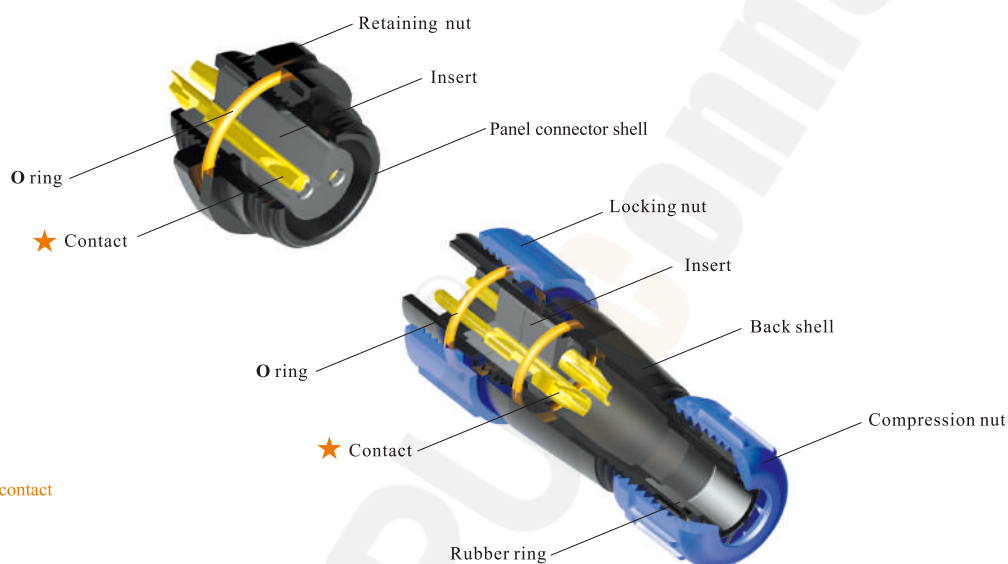


IP68

07

● Part Section Showing Internal Components



★ 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 125°C (Only for horizontal mount screw of SP13/SP17/SP21Series)	
Contact material	Brass with gold plating	
Termination	Solder: SP11, SP13, SP17, SP21, SP25, SP29 Crimp: SP17, SP21, SP25, SP29 Screw: SP13/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	
Working temperature range	-40°C ~ +85°C	
Insulation resistance	2000 MΩ	

SP21 Series

**SP
21**



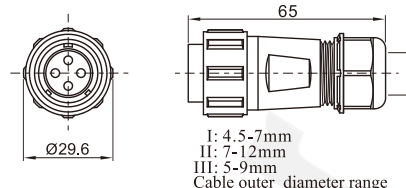
SP2110 / P _ _ _

SP2110 / S _ _ _

Male contact
Female contact

Cable connector
Mate with SP2111, SP2111C, SP2112,
SP2113, SP2115,

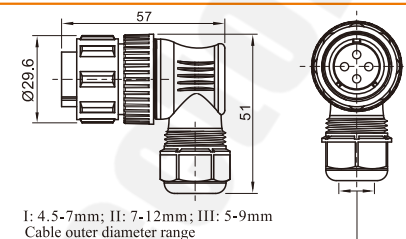
1: solder, 2: screw, 3: crimp, 8: angled screw
Cable outer diameter range
I: 4.5-7mm, II: 7-12mm, III: 5-9mm
Number of contact



SP2116 / P _ _ _

SP2116 / S _ _ _

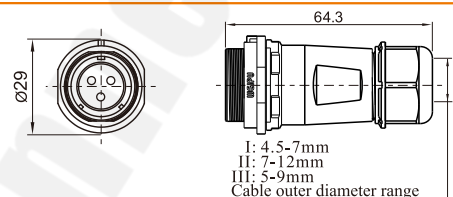
Angled cable connector
Mate with SP2111, SP2111C, SP2112,
SP2113, SP2115,



SP2111C / P _ _ _

SP2111C / S _ _ _

In-line cable connector C
Mate with SP2110, SP2116



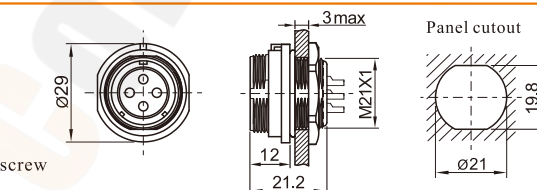
SP2112 / P _ _ _

SP2112 / S _ _ _

Number of contact

Rear-nut mount
Mate with SP2110, SP2116

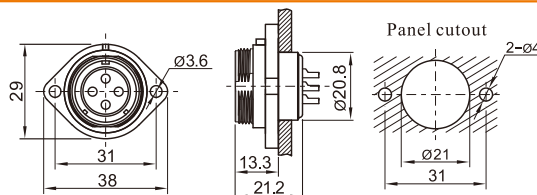
1: solder, 2: screw, 3: crimp, 8: angled screw



