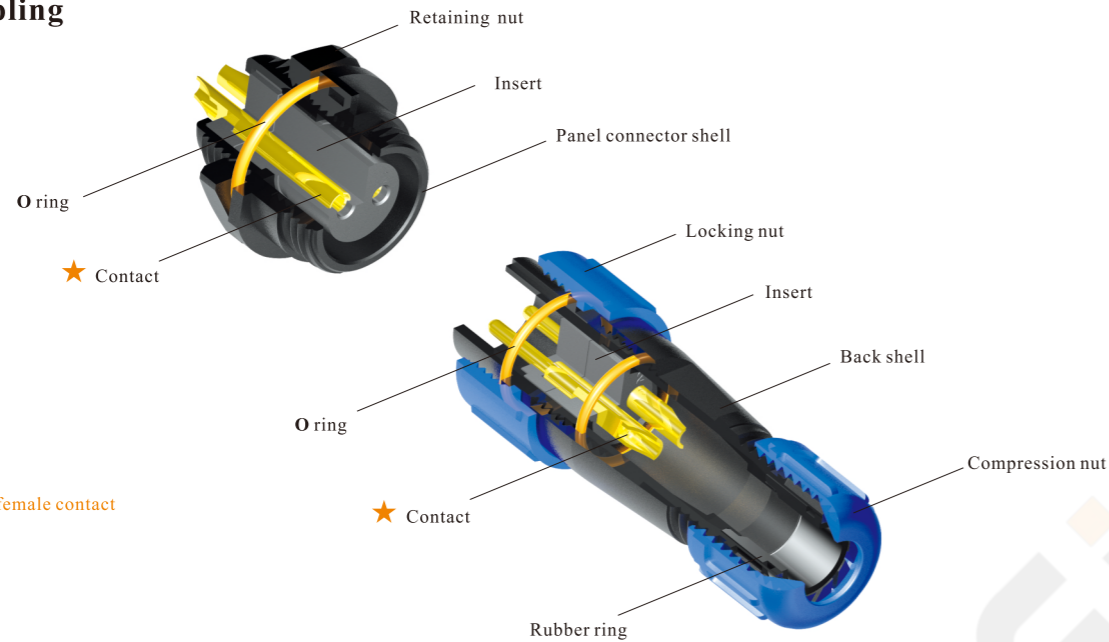




- SP Series IP68
- Threaded coupling



★ 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	

SP11 Series

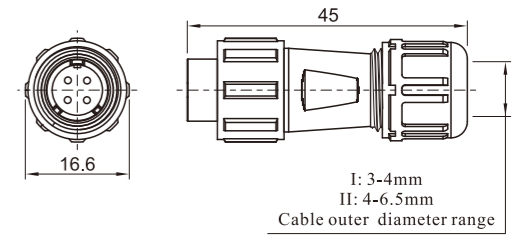


Cable connector  
Mate with SP1111,  
SP1111C, SP1112

SP1110/P — Male contact

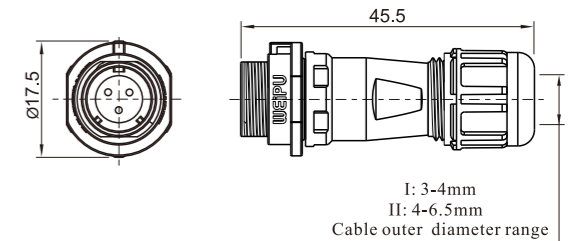
SP1110/S — Female contact

Cable outer diameter range  
I: 3-4mm II: 4-6.5mm  
Number of contact  
Female contact



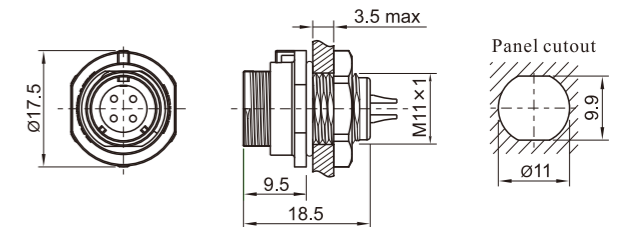
In-line cable connector C  
Mate with SP1110

