

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	

SP11 Series

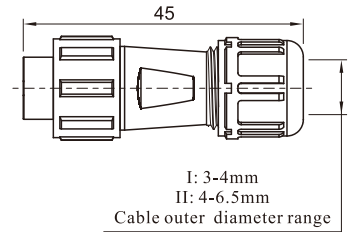
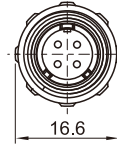


Cable connector
Mate with SP1111,
SP1111C, SP1112

SP1110/P — SP1110/S

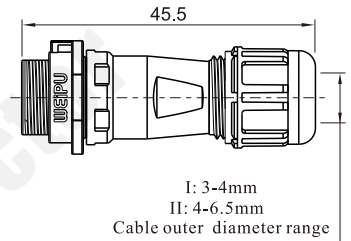
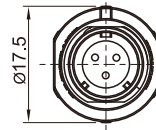
Male contact

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



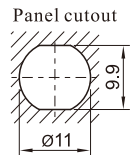
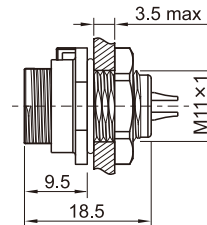
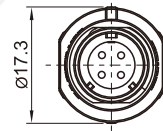
In-line cable connector C
Mate with SP1110

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



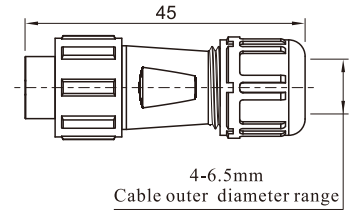
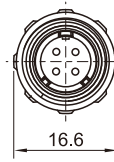
Cable connector
Mate with SP1111, SP1112

SP1110/P

SP1110/S

Male contact

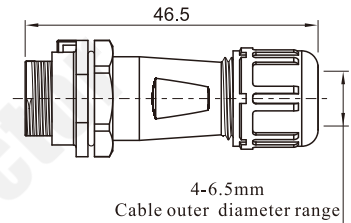
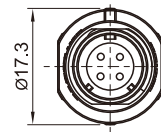
(CU):
Colour: All black
Number of contact
Female contact



In-line cable connector
Mate with SP1110

SP1111/P

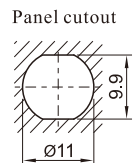
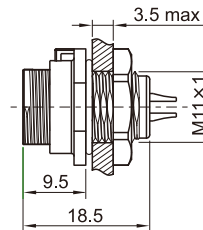
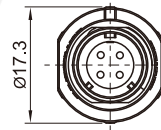
SP1111/S



Rear-nut mount
Mate with SP1110

SP1112/P

SP1112/S



Solder contact spec

Number of contact	4	5
Male contact face view		
Rated current (A)	3	3
Contact diameter(mm)	Ø0.7×4	Ø0.7×5
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



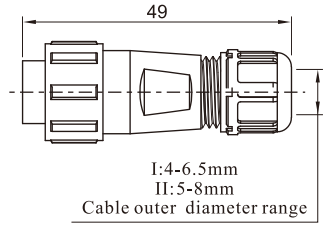
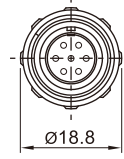
Cable connector
Mate with SP1311,
SP1311C, SP1312

SP1310 / P

SP1310 / S

Male contact

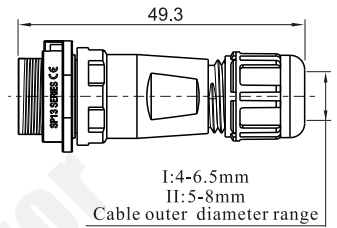
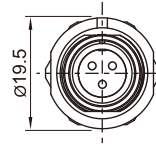
Cable outer diameter range
I: 4-6.5mm, II: 5-8mm
Number of contact
Female contact



In-line cable connector C
Mate with SP1310

SP1311C / P

SP1311C / S

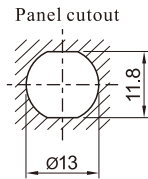
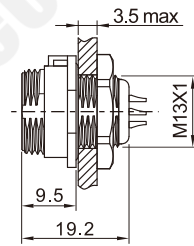
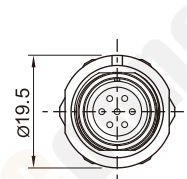


