |
|                   |              | CONT-JL10-04P-C2-PKG100  | #8 ~ #10 AWG          |
| 18-A6             | #12          | CONT-JL10-12P-C1-PKG100  | #14 AWG               |
|                   | #20          | CONT-JL10-20P-C1-PKG100  | #20 ~ #22 AWG         |
| 22-A6             | #8           | CONT-JL10-08P-C1-PKG100  | #8 ~ #10 AWG          |
|                   |              | CONT-JL10-08P-C2-PKG100  | #10 ~ #12 AWG         |
|                   |              | CONT-JL10-08P-C3-PKG100  | #12 ~ #14 AWG         |
|                   | #20          | CONT-JL10-20P-C1-PKG100  | #20 ~ #22 AWG         |

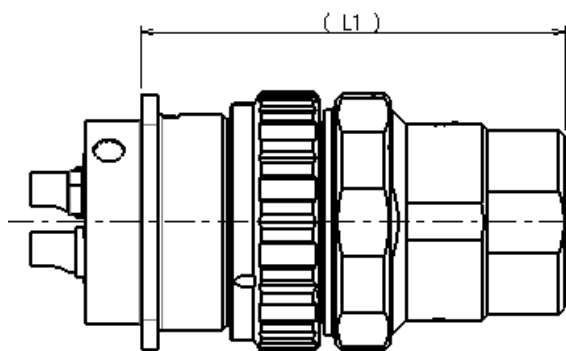
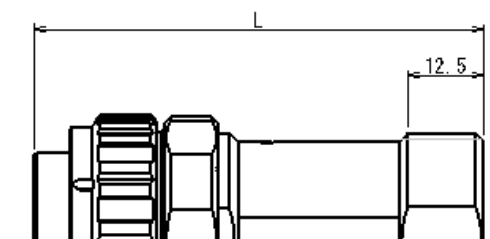
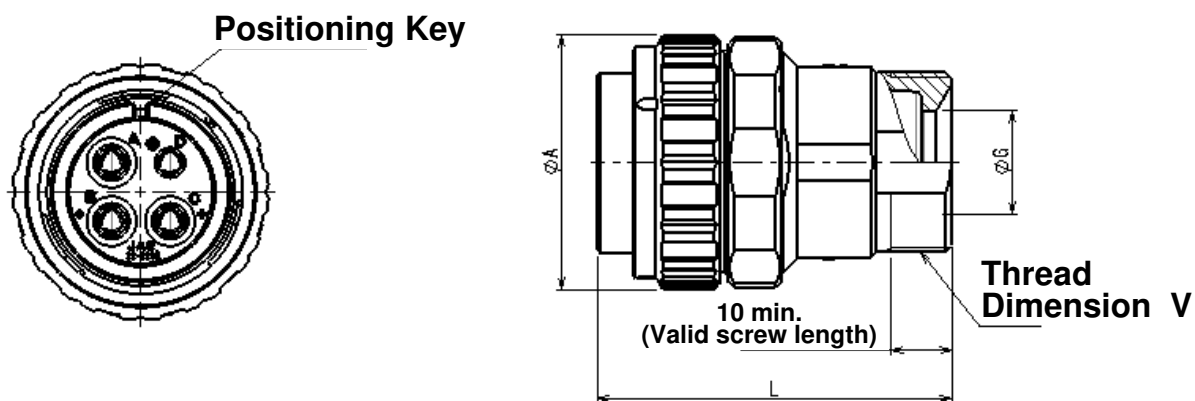
\*Please refer to Crimp Tool Handling Instructions for details of applicable cables.