SP1111C/P — SP1111C/S —



Rear-nut mount  
Mate with SP1110

SP1112/P — SP1112/S —



Solder contact spec

Number of contact	2	3	4	5
Male contact face view				
Rated current (A)	5	5	3	3
Contact diameter(mm)	Ø1×2	Ø1×3	Ø0.7×4	Ø0.7×5
Rated voltage (AC.V)	180	180	125	125
Test voltage(AC.V) 1 min	1000	1000	1000	1000
Contact resistance(mΩ)	5	5	10	10
Wire size(mm²/AWG)	≤0.75/18	≤0.75/18	≤0.5/20	≤0.5/20

SP11 Series

SP  
11

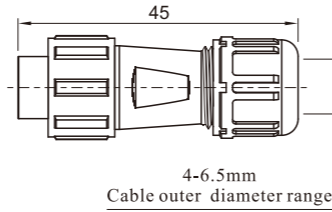
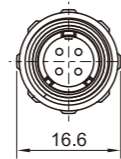


Cable connector  
Mate with SP1111, SP1112

SP1110/P  
Male contact

SP1110/S  
Female contact

(CU):  
Colour: All black  
Number of contact



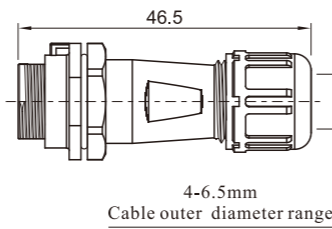
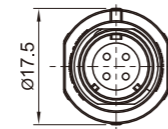
05



In-line cable connector  
Mate with SP1110

SP1111/P  
Male contact

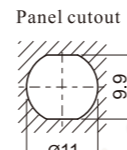
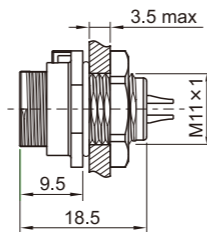
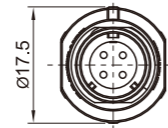
SP1111/S  
Female contact



Rear-nut mount  
Mate with SP1110

SP1112/P  
Male contact

SP1112/S  
Female contact



Solder contact spec

Number of contact	4	5
Male contact face view		
Rated current (A)	3	3
Contact diameter(mm)	0.7x4	0.7x5
Rated voltage (AC.V)	125	125
Test voltage(AC.V) 1 min	1000	1000
Contact resistance(mΩ)	10	10
Wire size (AWG)	20	20

SP13 Series

SP  
13

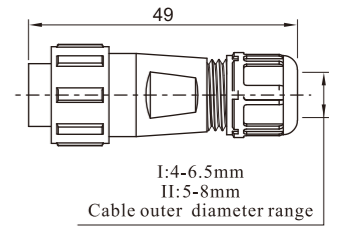
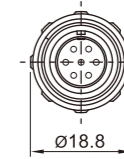


Cable connector  
Mate with SP1311,  
SP1311C, SP1312

SP1310/P  
Male contact

SP1310/S  
Female contact

Cable outer diameter range  
I: 4-6.5mm, II: 5-8mm  
Number of contact



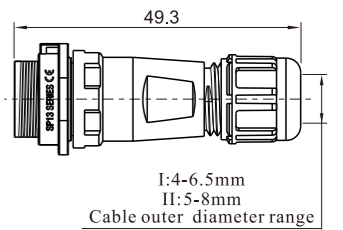
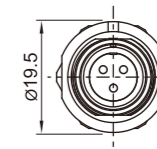
05



In-line cable connector C  
Mate with SP1310

SP1311C/P  
Male contact

SP1311C/S  
Female contact

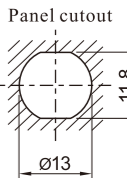
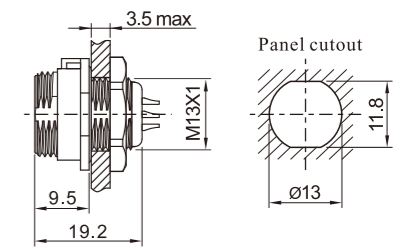
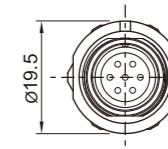


