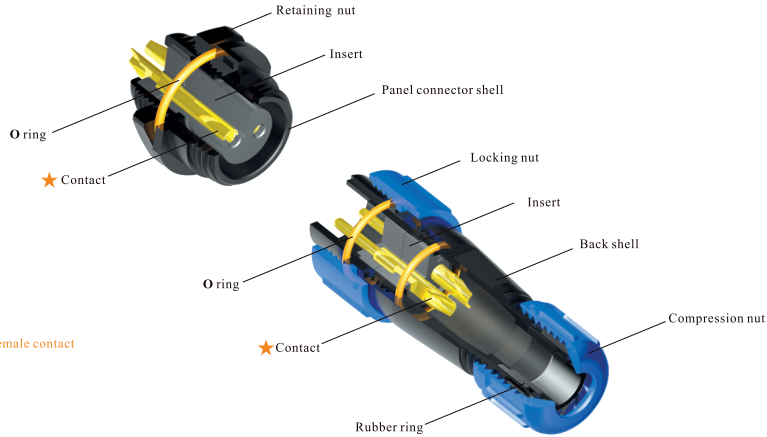


IP68



● SP Series IP68

● Threaded coupling



★ Each side can be male or female contact

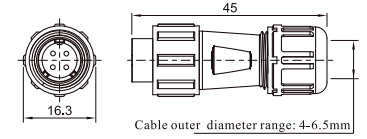
Material and spec

Coupling	Threaded	
Shell material	PC, Nylon66, fire resistance: V-0	
Insert material	PPS, max temperature 260 °C	
Contact material	Brass with gold plating	
Termination	Solder: SP13, SP17, SP21, SP29 Crimp: SP17, SP21, SP29 Screw: SP21, SP29 (ø2.5, ø3, ø3.5mm contact)	
Cable outer diameter range	SP11: 4-6.5 SP13 I: 4-6.5mm, II: 5-8mm SP17: 6-10mm	SP21: I: 4.5-7mm, II: 7-12mm SP29: 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, SP1112

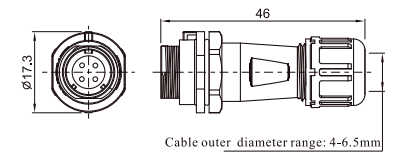


SP1110/P--N SP1110/S--N

Male contact
Number of contact
Female contact



In-line cable connector
Mate with SP1110

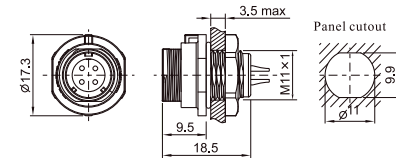


SP1111/P--N SP1111/S--N

C:with cap
N:without cap
Number of contact



Rear-nut mount
Mate with SP1110



SP1112/P--N SP1112/S--N

C:with cap
N:without cap
Number of contact

Solder contact spec

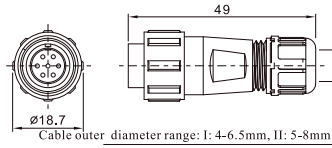
Number of contact	2	3	4	5
Male contact face view				
Rated current (A)	5	5	3	3
Contact diameter(mm)	ø1×2	ø1×3	ø0.7×4	ø0.7×5
Rated voltage (AC.V)	180	180	125	125
Test voltage(AC.V) 1 min	1000	1000	1000	1000
Contact resistance(mΩ)	5	5	10	10
Wire size (mm²/AWG)	≤0.75/18	≤0.75/18	≤0.5/20	≤0.5/20

SP13 Series

SP
13



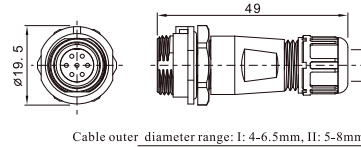
Cable connector
Mate with SP1311, SP1312



SP1310 / P --- SP1310 / S
Male contact --- Female contact
(C): with cap
N: without cap
Cable outer diameter
I: 4-6.5mm, II: 5-8mm
Number of contact



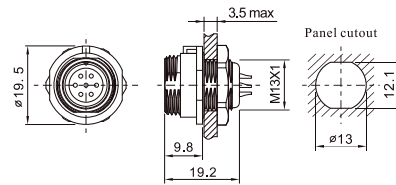
In-line cable connector
Mate with SP1310



SP1311 / P --- SP1311 / S
Number of contact ---
C: with cap
N: without cap
Cable outer diameter
I: 4-6.5mm, II: 5-8mm



Rear-nut mount
Mate with SP1310



SP1312 / P --- SP1312 / S
Number of contact ---
C: with cap
N: without cap

Solder contact spec

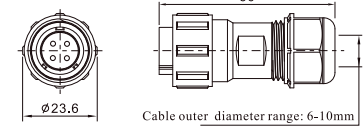
Number of contact	2	3	4	5	6	7	9
Male contact face view							
Rated current (A)	13	13	5	5	5	5	3
Contact diameter (mm)	Ø1.6X2	Ø1.6X3	Ø1X4	Ø1X5	Ø1X6	Ø1X7	Ø0.7X9
Rated voltage (AC.V)	250	250	200	180	125	125	125
Test voltage(AC.V) 1 min	1500	1500	1500	1000	1000	1000	1000
Contact resistance (mΩ)	2.5	2.5	5	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