Individual Plug



| Shell Size | $\phi A$<br>$\pm 0.8$ | L    | Thread Dimension V |
|------------|-----------------------|------|--------------------|
| 18         | 35.85                 | 30   | 1 3/16-18UNEF-2B   |
| 20         | 40.5                  | 31   | 1 3/8-18UNEF-2B    |
| 22         | 42.2                  | 31   | 1 7/16-18UNEF-2B   |
| 24         | 45.5                  | 31   | 1 9/16-18UNEF-2B   |
| 28         | 51.5                  | 26.3 | 1 13/16-18UNS-2B   |
| 32         | 58.6                  | 31.2 | 2 1/8-16UN-2B      |

**Straight Plug**



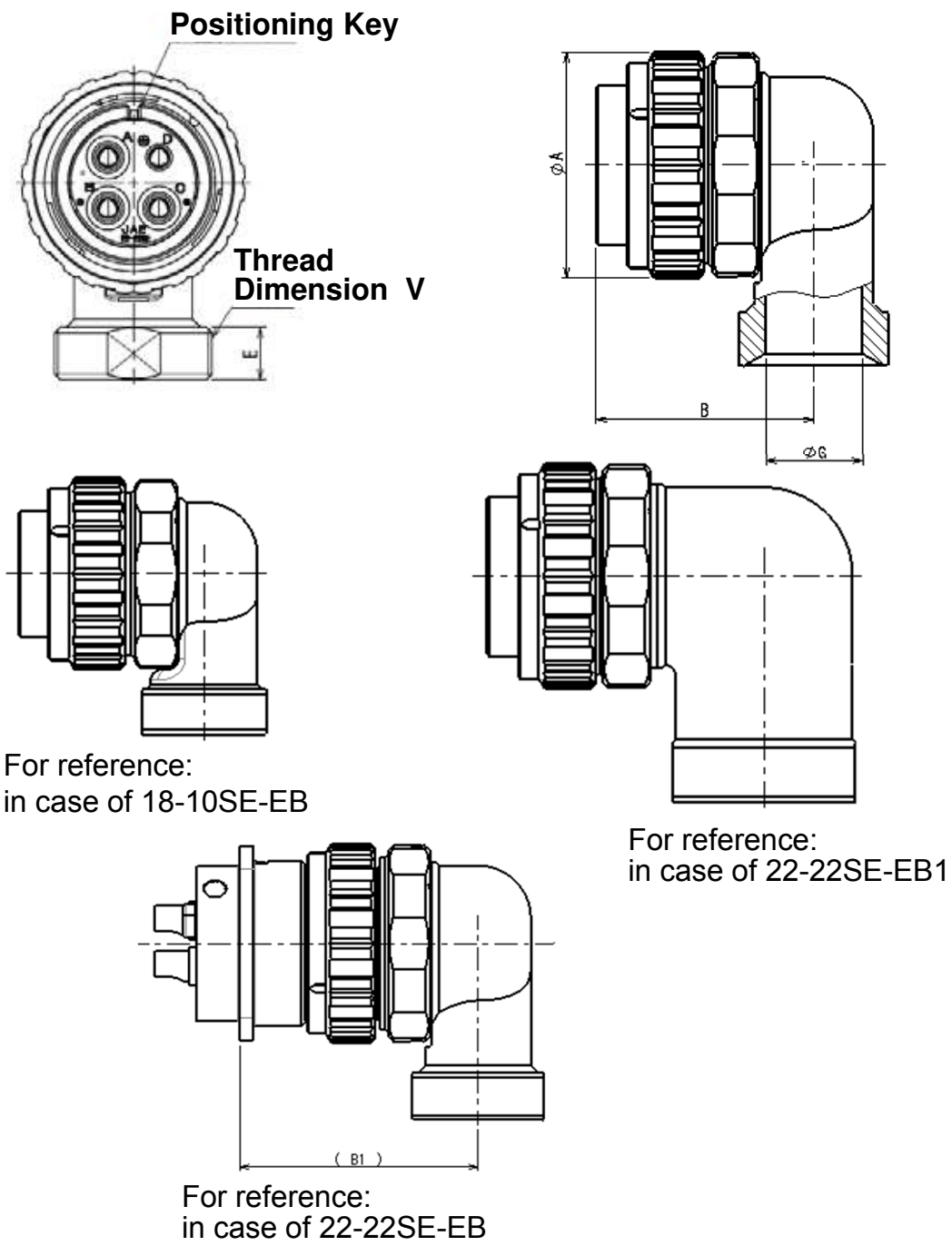
For reference:  
in case of 22-22SE-EB1

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

| Shell Size | $\phi A$<br>$\pm 0.8$ | $\phi G$<br>$\pm 0.5$ | $L$<br>$\pm 0.8$ | (L1)  | Thread Dimension V |
|------------|-----------------------|-----------------------|------------------|-------|--------------------|
| 18         | 35.85                 | 15                    | 51.05            | 60.6  | 1-20UNEF-2A        |
| 20         | 40.5                  | 17                    | 52.1             | 61.9  | 1 3/16-18UNEF-2A   |
| 22         | 42.2                  | 17                    | 58.65            | 68.5  | 1 3/16-18UNEF-2A   |
| 24         | 45.5                  | 20                    | 65.81            | 76.2  | 1 7/16-18UNEF-2A   |
| 28         | 51.5                  | 20                    | 70.0             | 75.5  | 1 7/16-18UNEF-2A   |
| 32         | 58.6                  | 30                    | 99.6             | 114.2 | 1 3/4-18UNS-2A     |

