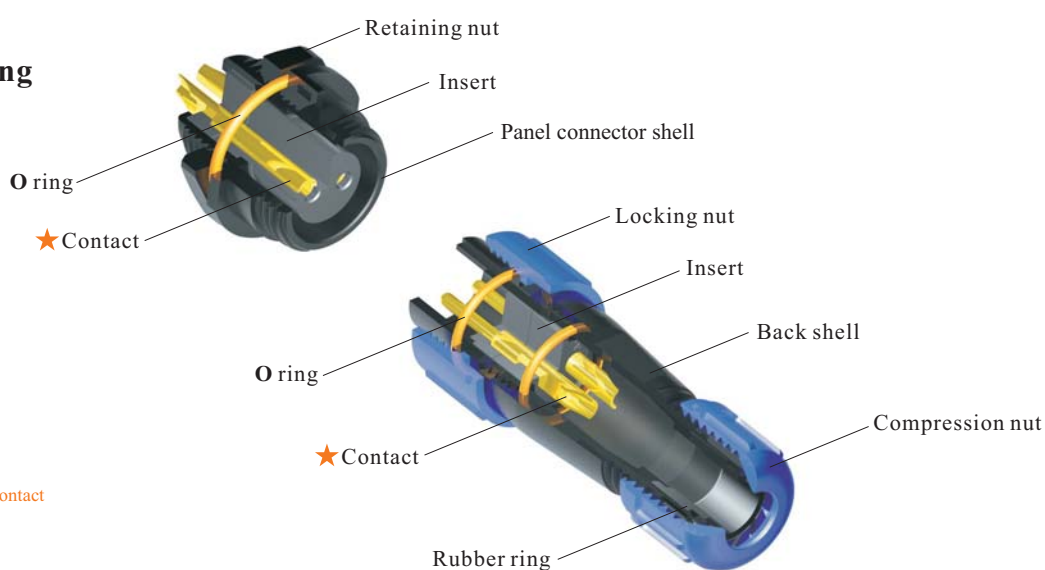


IP68

- SP Series IP68
- Threaded coupling



★ Each side can be male or female contact

Material and spec

Coupling	Threaded
Shell material	PC, PA66, fire resistance: V-0
Insert material	PPS, max temperature 260 °C PA66, max temperature -30°C~+125°C (Only for horizontal mount screw of SP17/SP21Series)
Contact material	Brass with gold plating
Termination	Solder: SP 11, SP13, SP17, SP21, SP25, SP29 Crimp: SP17, SP21, SP25, SP29 Screw: SP17, SP21, SP25, SP29 (Ø2, Ø2.5, Ø3, Ø3.5mm contact)
Cable outer diameter range	SP11: I: 3-4mm, II: 4-6.5mm SP17: I: 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 (mated)
Mating cycle	500
Temperature range	-40°C~+85°C
Insulation resistance	2000 MΩ

