

Sam Woo Electronics General Catalogue

*Edition 9*

# Connector, Antenna and Cable Assembly



## Circular

SCC SCN/SCK SH SM SN SP SPP SR IP67 SRC ST ST IP67  
SU SU2/SU3 SW SW IP67 SXR

## RF / Microwave

SB STE SMA SMB MCX MMCX BNCCHD BNC75Ω BNC50Ω MRF D-TAP  
POWER PIN Micro USB IP67 Cable Assembly

## Antenna

SMA TNC BNC



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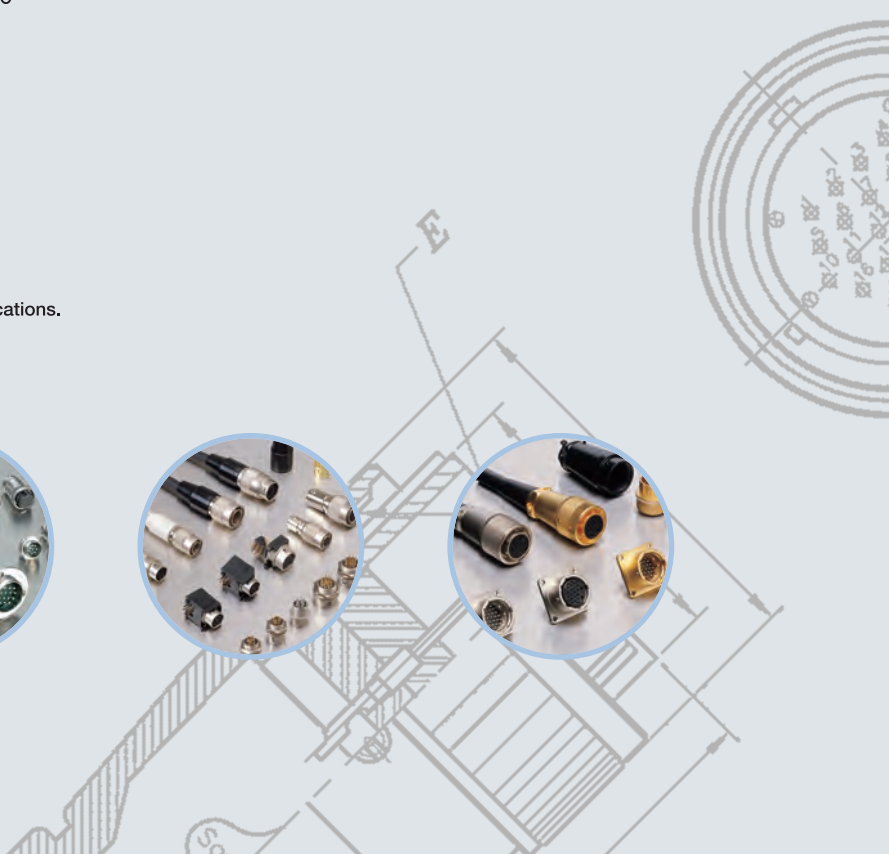
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All dimensions are in millimeters.  
Specifications subject to change without notice.  
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## About Sam Woo

Sam Woo Electronics Co., Ltd is a manufacturer of circular connectors, antennas and cable assemblies for Broadcasting audio/Video Unit, Security/Surveillance Camera, Medical Equipment, Factory Automation and General Industrial Applications. Sam Woo Electronics Co., Ltd, established in 1981, has been growing and expanding into the international market with a conscious effort to provide quick response for standard as well as customized connections. Our network to US, Hong Kong, Japan, France, England and Spain. We are about maintaining good relations with our current/potential clients who share common growth values and business ethics through the delivery of quality products.

### Mission

Connecting the world

### Vision

Developing a Healthy Community

### Core Value

Empowerment through Transformation and Growth

## Certificate

System Certificate	ISO 9001, ISO14001, ISO13485
Environment Compliance	RoHS, PFOS, REACH
Product Quality Certificate	UL, CE

## Brief History

- 2016 Completed "Smart Factory Business" with Sam Sung Electronics.
- 2015 Completed "Industry Innovation Movement 3.0" from a Korea Chamber of Commerce & Industry
- 2014 Selected as a "Woman-friendly Enterprises" by Shiheung Province
- 2014 Selected as a "Best Job Enterprises" by Gyeonggi Province
- 2013 Acquired Eco-Partner Certificate with Samsung Electronics Co., Ltd.
- 2012 Established Cable Assembly department and acquired ISO9001 and ISO14001
- 2012 Acquired ISO13485 Certificate
- 2011 Selected as Gyeonggi Internet Trade Frontier Business
  
- 2008 Selected as a INNO-BIZ from Small & Medium Business Administration
- 2008 Selected as a member of Gyeonggi Venture Business Association(GIVA)
- 2008 Acquired UL Certificate (E 312221)
- 2006 Established partnership with E-valucon HK
- 2005 Received LG Eco Partner Certificate
- 2005 RoHS Regulation Compliance applied to all exporting items
- 2004 Adopted ERP System
- 2003 Acquired KSA14001 / ISO14001 Certificates
- 2003 Selected as a "Promising Small & Medium - Size Enterprises 2003" by Gyeonggi Province
- 2003 Registered "R&D Center" (No. 20031233) certified Korea Industrial Technology Association (KITA)
- 2003 Acquired UL Certificate (E234985)
- 2002 Awarded "Government Support Program for Exporting Enterprises" for three consecutive years
- 2002 Established partnership with Trust Components, Ltd. (Japan) and E-valucon, Inc. (USA)
- 2000 Issued patent for SIM card connector
  
- 1999 Constructed a new plant in Shihwa Industrial Complex, South Korea
- 1997 Acquired KSA9001/ISO9001 Certifications
- 1994 Issued 20 patents for cable TV connector
  
- 1981 Established

## Circular Connectors

SCC  
SCN/SCK  
SH  
SM  
SN  
SP  
SPP  
SR IP67  
SRC  
ST  
ST IP67  
SU IP67  
SU2 / SU3 IP67  
SW  
SW IP67  
SXR

## RF / Microwave

Triaxial 75  $\Omega$

SB

Stereo Plug

STE

Miniature

SMA  
SMB  
MCX  
MMCX

BNCCHD

BNC75  $\Omega$

BNC50  $\Omega$

N

M

TNC

Others

MRF

D-tap

POWER PIN

MICRO USB IP67 Cable Assembly

## Antenna

Between-Series Adapter

Custom Band

SMA

TNC

# Circular Connectors

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# Circular Selection Guide

## ■ Selection by Size / Contacts / Current

Select shell diameter, number of contacts, and current rating, then go to the indicated page for details on the product.

series	contacts	2	3	4	5	6	7	8	9	10	12	14	16	18	19	20	22	24	26	28	30	32	
	size																						
SCC	13		● 10A		● 5A																		
	16						● 10A	● 5A		● 5A													
	21		● 20A	● 15A						● 10A			● 5A										
	25												● 10A						● 5A				
SCN & SCK	12	● 4A,3A		● 4A,3A																			
	16	● 5A	● 5A	● 5A	● 4A	● 3A	● 3A	● 3A															
	20	● 7A	● 7A	● 7A	● 7A	● 4A		● 3A		● 3A						● 2A							
	25	● 10A	● 10A	● 10A	● 10A	● 4A		● 4A		● 4A	● 4A												
SCK	30	● 15A	● 15A	● 15A		● 15A		● 15A		● 5A		● 4A											
	32	● 30A	● 30A	● 30A																			
	40	● 40A	● 40A	● 40A							● 10A,4A												
SH	9					● 2A																	
SM	9							● 2A															
SN	8			● 2A	● 2A	● 2A																	
	10	● 3A	● 3A	● 3A					● 2A	● 2A	● 2A												
SP	00	● 5A	● 3A	● 2A																			
	0	● 10A	● 8A	● 7A	● 6.5A	● 2.5A	● 2.5A		● 2A														
	1	● 15A	● 12A	● 10A	● 9A	● 7A	● 7A	● 5A				● 2A											
	2							● 10A		● 8A													
	3																					● 3.5A	
SPP	1	● 10A		● 8A	● 7A	● 6A	● 5A	● 5A		● 3A													
SR IP67	8			● 3A																			
SRC	21									● 10A			● 5A						● 10A,5A				
ST	8											● 1A											
	9										● 1A		● 1A			● 1A							
	9A										● 1A		● 1A			● 1A							
ST IP67	9									● 1A		● 1A			● 1A								
SU/SU2/SU3	20		● 5A	● 5A	● 5A	● 5A		● 5A		● 3A	● 3A												
SW / SW IP67	8			● 2A	● 2A	● 2A																	
	10	● 3A	● 3A	● 3A					● 2A	● 2A	● 2A												
SW IP67	16																				● 2A		
SXR	10							● 2A															
series	size																						
	contacts																						

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## ■ Application

Find application type. Check the available sizes and contact numbers. Then go to the indicated page for details on the product.

Application	Product Series	Available Size	No. of Contacts
Audio/Video	SN	8,10	2,3,4,5,6,9,10,12
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
CCTV	SN	8,10	2,3,4,5,6,9,10,12
Communication	SCN/SCK	12,16,20,25,30,32,40	2,3,4,5,6,7,8,10,12,14,20
Computers & Peripherals	SN	8,10	2,3,4,5,6,9,10,12
Control Engineering	SU	20	3,4,5,6,8,12,14
Electric / Electronic	SCN/SCK	12,16,20,25,30,32,40	2,3,4,5,6,7,8,10,12,14,20
Electronic Precision Equipment	SU	20	3,4,5,6,8,12,14
Factory Automation	SN	8,10	2,3,4,5,6,9,10,12
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
HDTV	SP	00,0,1,2,3	multiple contacts
Industrial	SCC	13,16,21,25	3,4,5,7,8,10,16,24
Measuring Equipment	SN	8,10	2,3,4,5,6,9,10,12
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
Medical Unit	SN	8,10	2,3,4,5,6,9,10,12
	SP	00,0,1,2,3	multiple contacts
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
	SU	20	3,4,5,6,8,12,14
Microphone	SH	9	6
Optical Testing	SP	00,0,1,2,3	multiple contacts
Portable Wireless Radio	SN	8,10	2,3,4,5,6,9,10,12
	SP	00,0,1,2,3	multiple contacts
Precision Equipment	SU	20	3,4,5,6,8,12,14
Professional Audio	SN	8,10	2,3,4,5,6,9,10,12
	SP	00,0,1,2,3	multiple contacts
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
Professional Video	SN	8,10	2,3,4,5,6,9,10,12
	SP	00,0,1,2,3	multiple contacts
	SRC	21	10,16,26
	ST	8,8B,9	12,14,16,20
Robotics	ST	8,8B,9	12,14,16,20
Sensor	ST	8,8B,9	12,14,16,20
Telecommunication	SP	00,0,1,2,3	multiple contacts
Vision Testing	SP	00,0,1,2,3	multiple contacts
	SRC	21	10,16,26
Wireless Communication	SH	9	6
Wireless Radio	SN	8,10	2,3,4,5,6,9,10,12
	SP	00,0,1,2,3	multiple contacts

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# Circular Overview

## SCC Series

P.12



### Size / No. of Contacts

Size - 13,16,21,25  
Contacts - 3,4,5,7,8,10,16,24

### Material / Finish

Body - Aluminum alloy / Ni plating  
Insulator - Thermosetting resin / Blue,  
Green  
Contacts - Copper alloy / Silver plating

### Applications

Industrial

### Features

Rugged  
Light weight  
Low cost  
General purpose

## SCK / SCN Series

P.16



### Size / No. of Contacts

SCN Size - 12,16,20,25  
SCK Size - 12,16,20,25,30,32,40  
Contacts - 2,3,4,5,6,7,8,10,12,14,20

### Material / Finish

Body - Zinc alloy / Ni plating  
Insulator - PA & Bakelite / Green & Black  
Contacts - Brass, Phosphor Bronze /  
Silver or Gold plating

### Applications

Electric & Electronic  
Communication

### Features

Rugged  
Simple construction  
Stable performance

## SH Series

P.30



### Size / No. of Contacts

Size - 9  
Contacts - 6

### Material / Finish

Body - Brass / Chromium plating  
Insulator - Glass filled polyacetal / White  
Contacts - Brass, Phosphor Bronze /  
Gold plating

### Applications

Microphone Circuitry  
Wireless Communication

### Features

Compact  
Durable  
Contemporary design

## SM Series

P.34



### Size / No. of Contacts

Size - 9  
Contacts - 8

### Material / Finish

Body - Brass / Ni plating  
Insulator - PA / Black, Ivory  
Contacts - Brass, Phosphor Bronze /  
Gold plating

### Applications

Professional Audio and Camera,  
CCTV, Medical, Wireless Radio,  
Factory Automation, Computers, etc.

### Features

Miniature circular  
High durability / reliability  
Light weight



## SN Series

P.40



### Size / No. of Contacts

Size - 8,10  
Contacts - 2,3,4,5,6,9,10,12

### Material / Finish

Body - Zinc alloy and Brass / Ni Plating  
Insulator - PA / Black  
Contacts - Brass, Phosphor Bronze / Silver or Gold Plating

### Applications

Professional A/V, CCTV, Medical, Wireless Radio, Measuring, Computers and Peripherals, Factory Automation, etc.