|          |      |    |       |       |                  |
|----------|------|----|-------|-------|------------------|
| 22SE-EB1 | 42.2 | 22 | 74.35 | 84.15 | 1 7/16-18UNEF-2A |
|----------|------|----|-------|-------|------------------|

Angle Plug



| Shell Size | $\phi A$<br>$\pm 0.8$ | B<br>$\pm 0.8$ | (B1)  | E<br>$\pm 0.5$ | $\phi G$<br>$\pm 0.5$ | Thread Dimension V |
|------------|-----------------------|----------------|-------|----------------|-----------------------|--------------------|
| 18         | 35.85                 | 34.55          | 44.4  | 8.5            | 16                    | 1-20UNEF-2A        |
| 20         | 40.5                  | 54.3           | 64.1  | 10             | 17                    | 1 3/16-18UNEF-2A   |
| 22         | 42.2                  | 40.65          | 50.45 | 10             | 18                    | 1 3/16-18UNEF-2A   |
| 24         | 45.5                  | 59.76          | 70.2  | 10             | 20                    | 1 7/16-18UNEF-2A   |
| 28         | 51.5                  | 64.0           | 69.4  | 10             | 20                    | 1 7/16-18UNEF-2A   |
| 32         | 58.6                  | 66.9           | 81.2  | 10             | 30                    | 1 3/4-18UNS-2A     |

|          |      |      |      |    |    |                  |
|----------|------|------|------|----|----|------------------|
| 22SE-EB1 | 42.2 | 51.6 | 61.4 | 10 | 22 | 1 7/16-18UNEF-2A |
|----------|------|------|------|----|----|------------------|

## Accessory: Cable Clamp (Sold separately)

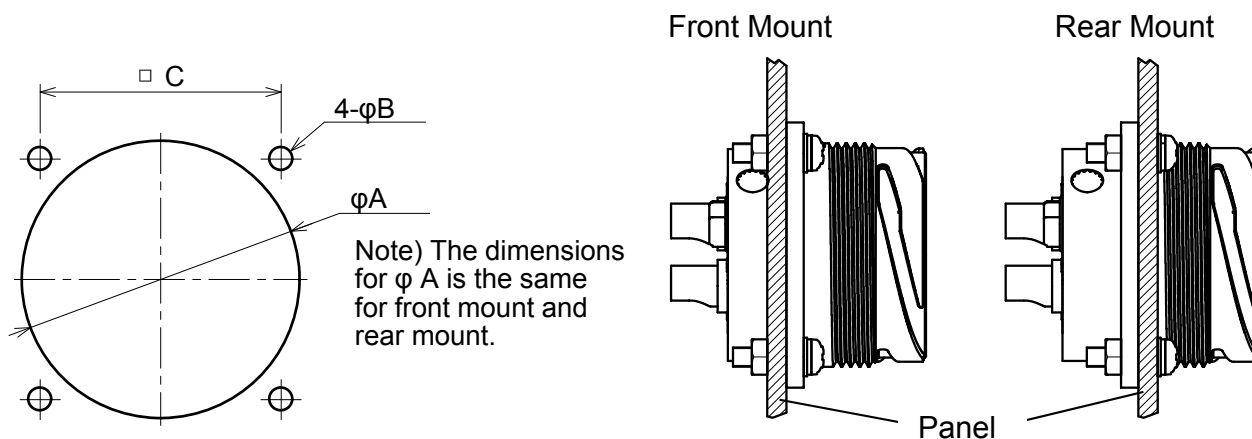
Cable clamp is the same as used with our JL04V Series.