Rear-nut mount
Mate with SP1310

SP1312 / P

SP1312 / S

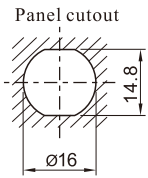
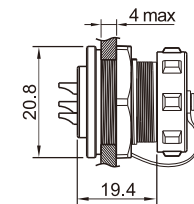
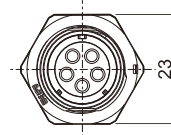
芯数 Number of contact



Front-nut mount
Mate with SP1310

SP1315 / P

SP1315 / S



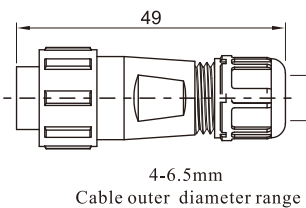
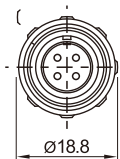
Solder contact spec

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)	Ø1.6X2	Ø1.6X3	Ø1X4	Ø1X5	Ø1X6	Ø1X7	Ø0.7X9
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 (mm ² / AWG)	≤2 / 14	≤2 / 14	≤0.75 / 18	≤0.75 / 18	≤0.75 / 18	≤0.75 / 18	≤0.5 / 20

SP13 Series



Cable connector
Mate with SP1311, SP1312

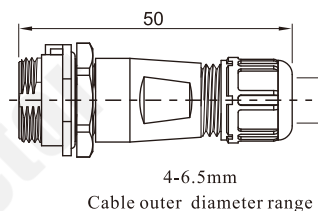
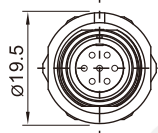


SP1310 / P__ — Male contact
SP1310 / S__ — Female contact

(CU):
Number of contact
Female contact



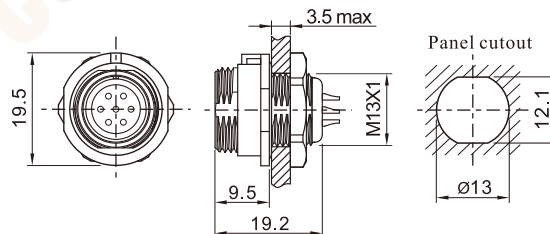
In-line cable connector
Mate with SP1310



SP1311 / P__ — Male contact
SP1311 / S__ — Female contact



Rear-nut mount
Mate with SP1310



SP1312 / P__ — Male contact
SP1312 / S__ — Female contact

(CU):
Number of contact

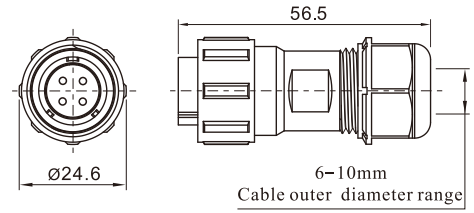
Solder contact spec

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

SP17 Series



Cable connector
Mate with SP1711, SP1711C,
SP1712

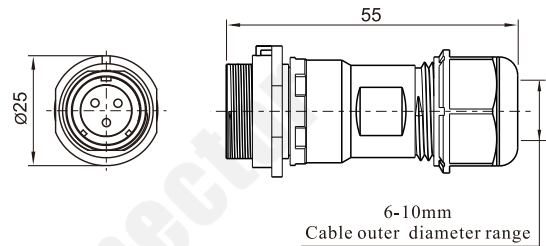


SP1710 / P _ _ _ Male contact

SP1710 / S _ _ _
1: solder, 3: crimp
Number of contact
Female contact



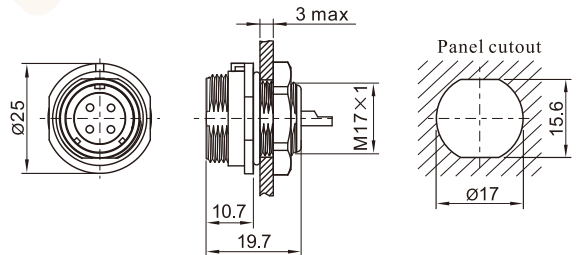
In-line cable connector C
Mate with SP1710



