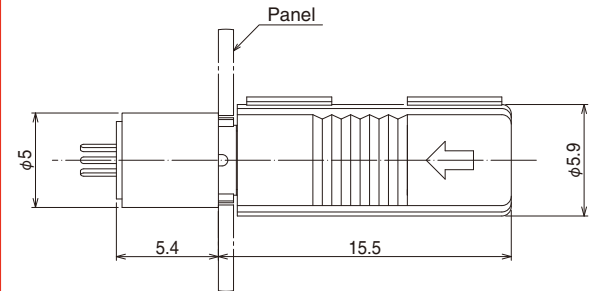


# High Performance Microminiature Circular Connectors

## SR38 Series



### Mating Condition



### ■ Features

#### 1. High density, microminiature design

- With a nominal outside diameter of 5.3mm, the SR38 is designed to save space and fits well in tight spaces.
- The simple lock is designed to resist external forces, such as vibration. Shielding function is also provided.

#### 2. Simple wire installation

- The plug is easy to assemble and no special tools are required.
- The receptacle is a PCB dip type.

### ■ Product Specifications

|         |               |              |                             |             |
|---------|---------------|--------------|-----------------------------|-------------|
| Ratings | Rated Current | 0.5A         | Operating Temperature Range | -15 to 60°C |
|         | Rated Voltage | AC30V, DC42V | Storage Temperature Range   | -10 to 60°C |

| Items                    | Specifications   | Conditions  |
|--------------------------|--|---|
| 1. Contact Resistance    | 30mΩ max.  | Measured with DC 100mA  |
| 2. Insulation Resistance | 100MΩ min.   | Measured with DC 100V   |
| 3. Withstanding Voltage  | No flashover or breakdown  | AC 100V for 1 minute  |
| 4. Vibration Resistance  | No electrical discontinuity of 10μs or greater                                     | Tested 3 directions with 10 to 55Hz/cycle, vibration width 0.75mm, 2 hours each.  |
| 5. Shock                 | No electrical discontinuity of 10μs or greater                                     | Tested 3 directions with acceleration 490m/s <sup>2</sup> and duration 11ms, 3 times each.  |
| 6. Durability            | Contact Resistance : 50mΩ max.   | 100 mating cycles   |
| 7. Temperature Cycles    | Insulation Resistance : 100MΩ min.   | -25°C : 30minutes ⇒ Ordinary temperature:<br>10 to 15minutes ⇒ 70°C :<br>Left for 30minutes ⇒ Ordinary temperature:<br>10 to 15minutes, Total 5 cycles. |
| 8. Humidity Resistance   | Insulation resistance :<br>1MΩ min. (in high humidity)<br>10MΩ min. (after drying) | Left at temperature 40°C and humidity 90 to 95%<br>for 96 hours.  |

### ■ Materials / Finish

| Items      | Materials      | Finish                      | Remarks        |
|------------|----------------|-----------------------------|----------------|
| Plug       | Brass          | Tin plated                  | -              |
|            | Outer Case     | Polypropylene resin (Black) | -              |
|            | Insulator      | PBT resin (Black)           | -              |
|            | Male Contact   | Phosphor bronze             | Silver plating |
| Receptacle | Brass          | Nickel plating              | -              |
|            | Outer Shell    | Phosphor bronze             | Tin plated     |
|            | Insulator      | PBT resin (Black)           | -              |
|            | Female Contact | Phosphor bronze             | Silver plating |

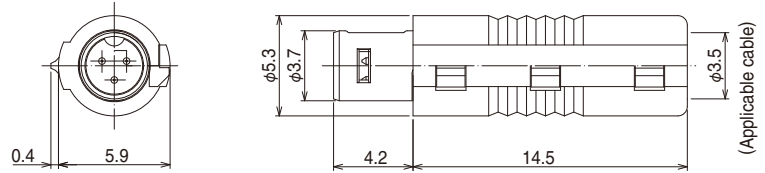
## Product Number Structure

**SR38 - 4 P - 3 P (\*\*)**

① ② ③ ④ ⑤ ⑥

|   |
|---|
| ① Model Name: SR38 Series   |
| ② Shell size: This describes the outer diameter of the case on the mating plug  |
| ③ Shell Type<br>P: Plug<br>R: Receptacle  |
| ④ No. of Contacts:  |
| ⑤ Contact Gender<br>P: Male Contact<br>S: Female contact                        |
| ⑥ Other Specifications: A two digit number will denote specific product changes |