### Features

Push-pull, Light-weight  
Miniature circular, Low cost

## SP Series

P.52



### Size / No. of Contacts

Size - 00,0,1,2,3  
Contacts - multiple

### Material / Finish

Body - Brass / Chromium Plating  
Insulator - PEEK, PA or Teflon  
Contacts - Brass / Gold Plating

### Applications

Telecommunication, HDTV, Professional A/V, Optical Testing, Vision Testing, Portable Wireless Radio, Medical, etc.

### Features

Ultimate performance  
Aerodynamic and aesthetic

## SPP Series

P.68



### Size / No. of Contacts

Size - 1  
Contacts - multiple

### Material / Finish

Body-PSU, PEI, PC  
Insulator - PEEK, PA  
Contacts - Brass / Gold Plating

### Applications

Medical electronics  
Test and measurement  
Industrial electronics  
Automotive

### Features

User friendly and robust  
Secure multi-contact push-pull mechanism

## SR IP67 Series

P.78



### Size / No. of Contacts

Size - 8  
Contacts - 4

### Material / Finish

Cap - Brass / Ni Plating  
Insulator - PBT / Black  
Outer sheath - PVC / Black  
Contacts - Brass, Phosphor Bronze / Silver or Gold Plating

### Applications

Factory Automation and Sensors, Process control, Industrial instrumentation, Commercial electronics

### Features

M12 threaded locking  
Protection rating of IP67 with overmoding

## SRC Series

P.82



Bayonet

### Size / No. of Contacts

Size - 21  
Contacts - 10,16,26

### Material / Finish

Body - Aluminum alloy / Ni plating  
Insulator - Thermosetting resin / Black or Blue  
Contacts - Brass, Phosphor Bronze/Gold or Silver plating

### Applications

Professional A/V, Vision Testing, Factory Automation, Measuring, Medical, etc.

### Features

Bayonet locking system  
Rugged, Light-weight, Low cost  
General purpose

## ST Series

P.88



### Size / No. of Contacts

Size - 8,8B,9, 9A  
Contacts - 12,14,16,20

### Material / Finish

Body - Brass & Zinc alloy / Ni plating  
Insulator - PPS resin / Black  
Contacts - Brass, Phosphor Bronze / Gold plating

### Applications

Professional A/V  
Measuring  
Sensors  
Wireless Radio  
Medical, etc.

### Features

Super-miniature with multi-contact  
Safe insert system

## ST IP67 Series

P.100



### Size / No. of Contacts

Size - 9  
Contacts - 12,16,20

### Material / Finish

Body - Brass & Zinc alloy / Ni plating  
Insulator - PPS resin / Black  
Contacts - Brass, Phosphor Bronze / Gold plating

### Applications

Professional A/V  
Measuring  
Sensors  
Wireless Radio  
Medical, etc.

### Features

Super-miniature with multi-contact  
Safe insert system  
Waterproof(IP67) with overmolding

## SU IP67 Series

P.108



### Size / No. of Contacts

Size - 20  
Contacts - 3,4,5,6,8,A5,12,14

### Material / Finish

Body - Zinc Alloy / Ni plating  
Insulator - PA / Black  
Contacts - Brass, Phosphor Bronze / Gold plating

### Applications

Electronic Precision Equipment  
Control Engineering  
Automation  
Medical

### Features

Waterproof(IP67)  
Electro-magnetic protection

## SU2 / SU3 IP67 Series P.122



### Size / No. of Contacts

Size - 20  
Contacts - 3,4,5,6,8,A5,12,14

### Material / Finish

Body - Zinc Alloy, Brass  
Insulator - PA  
Contacts - Brass, Phosphor Bronze

### Applications

CCU (Central Control Unit)  
Smart Bias Tee, Junction Box  
Lightening Protection Unit  
RET Control Cable  
RCU (Remote Control Unit)  
Power Signal Splitter  
General Industrial

### Features

Safe Connection / Easy Mounting

## SW Series P.128



### Size / No. of Contacts

Size - 8,10  
Contacts - 2,3,4,5,6,9,10,12

### Material / Finish

Body - Brass / Ni plating  
Insulator - PA / Black  
Contacts - Brass, Phosphor Bronze / Silver  
or Gold Plating

### Applications

Professional Audio and Camera,  
CCTV, Medical, Wireless Radio,  
Testing & Measuring Equipment, etc.

### Features

Excellent performance at low price  
Screw mounting  
Super-miniature with multi-contact  
Precise design

## SW IP67 Series P.134



### Size / No. of Contacts

Size - 8,10,16  
Contacts - 2,3,4,5,6,9,10,12,28

### Material / Finish

Body - Brass / Ni plating  
Insulator - PA / Black  
Contacts - Brass, Phosphor Bronze / Silver  
or Gold Plating

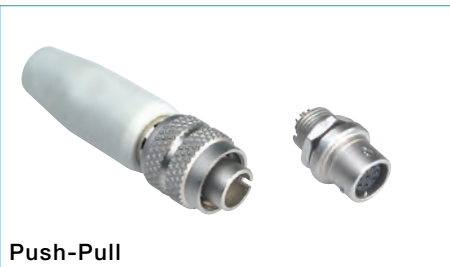
### Applications

Professional Audio and Camera,  
CCTV, Medical, Wireless Radio,  
Testing & Measuring Equipment, etc.

### Features

Excellent performance at low cost  
Screw mounting  
Super-miniature with multi-contact  
Precise design  
Protection rating of IP67 with overmolding

## SXR Series P.142



Push-Pull

### Size / No. of Contacts

Size - 10  
Contacts - 8

### Material / Finish

Body - Aluminum alloy / Ni plating  
Insulator - PBT resin / Black  
Contacts - Brass, Phosphor Bronze /  
Gold plating

### Applications

Professional Audio and Camera

### Features

Miniature, Light weight,  
Ground function

# SCC Series Part Numbering



## Features

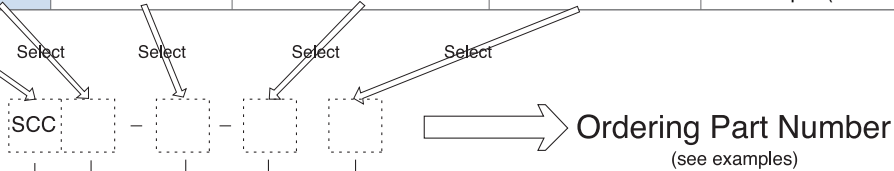
- Rugged
- Light weight
- Low cost
- General purpose

## Applications

- Industrial

## Part Numbering

Product Number		Size	Number of Contacts	Suffix (Contact Type)	Notes
Series	Prefix (Body)				
SCC	6A	13,16,21,25	13 size : 3,5 16 size : 7,8,10 21 size : 3,4,10,16 25 size : 16,24	P	Plug(Male)
				S	Plug(Female)
	2A			P	Receptacle(Male)
				S	Receptacle(Female)
	1A			P	Adapter(Male)
				S	Adapter(Female)



**Connector Series (Body Type)**  
 SCC6A - Plug  
 SCC2A - Receptacle  
 SCC1A - Adapter

**Size**  
 13,16,21,25

**No. of Contacts**  
 13 Size : 3,5  
 16 Size : 7,8,10  
 21 Size : 3,4,10,16  
 25 Size : 16,24

**Contact Type**  
 P : Male  
 S : Female

### Examples






SCC6A - 13 - 3P  
 SCC Series Plug - Size 13 - 3 Male Contacts

SCC2A - 16 - 10S  
 SCC Series Receptacle - Size 16 - 10 Female Contacts







SCC1A - 25 - 24P  
 SCC Series Adapter - Size 25 - 24 Male Contacts

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ Major Performances / Contact Arrangements

Performance	Size 13		Size 16		
	3	5	7	8	10
Withstanding Voltage (per min) <sup>1</sup>	AC 1500V, 1min	AC 1000V, 1min	AC 1000V, 1min	AC 1000V, 1min	AC 1000V, 1min
Current	10A	5A	10A	5A	5A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	5m Ω	5m Ω	5m Ω	5m Ω	5m Ω
Solder Pot Inside Diameter (φ)	1.5	1.0	1.5	1.0	1.0
Wire Gauge (Maximum)	AWG18	AWG20	AWG18	AWG20	AWG20
Contact Arrangement					

Performance	Size 21				Size 25	
	3	4	10	16	16	24
Withstanding Voltage (per min) <sup>1</sup>	AC 1500V, 1min	AC 1500V, 1min	AC 1000V, 1min	AC 1000V, 1min	AC 500V, 1min	AC 500V, 1min
Current	20A	15A	10A	5A	10A	5A
Insulation Resistance (Minimum) <sup>2</sup>	more than 1000M Ω at DC 500V	more than 1000M Ω at DC 500V	1,000M Ω	1,000M Ω	500M Ω	500M Ω
Contact Resistance (Maximum) <sup>3</sup>	5m Ω	5m Ω	5m Ω	5m Ω	5m Ω	5m Ω
Solder Pot Inside Diameter (φ)	2.7	2.2	1.5	1.0	1.5	1.0
Wire Gauge (Maximum)	AWG12	AWG14	AWG18	AWG20	AWG18	AWG20
Contact Arrangement						

<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

■ Material Used / Finish

	Material	Finish
Body	Aluminum alloy	Ni Plating
Insulator	Thermosetting resin	UL94V-0 ; Blue, Green
Contacts	Male	Copper alloy
	Female	Copper alloy

■ Mating & Unmating Force

Shell Size	Contacts	Force	Shell Size	Contacts	Force
13	3	< 1.4Kg	13	5	< 1.5Kg
16	7	< 3.2Kg	16	10	< 3.4Kg
21	10	< 4.5Kg	21	16	< 5.5Kg
25	16	< 7.2Kg	25	24	< 8.2Kg

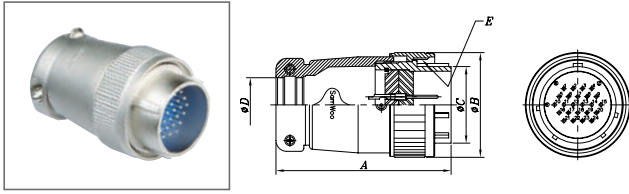
■ SCC Series Mini-map



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

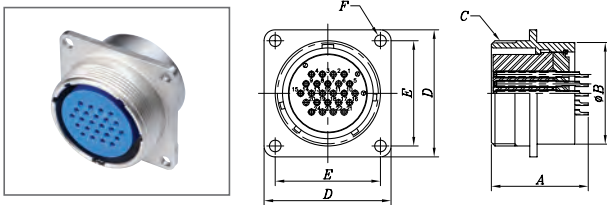
# SCC Series Male / Female Plug, Receptacle, Adapter

## ■ SCC6A Plug



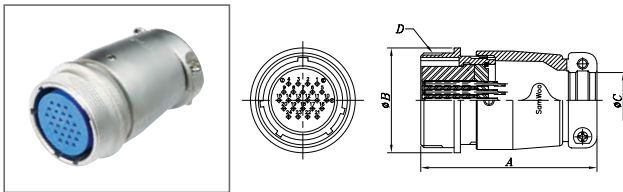
Product Number	A	∅ B	∅ C	∅ D	E
SCC6A-13- 3P	45,7	21,5	12,7	8,0	M18×1,0P
SCC6A-13- 5P					
SCC6A-16- 7P					
SCC6A-16- 8P	48,0	25,5	16,3	11,5	M22×1,0P
SCC6A-16-10P					
SCC6A-21- 3P					
SCC6A-21- 4P	53,5	29,7	20,5	14,0	M26×1,0P
SCC6A-21-10P					
SCC6A-21-16P					
SCC6A-25-16P	56,5	33,8	24,7	17,5	M30×1,0P
SCC6A-25-24P					

## ■ SCC2A Receptacle

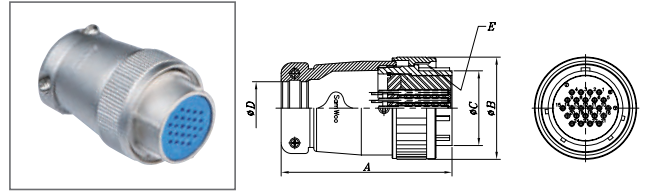


Product Number	A	∅ B	C	D	E	F
SCC2A-13- 3S	27,8	16,0	M18×1,0P	26,0	20,0	4-∅3,2
SCC2A-13- 5S	26,5					
SCC2A-16- 7S	27,6					
SCC2A-16- 8S	27,6	19,8	M22×1,0P	29,0	23,0	4-∅3,2
SCC2A-16-10S	27,0					
SCC2A-21- 3S	31,1					
SCC2A-21- 4S	29,4	24,0	M26×1,0P	32,0	26,0	4-∅3,3
SCC2A-21-10S	27,1					
SCC2A-21-16S	26,6					
SCC2A-25-16S	27,3	27,9	M30×1,0P	35,0	29,5	4-∅3,3
SCC2A-25-24S	26,7					

