

Push-on Bayonet Lock Miniature Waterproof Connectors

HR34B Series



Push-on Bayonet Lock

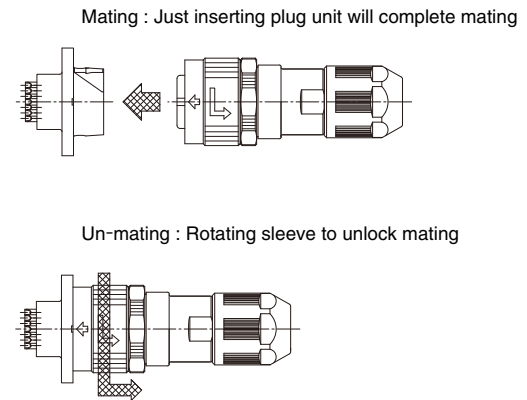


fig.1

■ Features

1. Water and dust protection

- IP67 or more (IP68) water and dust protection rating when fully mated.
- Resistant to industrial grade oils.
- 4-position receptacles are sealed against water penetration when mounted on the panel - no protective cap is required.

2. Easy and precise mating

- Mating: Just inserting plug unit completes mating
Unmating: Rotating sleeve counterclockwise unlocks connectors (fig.1)
- Marking helps align plug with receptacle when mating.
- 3 guide keys make blind mating possible.
(Receptacle structure prevents plug from damaging receptacle terminals)

3. Multi-directional cable exit

Right angle plugs allow the cable to exit in 8 directions, in 45° increments.(fig.2)

4. Safty standards

The 4-position connectors meet requirements of TÜV standard.

5. Wide variation

Cable exit directions

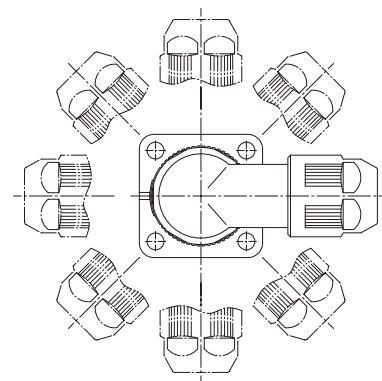


fig.2

| Item | |
|----------------------------------|---|
| Number of positions | 4,10 |
| Connector type | straight plug,right angle plug,receptacle |
| Terminations(plug) | solder,crimp |
| Terminations(receptacle) | wire solder |
| Conduit material | plastic,metal |
| Applicable cable size(Reference) | (ϕ 5.7~6.5), (ϕ 6.5~7.3), (ϕ 8.0~9.0) |

■ Product Specifications

| | | | | |
|---------|----------------|---|-----------------------------|----------------|
| Ratings | Current rating | 10 pos. : 3A 4 pos. : 5A | Operating temperature range | -20°C to 125°C |
| | Voltage rating | 10 pos. : 200V AC, 250V DC 4 pos. : 200V AC, 200V DC (Pollution degree 3) 400V AC, 400V DC (Pollution degree 2) | Storage temperature range | -10°C to 60°C |

| Item | Specification | Conditions |
|-----------------------------------|---|--|
| 1.Contact resistance | 20mΩ max. | 1A DC |
| 2.Insulation resistance | 1,000MΩ min. | 500V DC |
| 3.Withstanding voltage | No flashover or insulation breakdown | 10 pos. : 900V AC / 1 minute 4 pos. : 2,000V AC / 1 minute |
| 4.Vibration | No electrical discontinuity of 10μs or longer | Frequency : 10 to 500 Hz/cycle, total amplitude of 0.75 mm, 98m/s ² each, 3 hours in 3 axis. |
| 5.Shock | No electrical discontinuity of 10μs or longer | Acceleration of 490 m/s ² , 11 ms duration, 3 axis, each for 3 hours |
| 6.Durability (Mating / un-mating) | Contact resistance : 30mΩ max. | 500 cycles |
| 7.Temperature cycle | Insulation resistance : 500MΩ min. | Temperature: -55°C → +15° to +35°C → +85°C → +15° to +35°C Time : 30 min. → 2 to 3 min. → 30 min. → 2 to 3 min. 5 cycles |
| 8.Humidity | Insulation resistance : 50MΩ min. (at high humidity) Insulation resistance : 500MΩ min. (when dry) | 336 hours at 71°C, and humidity of 95% |
| 9.Water protection | No water penetration inside connector | At the depth of 1meters for 0.5 hours. |