SP2113 / P _ _ _

SP2113 / S _ _ _

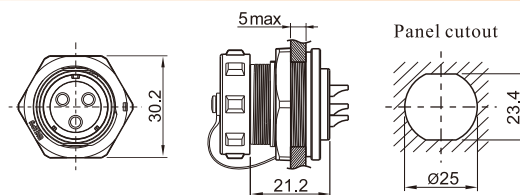
2-hole flange
Mate with SP2110, SP2116



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	≤2/14	≤4/12 ≤0.75/18	≤4/12 ≤0.75/18	≤2/14	≤1.5/16	≤0.75/18	≤0.75/18	≤0.75/18
Wire size for screw termination (mm ² /AWG)	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	/	/	/	/	/	/	/	/	/

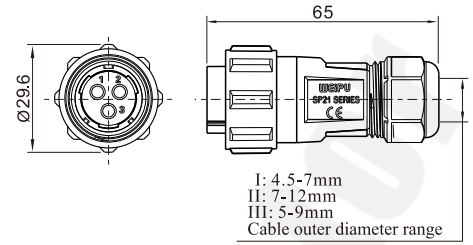
SP21 Series



**SP
21**



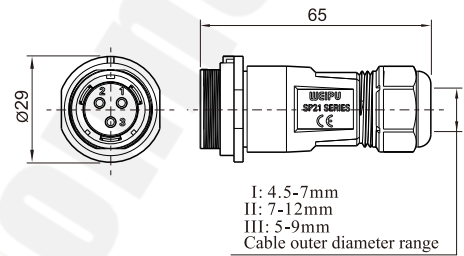
Plug with horizontal mount screw
Mate with SP2111, SP2112



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



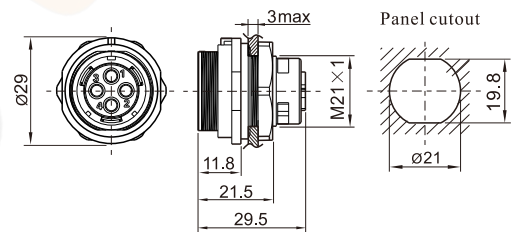
Connector with horizontal mount screw
Mate with SP2110



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



Allen Key size: 1.5

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)	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

US



SP2110 / P

Male contact

US



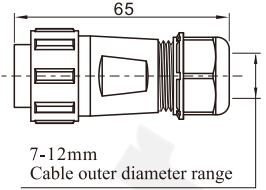
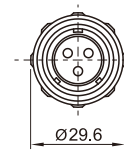
SP2110 / S

Female contact

Cable connector
Mate with SP2111, SP2112, SP2113, SP2115

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

Number of contact



65
7-12mm
Cable outer diameter range

US



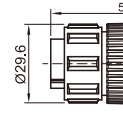
SP2116 / P

US



SP2116 / S

Angled cable connector
Mate with SP2111, SP2112, SP2113, SP2115



57
51
7-12mm
Cable outer diameter range



US



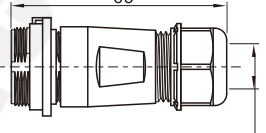
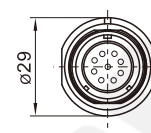
SP2111 / P

US



SP2111 / S

In-line cable connector
Mate with SP2110, SP2116



65
7-12mm
Cable outer diameter range

US



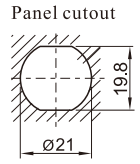
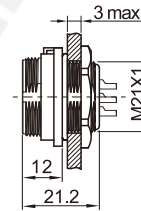
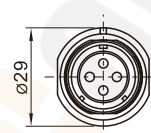
SP2112 / P

US



SP2112 / S

Rear-nut mount
Mate with SP2110, SP2116



US



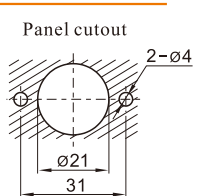
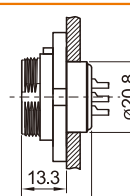
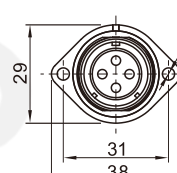
SP2113 / P