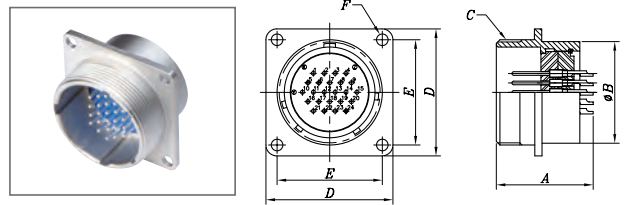
## ■ SCC1A Adapter



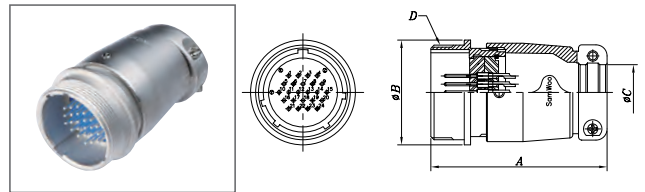
Product Number	A	∅ B	∅ C	D
SCC1A-13- 3S	45,0	21,0	8,0	M18×1,0P
SCC1A-13- 5S				
SCC1A-16- 7S				
SCC1A-16- 8S	47,8	25,0	11,5	M22×1,0P
SCC1A-16-10S				
SCC1A-21- 3S				
SCC1A-21- 4S	51,5	29,0	14,0	M26×1,0P
SCC1A-21-10S				
SCC1A-21-16S				
SCC1A-25-16S	55,5	33,0	17,5	M30×1,0P
SCC1A-25-24S				



Product Number	A	∅ B	∅ C	∅ D	E
SCC6A-13- 3S	45,7	21,5	12,7	8,0	M18×1,0P
SCC6A-13- 5S					
SCC6A-16- 7S					
SCC6A-16- 8S	48,0	25,5	16,3	11,5	M22×1,0P
SCC6A-16-10S					
SCC6A-21- 3S					
SCC6A-21- 4S	53,5	29,7	20,5	14,0	M26×1,0P
SCC6A-21-10S					
SCC6A-21-16S					
SCC6A-25-16S	56,5	33,8	24,7	17,5	M30×1,0P
SCC6A-25-24S					



Product Number	A	∅ B	C	D	E	F
SCC2A-13- 3P	26,5	16,0	M18×1,0P	26,0	20,0	4-∅3,2
SCC2A-13- 5P						
SCC2A-16- 7P						
SCC2A-16- 8P	26,5	19,8	M22×1,0P	29,0	23,0	4-∅3,2
SCC2A-16-10P						
SCC2A-21- 3P						
SCC2A-21- 4P	30,9	24,0	M26×1,0P	32,0	26,0	4-∅3,3
SCC2A-21-10P	29,4					
SCC2A-21-16P	25,5					
SCC2A-25-16P	26,3	24,0	M26×1,0P	32,0	26,0	4-∅3,3
SCC2A-25-24P	26,2					
SCC2A-25-24P	26,5	27,9	M30×1,0P	35,0	29,5	4-∅3,3



Product Number	A	∅ B	∅ C	D
SCC1A-13- 3P	45,0	21,0	8,0	M18×1,0P
SCC1A-13- 5P				
SCC1A-16- 7P				
SCC1A-16- 8P	47,8	25,0	11,5	M22×1,0P
SCC1A-16-10P				
SCC1A-21- 3P				
SCC1A-21- 4P	51,5	29,0	14,0	M26×1,0P
SCC1A-21-10P				
SCC1A-21-16P				
SCC1A-25-16P	55,5	33,0	17,5	M30×1,0P
SCC1A-25-24P				

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



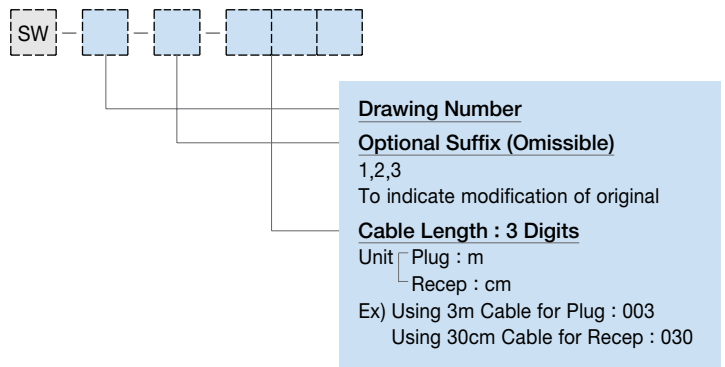
**Features**

- Rugged
- Light weight
- Low cost
- General purpose
- Standard and Custom Design

**Applications**

- Industrial

■ **Part Numbering**



■ **Plug Cable Assembly**



Type	Construction
A	SCC Connector + Cable + Housing
B	SCC Connector + Cable + SCC Connector

※ Design and Customization Service Available

■ **Receptacle Cable Assembly**



Type	Construction
A	SCC Connector + wire + Open end
B	SCC Connector + wire + Housing
C	SCC Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SCN / SCK Series Part Numbering



## Features

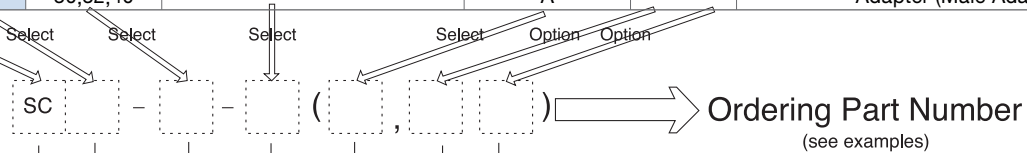
- Rugged
- Simple construction
- Stable mechanical / Electrical performances

## Applications

- Electric / Electronic
- Communication

## Part Numbering

Product Number		Size	Number of Contacts	Suffix (Body Type)	Option	Notes
Series	Prefix				L/T	
SC	K	12,16,20,25, 30,32,40	12 size:2 or 4 16 size:2,3,4,5,6,7,8 20 size:2,3,4,5,6,8,10,20 25 size:2,3,4,5,6,8,10,12 30 size:2,3,4,6,8,10,14 32 size:2,3,4 40 size:2,3,4,12  Check each product for more detail	P	●	SCK series plug
				PL	●	SCK series Right-angle plug
	R			Receptacle (Panel type)		
	RC			Receptacle Cover		
	R			Receptacle (Nut type)		
	RPCB			Receptacle (PCB type)		
	BRPCB			Bulkhead Receptacle		
	P			Plug (Reverse contact)		
	R			Receptacle (Reverse contact)		
	R			Receptacle (Reverse contact)		
P		Adapter (Female Adapter)				
A		Adapter (Male Adapter)				



### Examples

- SCK - 12 - 4 ( P )**  
SCK series - Size 12 Plug - 4 Female Contacts
- SCK - 16 - 8 ( R )**  
SCK series - Size 16 Panel Type Receptacle - 8 Male Contacts
- SCN - 20 - 10 ( R )**  
SCN series - Size 20 Nut Type Receptacle - 10 Male Contacts
- SCA - 30 - 2 ( P )**  
SCA series - Size 30 Adapter - 2 Female Contacts
- SCK - 16 - 4 ( P , L/T )**  
SCK series - Size 16 Plug - 4 Female Contact (Lock Type)
- SCK - 16 - 8 ( PL , L/T )**  
SCK series - Size 16 Right Angle Plug - 8 Female Contacts
- SCN - 16 - 7 ( RPCB )**  
SCN series - Size 16 PCB Receptacle - 7 Male Contacts

### Connector Series (Body Type)

- SCK - Plug(Female) / Receptacle(Male)
- SCN - Nut type receptacle(Male)
- SCKH - Plug(Male) / Receptacle(Female)
- SCNH - Receptacle(Female)
- SCA - Adapter

### Size

12,16,20,25,30,32,40

### No. of Contacts

12 Size : 2 or 4  
 16 Size : 2,3,4,5,6,7,8  
 20 Size : 2,3,4,5,6,8,10,20  
 25 Size : 2,3,4,5,6,8,10,12  
 30 Size : 2,3,4,6,8,10,14  
 32 Size : 2,3,4  
 40 Size : 2,3,4,12

### Extended Body Type

- P : Plug
- PL : Right angle Plug
- R : Receptacle
- RPCB : PCB Receptacle
- BRPCB : Bulkhead PCB Receptacle
- RC : Receptacle Cap
- A : Adapter

### Option

L/T : Lock type (available in size 16 with 4,5,6,7,8 contacts only)

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ Major Performances / Contact Arrangements

Performance Size / No. of Contacts		Withstanding Voltage/min.	Current	Insulation Resistance (Minimum)	Contact Resistance (Maximum)	Contact $\phi$	Solder Pot $\phi$	Wire Gauge (Maximum)	Contact Arrangement
12	2	AC 500V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.2	AWG20	
			3A			1.5	1.2	AWG20	
	4	AC 500V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.2	AWG20	
			3A			1.0	1.0	AWG20	
16	2	AC 500V	5A	1,000M $\Omega$	5m $\Omega$	2.5	1.5	AWG18	
	3	AC 500V	5A	1,000M $\Omega$	5m $\Omega$	2.5	1.5	AWG18	
	4	AC 500V	5A	1,000M $\Omega$	5m $\Omega$	2.5	1.5	AWG18	
	5	AC 500V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.2	AWG20	
	6	AC 500V	3A	1,000M $\Omega$	5m $\Omega$	1.2	1.0	AWG20	
	7	AC 500V	3A	1,000M $\Omega$	5m $\Omega$	1.2	1.0	AWG20	
	8	AC 500V	3A	1,000M $\Omega$	5m $\Omega$	1.2	1.0	AWG20	
20	2	AC 1000V	7A	1,000M $\Omega$	5m $\Omega$	3.0	2.2	AWG14	
	3	AC 1000V	7A	1,000M $\Omega$	5m $\Omega$	3.0	2.2	AWG14	
	4	AC 1000V	7A	1,000M $\Omega$	5m $\Omega$	3.0	2.2	AWG14	
	5	AC 1000V	7A	1,000M $\Omega$	5m $\Omega$	3.0	2.2	AWG14	
	6	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.5	AWG18	
	8	AC 1000V	3A	1,000M $\Omega$	5m $\Omega$	1.5	1.0	AWG20	
	10	AC 1000V	3A	1,000M $\Omega$	5m $\Omega$	1.5	1.0	AWG20	
	20	AC 1000V	2A	1,000M $\Omega$	5m $\Omega$	0.7	0.8	AWG22	

■ Symbol for Contact Diameter

Mark														
Diameter	0.7	1.0	1.2	1.5	1.8	2.0	2.5	3.0	3.5	4.0	4.5	6.0	7.0	

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SCN / SCK Series Specifications

## Major Performances / Contact Arrangements

Performance Size / No. of Contacts		Withstanding Voltage/min.	Current	Insulation Resistance (Minimum)	Contact Resistance (Maximum)	Contact $\phi$	Solder Pot $\phi$	Wire Gauge (Maximum)	Contact Arrangement
25	2	AC 1000V	10A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	3	AC 1000V	10A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	4	AC 1000V	10A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	5	AC 1000V	10A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	6	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.5	AWG18	
	8	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.5	AWG18	
	10	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.5	AWG18	
	12	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	2.0	1.5	AWG18	
30	2	AC 500V	15A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	3	AC 500V	15A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	4	AC 500V	15A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	6	AC 1000V	15A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	8	AC 1000V	15A	1,000M $\Omega$	5m $\Omega$	3.5	2.7	AWG12	
	10	AC 1000V	5A	1,000M $\Omega$	5m $\Omega$	2.5	2.2	AWG14	
	14	AC 1000V	4A	1,000M $\Omega$	5m $\Omega$	1.8	1.2	AWG20	

### Symbol for Contact Diameter

Mark													
Diameter	0.7	1.0	1.2	1.5	1.8	2.0	2.5	3.0	3.5	4.0	4.5	6.0	7.0

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Major Performances / Contact Arrangements

Performance Size / No. of Contacts	Withstanding Voltage/min.	Current	Insulation Resistance (Minimum)	Contact Resistance (Maximum)	Contact $\varnothing$	Solder Pot $\varnothing$	Wire Gauge (Maximum)	Contact Arrangement	
32	2	AC 1000V	40A	1,000M $\Omega$	5m $\Omega$	7.0	4.1	AWG8	
	3	AC 1000V	40A	1,000M $\Omega$	5m $\Omega$	7.0	4.1	AWG8	
	4	AC 1000V	30A	1,000M $\Omega$	5m $\Omega$	6.0	4.2	AWG6	
40	2	AC 1000V	40A	1,000M $\Omega$	5m $\Omega$	7.0	4.5	AWG6	
	3	AC 1000V	40A	1,000M $\Omega$	5m $\Omega$	7.0	4.5	AWG6	
	4	AC 1000V	40A	1,000M $\Omega$	5m $\Omega$	7.0	4.5	AWG6	
	12	AC 1000V	10A	1,000M $\Omega$	5m $\Omega$	3.0	2.0	AWG14	
4A			2.0			1.5	AWG18		

! <sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
<sup>4</sup> Connector contact arrangement is from mating surface.