SP1711C / P _ _ _ SP1711C / S _ _ _



Rear-nut mount
Mate with SP1710



SP1712 / P _ _ _ SP1712 / S _ _ _

Solder contact spec

★ 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 (mm ² /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



**SP
17**

SP17 Series



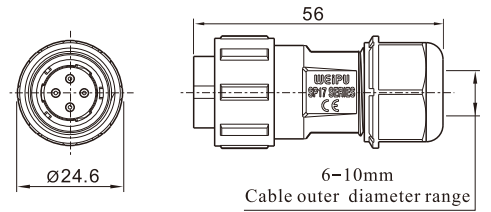
Plug with horizontal mount screw
Mate with SP1711, SP1712

SP1710 / P__-9

SP1710 / S__-9

Male contact

Number of contact
Female contact



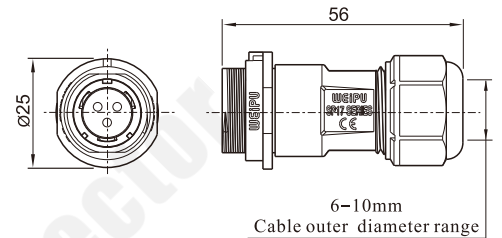
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Connector with horizontal mount screw
Mate with SP1710

SP1711 / P__-9

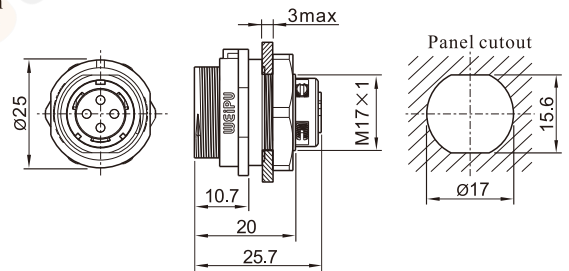
SP1711 / S__-9



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

SP1712 / P__-9

SP1712 / S__-9



Screw contact spec

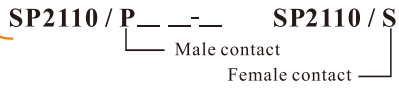
Number of contact	2B	3B	4B
Male contact face view			
Rated current (A)	15	15	15
Contact diameter(mm)	Ø2X2	Ø2X3	Ø2X4
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance (mΩ)	2.5	2.5	2.5
Wire size (mm²/AWG)	Min: 0.75/18 ≤ Max: ≤2/14	Min: 0.75/18 ≤ Max: ≤2/14	Min: 0.75/18 ≤ Max: ≤2/14

SP21 Series

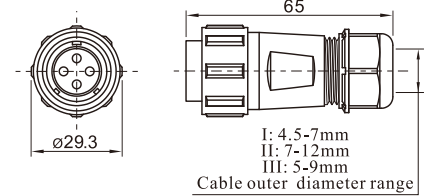
**SP
21**



Cable connector
Mate with SP2111, SP2111C,
SP2112, SP2113



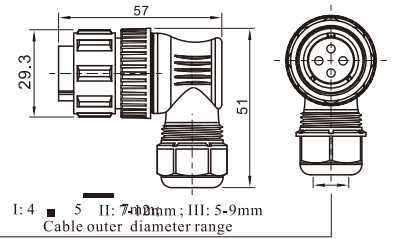
I: solder, 2: screw, 3: crimp
Cable outer diameter range
I: 4.5-7mm, II: 7-12mm, III: 5-9mm
Number of contact



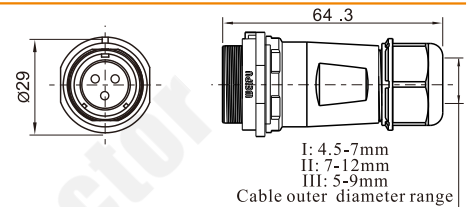
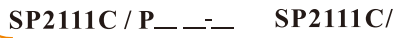
Angled cable connector
Mate with SP2111, SP2111C, SP2112, SP2113



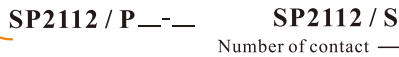
I: solder, 2: screw, 3: crimp
Cable outer diameter range
I: 4.5-7mm, II: 7-12mm, III: 5-9mm