SP11 Series



Cable connector
Mate with SP1111,
SP1111C, SP1112

SP1110/P__

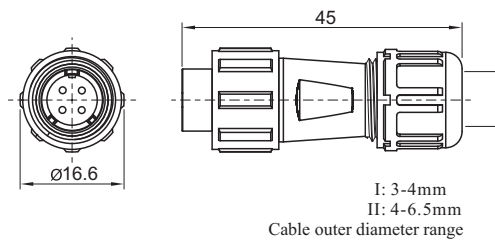
SP1110/S__

Male contact

Cable outer diameter range
I: 3-4mm II: 4-6.5mm

Number of contact

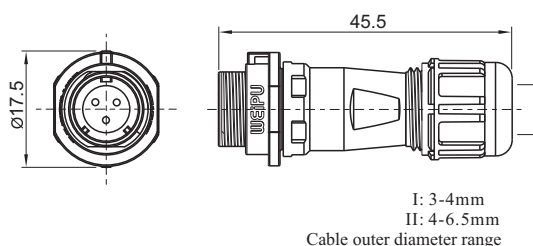
Female contact



In-line cable connector C
Mate with SP1110

SP1111C/P__

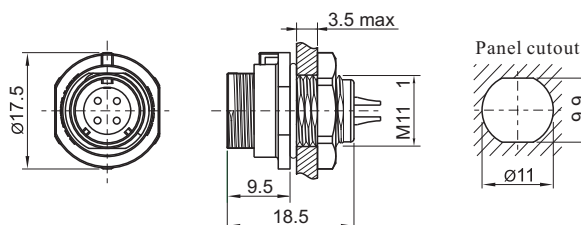
SP1111C/S__



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)	Ø1X2	Ø1X3	Ø0.7X4	Ø0.7X5
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

CULUS

CULUS



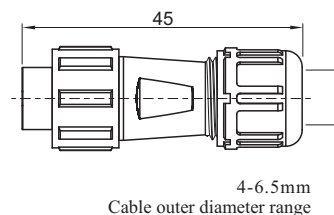
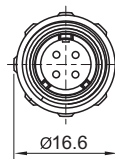
Cable connector
Mate with SP1111, SP1112

SP1110/P__

SP1110/S__

Male contact

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



07

CULUS

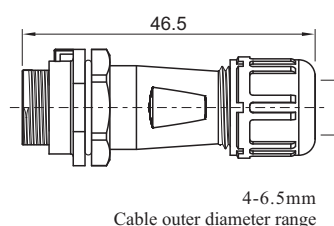
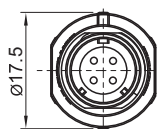
CULUS



In-line cable connector
Mate with SP1110

SP1111/P__

SP1111/S__



CULUS

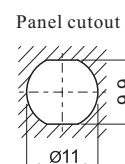
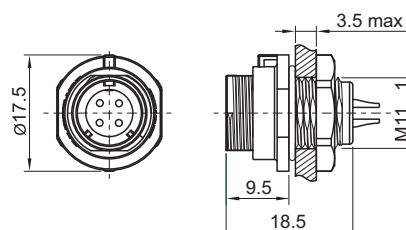
CULUS



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)	Ø0.7X4	Ø0.7X5
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



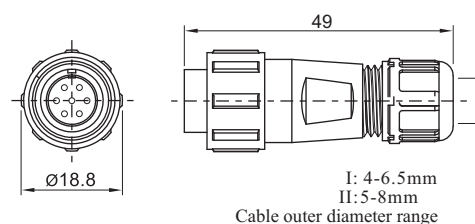
SP1310 / P__

SP1310 / S__

Male contact

Cable connector
Mate with SP1311,
SP1311C, SP1312

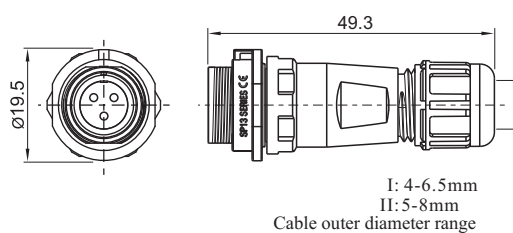
Cable outer diameter range
I: 4-6.5mm, II: 5-8mm
Number of contact
Female contact