■ Symbol for Contact Diameter

Mark													
Diameter	0,7	1,0	1,2	1,5	1,8	2,0	2,5	3,0	3,5	4,0	4,5	6,0	7,0

■ Material Used / Finish

		Material	Finish
Body		Zinc alloy	Ni plating
Insulator	Size 12	PA & Bakelite	Green
	Size 16	Bakelite	Black
	Size 20,25,30	Bakelite	Green
	Size 32,40	Epoxy	Green
Contacts	Male	Brass	Silver or Gold plating
	Female	Brass, Phosphor Bronze	Silver or Gold plating

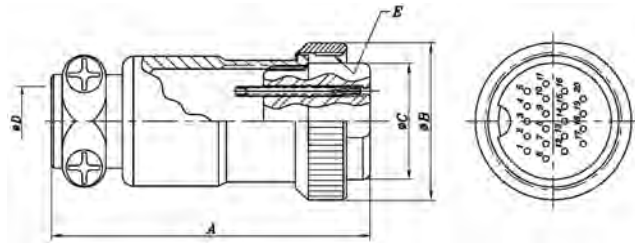
■ SCK / SCN Series Mini-map



Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

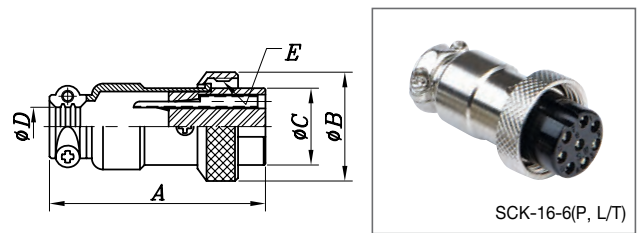


■ SCK Plug



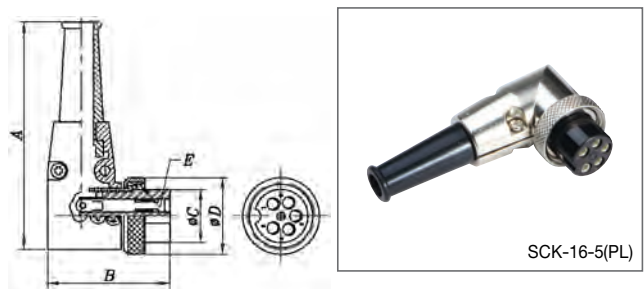
Product Number	A	ø B	ø C	ø D	E				
SCK-12- 2(P)	28.6	14.5	9.2	5.0	M13×0.75P				
SCK-12- 4(P)									
SCK-16- 2(P)	35.7	18.2	12.6	6.4	M16×1.0P				
SCK-16- 3(P)									
SCK-16- 4(P)									
SCK-16- 5(P)									
SCK-20- 2(P)	42.5	21.8	15.5	8.2	M19×1.0P				
SCK-20- 3(P)									
SCK-20- 4(P)									
SCK-20- 5(P)									
SCK-20- 6(P)									
SCK-20- 8(P)									
SCK-20-10(P)									
SCK-20-20(P)									
SCK-25- 2(P)					50.0	28.2	21.5	11.0	M25×1.25P
SCK-25- 3(P)									
SCK-25- 4(P)									
SCK-25- 5(P)									
SCK-25- 6(P)									
SCK-25- 8(P)									
SCK-25-10(P)									
SCK-25-12(P)									
SCK-30- 2(P)	53.5	33.0	25.0	13.0	M29×1.0P				
SCK-30- 3(P)									
SCK-30- 4(P)									
SCK-30- 6(P)									
SCK-30- 8(P)									
SCK-30-10(P)									
SCK-30-14(P)	59.0	37.8	28.3	15.0	M34×1.0P				
SCK-32- 3(P)									
SCK-32- 4(P)	67.7	45.5	34.8	18.0	M41.5×1.5P				
SCK-40- 2(P)									
SCK-40- 3(P)									
SCK-40- 4(P)									
SCK-40-12(P)									

■ SCK Series Plug (Lock Type)



Product Number	A	ø B	ø C	ø D	E
SCK-16-4(P, L/T)	36.0	18.2	12.6	6.4	M16×1.0P
SCK-16-5(P, L/T)					
SCK-16-6(P, L/T)					
SCK-16-7(P, L/T)					
SCK-16-8(P, L/T)					

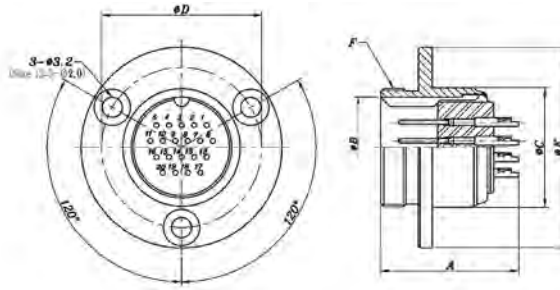
■ SCK Right-Angle Plug



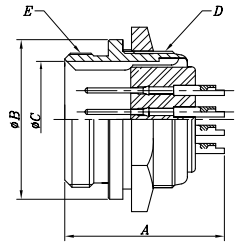
Product Number	A	B	ø C	ø D	E
SCK-16-4(P, L/T)-L	54.0	29	12.6	18.2	M16×1.0P
SCK-16-5(P, L/T)-L					
SCK-16-6(P, L/T)-L					
SCK-16-7(P, L/T)-L					
SCK-16-8(P, L/T)-L					

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SCK Receptacle



■ SCN Receptacle



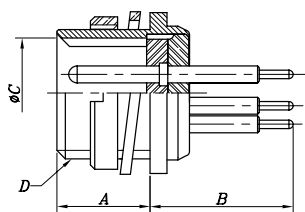
Product Number	A	$\phi B$	$\phi C$	D	E					
SCN-12- 2(R)	17,3	15,0	9,6	M12×0,75P	M13×0,75P					
SCN-12- 4(R)										
SCN-16- 2(R)	20,6	18,8	13,0	M16×0,75P	M16×1,0P					
SCN-16- 3(R)										
SCN-16- 4(R)										
SCN-16- 5(R)										
SCN-16- 6(R)										
SCN-16- 7(R)										
SCN-16- 8(R)										
SCN-20- 2(R)						22,0	23,0	15,9	M19×0,75P	M19×1,0P
SCN-20- 3(R)										
SCN-20- 4(R)										
SCN-20- 5(R)										
SCN-20- 6(R)										
SCN-20- 8(R)										
SCN-20-10(R)										
SCN-20-20(R)										
SCN-25- 2(R)	28,0	29,0	21,9	M25×1,0P	M25×1,25P					
SCN-25- 3(R)										
SCN-25- 4(R)										
SCN-25- 5(R)										
SCN-25- 6(R)										
SCN-25- 8(R)										
SCN-25-10(R)										
SCN-25-12(R)										

Product Number	A	$\phi B$	$\phi C$	$\phi D$	$\phi E$	F						
SCK-12- 2(R)	17,3	9,6	11,8	17,0	22,0	M13×0,75P						
SCK-12- 4(R)												
SCK-16- 2(R)	21,0	13,0	15,9	24,0	30,7	M16×1,0P						
SCK-16- 3(R)												
SCK-16- 4(R)												
SCK-16- 5(R)												
SCK-16- 6(R)												
SCK-16- 7(R)												
SCK-16- 8(R)												
SCK-20- 2(R)							22,0	16,0	19,0	25,5	32,0	M19×1,0P
SCK-20- 3(R)												
SCK-20- 4(R)												
SCK-20- 5(R)												
SCK-20- 6(R)												
SCK-20- 8(R)												
SCK-20-10(R)												
SCK-20-20(R)												
SCK-25- 2(R)	27,5	21,9	25,0	34,0	42,0	M25×1,25P						
SCK-25- 3(R)												
SCK-25- 4(R)												
SCK-25- 5(R)												
SCK-25- 6(R)												
SCK-25-8(R)												
SCK-25-10(R)												
SCK-25-12(R)												
SCK-30- 2(R)							28,2	25,7	29,0	37,0	45,5	M29×1,0P
SCK-30- 3(R)												
SCK-30- 4(R)												
SCK-30- 6(R)												
SCK-30- 8(R)												
SCK-30-10(R)												
SCK-30-14(R)												
SCK-32- 2(R)	33,5	28,9	32,0	42,0	50,8	M34×1,0P						
SCK-32- 3(R)												
SCK-32- 4(R)												
SCK-40- 2(R)							39,5	35,5	40,0	50,0	58,0	M41,5×1,5P
SCK-40- 3(R)												
SCK-40- 4(R)												
SCK-40-12(R)												

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SCN / SCK Series SCN Male / PCB Type Receptacle

## ■ SCN PCB Receptacle Solder type also available

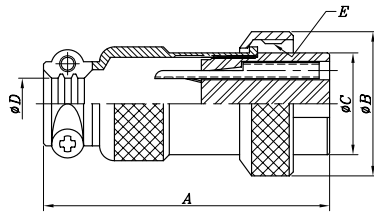


Product Number	A	B	∅ C	D
SCN-16-2(BRPCB)	11,0	11,7~17,7 (Customizable)	13	M16×1,0P
SCN-16-3(BRPCB)				
SCN-16-4(BRPCB)				
SCN-16-5(BRPCB)				
SCN-16-6(BRPCB)				
SCN-16-7(BRPCB)				
SCN-16-8(BRPCB)	12,5	11,7~17,7 (Customizable)	16	M19×1,0P
SCN-20-3(BRPCB)				
SCN-20-4(BRPCB)				

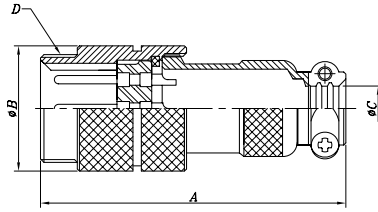
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



■ SCA Adapter (Female Contact)



■ SCA Adapter (Male Contact)



Product Number	A	φ B	φ C	φ D	E					
SCA-16- 2(P)	35,7	18,2	12,6	6,4	M16×1,0P					
SCA-16- 3(P)										
SCA-16- 4(P)										
SCA-16- 5(P)										
SCA-20- 2(P)	42,5	21,8	15,5	8,2	M19×1,0P					
SCA-20- 3(P)										
SCA-20- 4(P)										
SCA-20- 5(P)										
SCA-20- 6(P)										
SCA-20- 8(P)										
SCA-20-10(P)										
SCA-20-20(P)										
SCA-25- 2(P)	50,0	28,2	21,5	11,0	M25×1,25P					
SCA-25- 3(P)										
SCA-25- 4(P)										
SCA-25- 5(P)										
SCA-25- 6(P)										
SCA-25- 8(P)										
SCA-25-10(P)										
SCA-25-12(P)										
SCA-30- 2(P)						53,5	33,0	25,0	13,0	M29×1,0P
SCA-30- 3(P)										
SCA-30- 4(P)										
SCA-30- 6(P)										
SCA-30- 8(P)										
SCA-32- 2(P)	59,0	38,2	28,0	15,0	M34×1,0P					
SCA-32- 3(P)										
SCA-32- 4(P)										
SCA-40- 2(P)	67,7	45,5	34,8	18,0	M41,5×1,5P					
SCA-40- 3(P)										
SCA-40- 4(P)										
SCA-40-12(P)										

Product Number	A	φ B	φ C	D				
SCA-16- 2(A)	43,7	18,2	6,4	M16×1,0P				
SCA-16- 3(A)								
SCA-16- 4(A)								
SCA-16- 5(A)								
SCA-20- 2(A)	49,0	21,8	8,2	M19×1,0P				
SCA-20- 3(A)								
SCA-20- 4(A)								
SCA-20- 5(A)								
SCA-20- 6(A)								
SCA-20- 8(A)								
SCA-20-10(A)								
SCA-20-20(A)								
SCA-25- 2(A)	56,2	28,2	11,0	M25×1,25P				
SCA-25- 3(A)								
SCA-25- 4(A)								
SCA-25- 5(A)								
SCA-25- 6(A)								
SCA-25- 8(A)								
SCA-25-10(A)								
SCA-25-12(A)								
SCA-30- 2(A)					62,0	33,0	13,0	M29×1,0P
SCA-30- 3(A)								
SCA-30- 4(A)								
SCA-30- 6(A)								
SCA-30- 8(A)								
SCA-32- 2(A)	67,5	38,2	15,0	M34×1,0P				
SCA-32- 3(A)								
SCA-32- 4(A)								
SCA-40- 2(A)	74,5	45,5	18,0	M41,5×1,5P				
SCA-40- 3(A)								
SCA-40- 4(A)								
SCA-40-12(A)								

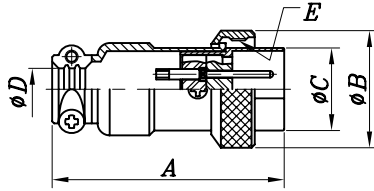
■ SCA Adapter (Set)



SCA Adapter sets are available.  
 SCA sets include both Male and Female adapter.  
 To order a set, choose (P,A) at the end of part number.

