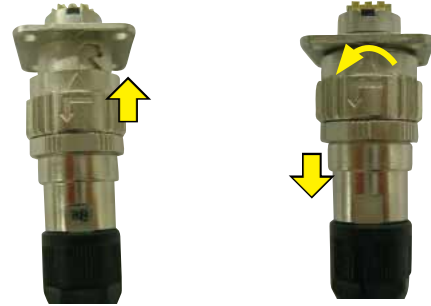


Small, Waterproof, Push-On Bayonet Lock Connectors

HR08D Series



Push-On Bayonet Lock



Mating is completed simply by pushing the plug onto the receptacle.

To unmate this connector, rotate the locking collar to release the lock, then pull them apart.

Fig.①

■ Features

1. Simplified mating operations

- To mate the connector, simply push it onto the receptacle. To unmate, rotate the locking collar and pull the plug back from the receptacle. (Fig. ①)
- Simplified mating is enabled by the alignment markings
- Mating guide keys are provided at 3 points to prevent contact damage. They also provide the ability to blind mate these connectors when needed. Plug connector does not damage the receptacle contacts.

2. Waterproof structure

Supports IP67 and IP68 ratings while in the mated condition. (Ratings explained below*)

*IP67: Submerged in 1 m for 30 minutes

*IP68: Submerged in 2 m for 14 days

3. Adjustable cable direction

The right angle plug can be adjusted to mount in any of the 8 different directions (adjustable in 45° increments). (Fig. ②)

4. Variations available

| Items | |
|----------------------------------|--|
| No. of Contacts | 2 or 10 positions available |
| Connector Type | Straight Plug, Right Angle Plug, Receptacle (10 pos. only) |
| Plug Termination | Crimp, solder |
| Receptacle Termination | Solder |
| Cord Tube Material | Plastic, metal |
| Cable Diameter Range (Reference) | (ϕ 5.7 to 6.5) (ϕ 6.5 to 7.3) (ϕ 8.0 to 9.0) |

Cable exit directions

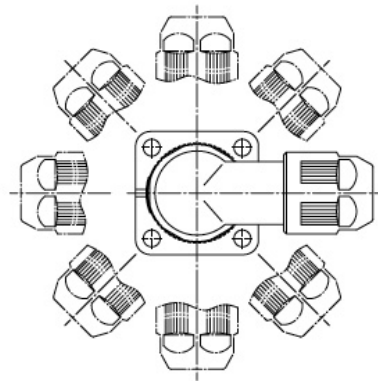


Fig.②

■ Product Specifications

| | | | | |
|---------|---------------|----------------|-----------------------------|----------------|
| Ratings | Rated Current | 3A | Operating Temperature Range | -20°C to +85°C |
| | Rated Voltage | AC200V, DC250V | Storage Temperature Range | -10°C to +60°C |

| Items | Specifications | Conditions |
|--------------------------|--|---|
| 1. Contact Resistance | 20mΩ or below | Measured with DC 1A |
| 2. Insulation Resistance | Minimum of 1,000MΩ | Measured with DC 500V |
| 3. Withstanding Voltage | No flashover or breakdown | 10 pos. AC 900V for 1 minute 2 pos. AC 1,500V for 1 minute |
| 4. Vibration Resistance | No electrical discontinuity of 10μs or greater | Tested in 3 directions with 10 to 500Hz /cycle, total vibration width of 0.75mm, and 98m/s ² , 3 hours each. |
| 5. Shock | No electrical discontinuity of 10μs or greater | Tested in 3 directions with the acceleration of 490m/s ² , and a duration of 11ms, 3 times each |
| 6. Durability | Contact Resistance : Maximum of 30mΩ | 500 mating cycles |
| 7. Temperature Cycles | Insulation Resistance : Minimum of 500MΩ | Left at -55°C : 30 minutes ⇒ Ordinary temperature : 2 to 3 minutes ⇒ 85°C : 30 minutes ⇒ Ordinary temperature : 2 to 3 minutes, 2 to 3 minutes, Total of 5 cycles |
| 8. Humidity Resistance | Insulation resistance Minimum of 50MΩ (high humidity) Minimum of 500MΩ (dry) | Left at temperature 71°C and humidity 95% for 336 hours. Left at the temperature of 71°C and 95% humidity for 336 hours. |
| 9. Waterproof Structure | Should be no water leakage inside the connector | Left submerged in water at the depth of 1m, for 0.5 hours, in the mated condition. |