■ Materials / Finish

● Plugs

| Part | Material | Finish | Remarks |
|------------------|---|--|---------------|
| Outer shell | Zinc alloy, aluminum alloy, and polyamide resin (black) | Black chrome plating, black chromate finish (Trivalent Chromium) | _____ |
| Insulator | PPS | Color : Black | UL94V-0 |
| Female contacts | 10 pos. | Phosphor bronze | Gold plated |
| | 4 pos. | Copper alloy | Silver plated |
| O-ring Gasket | Fluororubber, Nitrile hydride rubber | _____ | _____ |

● Receptacles

| Part | Material | Finish | Remarks |
|----------------|--------------|--|---------------|
| Outer shell | Zinc alloy | Black chromate finish (Trivalent Chromium) | _____ |
| Insulator | PPS | Color : Black | UL94V-0 |
| Male contacts | 10 pos. | Copper alloy | Gold plated |
| | 4 pos. | Brass | Silver plated |
| Ground contact | 4 pos. | Brass | Silver plated |
| O-ring | Fluororubber | _____ | _____ |

■ Product Number Structure

● Plugs

HR34B - 12 WP A - 10 S - X (**)
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

| | |
|---|--|
| ① Series name : HR34B Series | ⑤ Number of contacts. (Excluding ground contacts) |
| ② Shell size : Diameter(mm) of the mating interface of the plug | ⑥ Contact type S : Female, wire solder SC : Female, crimp |
| ③ Shell style WP : Straight plug WLP : Right-angle plug | |
| ④ Conduit material and Applicable cable size A : Conduit material metal, Applicable cable (Reference) : (φ5.7~6.5) B : Conduit material metal, Applicable cable (Reference) : (φ6.5~7.3) D : Conduit material plastic, Applicable cable (Reference) : (φ5.7~6.5) E : Conduit material plastic, Applicable cable (Reference) : (φ6.5~7.3) K : Conduit material metal, Applicable cable (Reference) : (φ8.0~9.0) | ⑦ Keying Blank : Standard X : X key position |
| | ⑧ Other specifications : 2 numerical digits will be added when there is a specifications change other than shown in positions ① to ⑦ |

● Receptacles

HR34B - 12 WR A - 10 P - X (**)
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

| | |
|---|---|
| ① Series name : HR34B Series | ⑤ Number of contacts. (Excluding ground contacts) |
| ② Shell size : Diameter(mm) of the mating interface of the plug | ⑥ Contact type P : Male, wire solder |
| ③ Shell style WR : Receptacle | |
| ④ Shell type A : Square flange for 10 positions B : Square flange for 4 positions | ⑦ Keying Blank : Standard X : X key position |
| | ⑧ Other specifications : 2 numerical digits will be added when there is a specification change other than shown in positions ① to ⑦ |

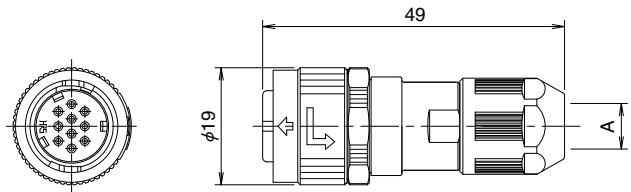
● Crimp contacts

HR34B - SC1 - 2 1 1
 ① ② ③ ④ ⑤

| | |
|---|--------------------------------|
| ① Series name : HR34B Series | ④ Conductor size : 20 to 25AWG |
| ② Contact style : SC1 : Female contact | ⑤ Plating 1 : Gold plated |
| ③ Contact type 1 : 100pcs/pack 2 : 10,000pcs/reel | |