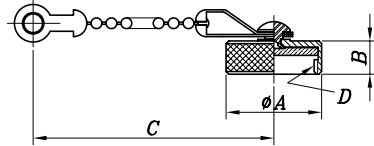
ex) To order SCA-25-10(P) and SCA-25-10(A),  
 Select SCA-25-10(P,A)

■ SCKH Plug



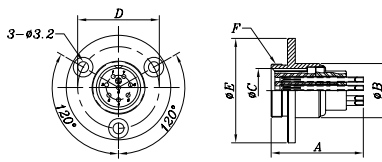
Product Number	A	∅ B	∅ C	∅ D	E
SCKH-16- 4(P)	36,0	18,2	12,7	6,4	M16×1,0P
SCKH-16- 5(P)					
SCKH-16- 8(P)					
SCKH-20-18(P)	42,3	21,8	15,6	8,2	M19×1,0P
SCKH-25- 2(P)	50,0	28,2	21,5	11,0	M25×1,25P
SCKH-25- 4(P)					
SCKH-30- 2(P)	54,0	33,0	25,0	13,0	M29×1,0P

■ SCK Receptacle Cap



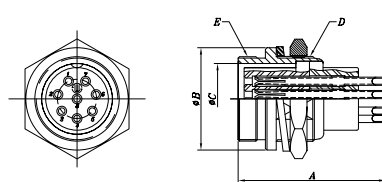
Product Number	∅ A	B	C	D
SCK-12(RC)	14,7	4,7	130	M13×0,75P
SCK-16(RC)	18,0	6,2	130	M16×1,0P
SCK-20(RC)	21,8	7,2	170	M19×1,0P
SCK-25(RC)	28,3	7,0	170	M25×1,25P
SCK-30(RC)	32,8	7,7	170	M29×1,0P
SCK-32(RC)	37,8	8,2	170	M34×1,0P
SCK-40(RC)	45,5	9,2	170	M41,5×1,5P

■ SCKH Receptacle



Product Number	A	∅ B	∅ C	∅ D	∅ E	F
SCKH-16- 4(R)	28,2	15,9	13,0	24,0	30,7	M16×1,0P
SCKH-16- 5(R)						
SCKH-16- 8(R)						
SCKH-20-18(R)	20,6	19	15,9	25,5	32,0	M19×1,0P
SCKH-25- 2(R)	31,0	25,0	21,9	34,0	42,0	M25×1,25P
SCKH-25- 4(R)						
SCKH-30- 2(R)	31,0	29,0	25,7	37,0	45,5	M29×1,0P

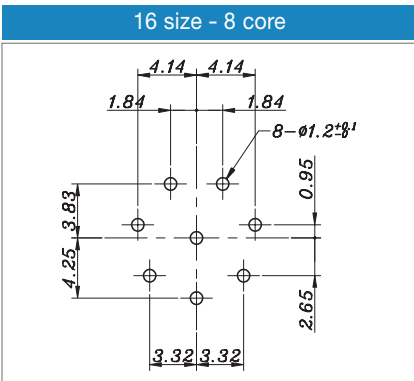
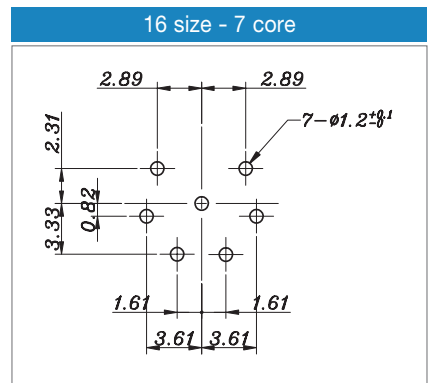
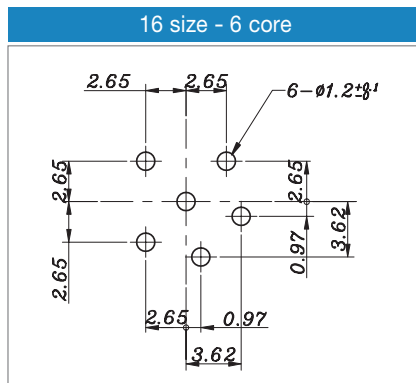
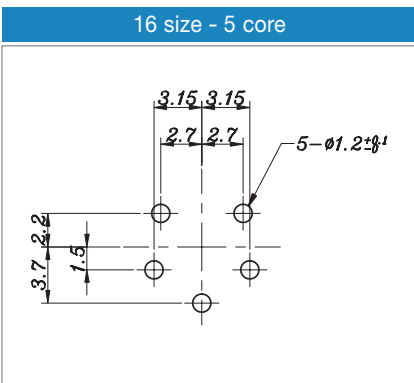
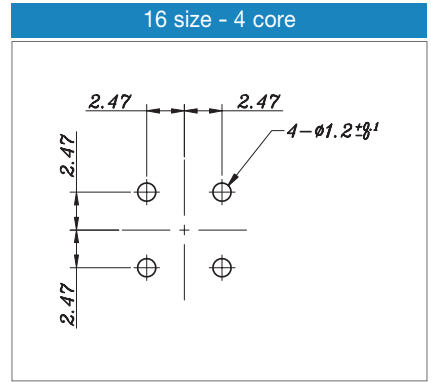
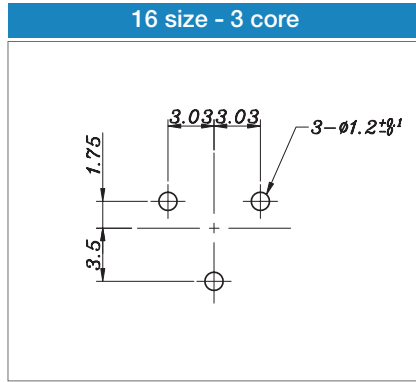
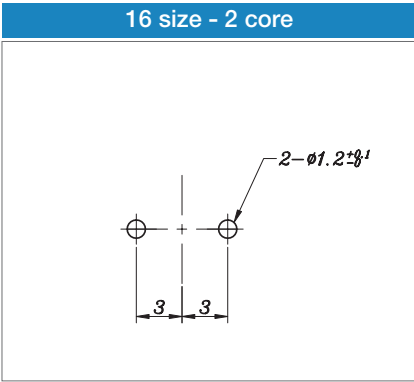
■ SCNH Receptacle



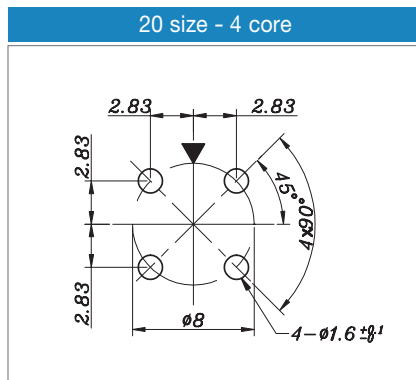
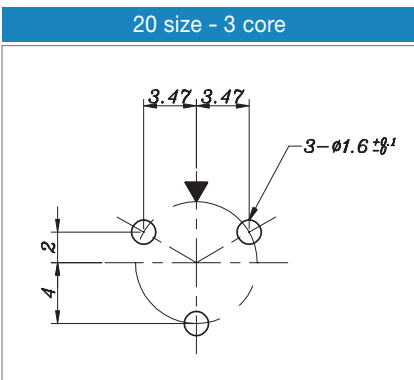
Product Number	A	∅ B	∅ C	D	E
SCNH-16- 4(R)	20,6	18,8	13,0	M16×0,75P	M16×1,0P
SCNH-16- 5(R)					
SCNH-16- 8(R)					
SCNH-20-18(R)	20,5	23,0	15,9	M19×0,75P	M19×1,0P
SCNH-25- 2(R)	22,0	29,0	21,9	M25×1,0P	M25×1,25P
SCNH-25- 4(R)					

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ SCN-16 BRPCB Series PCB Hole Layout

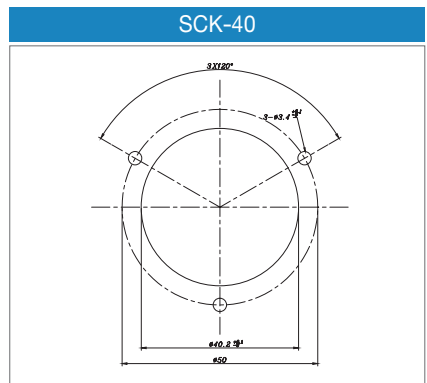
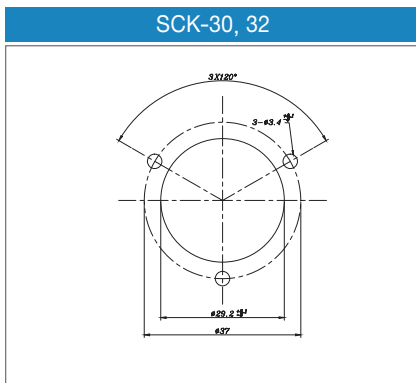
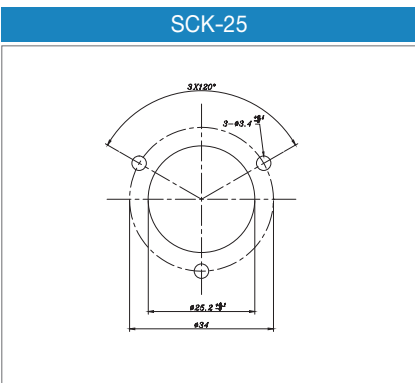
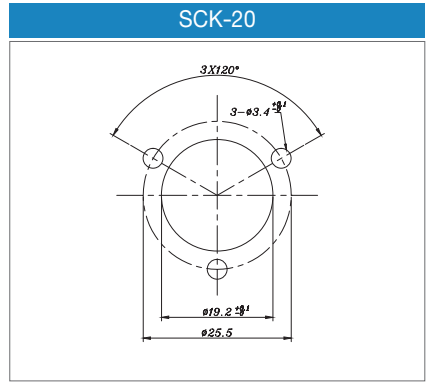
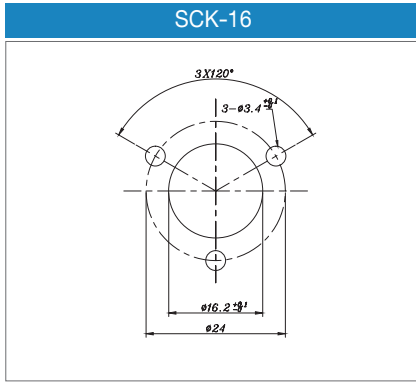
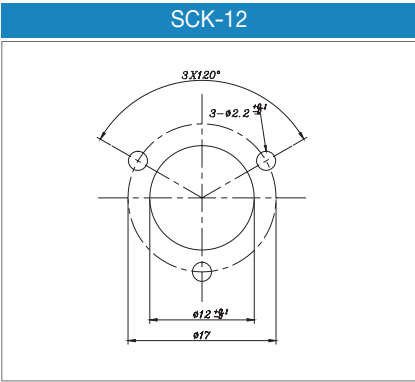


■ SCN-20 BRPCB Series PCB Hole Layout

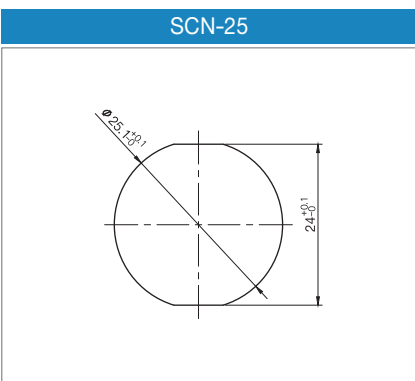
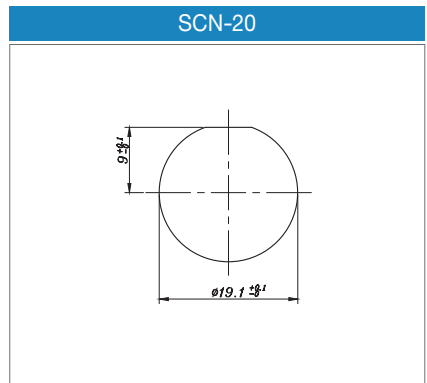
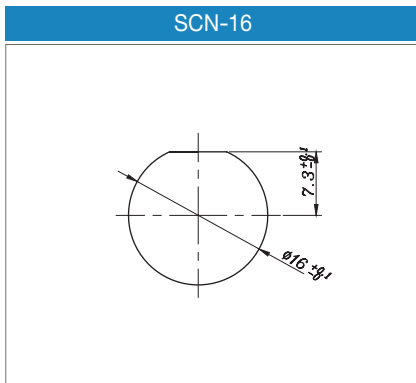
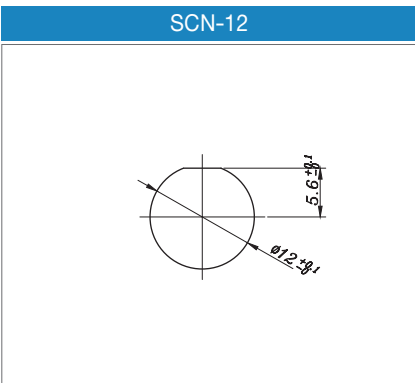


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SCK Series Panel Layout



■ SCN Series Panel Lay Out



Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



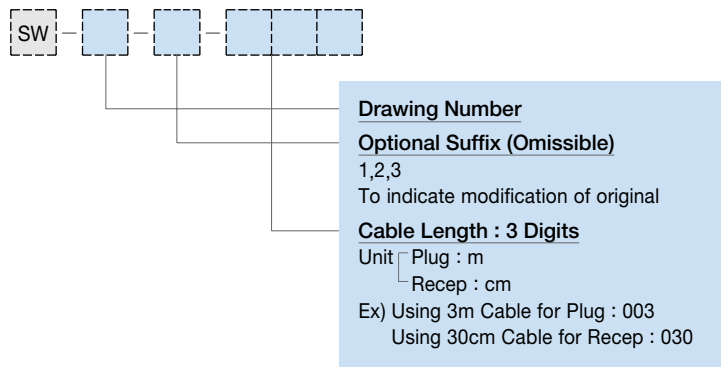
**Features**

- Rugged
- Simple construction
- Stable mechanical / Electrical performances
- Standard and Custom Design

**Applications**

- Electric / Electronic
- Communication

■ **Part Numbering**



■ **Plug Cable Assembly**



Type	Construction
A	SCK Connector + Cable + Housing
B	SCK Connector + Cable + SCK Connector