■ Materials / Finish

● Plug

| Component | Materials | Finish | Remarks |
|----------------|--|----------------------|---------|
| Outer Shell | Zinc Alloy, aluminum alloy and polyamide resin (black) | Nickel under plating | _____ |
| Insulator | PPS resin (black) | _____ | UL94V-0 |
| Female Contact | Phosphorous bronze | Gold plating | _____ |
| O Ring, Gasket | NBR, Nitrile hydride rubber | _____ | _____ |

● Receptacle

| Component | Materials | Finish | Remarks |
|----------------------------|-------------------|----------------------|---------|
| Outer Shell | Zinc alloy | Nickel under plating | _____ |
| Insulator | PPS resin (black) | _____ | UL94V-0 |
| Male Contact 10 position | Brass | Gold plating | _____ |
| O Ring | NBR | _____ | _____ |

■ Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

Please select from the product numbers listed in this catalog when placing orders.

● Plug

HR08D 12 WP A - 10 S ()**

① ② ③ ④ ⑤ ⑥ ⑦

| |
|--|
| ① Model Name : HR08D series |
| ② Shell Size : Diameter (mm) of the mating interface of the plug |
| ③ Shell Type WP : Straight plug, WLP: Right angle plug |
| ④ Cord Tube and Cable Range Type A : Material of cord tube : Metal, with cable dia. range of (φ 5.7 to 6.5) B : Material of cord tube : Metal, with cable dia. range of (φ 6.5 to 7.3) M : Material of cord tube : Plastic, with cable dia. range of (φ 5.7 to 6.5) N : Material of cord tube : Plastic, with cable dia. range of (φ 6.5 to 7.3) K : Material of cord tube : Metal, with cable dia. range of (φ 8.0 to 9.0) |
| ⑤ Number of Contacts : Contacts available (2 or 10) |
| ⑥ Contact Shape S : Female contact for solder termination SC : Female contact for crimping termination |
| ⑦ Other specifications : A two-digit character is added to indicate other specifications as needed. |

● Receptacle

HR08D 12 WR - 10 P ()**

① ② ③ ④ ⑤ ⑥

| |
|--|
| ① Model Name : HR08D series |
| ② Shell Size : Diameter (mm) of the mating interface of the plug |
| ③ Shell Type WR : Receptacle |
| ④ Number of Contacts : Contacts available (10 only) |
| ⑤ Contact Shape P : Male contact for solder termination |
| ⑥ Other specifications : A two-digit character is added to indicate other specifications as needed. |

● Crimp contact

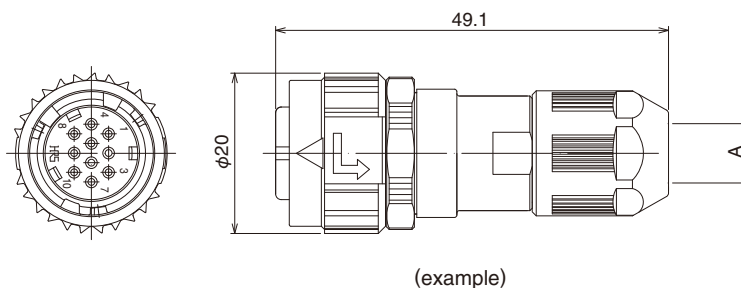
HR34B - SC1 - 2 1 1

① ② ③ ④ ⑤

| |
|--|
| ① Model Name : HR34B series (Shares the same contacts as the HR34B series) |
| ② Contact Type SC1 : Female contact |
| ③ Contact Shape 1 : Single contact 2 : Reel contact |
| ④ Barrel Shape : 1 : 20 to 25 AWG |
| ⑤ Plating Type 1 : Gold plating |