■ Straight plugs

● Standard type (Conduit material :Plastic)



◆ Wire solder

All dimensions : mm

| Part No. | HRS No. | A | Applicable cable diameter range(Reference) | Solder cup inner diameter |
|------------------|---------------|------|--|---------------------------|
| HR34B-12WPD-10S | 134-0026-0 00 | φ7.4 | (φ5.7~6.5) | φ1 |
| HR34B-12WPE-10S | 134-0027-2 00 | φ8.5 | (φ6.5~7.3) | |
| HR34B-12WPD-4S | 134-0020-3 00 | φ7.4 | (φ5.7~6.5) | φ1.7 |
| HR34B-12WPD-4S-X | 134-0023-1 00 | | | |
| HR34B-12WPE-4S | 134-0025-7 00 | φ8.5 | (φ6.5~7.3) | |
| HR34B-12WPE-4S-X | 134-0031-0 00 | | | |

◆ Crimp (separate contacts required)

| Part No. | HRS No. | A | Applicable cable diameter range(Reference) |
|------------------|---------------|------|--|
| HR34B-12WPD-10SC | 134-0037-6 00 | φ7.4 | (φ5.7~6.5) |
| HR34B-12WPE-10SC | 134-0038-9 00 | φ8.5 | (φ6.5~7.3) |

● Robust type(Conduit material :Metal)

◆ Wire solder

All dimensions : mm

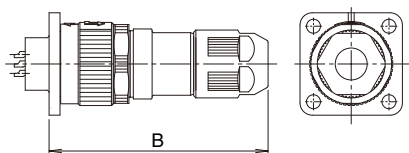
| Part No. | HRS No. | A | Applicable cable diameter range(Reference) | Solder cup inner diameter |
|---------------------|---------------|------|--|---------------------------|
| HR34B-12WPA-10S(71) | 134-0004-7 71 | φ7.4 | (φ5.7~6.5) | φ1 |
| HR34B-12WPB-10S(71) | 134-0007-5 71 | φ8.5 | (φ6.5~7.3) | |
| HR34B-12WPK-10S | 134-0052-0 00 | φ9.5 | (φ8.0~9.0) | |

◆ Crimp (separate contacts required)

| Part No. | HRS No. | A | Applicable cable diameter range(Reference) |
|------------------|---------------|------|--|
| HR34B-12WPA-10SC | 134-0017-9 00 | φ7.4 | (φ5.7~6.5) |
| HR34B-12WPB-10SC | 134-0028-5 00 | φ8.5 | (φ6.5~7.3) |
| HR34B-12WPK-10SC | 134-0053-2 00 | φ9.5 | (φ8.0~9.0) |

Not all cables of applicable dia. range can be easily assembled.
Please kindly check with factory before use.

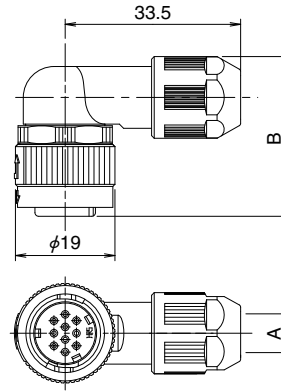
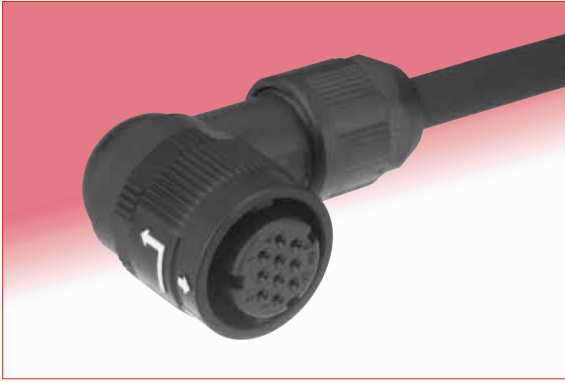
◆ Illustrations of mated connectors.