SP1311C / P__

SP1311 C / S__

In-line cable connector C
Mate with SP1310

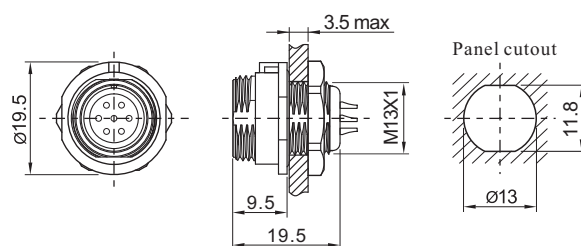


SP1312 / P__

SP1312 / S__

Rear-nut mount
Mate with SP1310

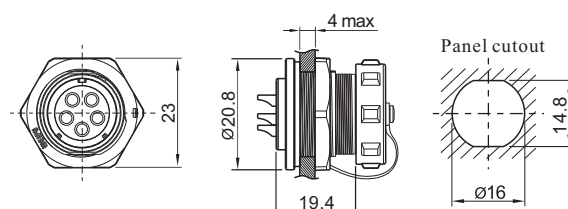
Number of contact



SP1315 / P__

SP1315 / S__

Front-nut mount
Mate with SP1310



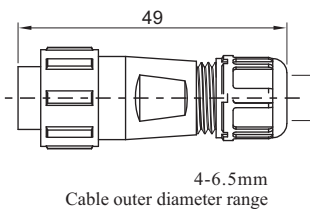
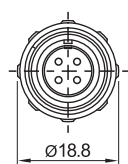
Solder contact spec

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)	≤1.5/16	≤1.5/16	≤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

SP1310 / S

Male contact

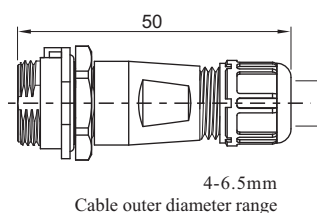
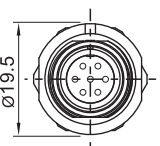
(CU): US
Colour: All black

Number of contact

Female contact



In-line cable connector
Mate with SP1310

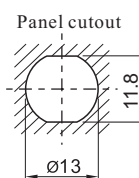
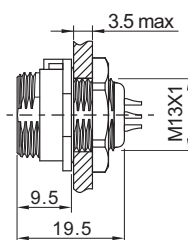
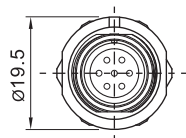


SP1311 / P

SP1311 / S



Rear-nut mount
Mate with SP1310



SP1312 / P

SP1312 / S

(CU): US

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

SP13 Series



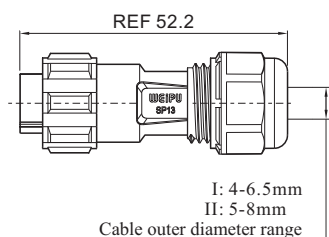
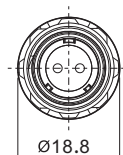
SP
13



Plug with horizontal mount screw
Mate with SP1311, SP1312

SP1310 / P-9

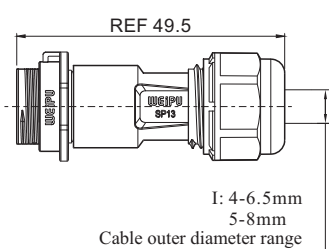
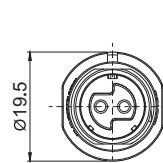
Number of contact
Male contact



Connector with horizontal mount screw
Mate with SP1310

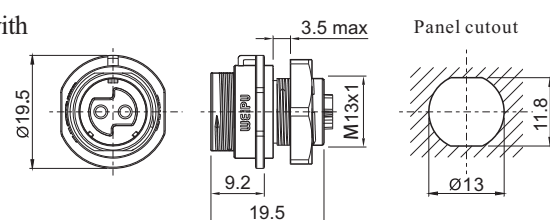
SP1311 / S-9

Female contact



Rear-nut mount receptacle with horizontal mount screw
Mate with SP1310

SP1312 / S-9



Note: 2, 3Pin Hexagonal tool specifications: H1.3
4Pin Hexagonal tool specifications: H0.9

Solder contact spec

Number of contact	2	3	4
Male contact face view			
Rated current (A)	13	13	5
Contact diameter(mm)	Ø1.6X2	Ø1.6X3	Ø1X4
Rated voltage (AC.V)	250	250	200
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance (mΩ)	2.5	2.5	5
Wire size(mm²/AWG)	Min: 0.75/18 Max: 1.5/16	Min: 0.75/18 Max: 1.5/16	Min: 0.4/21 Max: 0.75/18