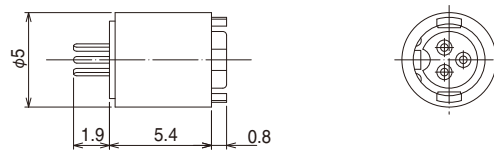
## Plug



| Part No.       | HRS No.       |
|----------------|---------------|
| SR38-4P-3P(31) | 103-0372-2 31 |

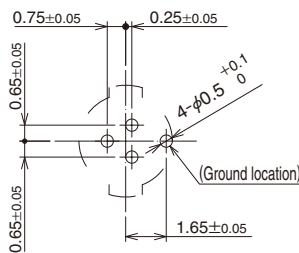
When this connector is assembled with the applicable cable, the clamp will perform well between 10 to 20N. If you plan on using cable other than the type we recommended, please check with your cable manufacturer to make sure it meets our requirements. This is especially important when the cable is being flexed as it may affect the performance of the connector.

## Receptacle

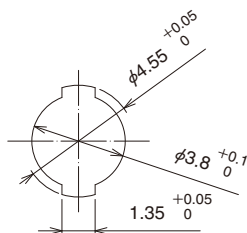


| Part No.       | HRS No.       |
|----------------|---------------|
| SR38-4R-3S(71) | 103-0373-5 71 |

## Dip Post Arrangement and Panel Installation Dimensions



Dip Post Arrangement

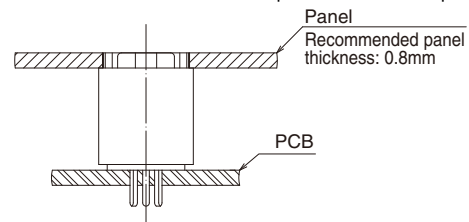


Panel Cutout

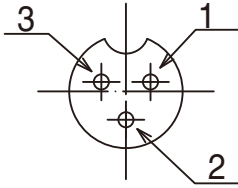
## Installation of the Receptacle

As shown in the figure below, pinch the panel and PCB for fixation. Position the PCB, receptacle and panel together, as shown in the figure below.

Also, make sure no loads are applied to the contact dip. Make sure that no direct force is placed onto the receptacle.

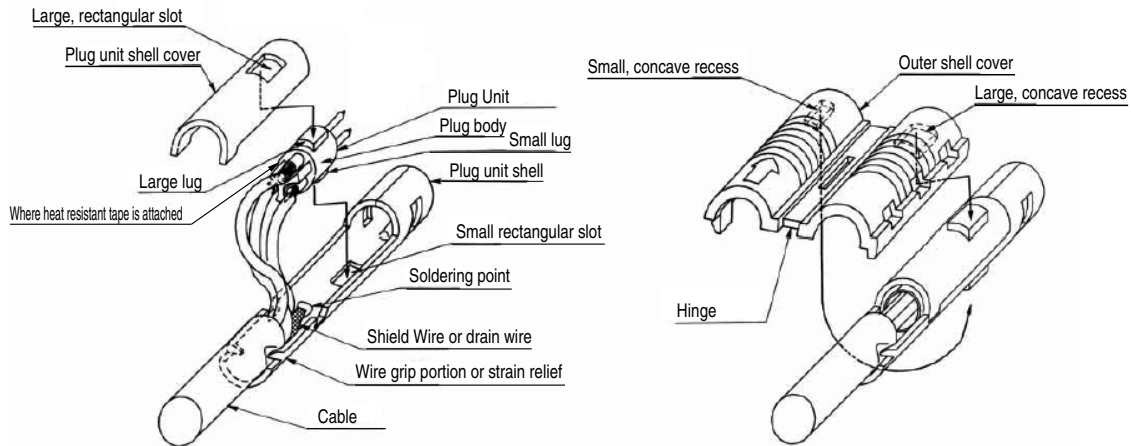


## ◆ Contact Arrangement



- Reference 1. This diagram displays a view of the receptacle from the mating side (plug termination side)  
 2. The inner diameter of the solder pot is 0.5mm.

## ◆ Termination Procedure (Plug side)



1. Solder the prepared wires of the cable to the plug unit.  
(When using a soldering iron, apply heat of no more than 280°C for a maximum of 3 seconds.)
2. Heat resistant tape is wound around the terminated part of the plug unit for insulation between the contacts and the shell. (Please prepare the heat resistant tape by yourself.)
3. Solder the shield or drain wire to the bottom of the connector shell as shown in the diagram.
4. Install the cable into the wire grip portion of the plug unit shell.
5. Install the large and small lugs of the of the plug unit into the matching rectangular slots in the shell. Then install the plug unit shell cover.
6. Match the corresponding large and small recesses on the outer shell cover with the large and small lug parts on the plug body. Then close the outer shell cover and snap shut.