| Straight plug Mating combinations | B |
|--------------------------------------|------|
| 10 pos.plug + receptacle wire solder | 50.1 |
| 4 pos.plug + receptacle wire solder | 49.6 |

■ Right angle plugs

● Standard type (Conduit material : Plastic)



◆ Wire solder

All dimensions : mm

| Part No. | HRS No. | A | B | Applicable cable diameter range(Reference) | Solder cup inner diameter |
|-------------------|---------------|------|-------|--|---------------------------|
| HR34B-12WLDP-10S | 134-0039-1 00 | φ7.4 | 30.85 | (φ5.7~6.5) | φ1 |
| HR34B-12WLPE-10S | 134-0040-0 00 | φ8.5 | | (φ6.5~7.3) | |
| HR34B-12WLDP-4S | 134-0030-7 00 | φ7.4 | | (φ5.7~6.5) | φ1.7 |
| HR34B-12WLDP-4S-X | 134-0034-8 00 | | | | |
| HR34B-12WLPE-4S | 134-0035-0 00 | φ8.5 | | (φ6.5~7.3) | |
| HR34B-12WLPE-4S-X | 134-0036-3 00 | | | | |

◆ Crimp (separate contacts required)

| Part No. | HRS No. | A | B | Applicable cable diameter range(Reference) |
|-------------------|---------------|------|-------|--|
| HR34B-12WLDP-10SC | 134-0041-3 00 | φ7.4 | 30.85 | (φ5.7~6.5) |
| HR34B-12WLPE-10SC | 134-0042-6 00 | φ8.5 | | (φ6.5~7.3) |

● Robust type (Conduit material :Metal)

◆ Wire solder

All dimensions : mm

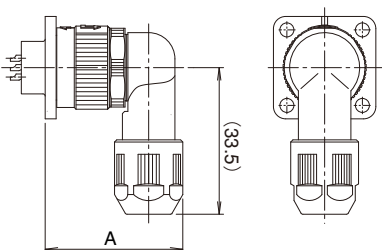
| Part No. | HRS No. | A | B | Applicable cable diameter range(Reference) | Solder cup inner diameter |
|----------------------|---------------|------|------|--|---------------------------|
| HR34B-12WLPA-10S(71) | 134-0005-0 71 | φ7.4 | 30.5 | (φ5.7~6.5) | φ1 |
| HR34B-12WLPB-10S(71) | 134-0008-8 71 | φ8.5 | | (φ6.5~7.3) | |
| HR34B-12WLPA-10S | 134-0054-5 00 | φ9.5 | 31.5 | (φ8.0~9.0) | |

◆ Crimp (separate contacts required)

| Part No. | HRS No. | A | B | Applicable cable diameter range(Reference) |
|-------------------|---------------|------|------|--|
| HR34B-12WLPA-10SC | 134-0018-1 00 | φ7.4 | 30.5 | (φ5.7~6.5) |
| HR34B-12WLPB-10SC | 134-0029-8 00 | φ8.5 | | (φ6.5~7.3) |
| HR34B-12WLPA-10SC | 134-0055-8 00 | φ9.5 | 31.5 | (φ8.0~9.0) |

Not all cables of applicable dia. range can be easily assembled.
Please kindly check with factory before use.

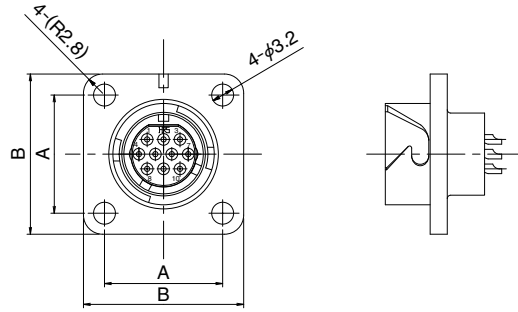
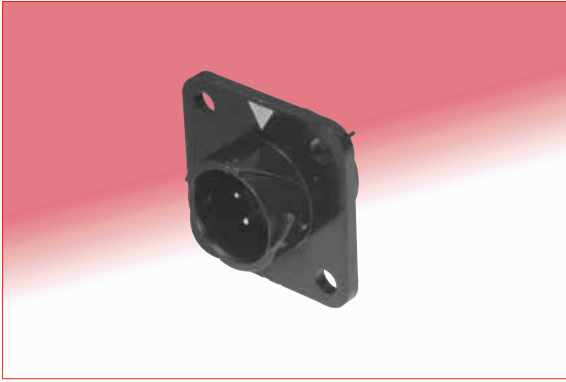
◆ Illustrations of mated connectors.