SP17 Series



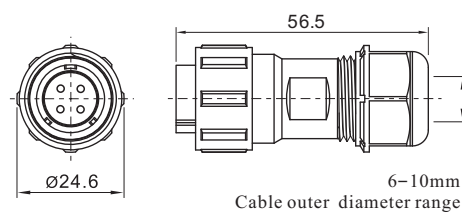
Cable connector
Mate with SP1711, SP1711C,
SP1712

SP1710 / P _ _ _

Male contact

SP1710 / S _ _ _

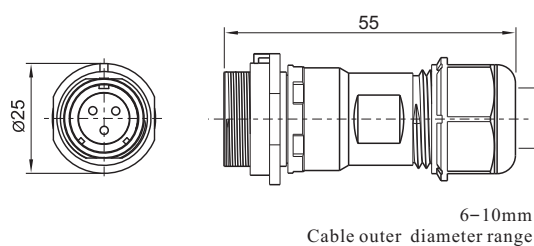
1: solder, 3: crimp
Number of contact
Female contact



In-line cable connector C
Mate with SP1710

SP1711C / P _ _ _

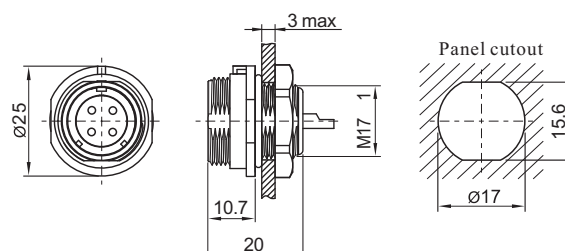
SP1711C / S _ _ _



Rear-nut mount
Mate with SP1710

SP1712 / P _ _ _

SP1712 / S _ _ _



Solder contact spec

★Crimp contact spec see P22

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)	≤1.5/16	≤1.5/16	≤0.75/18	≤1.5/16	≤1.5/16	≤1.5/16	≤0.75/18	≤0.75/18	≤0.75/18	≤0.75/18

SP17 Series



SP
17



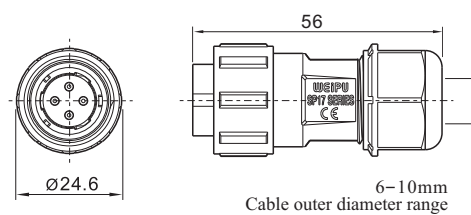
Plug with horizontal mount screw
Mate with SP1711, SP1712

SP1710 / P__-9

SP1710 / S__-9

插针 Male contact

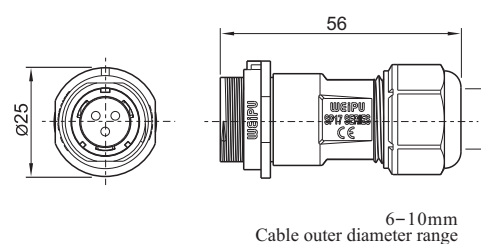
Number of contact
Female contact



Connector with horizontal mount screw
Mate with SP1710

SP1711 / P__-9

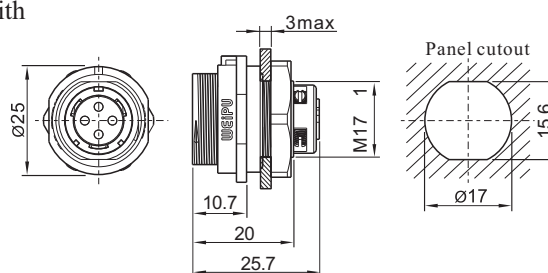
SP1711 / S__-9



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

SP1712 / P__-9

SP1712 / S__-9



Solder 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

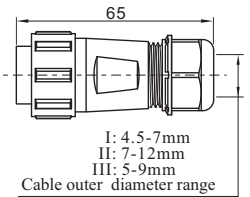
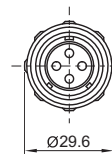
SP2110 / P _ _ _

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

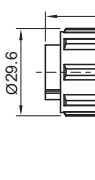
SP2116 / P _ _ _

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



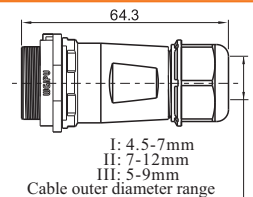
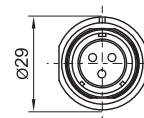
I: 4.5-7mm; II: 7-12mm; III: 5-9mm
Cable outer diameter range