Rear-nut mount  
Mate with SP1310

SP1312/P  
Male contact

SP1312/S  
Female contact

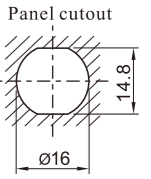
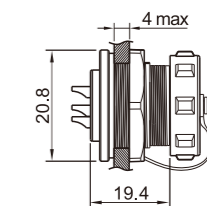
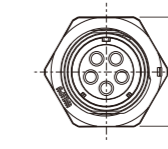
芯数 Number of contact



Front-nut mount  
Mate with SP1310

SP1315/P  
Male contact

SP1315/S  
Female contact



Solder contact spec

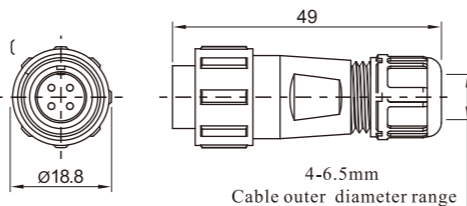
Number of contact	2	3	4	5	6	7	9
Male contact face view							
Rated current (A)	13	13	5	5	5	5	3
Contact diameter (mm)	1.6X2	1.6X3	1X4	1X5	1X6	1X7	0.7X9
Rated voltage (AC.V)	250	250	200	180	125	125	125
Test voltage(AC.V) 1 min	1500	1500	1500	1000	1000	1000	1000
Contact resistance (mΩ)	2.5	2.5	5	5	5	5	10
Wire size (mm² / AWG)	≤2/14	≤2/14	≤0.75/18	≤0.75/18	≤0.75/18	≤0.75/18	≤0.5/20

SP13 Series

SP  
13



Cable connector  
Mate with SP1311, SP1312



SP1310 / P — SP1310 / S

Male contact

(CU):

Number of contact

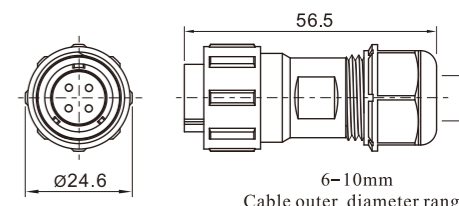
Female contact

SP17 Series

SP  
17



Cable connector  
Mate with SP1711, SP1711C,  
SP1712



SP1710 / P — SP1710 / S

Male contact

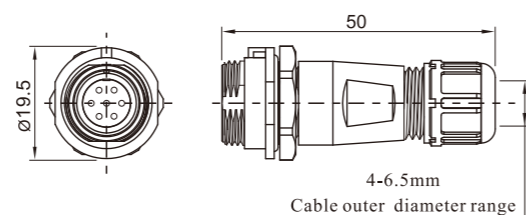
1: solder, 3: crimp

Number of contact

Female contact



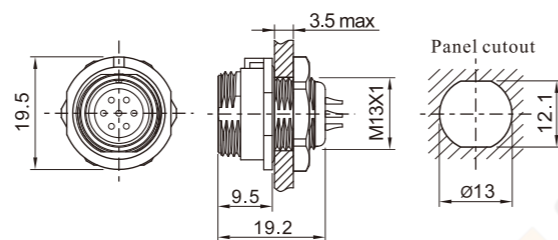
In-line cable connector  
Mate with SP1310



SP1311 / P — SP1311 / S



Rear-nut mount  
Mate with SP1310



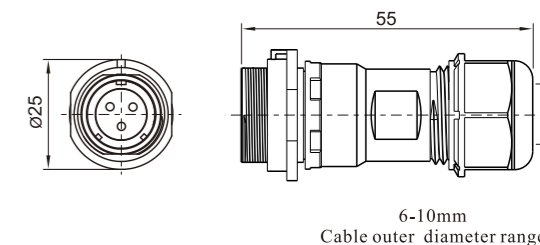
SP1312 / P — SP1312 / S

(CU):