| Right-angle plug Mating Combinations | | A |
|--------------------------------------|-------------------------------|------|
| 10 pos. plug shell A,B type. | Plug + receptacle wire solder | 31.0 |
| 10 pos. plug shell D,E type. | Plug + receptacle wire solder | 31.3 |
| 10 pos. plug shell K type. | Plug + receptacle wire solder | 32.0 |
| 4 pos. plug + receptacle wire solder | | 31.3 |

Receptacles

Wire solder



All dimensions : mm

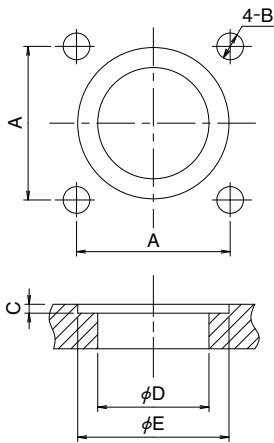
| Part No. | HRS No. | A | B | Solder cup inner diameter |
|------------------|---------------|-------|------|---------------------------|
| HR34B-12WRA-10P | 134-0016-6 00 | 17.26 | 23.4 | φ1 |
| HR34B-12WRB-4P | 134-0021-6 00 | 18.26 | 25.4 | φ1.4 |
| HR34B-12WRB-4P-X | 134-0024-4 00 | | | |

O ring for water proof is not attached. Please find appropriate one from the market.

Recommended panel cutouts

Receptacle - wire solder

All dimensions : mm

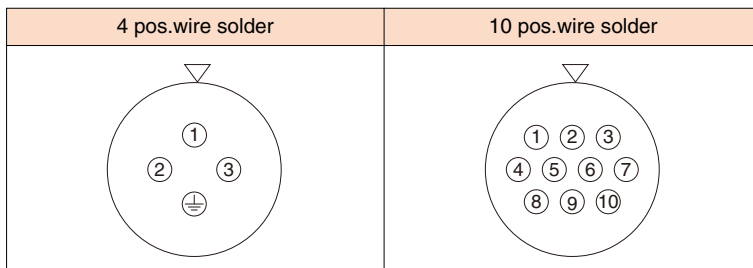


| | HR34B-12WRA-10P | HR34B-12WRB-4P HR34B-12WRB-4P-X |
|---|-----------------|------------------------------------|
| A | 17.26±0.05 | 18.26±0.05 |
| B | M3×0.5 | |
| C | 1 0/-0.1 | 1.1 0/-0.1 |
| D | 12.5 +0.1/0 | 16.3 +0.1/0 |
| E | 17 +0.1/0 | 20.8 +0.1/0 |

Recommended O ring dia.

| Part No. | Thickness | Inner diameter |
|------------------|-----------|----------------|
| HR34B-12WRA-10P | φ1.5 | φ11.5 |
| HR34B-12WRB-4P | φ1.5 | φ15.5 |
| HR34B-12WRB-4P-X | | |

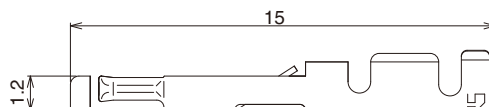
Receptacle Contact Arrangement



note.1 View direction : Mating surface
note.2 ⊕ mark is ground terminal.

