

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 °C; Insert material: PA66(New Screw)	
Contact material	Brass with gold plating	
Termination	Solder: SP11, SP13, SP17, SP21, SP25, SP29, Crimp: SP17, SP21, SP25, SP29 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 SP17: 6-10mm SP25: I: 10-14mm, II: 7-12mm	SP13: I: 4-6.5mm, II: 5-8mm SP21: I: 4.5-7mm, II: 7-12mm, III: 5-9mm SP29: I: 9-13mm, II: 13-16mm
IP rating	IP68	
Mating cycle	500	
Temperature range	-40°C ~ +85°C	
Insulation resistance	2000 MΩ	

# SP21 Series

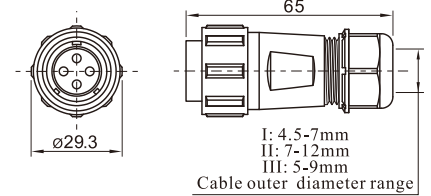
**SP  
21**



SP2110 / P Male contact  
SP2110 / S Female contact

Cable connector  
Mate with SP2111, SP2111C,  
SP2112, SP2113

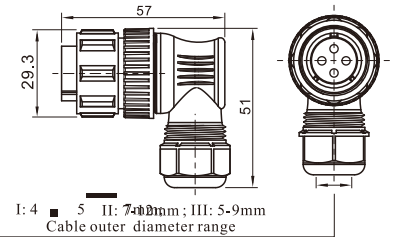
1: solder, 2: screw, 3: crimp  
Cable outer diameter range  
I: 4.5-7mm, II: 7-12mm, III: 5-9mm  
Number of contact



SP2116 / P  
SP2116 / S  
Number of contact

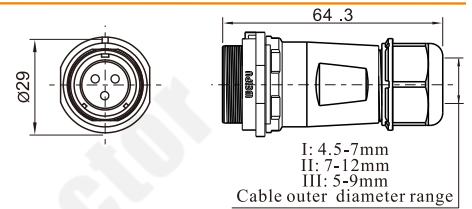
Angled cable connector  
Mate with SP2111, SP2111C, SP2112, SP2113

1: solder, 2: screw, 3: crimp  
Cable outer diameter range  
I: 4.5-7mm, II: 7-12mm, III: 5-9mm



SP2111C / P  
SP2111C / S

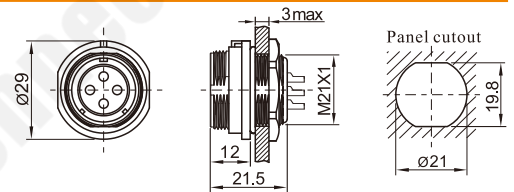
In-line cable connector C  
Mate with SP2110, SP2116



SP2112 / P  
SP2112 / S  
Number of contact

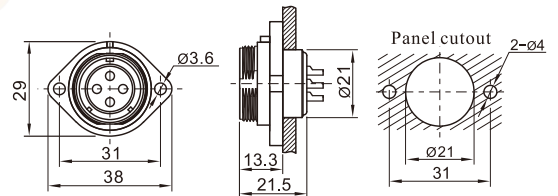
Rear-nut mount  
Mate with SP2110, SP2116

1: solder, 2: screw, 3: crimp



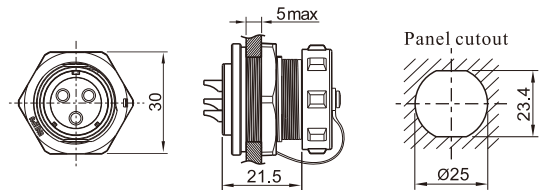
SP2113 / P  
SP2113 / S

2-hole flange  
Mate with SP2110, SP2116



SP2115 / P  
SP2115 / S

Front-nut mount  
Mate with SP2110, SP2116



## 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 5	15	25 5	30 5	15	10	5	5	5
Contact diameter (mm)	Ø3X2	Ø3X3	Ø3X4	Ø3X5	Ø3X2 Ø1X3	Ø2X5	Ø2.5X4 Ø1X2	Ø3X2 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 5	2.5	1 5	1 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 ≤0.75/18	≤2/14	≤4/12 ≤0.75/18	≤4/12 ≤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	/	/	/	/	/	/	/	/	/

# SP21 Series



**SP  
21**



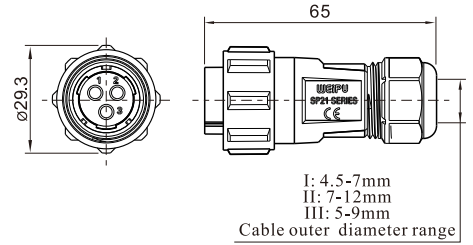
Plug with horizontal mount screw  
Mate with SP2111, SP2112