| Shell Size       | Product Name         | Applicable Cable O.D. |
|------------------|----------------------|-----------------------|
| 18               | JL04-18CK(07)-*-RK   | φ5 to φ8              |
| 18               | JL04-18CK(13)-*-R    | φ11 to φ14.1          |
| 20, 22           | JL04-2022CK(09)-*-R  | φ6.5 to φ9.5          |
| 20, 22           | JL04-2022CK(12)-*-R  | φ9.5 to φ13           |
| 20, 22           | JL04-2022CK(14)-*-R  | φ12.9 to φ16          |
| 24, 28, 22-22EB1 | JL04-2428CK(11)-*-RK | φ9 to φ12             |
| 24, 28, 22-22EB1 | JL04-2428CK(14)-*-RK | φ12 to φ15            |
| 24, 28, 22-22EB1 | JL04-2428CK(17)-*-R  | φ15 to φ18            |
| 24, 28, 22-22EB1 | JL04-2428CK(20)-*-RK | φ18 to φ20            |
| 32               | JL04-32CK(24)-*-RK   | φ22 to φ25            |

### For Reference: Panel Mount Dimensions

- (1) Front mount: Receptacle is attached to the front side of the panel and enclosure.  
Cable termination side will be inside when attached.
- (2) Rear mount: Receptacle is attached to the back side of the panel and enclosure.  
Please be aware of the panel thickness when concerning this product.

\* Mounting dimensions are the same as our JL04V Series.



| Shell Size | φA<br>±0.5 | φB  | □ C±0.13 | Mounting Screw (for reference) |                      | Max. Panel Thickness for Rear Mount |
|------------|------------|-----|----------|--------------------------------|----------------------|-------------------------------------|
|            |            |     |          | Metric screw thread            | Unified screw thread |                                     |
| 18         | 30.2       | 3.3 | 26.97    | M 3                            | #4-40                | 3mm max.                            |
| 20         | 33.4       | 3.3 | 29.36    | M 3                            | #4-40                | 3mm max.                            |
| 22         | 36.6       | 3.3 | 31.75    | M 3                            | #4-40                | 3mm max.                            |
| 24         | 39.7       | 3.8 | 34.92    | M 3.5                          | #6-32                | 4mm max.                            |
| 28         | 46.1       | 3.8 | 39.67    | M 3.5                          | #6-32                | 4mm max.                            |
| 32         | 52.4       | 4.4 | 44.45    | M 4                            | #8-32                | 6mm max.                            |

**Accessory: Gasket (Sold separately)**

There is a gasket to prevent water ingress from the panel hole (main body) of the enclosure when receptacle is mounted to the panel / enclosure. The gaskets are the same as ones used for our JL04V Series.

Note 1) Beside the use of a gasket, there is a need for countermeasure to prevent water immersion from the screw holes. Each user to prepare countermeasure.

| Shell Size | Gasket No. | SJ Drawing |
|------------|------------|------------|
| 18         | 075-50157  | SJ009289   |
| 20         | 075-50158  | SJ009289   |
| 22         | 075-50159  | SJ009289   |
| 24         | 075-50160  | SJ009289   |
| 28         | 075-50161  | SJ009289   |
| 32         | 075-50162  | SJ009289   |

|                                      |
|--------------------------------------|
| Part Number and Product Drawing List |
|--------------------------------------|