US



SP2113 / S

2-hole flange
Mate with SP2110, SP2116



US



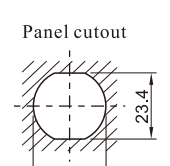
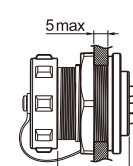
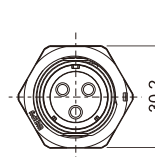
SP2115 / P

US



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 	25 	30 	25 	30 	15 	25 	30 	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	solder	solder	solder	solder	solder	solder	solder	solder	solder	solder	solder	solder
Wire size for solder (mm ² / AWG)	12	12	12	12	12/18	14	12/18	12/18	14	16	18	18	18



SF16, SA16, SP17, SY17 WS16, WF16, WY16	1 For straight connector only	2	3	4
Male contact face view				
Rated current (A)	50	10	10	5
Contact diameter(mm)	Ø3.5X1	Ø1.5X2	Ø1.5X3	Ø1X4
Rated voltage (AC.V)	500	500	500	400
Test voltage(AC.V) 1 min	1500	1500	1500	1200
Contact resistance(mΩ)	0.5	2.5	2.5	5
Insulation resistance (MΩ)	2000	2000	2000	2000

WK20,SF20, SA20, SP21, SY21 WS20,WF20, WY20, WP20	1 For straight connector only	2	3	4	5	7	7B	8
Male contact face view								
Rated current (A)	100	25	25	25	10	10	5	5
Contact diameter(mm)	Ø5.5X1	Ø2.5X2	Ø2.5X3	Ø2.5X4	Ø1.5X5	Ø1.5X7	Ø1X7	Ø1X8
Rated voltage (AC.V)	500	500	500	500	500	500	400	400
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500	1500	1200	1200
Contact resistance(mΩ)	0.3	1	1	1	2.5	2.5	5	5
Insulation resistance (MΩ)	2000	2000	2000	2000	2000	2000	2000	2000

WK24, SA24, SY25, SP25 WS24, WF24, WY24	4	5	9	12
Male contact face view				
Rated current (A)	25	25	10	5
Contact diameter(mm)	Ø2.5X4	Ø2.5X5	Ø1.5X9	Ø1X12
Rated voltage (AC.V)	500	500	500	400
Test voltage(AC.V) 1 min	1500	1500	1500	1200
Contact resistance(mΩ)	1	1	2.5	5
Insulation resistance (MΩ)	2000	2000	2000	2000

WK28, SA28, SP29, SY29 WS28, WF28, WY28	2	3	7	12	15	19
Male contact face view						
Rated current (A)	50	50	25	10	5	5
Contact diameter(mm)	Ø3.5X2	Ø3.5X3	Ø2.5X7	Ø1.5X12	Ø1X15	Ø1X19
Rated voltage (AC.V)	500	500	500	500	400	400
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1200	1200
Contact resistance(mΩ)	0.5	0.5	1	2.5	5	5
Insulation resistance (MΩ)	2000	2000	2000	2000	2000	2000

WS32, WF32, WY32	4	6	10	15	19
Male contact face view					
Rated current (A)	50	50 10	25	10	10
Contact diameter(mm)	Ø3.5X4	Ø3.5X4 Ø1.5X2	Ø2.5X10	Ø1.5X15	Ø1.5X19
Rated voltage (AC.V)	500	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500
Contact resistance(mΩ)	0.5	0.5 2.5	1	2.5	2.5
Insulation resistance (MΩ)	2000	2000	2000	2000	2000

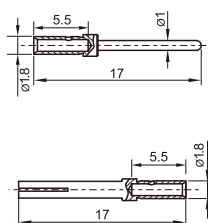
WS40, WF40, WY40	5	19	31
Male contact face view			
Rated current (A)	50	25	10
Contact diameter(mm)	Ø3.5X5	Ø2.5X19	Ø1.5X31
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance(mΩ)	0.5	1	2.5
Insulation resistance (MΩ)	2000	2000	2000

WS48, WF48, WY48	31	42
Male contact face view		
Rated current (A)	25	10
Contact diameter(mm)	Ø2.5X31	Ø1.5X42
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	1	2.5
Insulation resistance (MΩ)	2000	2000

WS55, WF55, WY55	38	61
Male contact face view		
Rated current (A)	25	10
Contact diameter(mm)	Ø2.5X38	Ø1.5X61
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	1	2.5
Insulation resistance (MΩ)	2000	2000

5A Crimp contact

- ※ Contact diameter: $\varnothing 1$
- ※ Material: Brass with gold plating
- ※ Contact resistance: $5\text{m}\Omega$



5A Male crimp contact

For SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.20-0.52mm ² AWG 24-20	5.5mm	YJ1-17-0.52AU	CTW-0.14/4	RT-1.0