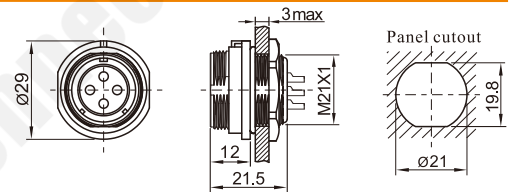
In-line cable connector C
Mate with SP2110, SP2116



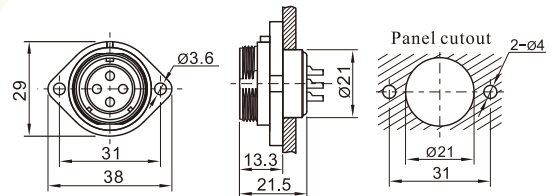
Rear-nut mount
Mate with SP2110, SP2116



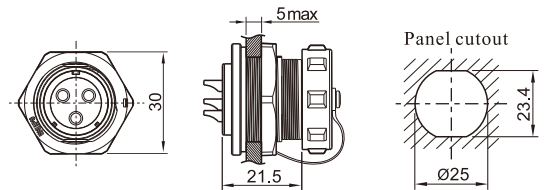
I: solder, 2: screw, 3: crimp



2-hole flange
Mate with SP2110, SP2116



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 ² / 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 ² /AWG)	≤1.5/15	≤1.5/15	≤1.5/15	≤1.5/15	/	/	/	/	/	/	/	/	/

SP21 Series



SP
21



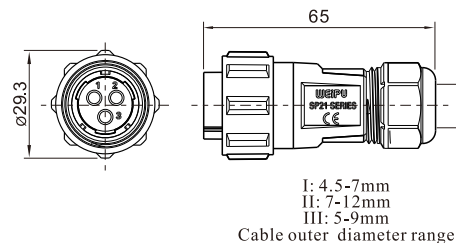
Plug with horizontal mount screw
Mate with SP2111, SP2112

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

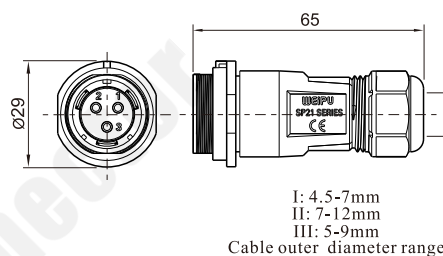


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Connector with horizontal mount screw
Mate with SP2110

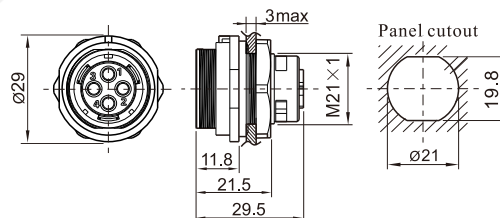
SP2111 / P__-9 SP2111 / S__-9



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

SP2112 / P__-9 SP2112 / S__-9

Number of contact



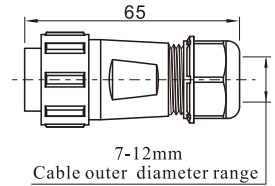
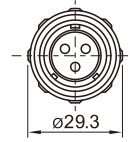
Screw contact spec

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



Cable connector
Mate with SP2111, SP2112, SP2113



SP2110 / P__

SP2110 / S__

Male contact

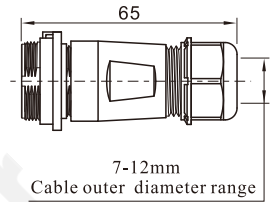
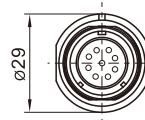
Female contact

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

Number of contact



In-line cable connector
Mate with SP2110

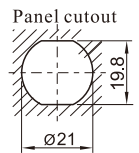
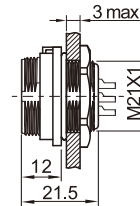
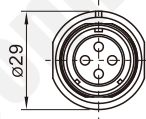


SP2111 / P__

SP2111 / S__



Rear-nut mount
Mate with SP2110



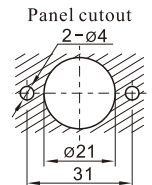
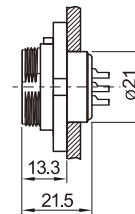
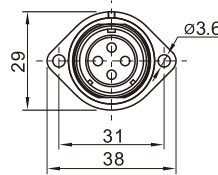
SP2112 / P__