SP2111C / P _ _ _

SP2111C / S _ _ _

In-line cable connector C
Mate with SP2110, SP2116



I: 4.5-7mm; II: 7-12mm; III: 5-9mm
Cable outer diameter range



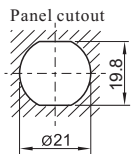
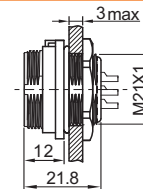
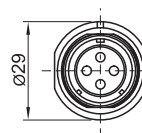
SP2112 / P _ _ _

SP2112 / S _ _ _

Number of contact

Rear-nut mount
Mate with SP2110, SP2116

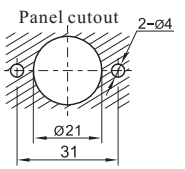
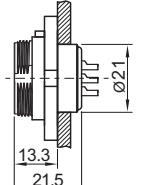
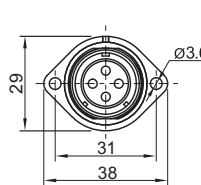
1: solder, 2: screw, 3: crimp



SP2113 / P _ _ _

SP2113 / S _ _ _

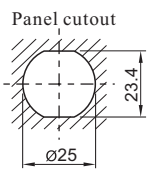
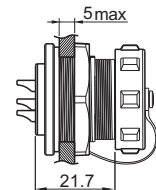
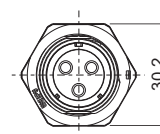
2-hole flange
Mate with SP2110, SP2116



SP2115 / P _ _ _

SP2115 / S _ _ _

Front-nut mount
Mate with SP2110, SP2116



Solder contact spec

★Crimp contact spec see P22

★Screw contact spec see P23

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	≤1.5/16	≤4/12 ≤0.75/18	≤4/12 ≤0.75/18	≤1.5/16	≤1.5/16	≤0.75/18	≤0.75/18	≤0.75/18
Wire size for screw termination (mm ² /AWG)	Min:0.5/20 Max1.5/15	Min:0.5/20 Max1.5/15	Min:0.5/20 Max1.5/15	Min:0.5/20 Max1.5/15	/	/	/	/	/	/	/	/	/

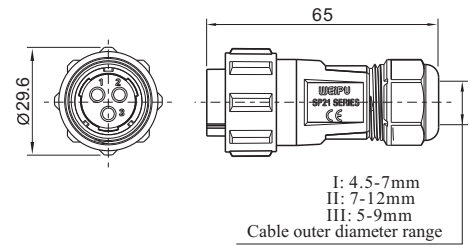
SP21 Series



**SP
21**



Plug with horizontal mount screw
Mate with SP2111, SP2112



SP2110 / P__-9 SP2110 / S__-9

Male contact

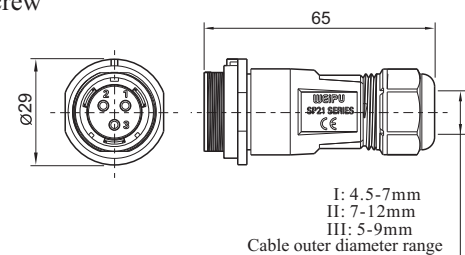
Female contact

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

Number of contact



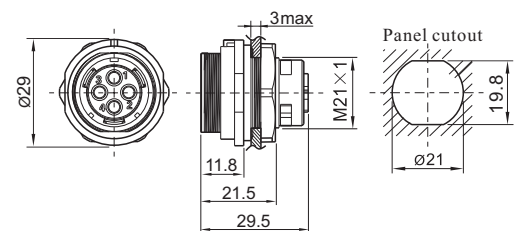
Connector with horizontal mount screw
Mate with SP2110