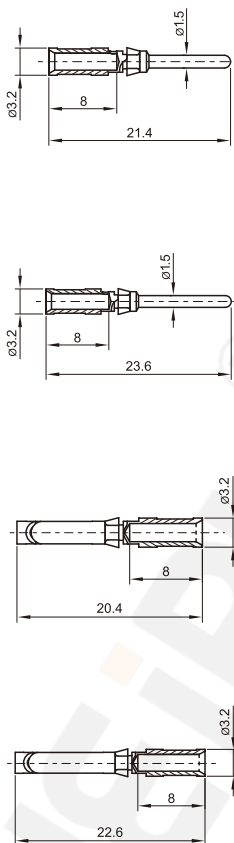
5A Female crimp contact

For SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.20-0.52mm ² AWG 24-20	5.5mm	YK1-17-0.52AU	CTW-0.14/4	RT-1.0

10A Crimp contact

- ※ Contact diameter: $\varnothing 1.5$
- ※ Material: Brass with gold plating
- ※ Contact resistance: $2.5\text{m}\Omega$



10A Male crimp contact

For WK, SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.14-0.37mm ² AWG 26-22	8mm	YJ1.5-21.4-0.37AU	CTW-0.14/4	RT-1.5
0.5mm ² AWG 20	8mm	YJ1.5-21.4-0.5AU	CTW-0.14/4	RT-1.5
0.75-1.0mm ² AWG 18	8mm	YJ1.5-21.4-1.0AU	CTW-0.14/4	RT-1.5
1.5mm ² AWG 16	8mm	YJ1.5-21.4-1.5AU	CTW-0.14/4	RT-1.5
2.5mm ² AWG 14	8mm	YJ1.5-21.4-2.5AU	CTW-0.14/4	RT-1.5

10A Male crimp contact

For WS/WF/WY32-55

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.14-0.37mm ² AWG 26-22	8mm	YJ1.5-23.6-0.37AU	CTW-0.14/4	RT-1.5
0.5mm ² AWG 20	8mm	YJ1.5-23.6-0.5AU	CTW-0.14/4	RT-1.5
0.75-1.0mm ² AWG 18	8mm	YJ1.5-23.6-1.0AU	CTW-0.14/4	RT-1.5
1.5mm ² AWG 16	8mm	YJ1.5-23.6-1.5AU	CTW-0.14/4	RT-1.5
2.5mm ² AWG 14	8mm	YJ1.5-23.6-2.5AU	CTW-0.14/4	RT-1.5

10A Female crimp contact

For WK, SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.14-0.37mm ² AWG 26-22	8mm	YK1.5-20.4-0.37AU	CTW-0.14/4	RT-1.5
0.5mm ² AWG 20	8mm	YK1.5-20.4-0.5AU	CTW-0.14/4	RT-1.5
0.75-1.0mm ² AWG 18	8mm	YK1.5-20.4-1.0AU	CTW-0.14/4	RT-1.5
1.5mm ² AWG 16	8mm	YK1.5-20.4-1.5AU	CTW-0.14/4	RT-1.5
2.5mm ² AWG 14	8mm	YK1.5-20.4-2.5AU	CTW-0.14/4	RT-1.5

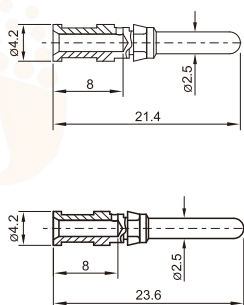
10A Female crimp contact

For WS/WF/WY32-55

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.14-0.37mm ² AWG 26-22	8mm	YK1.5-22.6-0.37AU	CTW-0.14/4	RT-1.5
0.5mm ² AWG 20	8mm	YK1.5-22.6-0.5AU	CTW-0.14/4	RT-1.5
0.75-1.0mm ² AWG 18	8mm	YK1.5-22.6-1.0AU	CTW-0.14/4	RT-1.5
1.5mm ² AWG 16	8mm	YK1.5-22.6-1.5AU	CTW-0.14/4	RT-1.5
2.5mm ² AWG 14	8mm	YK1.5-22.6-2.5AU	CTW-0.14/4	RT-1.5

25A Crimp contact

- ※ Contact diameter: $\varnothing 2.5$
- ※ Material: Brass with gold plating
- ※ Contact resistance: $1\text{m}\Omega$