| Contact Arrangement | Receptacle Part Number   | Receptacle Product Drawing Number            | Plug Part Number   | Plug Product Drawing Number |
|---------------------|--|--|--------------------|-----------------------------|
| 18-10               | JL10-2E18-10PE-B<br>JL10-2E18-10PE<br>JL10-2E18-10PCE-B (Crimp)<br>JL10-2E18-10PCE (Crimp) | SJ116011<br>SJ112315<br>SJ116012<br>SJ114710 | JL10-6A18-10SE     | SJ112323                    |
|                     |  |  | JL10-6A18-10SE-EB  | SJ112322                    |
|                     |  |  | JL10-8A18-10SE-EB  | SJ112321                    |
| 20-18               | JL10-2E20-18PE-B   | SJ115406                                     | JL10-6A20-18SE     | SJ115407                    |
|                     |  |  | JL10-6A20-18SE-EB  | SJ115408                    |
|                     |  |  | JL10-8A20-18SE-EB  | SJ115409                    |
| 20-4                | JL10-2E20-4PE-B  | SJ115402                                     | JL10-6A20-4SE      | SJ115403                    |
|                     |  |  | JL10-6A20-4SE-EB   | SJ115404                    |
|                     |  |  | JL10-8A20-4SE-EB   | SJ115405                    |
| 20-29               | JL10-2A20-29P  | SJ115410                                     | JL10-6A20-29S      | SJ115411                    |
|                     |  |  | JL10-6A20-29S-EB   | SJ115412                    |
|                     |  |  | JL10-8A20-29S-EB   | SJ115413                    |
|                     | JL10-2A20-29S  | SJ117463                                     | JL10-6A20-29P      | SJ117466                    |
|                     |  |  | JL10-6A20-29P-EB   | SJ117467                    |
| JL10-8A20-29P-EB    | SJ117470   |  |                    |                             |
| 22-14               | JL10-2A22-14P  | SJ115414                                     | JL10-6A22-14S-EB   | SJ115415                    |
|                     |  |  | JL10-8A22-14S-EB   | SJ115416                    |
|                     | JL10-2A22-14S  | SJ115417                                     | JL10-6A22-14P-EB   | SJ115418                    |
|                     |  |  | JL10-8A22-14P-EB   | SJ115419                    |
| 22-22               | JL10-2E22-22PE-B<br>JL10-2E22-22PE<br>JL10-2E22-22PCE-B (Crimp)<br>JL10-2E22-22PCE (Crimp) | SJ115881<br>SJ112313<br>SJ116010<br>SJ114709 | JL10-6A22-22SE     | SJ112320                    |
|                     |  |  | JL10-6A22-22SE-EB  | SJ112317                    |
|                     |  |  | JL10-6A22-22SE-EB1 | SJ112319                    |
|                     |  |  | JL10-8A22-22SE-EB  | SJ112316                    |
|                     |  |  | JL10-8A22-22SE-EB1 | SJ112318                    |
|                     | JL10-2A22-22SE   | SJ114872                                     | JL10-6A22-22PE-EB  | SJ117517                    |
|                     |  |  | JL10-8A22-22PE-EB  | SJ114873                    |
| 24-11               | JL10-2E24-11PE-B   | SJ115420                                     | JL10-6A24-11SE     | SJ115421                    |
|                     |  |  | JL10-6A24-11SE-EB  | SJ115422                    |
|                     |  |  | JL10-8A24-11SE-EB  | SJ115423                    |
| 28-11               | JL10-2A28-11SE-B   | SJ117434                                     | JL10-6A28-11PE     | SJ117436                    |
|                     |  |  | JL10-6A28-11PE-EB  | SJ117438                    |
|                     |  |  | JL10-8A28-11PE-EB  | SJ117441                    |
| 28-21               | JL10-2A28-21S  | SJ117443                                     | JL10-6A28-21P      | SJ117444                    |
|                     |  |  | JL10-6A28-21P-EB   | SJ117445                    |
|                     |  |  | JL10-8A28-21P-EB   | SJ117446                    |
| 32-17               | JL10-2E32-17PCE-B<br>(Crimp)   | SJ115424                                     | JL10-6A32-17SE     | SJ115425                    |
|                     |  |  | JL10-6A32-17SE-EB  | SJ115426                    |
|                     |  |  | JL10-8A32-17SE-EB  | SJ115427                    |

|                                      |
|--------------------------------------|
| Part Number and Product Drawing List |
|--------------------------------------|