SP2110 / P\_\_-9    SP2110 / S\_\_-9

Male contact

Female contact

Cable outer diameter range  
I: 4.5-7mm, II: 7-12mm III: 5-9mm  
Number of contact

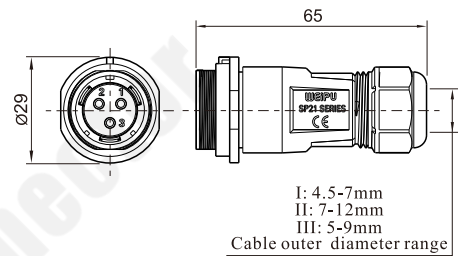


05



Connector with horizontal mount screw  
Mate with SP2110

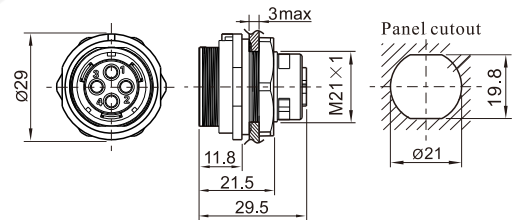
SP2111 / P\_\_-9    SP2111 / S\_\_-9



Rear-nut mount receptacle with horizontal mount screw  
Mate with SP2110

SP2112 / P\_\_-9    SP2112 / S\_\_-9


Number of contact



## Screw contact spec



Number of contact	2	3	4	5
Male contact face view				
Rated current (A)	30	30	30	30
Contact diameter (mm)	ø3X2	ø3X3	ø3X4	ø3X5
Rated voltage (AC.V)	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500
Contact resistance (mΩ)	1	1	1	1
Wire size for screw termination (mm²/AWG)	0.75/18 ≤ Min Max ≤ 4/12	0.75/18 ≤ Min Max ≤ 4/12	0.75/18 ≤ Min Max ≤ 4/12	0.75/18 ≤ Min Max ≤ 4/12

**SP21 Series**

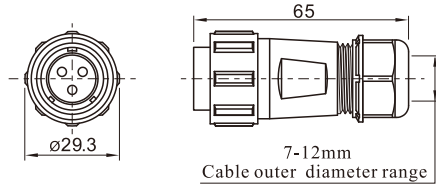


**SP2110 / P** — Male contact  
**SP2110 / S** — Female contact

Cable connector  
Mate with SP2111, SP2112, SP2113


(U): , (CU):   
Colour: All black

Number of contact



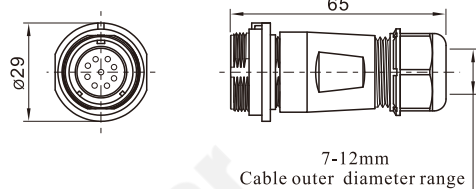
65  
7-12mm  
Cable outer diameter range

Ø29.3




**SP2111 / P** — Male contact  
**SP2111 / S** — Female contact

In-line cable connector  
Mate with SP2110





65  
7-12mm  
Cable outer diameter range

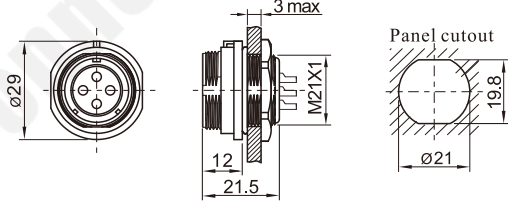
Ø29




**SP2112 / P** — Male contact  
**SP2112 / S** — Female contact

Rear-nut mount  
Mate with SP2110

(U): , (CU):   
Number of contact

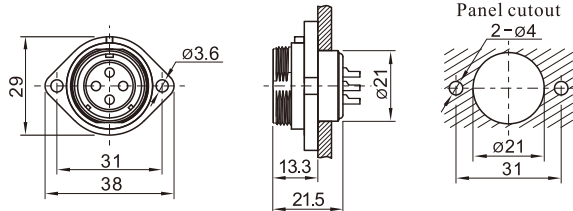


3 max  
M21X1  
12  
21.5  
Panel cutout  
19.8  
Ø21











**SP2113 / P** — Male contact  
**SP2113 / S** — Female contact

2-hole flange  
Mate with SP2110



29  
31  
38  
Ø3.6  
13.3  
21.5  
Panel cutout  
2-Ø4  
Ø21  
31

**Solder contact spec**

Number of contact	2	3	4	5
Male contact face view				
Rated current (A)	30   20 	30   20 	30   20 	30   20 
Contact diameter (mm)	Ø3X2	Ø3X3	Ø3X4	Ø3X5
Rated voltage (AC.V)	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500
Contact resistance (mΩ)	1	1	1	1
Termination	solder	solder	solder	solder
Wire size for solder (AWG)	12	12	12	12