25A Male crimp contact

For WK, SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.75-1.0mm ² AWG 18	8mm	YJ2.5-21.4-1.0AU	CTW-0.14/4	RT-2.5
1.5mm ² AWG 16	8mm	YJ2.5-21.4-1.5AU	CTW-0.14/4	RT-2.5
2.5mm ² AWG 14	8mm	YJ2.5-21.4-2.5AU	CTW-0.14/4	RT-2.5
4.0mm ² AWG 12	8mm	YJ2.5-21.4-4.0AU	CTW-0.14/4	RT-2.5

25A Male crimp contact

For WS/WF/WY32-55

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.75-1.0mm ² AWG 18	8mm	YJ2.5-23.6-1.0AU	CTW-0.14/4	RT-2.5
1.5mm ² AWG 16	8mm	YJ2.5-23.6-1.5AU	CTW-0.14/4	RT-2.5
2.5mm ² AWG 14	8mm	YJ2.5-23.6-2.5AU	CTW-0.14/4	RT-2.5
4.0mm ² AWG 12	8mm	YJ2.5-23.6-4.0AU	CTW-0.14/4	RT-2.5

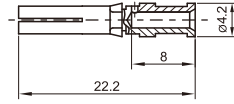
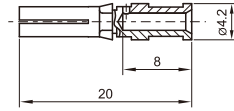
Crimp contact

25A Crimp contact

※ Contact diameter: Ø2.5

※ Material: Brass with gold plating

※ Contact resistance: 1m
Ω



25A Female crimp contact

For WK, SF, SA, SP, SY, WP, WS/WF/WY16-28

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.75-1.0mm ² AWG 18	8mm	YK2.5-20-1.0AU	CTW-0.14/4	RT-2.5
1.5mm ² AWG 16	8mm	YK2.5-20-1.5AU	CTW-0.14/4	RT-2.5
2.5mm ² AWG 14	8mm	YK2.5-20-2.5AU	CTW-0.14/4	RT-2.5
4.0mm ² AWG 12	8mm	YK2.5-20-4.0AU	CTW-0.14/4	RT-2.5

25A Female crimp contact

For WS/WF/WY32-55

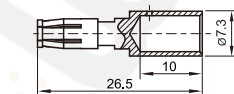
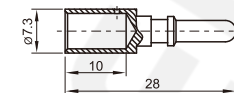
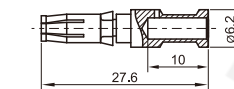
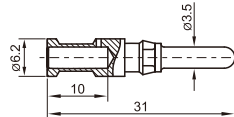
Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
0.75-1.0mm ² AWG 18	8mm	YK2.5-22.2-1.0AU	CTW-0.14/4	RT-2.5
1.5mm ² AWG 16	8mm	YK2.5-22.2-1.5AU	CTW-0.14/4	RT-2.5
2.5mm ² AWG 14	8mm	YK2.5-22.2-2.5AU	CTW-0.14/4	RT-2.5
4.0mm ² AWG 12	8mm	YK2.5-22.2-4.0AU	CTW-0.14/4	RT-2.5

50A Crimp contact

※ Contact diameter: Ø3.5

※ Material: copper

※ Contact resistance: 0.5m
Ω



50A Male crimp contact

For WS/WF/WY32-55

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
1.5mm ² AWG 16	10mm	YJ3.5-31-1.5AU	CT-0.14/4	RT-3.5
2.5mm ² AWG 14	10mm	YJ3.5-31-2.5AU	CT-0.14/4	RT-3.5
4.0mm ² AWG 12	10mm	YJ3.5-31-4.0AU	CT-0.14/4	RT-3.5
6.0mm ² AWG 10	10mm	YJ3.5-31-6.0AU	CT-4/10	RT-3.5
10.0mm ² AWG 7	10mm	YJ3.5-31-10.0AU	CT-4/10	RT-3.5

50A Female crimp contact

For WS/WF/WY32-55

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
1.5mm ² AWG 16	10mm	YK3.5-27.6-1.5AU	CT-0.14/4	RT-3.5
2.5mm ² AWG 14	10mm	YK3.5-27.6-2.5AU	CT-0.14/4	RT-3.5
4.0mm ² AWG 12	10mm	YK3.5-27.6-4.0AU	CT-0.14/4	RT-3.5
6.0mm ² AWG 10	10mm	YK3.5-27.6-6.0AU	CT-4/10	RT-3.5
10.0mm ² AWG 7	10mm	YK3.5-27.6-10.0AU	CT-4/10	RT-3.5