Number of contact



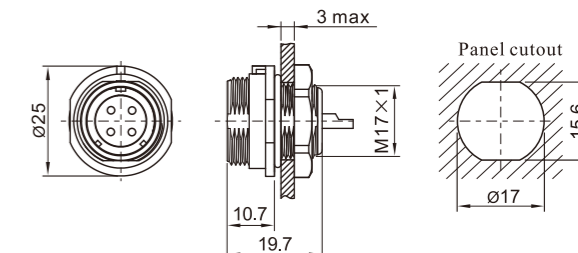
In-line cable connector C  
Mate with SP1710



SP1711C / P — SP1711C / S



Rear-nut mount  
Mate with SP1710



SP1712 / P — SP1712 / S

Solder contact spec

Number of contact	4	5	6	7	9
Male contact face view					
Rated current (A)	5	5	5	5	3
Contact diameter (mm)	Ø1X4	Ø1X5	Ø1X6	Ø1X7	Ø0.7X9
Rated voltage (AC.V)	300	300	300	300	125
Test voltage(AC.V) 1 min	1500	1000	1000	1000	1000
Contact resistance (mΩ)	5	5	5	5	10
Wire size (AWG)	20	20	20	20	20

Solder contact spec

★Crimp contact spec see P20

Number of contact	2	3	4	2B	3B	4B	5	7	9	10
Male contact face view										
Rated current (A)	10	10	5	15	15	15	5	5	5	5
Contact diameter(mm)	Ø1.5X2	Ø1.5X3	Ø1X4	Ø2X2	Ø2X3	Ø2X4	Ø1X5	Ø1X7	Ø1X9	Ø1X10
Rated voltage (AC.V)	500	500	500	500	500	500	500	400	400	400
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500	1500	1500	1200	1200	1200
Contact resistance (mΩ)	2.5	2.5	5	2.5	2.5	2.5	5	5	5	5
Wire size (mm²/AWG)	≤2/14	≤2/14	≤0.75/18	≤2/14	≤2/14	≤2/14	≤0.75/18	≤0.75/18	≤0.75/18	≤0.75/18

### SP17 Series



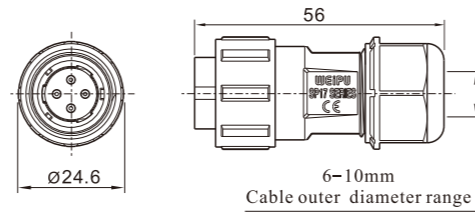
SP  
17



Plug with horizontal mount screw  
Mate with SP1711, SP1712

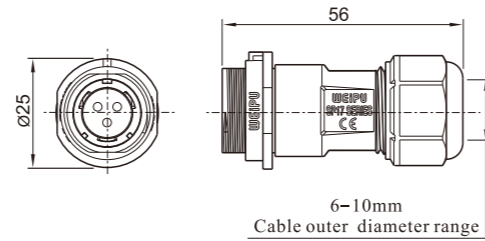
SP1710 / P\_\_-9    SP1710 / S\_\_-9

Male contact      Number of contact  
Female contact



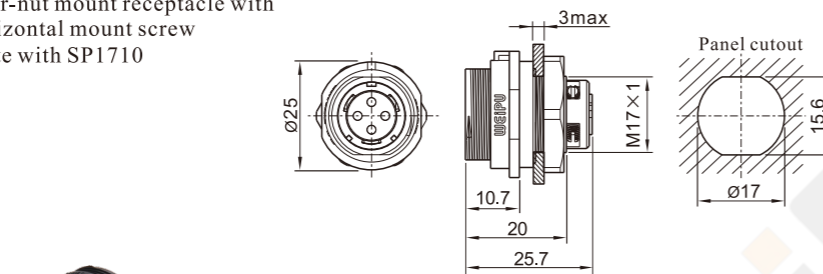
Connector with horizontal mount screw  
Mate with SP1710