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



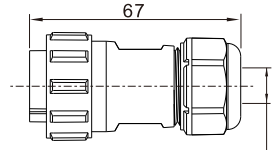
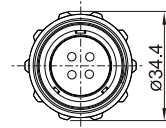
**SP
25**



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

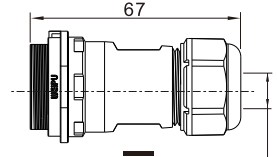
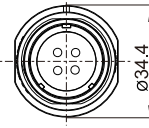


I: 10 14mm
II: 7-12mm
Cable outer diameter range



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

In-line cable connector C
Mate with SP2510



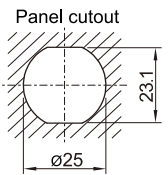
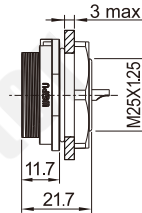
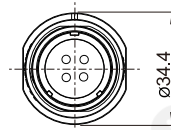
I: 10 14mm
II: 7-12mm
Cable outer diameter range



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

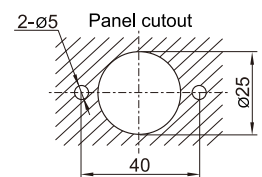
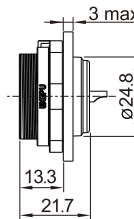
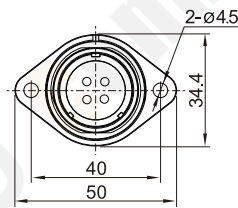
Rear-nut mount
Mate with SP2510

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



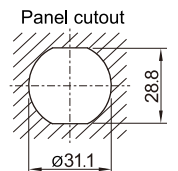
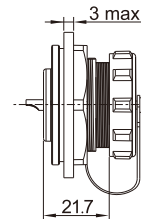
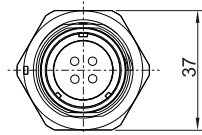
SP2513 / P --- SP2513 / S ---

2-hole flange
Mate with SP2510



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

Front-nut mount
Mate with SP2510



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(mm²/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

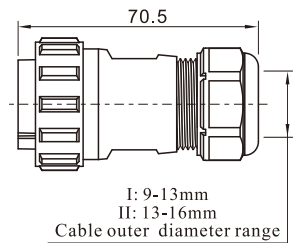
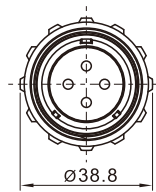
SP2910 / S

Male contact

1:solder, 2:screw, 3:crimp

Cable outer diameter range
I: 9-13mm II: 13-16mm

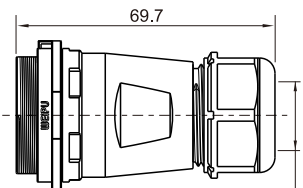
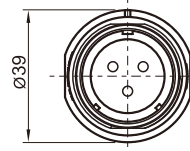
Number of contact
Female contact



In-line cable connector C
Mate with SP2910

SP2911C / P

SP2911C / S



I: 9-13mm
II: 13-16mm
Cable outer diameter range

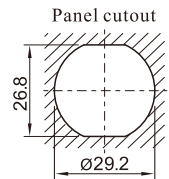
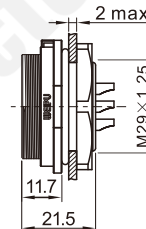
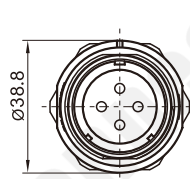


Rear-nut mount
Mate with SP2910

SP2912 / P

SP2912 / S

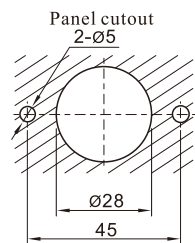
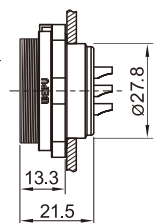
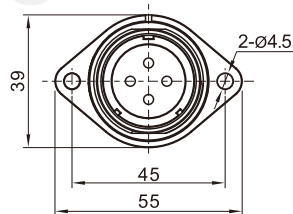
Number of contact



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 ² /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	≤2/14	≤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	/	/	/	/	/	/	/	/