50A Male crimp contact

For 2 & 3 pins of SP29, SY29, SA28, WK28/WS/WF/WY28

Wire size	Stripping length	Male crimp contact p/n	Crimping tool p/n	Removal tool p/n
4.0mm ² AWG 12	10mm	YJ3.5-28-4.0AU	CT-4/10	RT-3.5
6.0mm ² AWG 10	10mm	YJ3.5-28-6.0AU	CT-4/10	RT-3.5
10mm ² AWG 7	10mm	YJ3.5-28-10.0AU	CT-4/10	RT-3.5
16mm ² AWG 5	10mm	YJ3.5-28-16.0AU	YQK-70	RT-3.5

50A Female crimp contact

For 2 & 3 pins of SP29, SY29, SA28, WK28/WS/WF/WY28

Wire size	Stripping length	Female crimp contact p/n	Crimping tool p/n	Removal tool p/n
4.0mm ² AWG 12	10mm	YK3.5-26.5-4.0AU	CT-4/10	RT-3.5
6.0mm ² AWG 10	10mm	YK3.5-26.5-6.0AU	CT-4/10	RT-3.5
10mm ² AWG 7	10mm	YK3.5-26.5-10.0AU	CT-4/10	RT-3.5
16mm ² AWG 5	10mm	YK3.5-26.5-16.0AU	YQK-70	RT-3.5

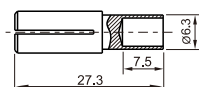
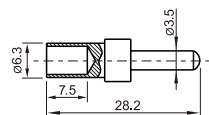
Crimp contact

50A Crimp contact

※ Contact diameter: Ø3.5

※ Material: brass with silver plating

※ Contact resistance: 0.5mΩ



50A Male crimp contact

For WS/WF/WY16/SY17/SP17/SA16/SF16

Wire size	Stripping length	Crimping tool p/n
10.0mm ² AWG 7	10mm	YQK-70

50A Female crimp contact

For WS/WF/WY16/SY17/SP17/SA16/SF16

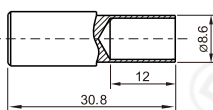
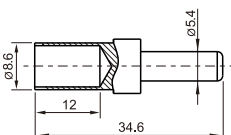
Wire size	Stripping length	Crimping tool p/n
10.0mm ² AWG 7	10mm	YQK-70

100A Crimp contact

※ Contact diameter: Ø5.5

※ Material: brass with silver plating

※ Contact resistance: 0.3mΩ



100A Male crimp contact

For WS/WF/WY20/SP21/SY21/SA20/SF20/WP20/WK20

Wire size	Stripping length	Crimping tool p/n
25mm ² AWG 3	10mm	YQK-70

100A Female crimp contact

For WS/WF/WY20/SP21/SY21/SA20/SF20/WP20/WK20

Wire size	Stripping length	Crimping tool p/n
25mm ² AWG 3	10mm	YQK-70

Crimp tool

For crimping the male / female contacts



Part number	Crimping wire range
YQK-70	4-70mm ² AWG 11-2/0

Crimp tool and Removal tool

Crimp tool

For crimping the male / female contacts



CTW-0.14/4



CT-4/10

Part number	Crimping wire range
CTW-0.14/4	0.14-4mm ² AWG 26-12
Part number	Crimping wire range
CT-4/10	4-10mm ² AWG 12-7

Removal tool

For taking out male / female contacts



RT-1.0



RT-1.5

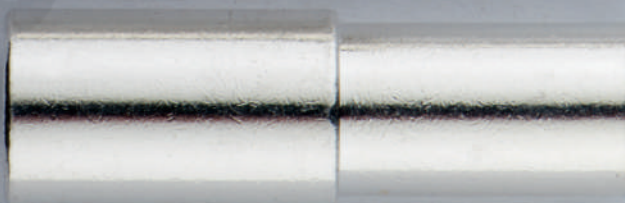
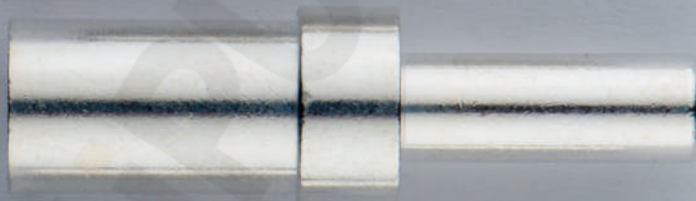
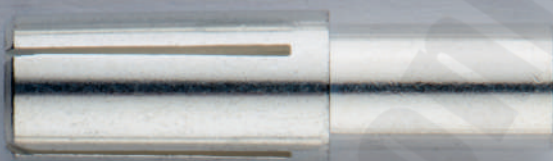
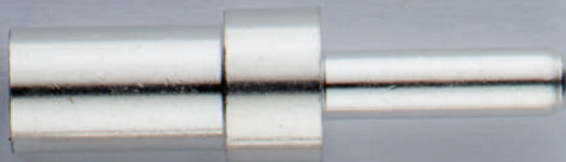