※ Design and Customization Service Available

■ **Receptacle Cable Assembly**



Type	Construction
A	SCK Connector + wire + open end
B	SCK Connector + wire + Housing
C	SCK Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



### Features

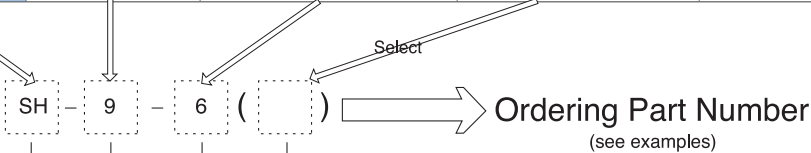
- Compact
- Durable
- Contemporary design

### Applications

- Microphone circuitry
- Wireless communication

### Part Numbering

Series	Size	Number of Contacts	Suffix (Contact Type)	Notes
SH	9	6	P	Plug(Male contact)
			R	Receptacle(Female contact)



### Examples

- SH - 9 - 6 ( P )  
SH series - Size 9 Plug - 6 Male Contacts
- SH - 9 - 6 ( R )  
SH series - Size 9 Receptacle - 6 Female Contact

### Connector Series

SH Series

### Size

9

### No. of Contacts

6

### Body Type

- P : Plug
- R : Receptacle

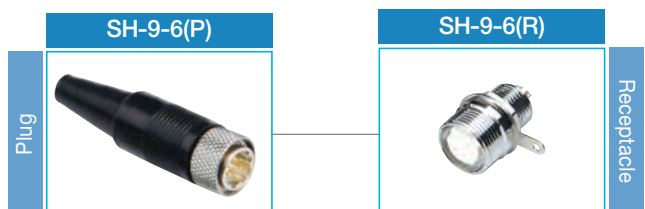
### Major Performances / Contact Arrangements

Performance Size/No. of Contacts		Rated Voltage	Withstanding Voltage/min.	Current	Insulation Resistance (Minimum)	Contact Resistance (Maximum)	Contact $\phi$	Solder Pot $\phi$	Contact Arrangement
9	6	AC 100V DC 140V	AC 300V	2A	200M $\Omega$	10m $\Omega$	$\phi$ 0,7	$\phi$ 0,7	

### Material Used / Finish

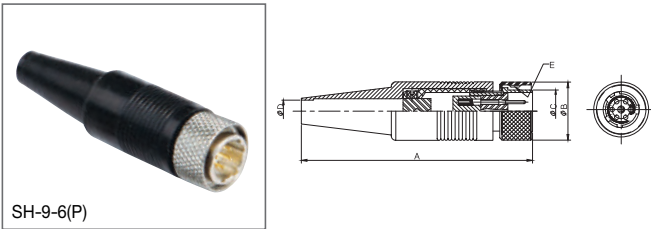
		Material	Finish
Body		Brass	Chromium Plating
Insulator		Glass-filled polyacetal	White
Contacts	Male	Brass	Gold Plating
	Female	Phosphor bronze	Gold Plating

### SH-9-6 Mini-map



Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

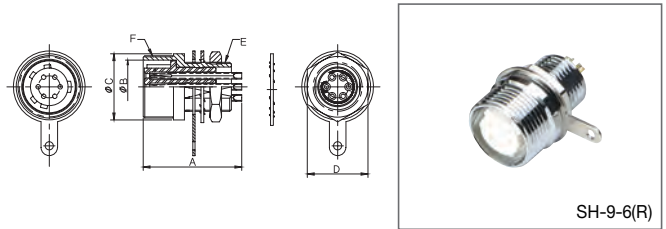
■ SH-9-6(P)



SH-9-6(P)

Product Number	A	ø B	ø C	ø D	E
SH-9-6(P)	51.0	12.9	9.4	4.9	M11,5×0,75P

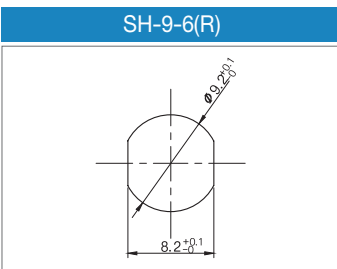
■ SH-9-6(R)



SH-9-6(R)

Product Number	A	ø B	ø C	D	E	F
SH-9-6(R)	19	9.7	12.0	11.0	M9×0,75P	M11,5×0,75P

■ SH Series Panel Layout



■ Cable Assembly Instruction

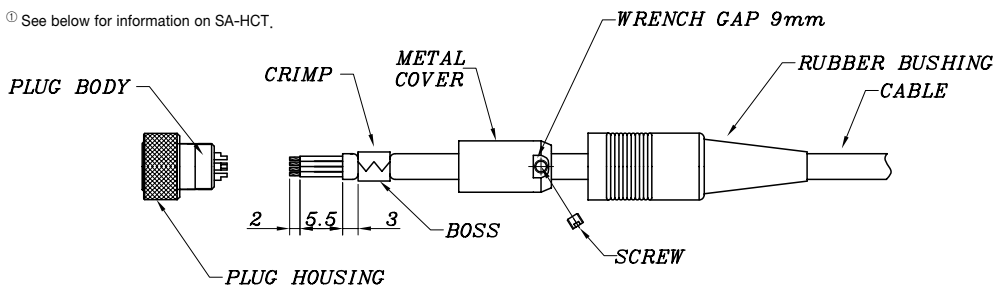
■ General Instruction / Information

- Diagram 1 shows a sample wiring for SN series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.

■ Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0.129mm<sup>2</sup>(AWG#26).
- ② Insert RUBBER BUSHING to cable.
- ③ Insert PLUG HOUSING to cable.
- ④ Strip cable per dimension given and loosen braid.
- ⑤ Secure PLUG BODY to jig for soldering.
- ⑥ Solder stripped cable to pin.
- ⑦ Fasten CRIMP using hand crimp tool (SA-HCT<sup>①</sup>)
- ⑧ Lock PLUG HOUSING and PLUG BODY using tightening force displayed on Table 1.
- ⑨ Tighten WRENCH BOLT using 0.3N force onto one of two embossed parts of crimp.
- ⑩ Cover RUBBER BUSHING onto PLUG HOUSING.

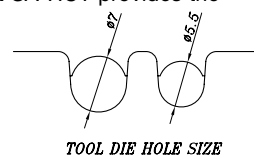
<sup>①</sup> See below for information on SA-HCT.



■ SA-HCT (Hand Crimp Tool)



Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results. Use ø 7.0 for SH series.



TOOL DIE HOLE SIZE

# SH Series Cable Assembly



## Features

- Compact
- Durable
- Contemporary design
- Standard and Custom Design

## Applications

- Microphone circuitry
- Wireless communication

## Part Numbering



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit { Plug : m  
       Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

## Plug Cable Assembly



Type	Construction
A	SH Connector + Cable + Housing
B	SH Connector + Cable + SH Connector

※ Design and Customization Service Available

## Receptacle Cable Assembly



Type	Construction
A	SH Connector + wire + open end
B	SH Connector + wire + Housing
C	SH Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.





# SM Series Part Numbering



## Features

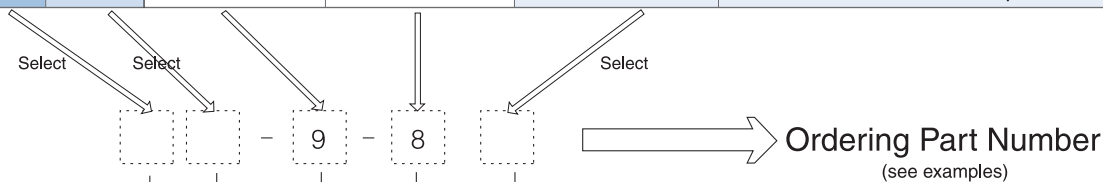
- Miniature circular
- High durability / reliability
- Light weight

## Applications

- Professional audio and video
- CCTV system
- Portable wireless radio
- Factory Automation
- Computers and peripherals
- Medical, and much more.

## Part Numbering

Product Number		Size	Number of Contacts	Suffix (Contact Type)	Notes	
Series	Prefix					
SMP		9	8	P	Plug (Male contact)	
				R	Receptacle (Female contact)	
	H			P	Plug (Female contact)	
				R	Receptacle (Male Contact)	
	A				Adapter	
	HA				Adapter	
SMS					P	Plug (Male contact)
					R	Receptacle (Female contact)
	H	P	Plug (Female contact)			
		R	Receptacle (Male Contact)			
	A		Adapter			
	HA		Adapter			



### Examples

SMP - 9 - 8 (P)

SMP series - Size 9 Plug - 8 Male contacts

SMS - 9 - 8 (R)

SMS Series - Size 9 Receptacle - 8 Female Contacts

SMSHA - 9 - 8

SMSHA series - Size 9 Adapter - 8 Male Contacts

### Connector Series

SMP Series : **Push-pull type**

SMPH - Reverse contact for SMP Series

SMPA - Adapter for SMP Series

SMPHA - Adapter for SMPH Series

SMS Series : **Screw - on type**

SMSH - Reverse contact for SMS Series

SMSA - Adapter for SMS Series

SMSHA - Adapter for SMSH Series

### Size

9

### No. of Contacts

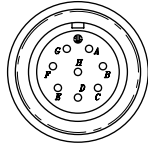
8

### Body Type

P : Plug

R : Receptacle

Major Performances / Contact Arrangements

Size/No. of Contacts	Size 9
Performance	8
Withstanding Voltage (Vrms)	700
Rated Current	2A
Rated Voltage (Vrms)	200
Insulation Resistance (Minimum)	1000M $\Omega$ or more at DC500V
Contact Resistance (Minimum)	8m $\Omega$
Temperature Range	-25 $^{\circ}$ C to + 85 $^{\circ}$ C
Contact Arrangement	

- ! <sup>1</sup> Withstanding voltage is the tested voltage value in this table.
- <sup>2</sup> Insulation resistance is measured at DC 100V.
- <sup>3</sup> Contact resistance is measured at DC 1A.
- Values are from tested items and may not apply to all connectors.
- Specifications subject to change without notice.
- Consult Sam Woo Electronics for the latest specifications.
- <sup>4</sup> Connector contact arrangement is from mating surface.

Material Used / Finish

	Material	Finish
Body	Brass	Ni Plating
Insulator	PA	Black, Ivory
Contacts	Male	Brass
	Female	Phosphor bronze
		Gold Plating

SM Series Mini-map

**SMP Series** Push-Pull Type

Plug

SMP-9-8(P)

→

SMP-9-8(R)

Receptacle

SMP-9-8(P)

→

SMPA-9-8

Adapter

Plug

SMPH-9-8(P)

→

SMPH-9-8(R)

Receptacle

SMPH-9-8(P)

→

SMPHA-9-8

Adapter

**SMS Series** Screw-On Type

Plug

SMS-9-8(P)

→

SMS-9-8(R)

Receptacle

SMS-9-8(P)

→

SMSA-9-8

Adapter

Plug

SMSH-9-8(P)

→

SMSH-9-8(R)

Receptacle

SMSH-9-8(P)

→

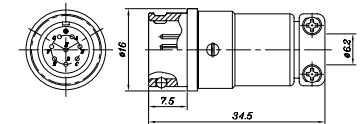
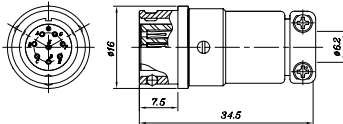
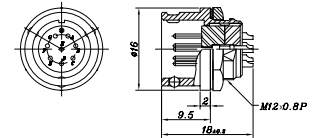
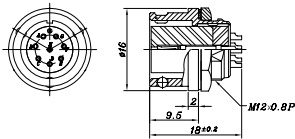
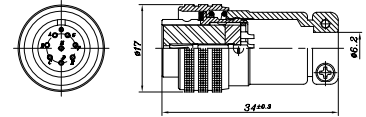
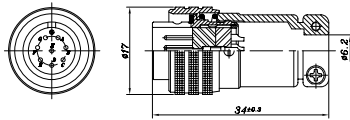
SMSHA-9-8

Adapter

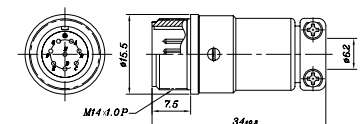
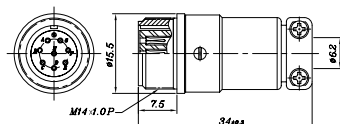
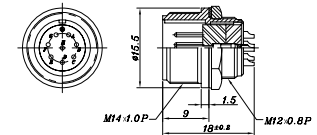
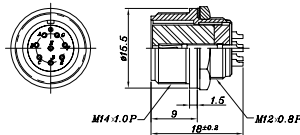
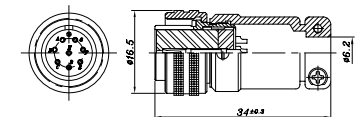
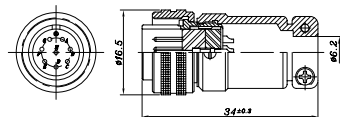
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SM Series Push-Pull / Screw-on type Plug, Receptacle, Adapter

## ■ Push-Pull type Male / Female Plug, Receptacle, Adapter

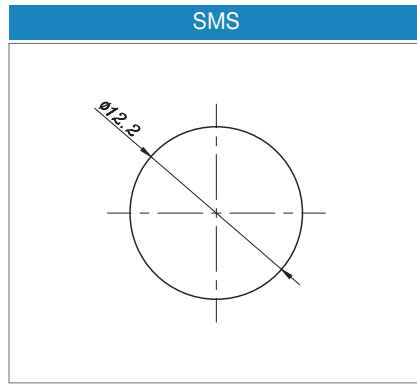
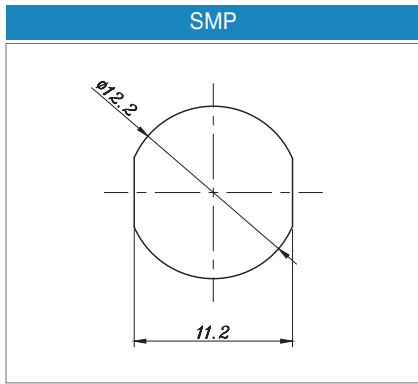


## ■ Screw-On type Male / Female Plug, Receptacle, Adapter



Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ SM Series Panel Layout





**Features**

- Miniature circular
- High durability / reliability
- Light weight
- Standard and Custom Design

**Applications**

- Professional audio and video
- CCTV system
- Portable wireless radio
- Factory Automation
- Computers and peripherals
- Medical, and much more.