SP17 Series

SP
17



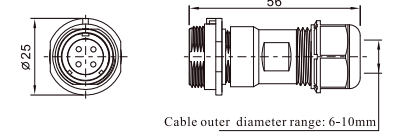
Cable connector
Mate with SP1711, SP1712



SP1710 / P --- N SP1710 / S --- N
Male contact --- Female contact
1: solder, 3: crimp
Number of contact



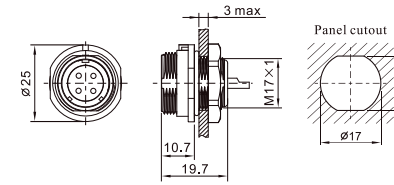
In-line cable connector
Mate with SP1710



SP1711 / P --- SP1711 / S
Number of contact ---
C: with cap
N: without cap
1: solder, 3: crimp



Rear-nut mount
Mate with SP1710



SP1712 / P --- SP1712 / S
Number of contact ---
C: with cap
N: without cap
1: solder, 3: crimp

Solder contact spec

★ Crimp contact spec see P107-P110

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

SP21 Series

**SP
21**

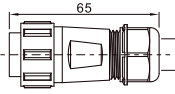


Cable connector
Mate with SP2111, SP2112, SP2113

SP2110 / P --- SP2110 / S

Male contact
Female contact

C: with cap
N: without cap
(U): (CU)
1: solder, 2: screw, 3: crimp
Cable outer diameter: I: 4.5-7mm, II: 7-12mm
Number of contact



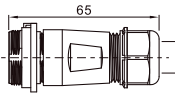
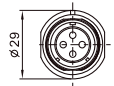
Cable outer diameter range:
I: 4.5-7mm II: 7-12mm



In-line cable connector
Mate with SP2110

SP2111 / P --- SP2111 / S

C: with cap
N: without cap



Cable outer diameter range:
I: 4.5-7mm II: 7-12mm

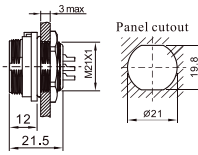
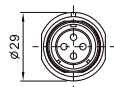


Rear-nut mount
Mate with SP2110

SP2112 / P --- SP2112 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp



Panel cutout
19.8
12
21.5

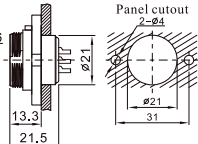
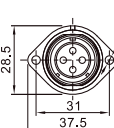


2-hole flange
Mate with SP2110

SP2113 / P --- SP2113 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp



Panel cutout
2-Ø4
21.5
31

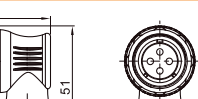
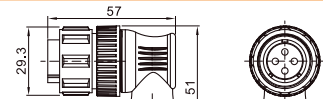


Angled cable connector
Mate with SP2111, SP2112, SP2113

SP2116 / P --- SP2116 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp
Cable outer diameter: I: 4.5-7mm II: 7-12mm



Cable outer diameter range:
I: 4.5-7mm II: 7-12mm

SP29 Series

**SP
29**

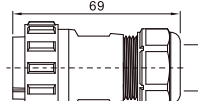
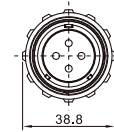


Cable connector
Mate with SP2911, SP2912, SP2913

SP2910 / P --- N SP2910 / S --- N

Male contact

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



Cable outer diameter range: 13-16mm

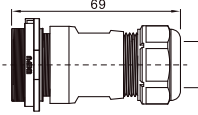
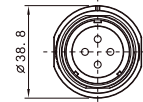


In-line cable connector
Mate with SP2910

SP2911 / P --- SP2911 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp



Cable outer diameter range: 13-16mm

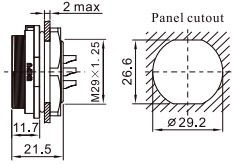
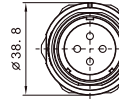


Rear-nut mount
Mate with SP2910

SP2912 / P --- SP2912 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp



Panel cutout
2 max
26.6
11.7
21.5
Ø29.2

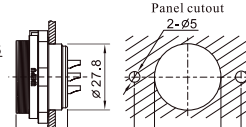
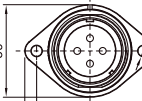


2-hole flange
Mate with SP2910

SP2913 / P --- SP2913 / S

Number of contact

C: with cap
N: without cap
1: solder, 2: screw, 3: crimp



Panel cutout
2-Ø5
39
45
55
13.2
21.5
Ø27.8
45

Solder contact spec

★ Crimp contact spec see P107-P110 ★ Screw contact spec see P111-P112

Number of Contact	2	3	4	5	5B	5C	6	6B	7	8	9	12	15
Male contact face view													
Rated current (A)	30 20	30 20	30 20	30 20	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	Ø1.5X10	Ø1X9	Ø1X12	Ø1X15
Rated voltage (AC.V)	500	500	500	500	500	500	500	500	500	500	400	400	400
Test voltage (AC.V) I min	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	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)	≤4/11	≤4/11	≤4/11	≤4/11	≤4/11 ≤0.75/18	≤2/14	≤4/11 ≤0.75/18	≤4/11 ≤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	/	/	/	/	/	/	/	/	/

Solder contact spec

★ Crimp contact spec see P107-P110 ★ Screw contact spec see P111-P112

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) I 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	5.0	0.5	1.5	1	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 for solder (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	/	/	/	/	/	/	/