RT-2.5



RT-3.5

Part number	Removal range
RT-1.0	5A Male / Female crimp contact
RT-1.5	10A Male / Female crimp contact
RT-2.5	25A Male / Female crimp contact
RT-3.5	50A Male / Female crimp contact



Screw contact spec

SF20, SA20, WS20, WF20, WY20	2	3	4
Male contact face view			
Rated current (A)	10	10	10
Contact diameter(mm)	ø2.5X2	ø2.5X3	ø2.5X4
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance (mΩ)	1	1	1
Wire size (mm ² / AWG)	Min: 0.5/20 Max: 1.5/15	Min: 0.5/20 Max: 1.5/15	Min: 0.5/20 Max: 1.5/15

WK20, SP21, SY21, WP20	2	3	4	5
Male contact face view				
Rated current (A)	10	10	10	10
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 (mm ² / AWG)	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

WK24, WS24, WF24, WY24 SA24, SF24, SP25, SY25	2	3	4
Male contact face view			
Rated current (A)	10	10	10
Contact diameter(mm)	ø2.5X2	ø2.5X3	ø2.5X4
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance (mΩ)	1	1	1
Wire size (mm ² / AWG)	Min: 0.5/20 Max: 1.5/15	Min: 0.5/20 Max: 1.5/15	Min: 0.5/20 Max: 1.5/15

SA28, SP29, SY29 WK28, WS28, WF28, WY28	2	3	4	7	8	10
Male contact face view						
Rated current (A)	32	32	10	10	10	10
Contact diameter(mm)	ø3.5X2	ø3.5X3	ø2.5X4	ø2.5X7	ø2.5X8	ø2.5X10
Rated voltage (AC.V)	500	500	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500	1500
Contact resistance(mΩ)	0.5	0.5	1	1	1	1
Wire size (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

Screw contact spec

WS32, WF32, WY32	4	10B	11	12
Male contact face view				
Rated current (A)	32	10	10	10
Contact diameter(mm)	Ø3.5X4	Ø2.5X10	Ø2.5X11	Ø2.5X12
Rated voltage (AC.V)	500V	500V	500V	500V
Test voltage(AC.V) 1 min	1500V	1500V	1500V	1500V
Contact resistance(mΩ)	0.5	1	1	1
Insulation resistance (MΩ)	2000	2000	2000	2000
Wire size (mm²/AWG)	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

WS40, WF40, WY40	5	9
Male contact face view		
Rated current (A)	32	10 32
Contact diameter(mm)	Ø3.5X5	Ø2.5X5 Ø3.5X4
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	0.5	1 0.5
Insulation resistance (MΩ)	2000	2000
Wire size (mm²/AWG)	Min: 0.5/20 Max: 6/10	Min: 0.5/20 Max: 1.5/15

WS48, WF48, WY48	7	20
Male contact face view		
Rated current (A)	32	10
Contact diameter(mm)	Ø3.5X7	Ø2.5X20
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	0.5	1
Insulation resistance (MΩ)	2000	2000
Wire size (mm²/AWG)	Min: 0.5/20 Max: 6/10	Min: 0.5/20 Max: 1.5/15

Angled Screw contact spec

WK20,SF20, SA20, WS20, WF20, WY20,SP21,SY21	2		3	
Male contact face view				
Rated current (A)	30		30	
Contact diameter(mm)	Ø3X2		Ø3X3	
Rated voltage (AC.V)	WK20, S F20, SA20 WS20, WF20, WY20	SP21,SY21	WK20, S F20, SA20 WS20, WF20, WY20	SP21,SY21
	500	800	500	800
Test voltage(AC.V) 1 min	1500	2800	1500	2800
Contact resistance (mΩ)	1		1	
Wire size (mm ² / AWG)	Min: 0.75/18 Max: 4/12		Min: 0.75/18 Max: 4/12	

WK24,SF24, SA24, WS24, WF24, WY24,SP25,SY25	4	
Male contact face view		
Rated current (A)	30	
Contact diameter(mm)	Ø3X4	
Rated voltage (AC.V)	WK24, S F24, SA24 WS24, WF24, WY24	SP25,SY25
	500	800
Test voltage(AC.V) 1 min	1500	2800
Contact resistance (mΩ)	1	
Wire size (mm ² / AWG)	Min: 0.75/18 Max: 4/12	