**Part Numbering**



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit Plug : m  
       Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

**Plug Cable Assembly**



Type	Construction
A	SM Connector + Cable + Housing
B	SM Connector + Cable + SM Connector

※ Design and Customization Service Available

**Receptacle Cable Assembly**



Type	Construction
A	SM Connector + wire + open end
B	SM Connector + wire + Housing
C	SM Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



# SN Series Part Numbering



## Features

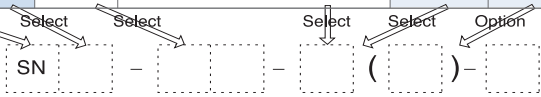
- Push-pull technology
- Miniature circular
- Light weight
- Low cost

## Applications

- Professional audio and video
- CCTV system
- Portable wireless radio
- Factory Automation
- Computers and peripherals
- Medical and much more

## Part Numbering

Product Number		Size	Number of Contacts	Suffix	Optional Suffix		Contact Type	Notes
Series	Prefix				S	B		
SN		8 or 10	8 size : 4,5,6 10 size : 2,3,4,9,10,12	P / PS		●	P	Plug
				PL		●	P	Right-angle plug
				R	●	●	S	Receptacle
				RPCB	●	●	S	PCB receptacle
				LRPCB	●	●	S	Right-angle PCB receptacle
	P / PS				●	S	Plug	
	PL				●	S	Right-angle plug	
	R			●	●	P	Receptacle	
	RPCB			●	●	P	PCB receptacle	
	LRPCB			●	●	P	Right-angle PCB receptacle	
	P				●	P	Plug (Clamp type)	
	P				●	S	Plug (Clamp type)	
				●	●	S	Adapter	
				●	●	P	Adapter	
	P				●	P	Plug (Screw-on type)	
	R			●	●	S	Receptacle (Screw-on type)	
	●	●	S	Adapter (Screw-on type)				



Ordering Part Number (see examples)

### Examples

- SN - 8 - 4 ( P )  
SN series - Size 8 Plug - 4 Male Contact
- SN - 8 - 6 ( RPCB )  
SN series - Size 8 PCB Receptacle - 6 Female Contact
- SN - 8 - 6 ( P ) - SB  
SN series - Size 8 - 6 contact ( Block Plug ) - Silver Plating Contact & Black plug housing
- SN1 - 10 - 12 ( R ) - S  
SN1 series - Size 10 Receptacle - 12 Female Contacts - Silver Plating contact
- SN2A - 10 - 2 - S  
SN2A series - Size 10 Adapter - 2 contact - Silver Plating contact
- SN - 8 - 4 ( LRPCB )K - S  
SN series - Size 8 - 4 contact ( Right-angle PCB receptacle, Any type ) - Silver Plating contact

**Connector Series (Prefix)**

- SN - SN series
- SNH - Reverse contact
- SN1 - Clamp type plug
- SN1H - Clamp type & reverse contact plug
- SNA - Adapter for SN series
- SNHA - Adapter for SNH series
- SN2 - Screw-on type
- SN2A - Adapter for SN2 series

**Size**      **Option**

8,10      B : Black plug housing

**No. of Contacts**

8 Size : 4,5,6      10 Size : 2,3,4,9,10,12

**Body Type**

P : Plug      PL : Right-angle plug

PS : Short Plug Housing

R : Receptacle (solder termination)

RPCB : Receptacle (PCB termination)

LRPCB : Right-angle Receptacle (PCB)

blank : Adapter

**Option**

S : Silver Plating contact

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ Major Performances / Contact Arrangements

Performance	Size 8	
	4	5
Withstanding Voltage (per min) <sup>1</sup>	AC 300V	AC 300V
Current	2A	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω
Solder Pot Inside Diameter	∅ 0,7	∅ 0,7
Wire Gauge (Maximum)	AWG26	AWG26
Contact Arrangement		

Performance	Size 10					
	2	3	4	9	10	12
Withstanding Voltage (per min) <sup>1</sup>	AC 500V	AC 500V	AC 500V	AC 300V	AC 300V	AC 300V
Current	3A	3A	3A	2A	2A	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω
Solder Pot Inside Diameter	∅ 1,0	∅ 1,0	∅ 1,0	∅ 0,7	∅ 0,7	∅ 0,7
Wire Gauge (Maximum)	AWG20	AWG20	AWG20	AWG26	AWG26	AWG26
Contact Arrangement						

<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

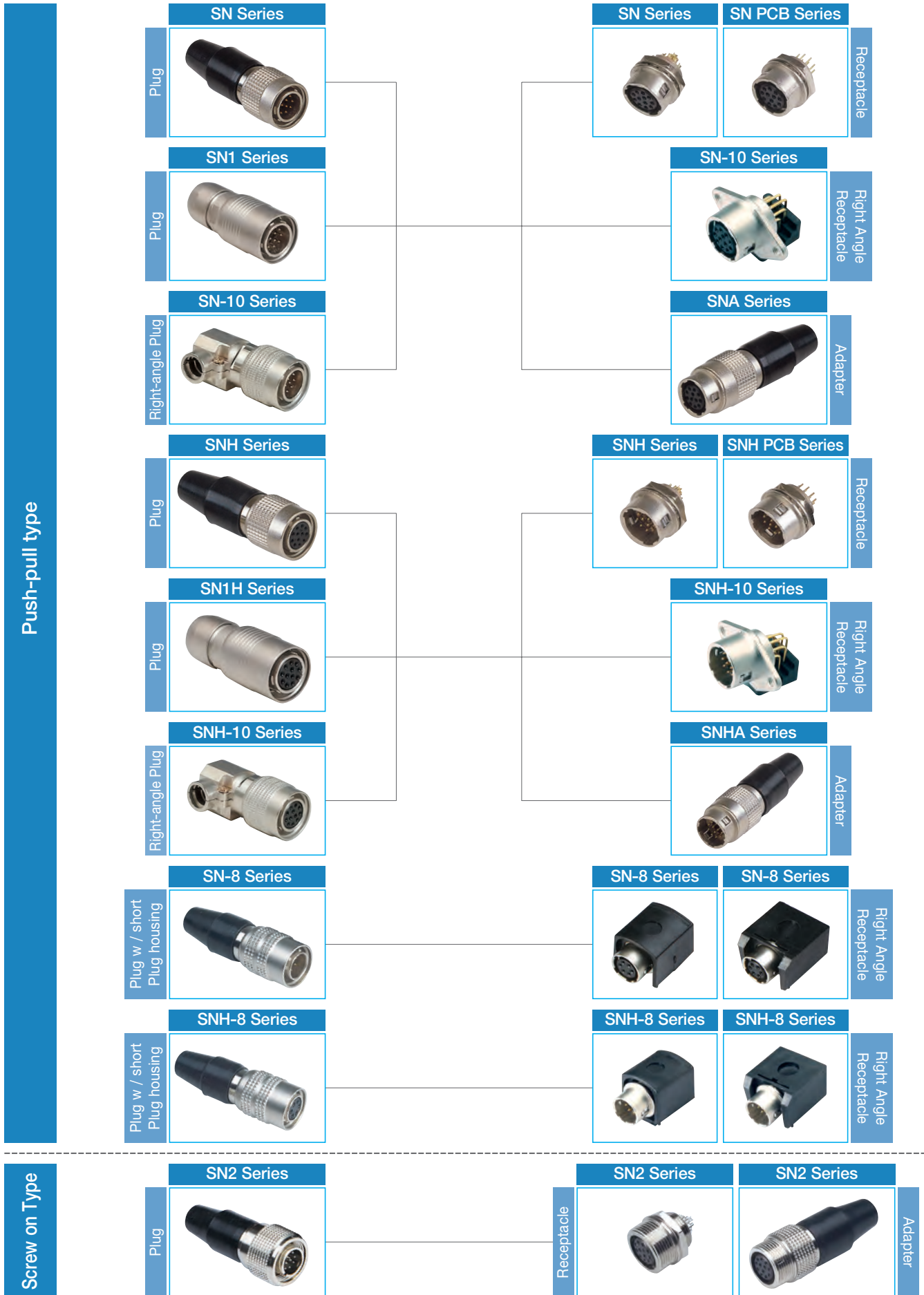
**Contact Diameter**  
 ∅ 0,55mm ∅ 1,0mm

■ Material Used / Finish

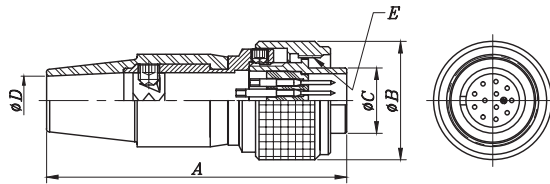
	Material	Finish
Body	Zinc alloy and brass	Ni Plating
Insulator	PA	Black
Contacts	Male	Brass Gold or Silver Plating
	Female	Phosphor bronze Gold or Silver Plating

# SN Series

## Mini-map

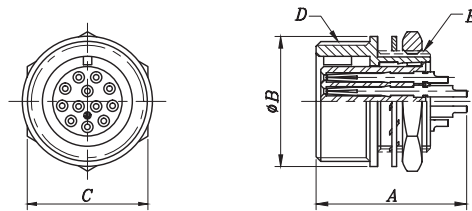


■ SN2 Plug



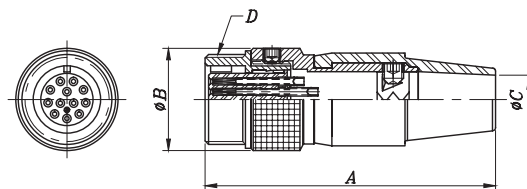
Product Number	A	φ B	φ C	φ D	E	Product Number	A	φ B	φ C	φ D	E
SN2-8-4 (P)	35,1	12	7	5,1	M10×0,75P	SN2-10-2 (P)	43,0	17,0	9,4	7,0	M13×0,75P
SN2-8-5 (P)						SN2-10-3 (P)					
SN2-8-6 (P)						SN2-10-4 (P)					
	SN2-10-9 (P)										
	SN2-10-10 (P)										
	SN2-10-12 (P)										

■ SN2 Receptacle



Product Number	A	φ B	C	D	E	Product Number	A	φ B	C	D	E
SN2-8-4 (R)	14,4	10,9	10	M10×0,75P	M8×0,5P	SN2-10-2 (R)	16,5	14	13	M13×0,75P	M11×0,75P
SN2-8-5 (R)						SN2-10-3 (R)					
SN2-8-6 (R)						SN2-10-4 (R)					
	SN2-10-9 (R)										
	SN2-10-10 (R)										
	SN2-10-12 (R)										

■ SN2A Adapter

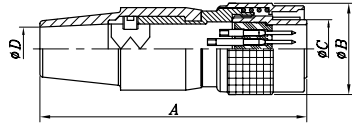


Product Number	A	φ B	φ C	D	Product Number	A	φ B	φ C	D
SN2A-8-4	41,7	14,7	7,0	M13×0,75P	SN2A-10-2	41,7	14,7	7,0	M13×0,75P
SN2A-8-5					SN2A-10-3				
SN2A-8-6					SN2A-10-4				
	SN2A-10-9								
	SN2A-10-10								
	SN2A-10-12								

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

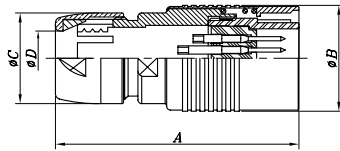
# SN Series Push-pull type SN Male Plug

## ■ SN Plug



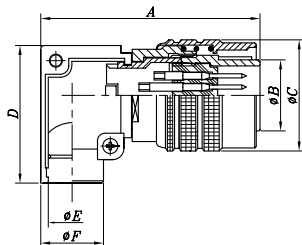
Product Number	A	ø B	ø C	ø D
SN-8-4(P)	35	11,5	7	5
SN-8-5(P)				
SN-8-6(P)				
SN-10-2(P)	43	14,9	9,4	7
SN-10-3(P)				
SN-10-4(P)				
SN-10-9(P)				
SN-10-10(P)				
SN-10-12(P)				