SP1711 / P\_\_-9    SP1711 / S\_\_-9



Rear-nut mount receptacle with horizontal mount screw  
Mate with SP1710

SP1712 / P\_\_-9    SP1712 / S\_\_-9



### Screw contact spec

Number of contact	2B	3B	4B
Male contact face view			
Rated current (A)	15	15	15
Contact diameter(mm)	Ø2X2	Ø2X3	Ø2X4
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance (mΩ)	2.5	2.5	2.5
Wire size (mm <sup>2</sup> /AWG)	Min: 0.75/18 Max: ≤2/14	Min: 0.75/18 Max: ≤2/14	Min: 0.75/18 Max: ≤2/14

### SP21 Series

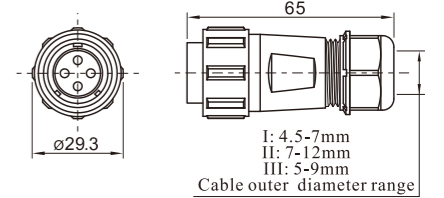
SP  
21



Cable connector  
Mate with SP2111, SP2111C,  
SP2112, SP2113

SP2110 / P\_\_-    SP2110 / S\_\_-  
Male contact    Female contact

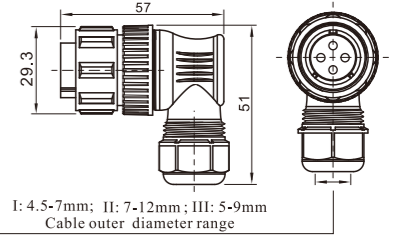
1: solder, 2: screw, 3: crimp  
Cable outer diameter range  
I: 4.5-7mm, II: 7-12mm, III: 5-9mm  
Number of contact



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

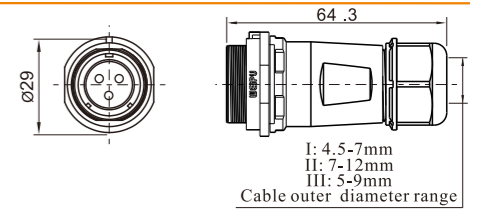
SP2116 / P\_\_-    SP2116 / S\_\_-  
Number of contact

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

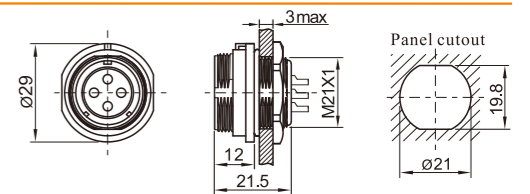
SP2111C / P\_\_-    SP2111C / S\_\_-



Rear-nut mount  
Mate with SP2110, SP2116

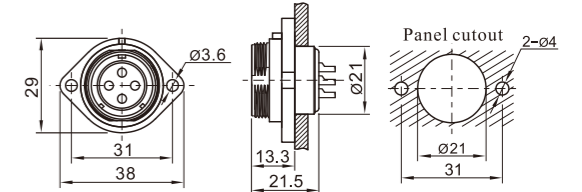
SP2112 / P\_\_-    SP2112 / S\_\_-  
Number of contact

1: solder, 2: screw, 3: crimp



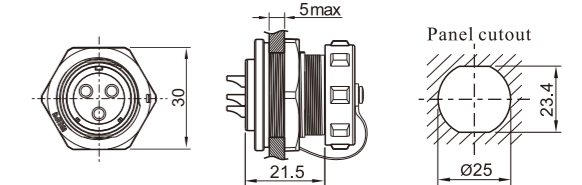
2-hole flange  
Mate with SP2110, SP2116

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 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	/	/	/	/	/	/	/	/	/