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



Solder 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)	Min:0.75/18 Max: 4/12	Min:0.75/18 Max: 4/12	Min:0.75/18 Max: 4/12	Min:0.75/18 Max: 4/12

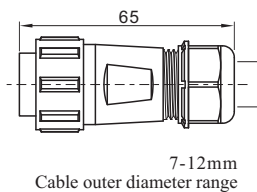
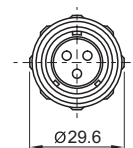
SP21 Series

UL US

UL US



Cable connector
Mate with SP2111, SP2112, SP2113



SP2110 / P

Male contact

SP2110 / S

Female contact

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

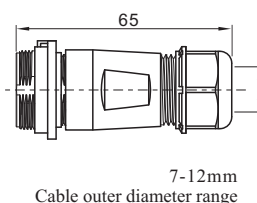
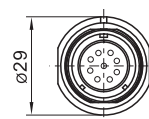
Number of contact

UL US

UL US



In-line cable connector
Mate with SP2110



SP2111 / P

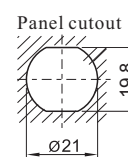
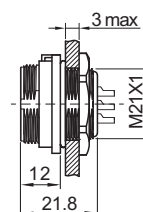
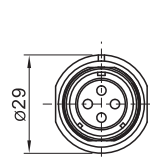
SP2111 / S

UL US

UL US



Rear-nut mount
Mate with SP2110



SP2112 / P

SP2112 / S

(U): UL, (CU): UL

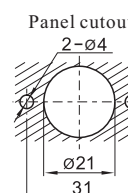
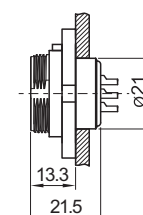
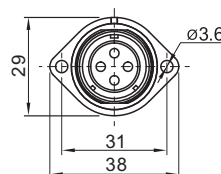
Number of contact

UL US

UL US



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 UL US	30 UL US	30 UL US	30 UL US
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

NEW

SP
25



Cable connector
Mate with SP2511, SP2511C,
SP2512, SP2513

SP2510 / P _ _ _ SP2510 / S _ _ _

Male contact

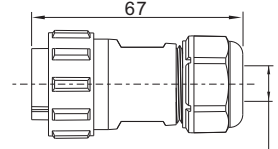
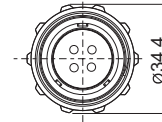
1:solder, 2:screw, 3:crimp

Cable outer diameter range

I: 10-14mm, II: 7-12mm

Number of contact

Female contact



I: 10-14mm

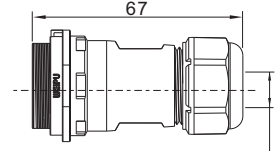
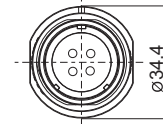
II: 7-12mm

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

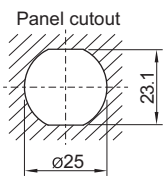
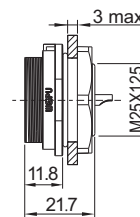
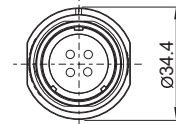


SP2512 / P _ _ _ SP2512 / S _ _ _

Rear-nut mount
Mate with SP2510

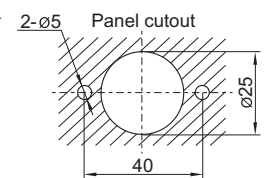
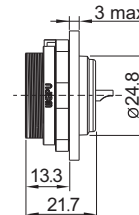
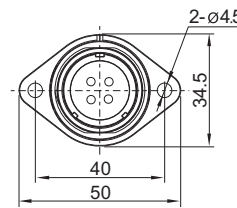
1:solder, 2:screw, 3:crimp

Number of contact



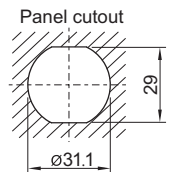
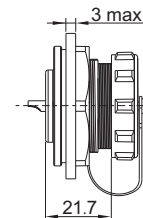
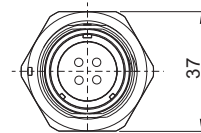
SP2513 / P _ _ _ SP2513 / S _ _ _