WK28,SF28, SA28, WS28, WF28, WY28,SP29,SY29	2		3		4		5	
Male contact face view								
Rated current (A)	50		50		40		30	
Contact diameter(mm)	Ø4X2		Ø4X3		Ø3.5X4		Ø3X5	
Rated voltage (AC.V)	WK28, S F28 SA28, WS28 WF28, WY28	SP29 SY29	WK28, S F28 SA28, WS28 WF28, WY28	SP29 SY29	WK28, S F28 SA28, WS28 WF28, WY28	SP29 SY29	WK28, S F28 SA28, WS28 WF28, WY28	SP29 SY29
	500	800	500	800	500	800	500	800
Test voltage(AC.V) 1 min	1500	2800	1500	2800	1500	2800	1500	2800
Contact resistance (mΩ)	0.5		0.5		0.5		1	
Wire size (mm ² / AWG)	Min: 4/11 Max: 10/8		Min: 4/11 Max: 10/8		Min: 2.5/13 Max: 6/10		Min: 0.75/18 Max: 4/12	

1. WS/WF/WY series → **only for models** Z, ZG, ZM, ZMQ, TK, ZK, ZKB, ZKF.

2. WK series → **only for models** Z, ZMQ, ZM, ZE, ZEP, TE, TEP.

Solder connect to crimp

SF16, SA16, SP17, SY17 WS16, WF16, WY16	2	3
Male contact face view		
Rated current (A)	10	10
Contact diameter(mm)	Ø1.5X2	Ø1.5X3
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	2.5	2.5
Insulation resistance (MΩ)	2000	2000

SF20, SA20, WS20, WF20, WY20	2	3	4	5	7
Male contact face view					
Rated current (A)	25	25	25	10	10
Contact diameter(mm)	Ø2.5X2	Ø2.5X3	Ø2.5X4	Ø1.5X5	Ø1.5X7
Rated voltage (AC.V)	500	500	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500	1500	1500
Contact resistance(mΩ)	1	1	1	2.5	2.5
Insulation resistance (MΩ)	2000	2000	2000	2000	2000

SA28, WS28, WF28, WY28 SP29,SY29	2	3	7
Male contact face view			
Rated current (A)	50	50	25
Contact diameter(mm)	Ø3.5X2	Ø3.5X3	Ø2.5X7
Rated voltage (AC.V)	500	500	500
Test voltage(AC.V) 1 min	1500	1500	1500
Contact resistance(mΩ)	0.5	0.5	1
Insulation resistance (MΩ)	2000	2000	2000

WS32, WF32, WY32	4	19
Male contact face view		
Rated current (A)	50	10
Contact diameter(mm)	Ø3.5X4	Ø1.5X19
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	0.5	2.5
Insulation resistance (MΩ)	2000	2000

WS40, WF40, WY40	31
Male contact face view	
Rated current (A)	10
Contact diameter(mm)	Ø1.5X31
Rated voltage (AC.V)	500
Test voltage(AC.V) 1 min	1500
Contact resistance(mΩ)	2.5
Insulation resistance (MΩ)	2000

Solder connect to crimp

WS48, WF48, WY48	42
Male contact face view	
Rated current (A)	10
Contact diameter(mm)	Ø1.5X42
Rated voltage (AC.V)	500
Test voltage(AC.V) 1 min	1500
Contact resistance(mΩ)	2.5
Insulation resistance (MΩ)	2000

WS55, WF55, WY55	61
Male contact face view	
Rated current (A)	10
Contact diameter(mm)	Ø1.5X61
Rated voltage (AC.V)	500
Test voltage(AC.V) 1 min	1500
Contact resistance(mΩ)	2.5
Insulation resistance (MΩ)	2000

Screw connect to crimp

SF20, SA20, WS20, WF20, WY20	2	3
Male contact face view		
Rated current (A)	10	10
Contact diameter(mm)	Ø2.5X2	Ø2.5X3
Rated voltage (AC.V)	500	500
Test voltage(AC.V) 1 min	1500	1500
Contact resistance(mΩ)	1	1
Insulation resistance (MΩ)	2000	2000

SA28, WS28, WF28, WY28	7
Male contact face view	
Rated current (A)	10
Contact diameter(mm)	Ø2.5X7
Rated voltage (AC.V)	500
Test voltage(AC.V) 1 min	1500
Contact resistance(mΩ)	1
Insulation resistance (MΩ)	2000

WS32, WF32, WY32	4
Male contact face view	
Rated current (A)	32
Contact diameter(mm)	Ø3.5X4
Rated voltage (AC.V)	500
Test voltage(AC.V) 1 min	1500
Contact resistance(mΩ)	0.5
Insulation resistance (MΩ)	2000