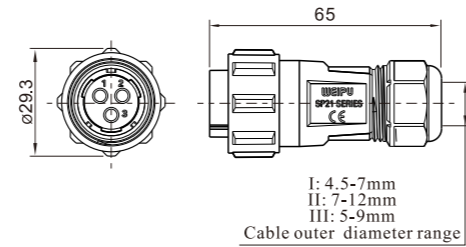
SP21 Series



SP 21



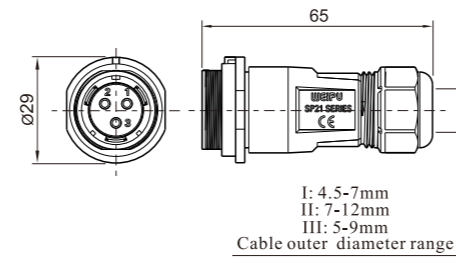
Plug with horizontal mount screw  
Mate with SP2111, SP2112



SP2110 / P\_\_-9 Male contact  
SP2110 / S\_\_-9 Female contact  
Cable outer diameter range  
I: 4.5-7mm, II: 7-12mm III: 5-9mm  
Number of contact



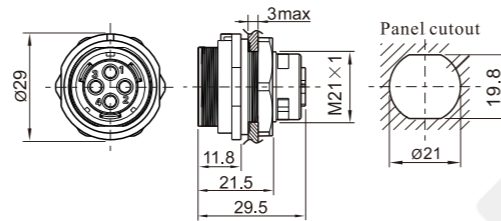
Connector with horizontal mount screw  
Mate with SP2110



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

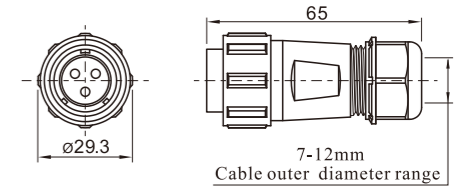
Number of contact	2	3	4	5
Male contact face view				
Rated current (A)	30	30	30	30
Contact diameter (mm)	ø3X2	ø3X3	ø3X4	ø3X5
Rated voltage (AC.V)	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500
Contact resistance (mΩ)	1	1	1	1
Wire size for screw termination (mm <sup>2</sup> /AWG)	0.75/18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

SP 21



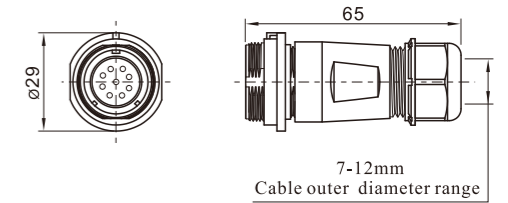
Cable connector  
Mate with SP2111, SP2112, SP2113



SP2110 / P\_\_ Male contact  
SP2110 / S\_\_ Female contact  
(U): (CU):   
Colour: All black  
Number of contact



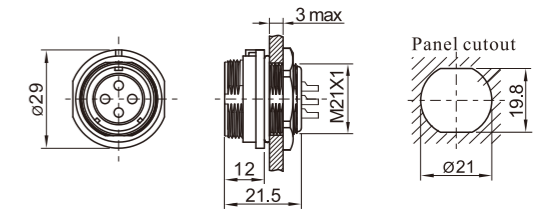
In-line cable connector  
Mate with SP2110



SP2111 / P\_\_ SP2111 / S\_\_



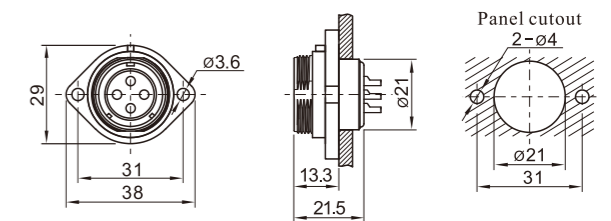
Rear-nut mount  
Mate with SP2110



SP2112 / P\_\_ SP2112 / S\_\_ (U): (CU):   
Number of contact



2-hole flange  
Mate with SP2110



SP2113 / P\_\_ SP2113 / S\_\_

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

SP25 Series



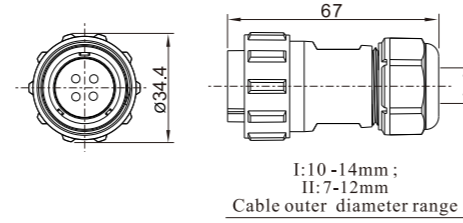
SP 25



Cable connector  
Mate with SP2511, SP2511C, SP2512, SP2513

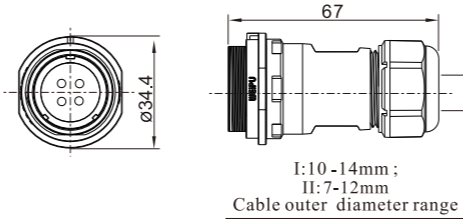
SP2510 / P --- SP2510 / S ---  
Male contact