■ Straight plug

● Regular version (Cord tube material : Plastic)



◆ Solder termination version

| Part No. | HRS No. | A | Applicable cable diameter range (Reference) | Contact solder cup inner diameter |
|---------------------|---------------|------|---|-----------------------------------|
| HR08D-12WPM-10S(31) | 108-0274-5 31 | φ7.4 | (φ5.7 to 6.5) | φ1 |
| HR08D-12WPN-10S(31) | 108-0275-8 31 | φ8.5 | (φ6.5 to 7.3) | |
| HR08D-12WPM-2S(31) | 108-0272-0 31 | φ7.4 | (φ5.7 to 6.5) | φ1.8 |
| HR08D-12WPN-2S(31) | 108-0266-7 31 | φ8.5 | (φ6.5 to 7.3) | |

◆ Crimp termination version

| Part No. | HRS No. | A | Applicable cable diameter range (Reference) |
|----------------------|---------------|------|---|
| HR08D-12WPM-10SC(31) | 108-0268-2 31 | φ7.4 | (φ5.7 to 6.5) |
| HR08D-12WPN-10SC(31) | 108-0269-5 31 | φ8.5 | (φ6.5 to 7.3) |

● Robust version (Cord tube material: Metal)

◆ Solder termination version

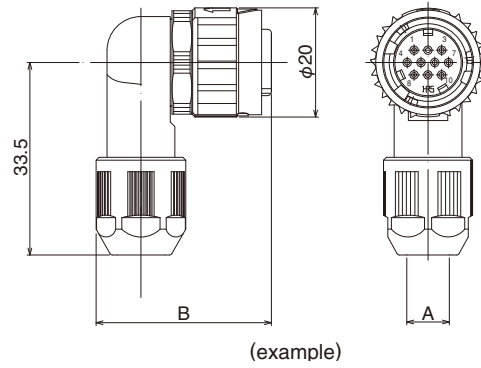
| Part No. | HRS No. | A | Applicable cable diameter range (Reference) | Contact solder cup inner diameter |
|---------------------|---------------|------|---|-----------------------------------|
| HR08D-12WPA-10S(31) | 108-0219-7 31 | φ7.4 | (φ5.7 to 6.5) | φ1 |
| HR08D-12WPB-10S(31) | 108-0231-2 31 | φ8.5 | (φ6.5 to 7.3) | |
| HR08D-12WPK-10S(31) | 108-0262-6 31 | φ9.5 | (φ8.0 to 9.0) | |
| HR08D-12WPA-2S(31) | 108-0279-9 31 | φ7.4 | (φ5.7 to 6.5) | φ1.8 |
| HR08D-12WPB-2S(31) | 108-0280-8 31 | φ8.5 | (φ6.5 to 7.3) | |
| HR08D-12WPK-2S(31) | 108-0281-0 31 | φ9.5 | (φ8.0 to 9.0) | |

◆ Crimp termination version

| Part No. | HRS No. | A | Applicable cable diameter range (Reference) |
|----------------------|---------------|------|---|
| HR08D-12WPA-10SC(31) | 108-0220-6 31 | φ7.4 | (φ5.7 to 6.5) |
| HR08D-12WPB-10SC(31) | 108-0232-5 31 | φ8.5 | (φ6.5 to 7.3) |
| HR08D-12WPK-10SC(31) | 108-0263-9 31 | φ9.5 | (φ8.0 to 9.0) |

■ Right angle plug

● Regular version (Cord tube material : Plastic)