2-hole flange
Mate with SP2510



SP2515 / P _ _ _ SP2515 / S _ _ _

Front-nut mount
Mate with SP2510



Solder contact spec

★Crimp contact spec see P22

★Screw contact spec see P23

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
Termination	solder / screw	solder / screw	solder / screw	/	/	/	/	/
Wire size (mm ² /AWG)	≤4/12	≤4/12	≤4/12	≤0.75/18 ≤4/12	≤1.5/16	≤1.5/16	≤0.75/18 ≤4/12	≤0.75/18
Wire size for screw termination	Min:0.5/20 Max1.5/15	Min:0.5/20 Max1.5/15	Min:0.5/20 Max1.5/15	/	/	/	/	/

SP29 Series

**SP
29**



Cable connector
Mate with SP2911, SP2911C,
SP2912, SP2913

SP2910 / P _ _ _

SP2910 / S _ _ _

Male contact

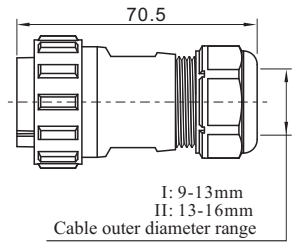
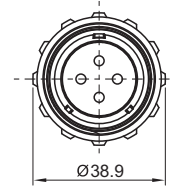
1:solder, 2:screw, 3:crimp

Cable outer diameter range

I: 9-13mm II: 13-16mm

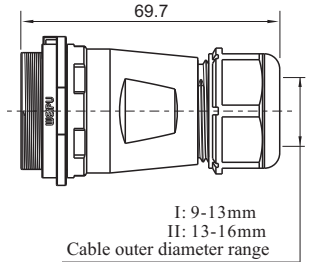
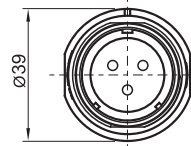
Number of contact

Female contact



In-line cable connector C
Mate with SP2910

SP2911C / P _ _ _ SP2911C / S _ _ _



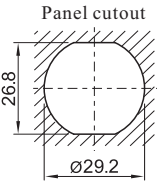
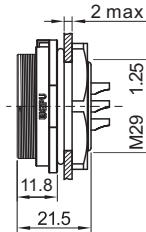
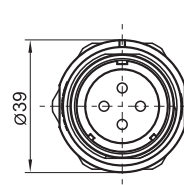
Rear-nut mount
Mate with SP2910

SP2912 / P _ _

SP2912 / S _ _

1:solder, 2:screw, 3:crimp

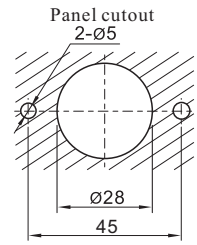
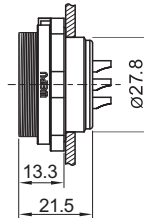
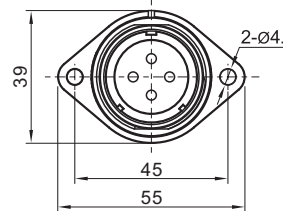
Number of contact



2-hole flange
Mate with SP2910

SP2913 / P _ _

SP2913 / S _ _



Solder contact spec

★Crimp contact spec see P22

★Screw contact spec see P23

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	≤4/12	≤4/12	≤4/12	≤16/5 ≤0.75/18	≤4/12 ≤0.75/18	≤4/12	≤1.5/16	≤1.5/16	≤1.5/16	≤1.5/16	≤0.75/18	≤0.75/18	≤0.75/18	≤0.75/18
(mm ² /AWG)	Min:0.5/20 Max:6/10	Min:0.5/20 Max:6/10	Min:0.5/20 Max:1.5/15	Min:0.5/20 Max:1.5/15	Min:0.5/20 Max:1.5/15	/	/	Min:0.5/20 Max:1.5/15	/	/	/	/	/	/	/	/
Wire size for screw termination																