1:solder, 2:screw, 3:crimp  
Cable outer diameter range  
I: 10-14mm ; II: 7-12mm  
Number of contact  
Female contact



In-line cable connector C  
Mate with SP2510

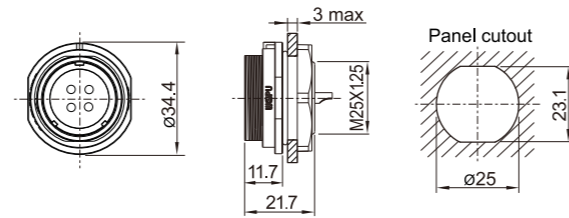
SP2511C / P --- SP2511C / S ---



Rear-nut mount  
Mate with SP2510

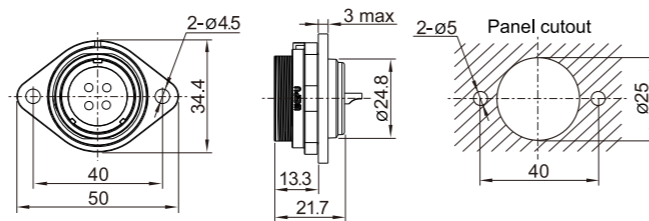
SP2512 / P --- SP2512 / S ---

1:solder, 2:screw, 3:crimp  
Number of contact



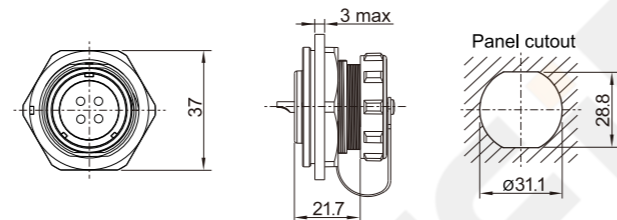
2-hole flange  
Mate with SP2510

SP2513 / P --- SP2513 / S ---



Front-nut mount  
Mate with SP2510

SP2515 / P --- SP2515 / S ---



Solder contact spec

★Crimp contact spec see P20

★Screw contact spec see P21

Number of contact	2	3	4	9	10	12	12B	19
Male contact face view								
Rated current (A)	25	25	25	5 25	10	10	5 30	5
Contact diameter(mm)	Ø2.5X2	Ø2.5X3	Ø2.5X4	Ø1X5 Ø2.5X4	Ø1.5X10	Ø1.5X12	Ø1X9 Ø3X3	Ø1X19
Rated voltage (AC.V)	500	500	500	500	500	500	500	400
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500	1500	1500	1200
Contact resistance(mΩ)	1	1	1	5 1	2.5	2.5	5 1	5
Insulation resistance (MΩ)	2000	2000	2000	2000	2000	2000	2000	2000
Wire size (mm <sup>2</sup> /AWG)	≤4/11	≤4/11	≤4/11	≤0.75/18 ≤4/11	≤2/14	≤2/14	≤0.75/18 ≤4/11	≤0.75/18