◆ Solder termination version

| Part No. | HRS No. | A | B | Applicable cable diameter range (Reference) | Contact solder cup inner diameter |
|----------------------|---------------|------------|-------|---|-----------------------------------|
| HR08D-12WLPM-10S(31) | 108-0276-0 31 | $\phi 7.4$ | 30.85 | ($\phi 5.7$ to 6.5) | $\phi 1$ |
| HR08D-12WLPN-10S(31) | 108-0277-3 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) | |
| HR08D-12WLPM-2S(31) | 108-0273-2 31 | $\phi 7.4$ | | ($\phi 5.7$ to 6.5) | $\phi 1.8$ |
| HR08D-12WLPN-2S(31) | 108-0267-0 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) | |

◆ Crimp termination version

| Part No. | HRS No. | A | B | Applicable cable diameter range (Reference) |
|-----------------------|---------------|------------|-------|---|
| HR08D-12WLPM-10SC(31) | 108-0270-4 31 | $\phi 7.4$ | 30.85 | ($\phi 5.7$ to 6.5) |
| HR08D-12WLPN-10SC(31) | 108-0271-7 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) |

● Robust version (Cord tube material: Metal)

◆ Solder termination version

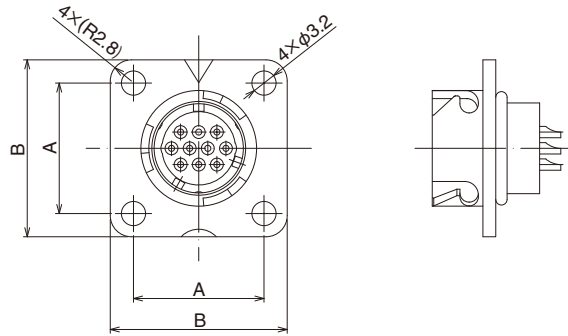
| Part No. | HRS No. | A | B | Applicable cable diameter range (Reference) | Contact solder cup inner diameter |
|----------------------|---------------|------------|------|---|-----------------------------------|
| HR08D-12WLPA-10S(31) | 108-0221-9 31 | $\phi 7.4$ | 30.5 | ($\phi 5.7$ to 6.5) | $\phi 1$ |
| HR08D-12WLPA-10S(31) | 108-0233-8 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) | |
| HR08D-12WLPA-10S(31) | 108-0264-1 31 | $\phi 9.5$ | 31.5 | ($\phi 8.0$ to 9.0) | $\phi 1.8$ |
| HR08D-12WLPA-2S(31) | 108-0282-3 31 | $\phi 7.4$ | 30.5 | ($\phi 5.7$ to 6.5) | |
| HR08D-12WLPA-2S(31) | 108-0283-6 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) | |
| HR08D-12WLPA-2S(31) | 108-0284-9 31 | $\phi 9.5$ | 31.5 | ($\phi 8.0$ to 9.0) | |

◆ Crimp termination version

| Part No. | HRS No. | A | B | Applicable cable diameter range (Reference) |
|-----------------------|---------------|------------|------|---|
| HR08D-12WLPA-10SC(31) | 108-0222-1 31 | $\phi 7.4$ | 30.5 | ($\phi 5.7$ to 6.5) |
| HR08D-12WLPA-10SC(31) | 108-0234-0 31 | $\phi 8.5$ | | ($\phi 6.5$ to 7.3) |
| HR08D-12WLPA-10SC(31) | 108-0265-4 31 | $\phi 9.5$ | 31.5 | ($\phi 8.0$ to 9.0) |

■ Receptacle

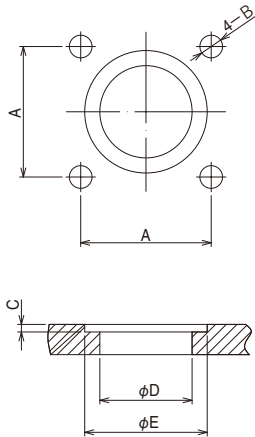
◆ Solder termination version



| Part No. | HRS No. | A | B | Contact solder cup inner diameter |
|--------------------|---------------|-------|------|-----------------------------------|
| HR08D-12WR-10P(31) | 108-0218-4 31 | 17.26 | 23.4 | φ1.1 |

Note : The number 10 contact is connected to the outer shell, which provides the ground connection.