| <b>Contact Arrangement</b> | <b>Receptacle Part Number</b> | <b>Receptacle Product Drawing Number</b> | <b>Plug Part Number</b> | <b>Plug Product Drawing Number</b> |
|----------------------------|-------------------------------|--|-------------------------|------------------------------------|
| 18-A6                      | JL10-2E18-A6PCE (Crimp)       | SJ119064                                 | JL10-6A18-A6SE-EB       | SJ121790                           |
|                            |                               |  | JL10-8A18-A6SE-EB       | SJ119065                           |
| 22-A6                      | JL10-2E22-A6PCE (Crimp)       | SJ119066                                 | JL10-6A22-A6SE-EB       | SJ121791                           |
|                            |                               |  | JL10-8A22-A6SE-EB       | SJ119067                           |



|   |
|---|
| Crimp Contact Part Number / Drawing Number List |
|---|

| Contact Size | Contact Part Number       | Drawing Number |
|--------------|---------------------------|----------------|
| #20          | CONT-JL10-20P-C1-PKG100   | SJ119110       |
| #12          | CONT-JL10-12P-C1-PKG100   | SJ114746       |
|              | CONT-JL10-12P-C2-PKG100   | SJ114747       |
|              | CONT-JL10-12P-C2-1-PKG100 | SJ119109       |
| #8           | CONT-JL10-08P-C1-PKG100   | SJ114743       |
|              | CONT-JL10-08P-C2-PKG100   | SJ114744       |
|              | CONT-JL10-08P-C3-PKG100   | SJ114745       |
| #4           | CONT-JL10-04P-C1-PKG100   | SJ116737       |
|              | CONT-JL10-04P-C2-PKG100   | SJ116738       |

\*For crimp type, receptacle and contacts are sold separately.

|      |
|------|
| Tool |
|------|

## (1) Crimp Tool

| Contact Size | Tool Type   | Applicable Crimp Tool      | Tool Handling Instructions |
|--------------|-------------|----------------------------|----------------------------|
| #20          | Manual Tool | M22520/2-01<br>JP-JL10-20P | T72-17-M<br>—              |
| #12          | Manual Tool | M22520/1-01<br>JP2-JL10-1  | T700161<br>T706199         |
|              |             | CT160-16-UNI               | T700355<br>T700355-01      |
| #8           | Manual Tool | CT160-16-UNI               | T700355<br>T700355-01      |
| #4           | Manual Tool | CT299*—JL10-4<br>(Note 1)  | T702140-01<br>T702140-02   |

Note 1) Please Refer to Tool Handling Instructions for details of all Applicable Crimp Tools (Including crimp tools with an asterisks within the part number.)

## (2) Contact Extraction Tool

| Contact Size | Extraction Tool | Tool Handling Instructions | Applicable Cable Diameter |
|--------------|-----------------|----------------------------|---------------------------|
| #20          | ET-JL10-20-1    | T711211                    | φ1.94max.                 |
| #12          | ET-JL10-12-1    | T711196                    | φ3.85max.                 |
|              | ET-JL10-12-2    | T711241                    | φ2.9max.                  |
| #8           | ET-JL10-8-1     | T711197                    | φ5.65max.                 |
| #4           | ET-JL10-4-1     | T711239                    | φ9.4max.                  |

## Specifications:

JACS-50101: Solder and crimp terminations

## Handling Instructions:

J AHL-50101: Solder termination, J AHL-50101-2: Crimp termination

**Cautions**

JL10 Caution 1



Please note that JL10 plug will not mate with JL04V receptacle.