SP29 Series

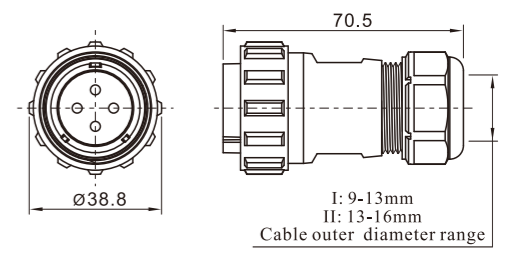
SP 29



Cable connector  
Mate with SP2911, SP2911C, SP2912, SP2913

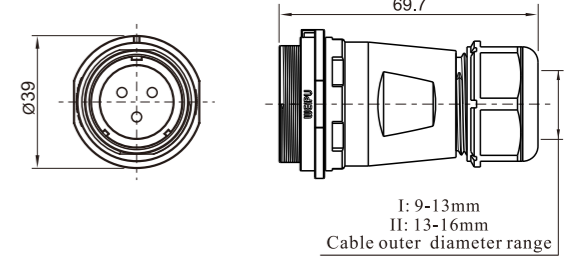
SP2910 / P --- SP2910 / S ---  
Male contact

1:solder, 2:screw, 3:crimp  
Cable outer diameter range  
I: 9-13mm II: 13-16mm  
Number of contact  
Female contact



In-line cable connector C  
Mate with SP2910

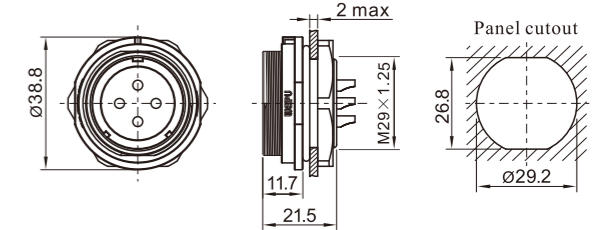
SP2911C / P --- SP2911C / S ---



Rear-nut mount  
Mate with SP2910

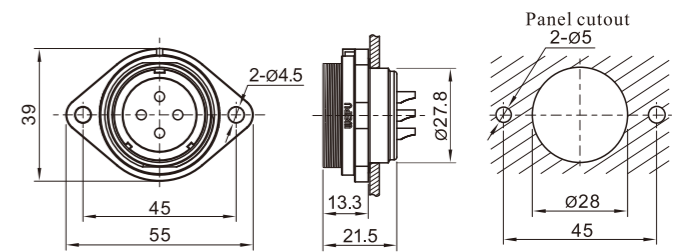
SP2912 / P --- SP2912 / S ---

Number of contact



2-hole flange  
Mate with SP2910

SP2913 / P --- SP2913 / S ---



Solder contact spec

★Crimp contact spec see P20

★Screw contact spec see P21

Number of contact	2	3	4	7	8	8B	9	10	10B	12	16	17	20	24	26	35
Male contact face view																
Rated current (A)	50	50	25	25	25	60, 5	25, 5	25	10	10	10	10	5	5	5	5
Contact diameter(mm)	Ø3.5X2	Ø3.5X3	Ø2.5X4	Ø2.5X7	Ø2.5X8	Ø5X2 Ø1X6	Ø2.5X4 Ø1X5	Ø2.5X10	Ø1.5X10	Ø1.5X12	Ø1.5X16	Ø1.5X17	Ø1X20	Ø1X24	Ø1X26	Ø1X35
Rated voltage (AC.V)	500	500	500	500	500	500 400	500	500	500	500	500	500	400	400	400	400
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1200	1200	1200	1200
Contact resistance(mΩ)	0.5	0.5	1	1	1	0.5, 5	1, 5	1	2.5	2.5	2.5	2.5	5	5	5	5
Termination	solder / screw	solder / screw	solder / screw	solder / screw	solder / screw	solder	solder	solder / screw	solder	solder	solder	solder	solder	solder	solder	solder
Wire size (mm <sup>2</sup> /AWG)	≤10/7	≤10/7	≤4/11	≤4/11	≤4/11	≤16/5 ≤0.75/18	≤4/11 ≤0.75/18	≤4/11	≤2/14	≤2/14	≤2/14	≤2/14	≤0.75/18	≤0.75/18	≤0.75/18	≤0.75/18
Wire size for screw termination	≤6/10	≤6/10	≤1.5/15	≤1.5/15	≤1.5/15	/	/	≤1.5/15	/	/	/	/	/	/	/	/