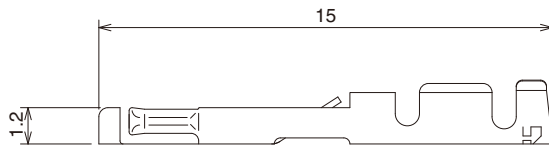
◆ Panel Mount Hole Dimensions



| Dimension | HR08D-12WR-10P(31) |
|-----------|--------------------|
| A | 17.26±0.05 |
| B | M3×0.5 |
| C | 1 0/ - 0.1 |
| D | 12.2 +0.1/0 |
| E | 16.2 +0.1/0 |

■ Crimp contact

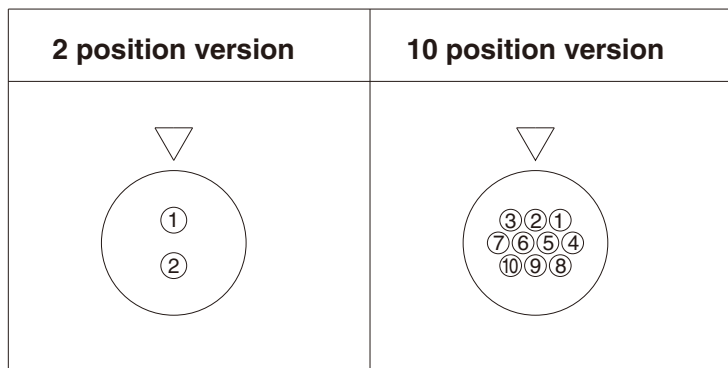
● Female contact



| Type | Part No. | HRS No. | Applicable electric wires |
|---------------------|---------------|------------|---------------------------|
| Loose piece contact | HR34B-SC1-111 | 134-0051-7 | 20 to 25 AWG |
| Reel contact | HR34B-SC1-211 | 134-0050-4 | |

Note : The loose piece contacts are sold in packs of 100. Reel contacts are sold in full reel quantities of 10,000 pieces per reel.

◆ Plug Contact Diagram



Note : The numbering of the contact is from the plug termination side.

◆ Applicable Tools

| Tools | Part No. | HRS No. | Applicable contacts | Applicable wire size |
|-------------------------------|---------------|------------|--------------------------------|----------------------|
| Manual Crimping Tool | HT304/HR34B-1 | 150-0107-9 | HR34B-SC1-111 | 20 AWG、23 AWG、25 AWG |
| Automatic Crimping Press | CM-105C | 901-0001-0 | HR34B-SC1-211 | 20 to 25 AWG |
| Automatic Crimping Applicator | AP105-HR34B-1 | 901-2051-2 | | |
| Contact Extraction Tool | RP6-SC-TP | 150-0039-0 | HR34B-SC1-111 HR34B-SC1-211 | ————— |

◆ Manual Crimping Tool



◆ Automatic Crimping Press CM-105C Model (applicator sold separately)



◆ Contact Extraction Tool



◆ Operating Precautions

1. Prior to inserting or extracting this connector, make sure that the connector is not energized and the power is in the OFF position.
2. There may be some resistance when inserting the cables into this connector, even if the cables are within the applicable cable range. This is to be expected due to the connector's waterproof ability. The waterproof performance and clamp force is dependant on the cable specification. Please check the cable specifications before using as they can cause a difference in performance in the waterproof protection and cable clamp force.
3. Please contact your local Hirose Sales Representative for any inquiries regarding the assembly procedures of this connector (ETAD-C0290-00).



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