Crimp contacts

Female



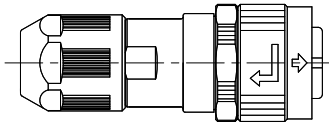
| Part No. | HRS No. | Packaging | Applicable conductor |
|---------------|---------------|-----------------|--------------------------------|
| HR34B-SC1-111 | 134-0051-7 00 | 100 pcs/pack | 20 to 25AWG (Stranded wire) |
| HR34B-SC1-211 | 134-0050-4 00 | 10,000 pcs/reel | |

Note : Use wire with a jacket diameter of 1.7mm max.

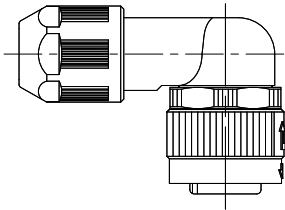
◆ Connector Mating Combinations

10 pos. Plugs

Straight, Wire Solder or Crimp
 HR34B-12WPA-10S(71),10SC HR34B-12WPB-10S(71),10SC
 HR34B-12WPD-10S,10SC HR34B-12WPE-10S,10SC
 HR34B-12WPK-10S,10SC

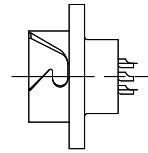


Right angle, Wire Solder or Crimp
 HR34B-12WLP A-10S(71),10SC HR34B-12WL P B-10S(71),10SC
 HR34B-12WL P D-10S,10SC HR34B-12WL P E-10S,10SC
 HR34B-12WL P K-10S,10SC



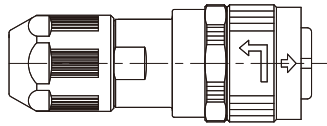
10 pos. Receptacles

Wire Solder
 HR34B-12WRA-10P

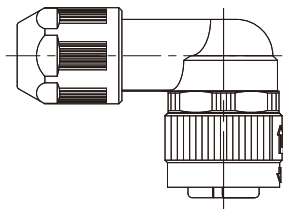


4 pos. Plugs

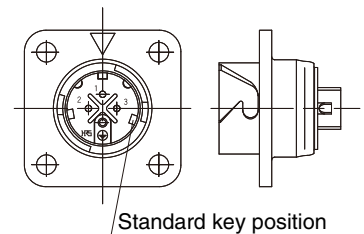
Straight, Wire Solder (Standard key position)
 HR34B-12WPD-4S
 HR34B-12WPE-4S



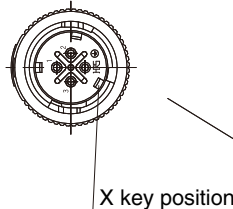
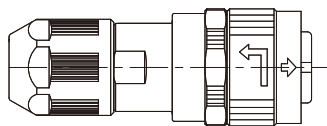
Right angle, Wire Solder (Standard key position)
 HR34B-12WL P D-4S
 HR34B-12WL P E-4S



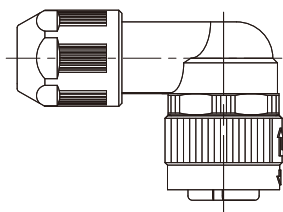
Wire solder (Standard key position)
 HR34B-12WRB-4P



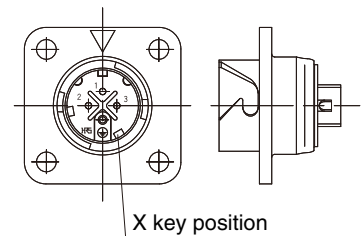
Straight, Wire Solder (X key position)
 HR34B-12WPD-4S-X
 HR34B-12WPE-4S-X



Right angle, Wire Solder (X key position)
 HR34B-12WL P D-4S-X
 HR34B-12WL P E-4S-X