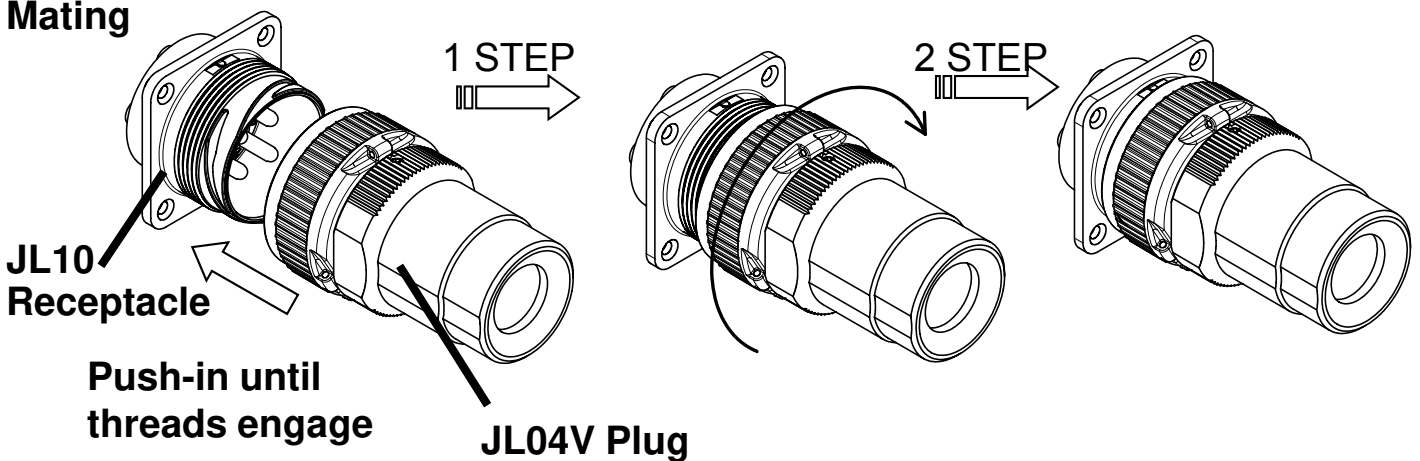
|              | Receptacle   | Plug        | Mating               |
|--------------|--------------|-------------|----------------------|
| Combinations | <b>JL04V</b> | <b>JL10</b> | <b>Will not mate</b> |
|              | JL04V        | JL04V       | Mateable             |
|              | JL10         | JL04V       | Mateable             |
|              | JL10         | JL10        | Mateable             |

JL10 Caution 2

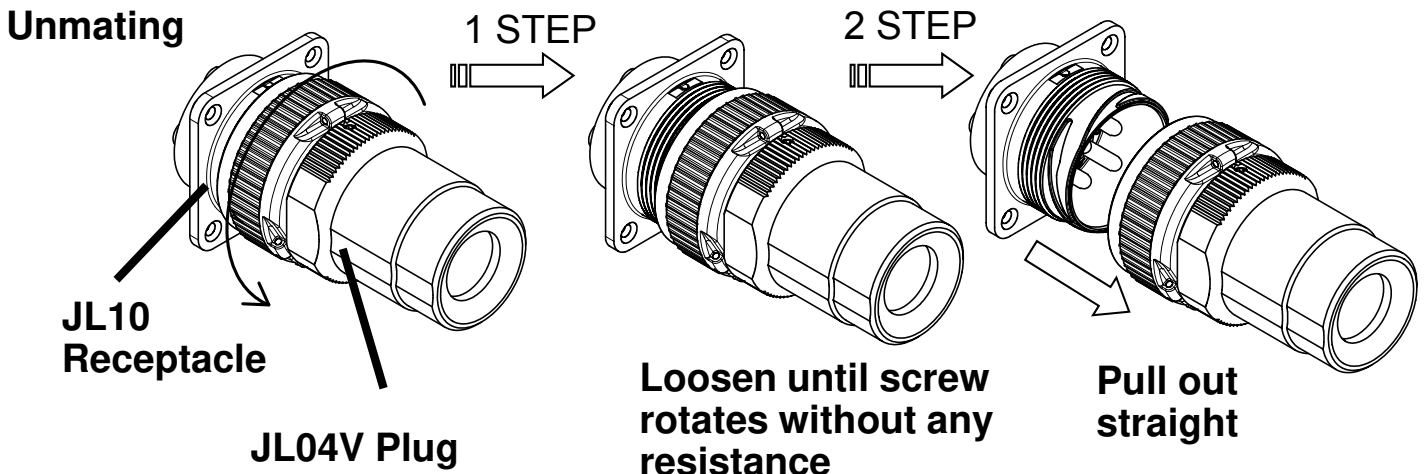


When using JL10 receptacle and JL04V plug mating and unmating operation will be in steps shown below.

**Mating**



**Unmating**



**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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