

IP 68

05

- SP Series IP68
- Threaded coupling



★ Each side can be male or female contact

### Material and spec

| Coupling                   | Threaded                                                                                                                                       |                                                                                                         |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Shell material             | PC, Nylon66, fire resistance: V-0                                                                                                              |                                                                                                         |
| Insert material            | PPS, max temperature 260 ℃; Insert material: PA66(New Screw)                                                                                   |                                                                                                         |
| Contact material           | Brass with gold plating                                                                                                                        |                                                                                                         |
| Termination                | Solder: SP11, SP13, SP17, SP21, SP25, SP29,<br>Crimp: SP17, SP21, SP25, SP29<br>Screw: SP17, SP21, SP25, SP29 (Ø2.0, Ø2.5, Ø3, Ø3.5mm contact) |                                                                                                         |
| Cable outer diameter range | SP11: I: 3-4mm, II: 4-6.5mm<br>SP17: 6-10mm<br>SP25: I: 10-14mm, II: 7-12mm                                                                    | SP13: I: 4-6.5mm, II: 5-8mm<br>SP21: I: 4.5-7mm, II: 7-12mm, III: 5-9mm<br>SP29: I: 9-13mm, II: 13-16mm |
| IP rating                  | IP68                                                                                                                                           |                                                                                                         |
| Mating cycle               | 500                                                                                                                                            |                                                                                                         |
| Temperature range          | -40℃~+85℃                                                                                                                                      |                                                                                                         |
| Insulation resistance      | 2000 MΩ                                                                                                                                        |                                                                                                         |

## SP21 Series

SP  
21



Cable connector  
Mate with SP2111, SP2111C,  
SP2112, SP2113

SP2110 / P

SP2110 / S

Male contact

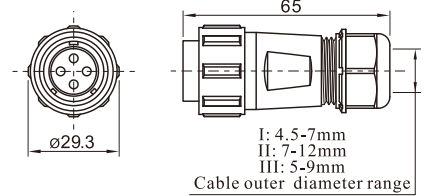
Female contact

1: solder, 2: screw, 3: crimp

Cable outer diameter range

I: 4.5-7mm, II: 7-12mm, III: 5-9mm

Number of contact



Angled cable connector  
Mate with SP2111, SP2111C, SP2112, SP2113

SP2116 / P

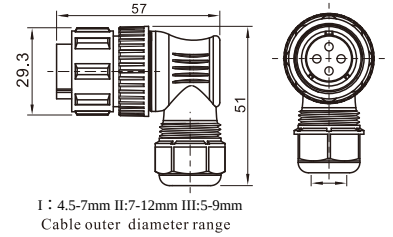
SP2116 / S

Number of contact

1: solder, 2: screw, 3: crimp

Cable outer diameter range

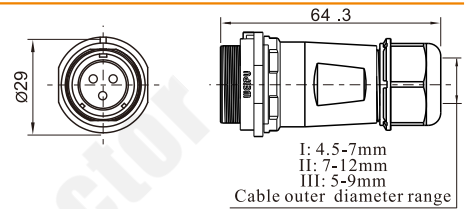
I: 4.5-7mm, II: 7-12mm, III: 5-9mm



In-line cable connector C  
Mate with SP2110, SP2116

SP2111C / P

SP2111C / S



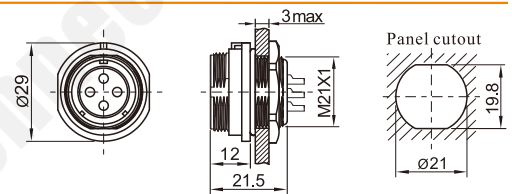
Rear-nut mount  
Mate with SP2110, SP2116

SP2112 / P

SP2112 / S

Number of contact

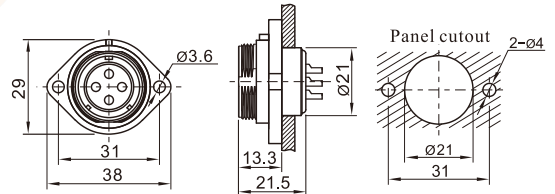
1: solder, 2: screw, 3: crimp



2-hole flange  
Mate with SP2110, SP2116

SP2113 / P

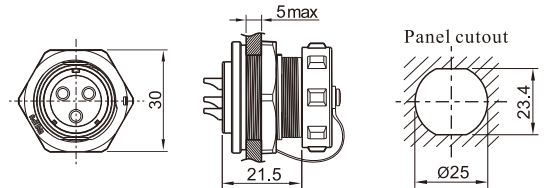
SP2113 / S



Front-nut mount  
Mate with SP2110, SP2116

SP2115 / P

SP2115 / S



### Solder contact spec

★Crimp contact spec see P20

★Screw contact spec see P21

| Number of contact                                      | 2              | 3              | 4              | 5              | 5B                | 5C     | 6                 | 6B                | 7      | 8      | 9        | 12       | 15       |
|--------------------------------------------------------|----------------|----------------|----------------|----------------|-------------------|--------|-------------------|-------------------|--------|--------|----------|----------|----------|
| Male contact face view                                 |                |                |                |                |                   |        |                   |                   |        |        |          |          |          |
| Rated current (A)                                      | 30             | 30             | 30             | 30             | 30<br>5           | 15     | 25<br>5           | 30<br>5           | 15     | 10     | 5        | 5        | 5        |
| Contact diameter (mm)                                  | Ø3X2           | Ø3X3           | Ø3X4           | Ø3X5           | Ø3X2<br>Ø1X3      | Ø2X5   | Ø2.5X4<br>Ø1X2    | Ø3X2<br>Ø1X4      | Ø2X7   | Ø1.5X8 | Ø1X9     | Ø1X12    | Ø1X15    |
| Rated voltage (AC.V)                                   | 500            | 500            | 500            | 500            | 500               | 500    | 500               | 500               | 500    | 500    | 400      | 400      | 400      |
| Test voltage(AC.V) 1 min                               | 1500           | 1500           | 1500           | 1500           | 1500              | 1500   | 1500              | 1500              | 1500   | 1500   | 1200     | 1200     | 1200     |
| Contact resistance (mΩ)                                | 1              | 1              | 1              | 1              | 1<br>5            | 2.5    | 1<br>5            | 1<br>5            | 2.5    | 2.5    | 5        | 5        | 5        |
| Termination                                            | solder / screw | solder / screw | solder / screw | solder / screw | solder            | solder | solder            | solder            | solder | solder | solder   | solder   | solder   |
| Wire size for solder (mm <sup>2</sup> / AWG)           | ≤4/12          | ≤4/12          | ≤4/12          | ≤4/12          | ≤4/12<br>≤0.75/18 | ≤2/14  | ≤4/12<br>≤0.75/18 | ≤4/12<br>≤0.75/18 | ≤2/14  | ≤2/14  | ≤0.75/18 | ≤0.75/18 | ≤0.75/18 |
| Wire size for screw termination (mm <sup>2</sup> /AWG) | ≤1.5/15        | ≤1.5/15        | ≤1.5/15        | ≤1.5/15        | /                 | /      | /                 | /                 | /      | /      | /        | /        | /        |