Wire solder (X key position)
 HR34B-12WRB-4P-X



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◆ Applicable tools

| Type | Part No. | HRS No. | Applicable Cable | Applicable Contact |
|---------------------------------------|---------------|------------|-----------------------------------|--------------------------------|
| Automatic Crimping Machine Body | CM-105C | 901-0001-0 | ———— | ———— |
| Automatic Crimping Machine Applicator | AP105-HR34B-1 | 901-2051-2 | 20 AWG to 25 AWG | HR34B-SC1-211 |
| Manual Crimp Tool | HT304/HR34B-1 | 150-0107-9 | UL20276 20 AWG, 23 AWG, 25 AWG | HR34B-SC1-111 |
| Terminal Extraction Tool | RP6-SC-TP | 150-0039-0 | ———— | HR34B-SC1-111 HR34B-SC1-211 |

Note 1 : Perform crimping based on the "Crimping Quality Standards" and "Crimping Conditions Table"

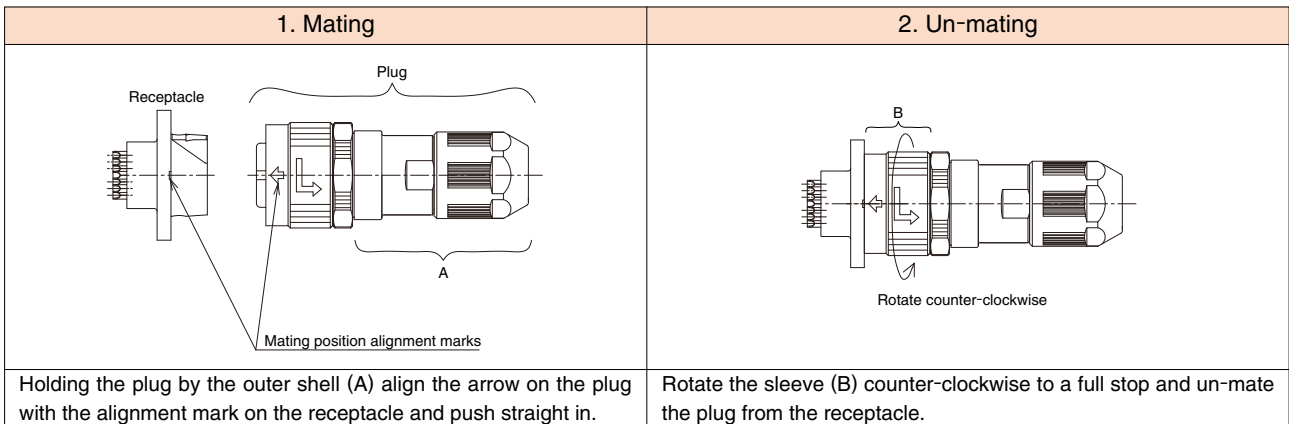
Note 2 : Problems that occur when using tools not designated by Hirose are outside the scope of warranty.

Note 3 : The applicable cables and applicable contacts are limited to those listed in the above table. For inquiries on cables not listed contact a Hirose representative.

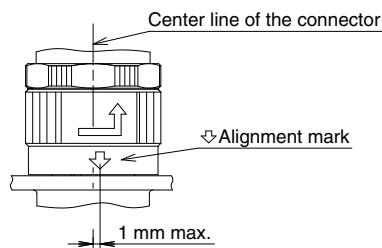
◆ Manual contact crimping tool ◆ Press CM-105C (Applicator ◆ Contact extraction tool ordered separate)



◆ Handling



◆ Precautions



When completely mated and locked the alignment arrow on the plug must line-up with the center line of the connector (alignment mark on the receptacle).

If the alignment arrow and the center line of the connectors are not aligned (1mm max.) re-insert the plug until they are aligned.

1. When disconnecting or inserting the connector, be sure to do so after turning off the power.
2. To insert the connector, push it in until the arrow tip of the plug mating mark indicates the specified position of the diagram below (i.e., the mating mark of the receptacle).
3. Note that the display method of the mating mark will differ depending on the receptacle.
4. To maintain the waterproof quality and cable clamp force, use a cable that is within the range of the applicable cable diameter.
5. Please consult Hirose Electric Sales for harness assembly procedure (ETAD-C0116-00).
6. Please note that the white label on the connector may come off due to solvents such as alcohol.



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