## ■ SN1 Plug



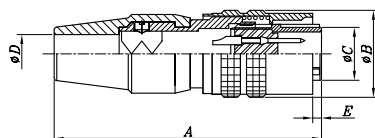
Product Number	A	ø B	ø C	ø D
SN1-8-4(P)	28	11,0	9,0	5,2
SN1-8-5(P)				
SN1-8-6(P)				
SN1-10-2(P)	32	14,0	12,0	7,2
SN1-10-3(P)				
SN1-10-4(P)				
SN1-10-9(P)				
SN1-10-10(P)				
SN1-10-12(P)				

## ■ SN Right-Angle Plug



Product Number	A	ø B	ø C	D	ø E	ø F
SN-8-4(PL)	25,9	7,0	11,5	14,6	5,0	6,6
SN-8-5(PL)						
SN-8-6(PL)						
SN-10-9(PL)	29,0	9,4	14,9	18,2	6,3	8,3
SN-10-10(PL)						
SN-10-12(PL)						

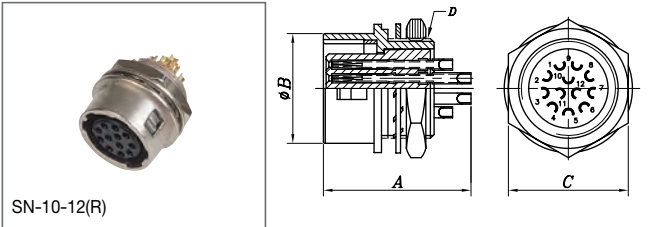
## ■ SN Plug (Short plug housing)



Product Number	A	ø B	ø C	ø D	E
SN-8-4(PS)	35,0	11,5	7,0	5,1	0,6
SN-8-6(PS)					

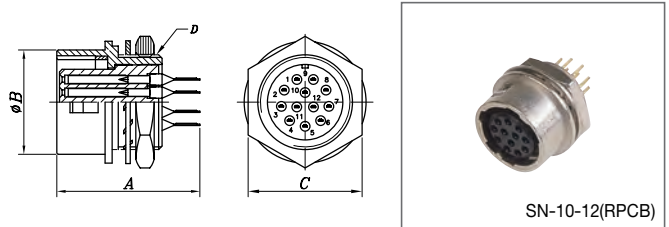
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ SN Receptacle



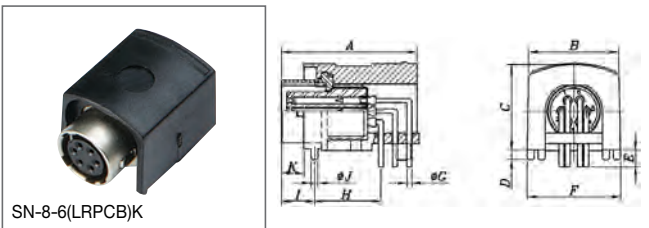
Product Number	A	φ B	C	D	Product Number	A	φ B	C	D
SN-8-4 (R)	14,5	8,8	10,0	M8×0,5P	SN-10-2 (R)	11,9	13,0	M11×0,75P	15
SN-10-3 (R)					15				
SN-10-4 (R)					15				
SN-8-6 (R)					SN-10-9(R)				16,5
					SN-10-10(R)				16,5
					SN-10-12(R)				16,5

■ SN PCB Receptacle



Product Number	A	φ B	C	D	Product Number	A	φ B	C	D
SN-8-4 (RPCB)	15,7	8,8	10	M8×0,5P	SN-10-2 (RPCB)	16,2	11,9	13	M11×0,75P
SN-8-5 (RPCB)					15,7				
SN-8-6 (RPCB)					15,7				
					SN-10-3 (RPCB)				16,2
					SN-10-4 (RPCB)				16,2
					SN-10-9(RPCB)				16,2
					SN-10-10(RPCB)				16,2
					SN-10-12(RPCB)				16,2

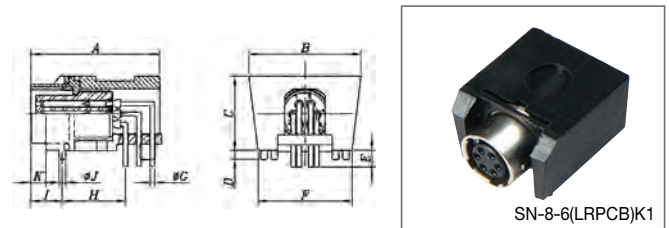
■ SN Right Angle PCB Receptacle (Any Type)



Product Number	A	B	C	D	E	F	φ G	H	I	φ J	K
SN-8-4 (LRPCB)K	19,2	12,8	12,0	1,3	2,4	13,2	0,7	9,4	4,7	1,0	3,2
SN-8-6 (LRPCB)K											

! SN-8-4(LRPCB)K1, SN-8-6(LRPCB)K1 only mates with SN-8-4(PS), SN-8-6(PS) plugs.

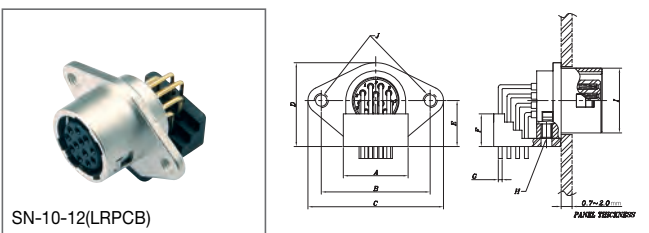
■ SN Right Angle PCB Receptacle (Magic Type)



Product Number	A	B	C	D	E	F	φ G	H	I	φ J	K
SN-8-4(LRPCB)K1	19,2	16,7	11,0	1,3	2,4	14,0	0,7	9,4	4,7	1,0	2,2
SN-8-6(LRPCB)K1											

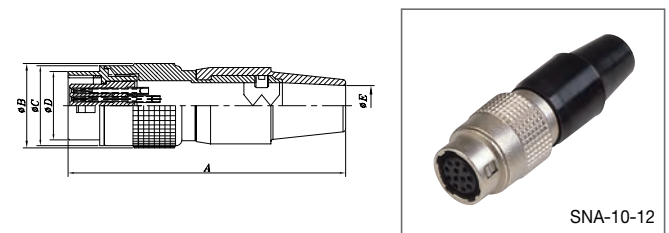
! SN-8-4(LRPCB)K1, SN-8-6(LRPCB)K1 only mates with SN-8-4(PS), SN-8-6(PS) plugs.

■ SN Right Angle PCB Receptacle

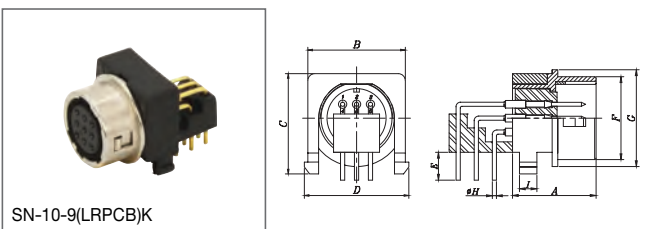


Product Number	A	B	C	D	E	F	φ G	H	φ I	J
SN-10-12(LRPCB)	11,9	20	24,9	15,4	8,5	6	0,7	M2,0 ×0,4P	11,9	M2,6 ×0,45P

■ SNA Adapter



Product Number	A	φ B	φ C	φ D	φ E	Product Number	A	φ B	φ C	φ D	φ E
SNA-8-4	40,2	11,5	10,9	8,8	5,1	SN-10-2	48,0	14,9	13,9	11,9	7,0
SNA-8-5						SN-10-3					
SNA-8-6						SN-10-4					
						SN-10-9					
						SN-10-10					
						SN-10-12					

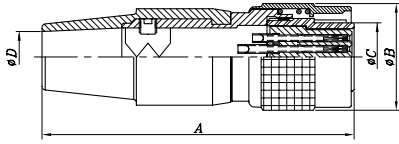


Product Number	A	B	C	D	E	F	G	φ H	I
SN-10-9(LRPCB)K	12	14	14,3	15	3	11,9	13,9	0,7	2,5

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

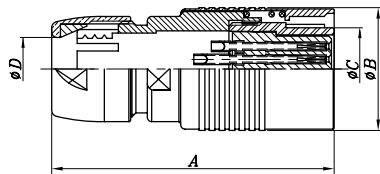
# SN Series Push-pull type SNH Female Plug

## ■ SNH Plug



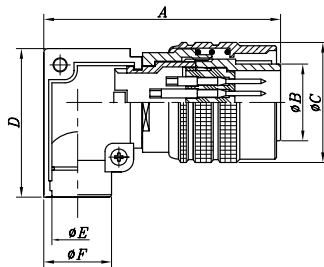
Product Number	A	φ B	φ C	φ D
SNH-8-4(P)	35	11,5	7	5
SNH-8-5(P)				
SNH-8-6(P)				
SNH-10-2(P)	43	14,9	9,4	7
SNH-10-3(P)				
SNH-10-4(P)				
SNH-10-9(P)				
SNH-10-10(P)				
SNH-10-12(P)				

## ■ SN1H Plug



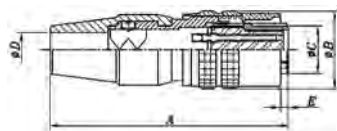
Product Number	A	φ B	φ C	φ D
SN1H-8-4(P)	28	11,0	9,0	5,2
SN1H-8-5(P)				
SN1H-8-6(P)				
SN1H-10-2(P)	32	14,0	12,0	7,2
SN1H-10-3(P)				
SN1H-10-4(P)				
SN1H-10-9(P)				
SN1H-10-10(P)				
SN1H-10-12(P)				

## ■ SNH Right Angle Plug



Product Number	A	φ B	φ C	D	φ E	φ F
SNH-8-4(PL)	25,9	7,0	11,5	14,6	5,0	6,6
SNH-8-5(PL)						
SNH-8-6(PL)						
SNH-10-9(PL)	29,0	9,4	14,9	18,2	6,3	8,3
SNH-10-10(PL)						
SNH-10-12(PL)						

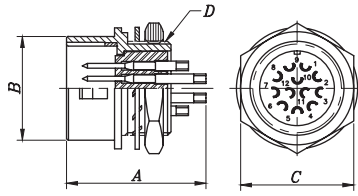
## ■ SNH Plug (Short plug housing)



Product Number	A	φ B	φ C	φ D	E
SNH-8-4(PS)	35,0	11,5	7,0	5,1	0,6
SNH-8-6(PS)					

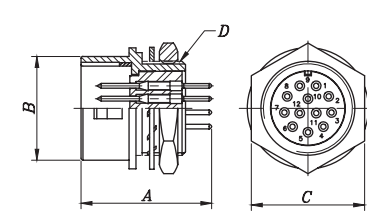
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SNH Receptacle



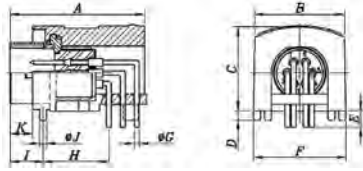
Product Number	A	φ B	C	D	
SNH-8-4 (R)	14,2	8,8	10,0	M8×0,5P	
SNH-8-5 (R)					
SNH-8-6 (R)					
SNH-10-2(R)	16,2	11,9	13,0		M11×0,75P
SNH-10-3(R)					
SNH-10-4(R)					
SNH-10-9(R)					
SNH-10-10(R)					
SNH-10-12(R)					

■ SNH PCB Receptacle



Product Number	A	φ B	C	D	
SNH-8-4(RPCB)	15	8,8	10	M8×0,5P	
SNH-8-5(RPCB)					
SNH-8-6(RPCB)					
SNH-10-2(RPCB)	15	11,9	13		M11×0,75P
SNH-10-3(RPCB)					
SNH-10-4(RPCB)					
SNH-10-9(RPCB)					
SNH-10-10(RPCB)					
SNH-10-12(RPCB)					

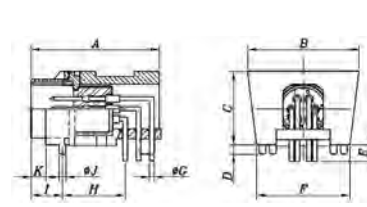
■ SNH Right Angle PCB Receptacle (Any Type)



Product Number	A	B	C	D	E	F	φ G	H	I	φ J	K
SNH-8-4(LRPCB)K	19,2	12,8	12,0	1,3	2,4	13,2	0,7	9,4	4,7	1,0	3,2
SNH-8-6(LRPCB)K											

! SN-8-4(LRPCB)K1, SN-8-6(LRPCB)K1 only mates with SN-8-4(PS), SN-8-6(PS) plugs.

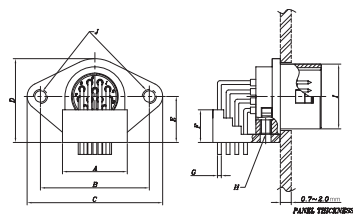
■ SNH Right Angle PCB Receptacle (Magic Type)



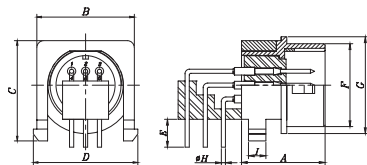
Product Number	A	B	C	D	E	F	φ G	H	I	φ J	K
SNH-8-4(LRPCB)K1	19,2	16,7	11,0	1,3	2,4	14,0	0,7	9,4	4,7	1,0	2,2
SNH-8-6(LRPCB)K1											

! SNH-8-4(LRPCB)K1, SNH-8-6(LRPCB)K1 only mates with SNH-8-4(PS), SNH-8-6(PS) plugs.

■ SNH Right Angle PCB Receptacle

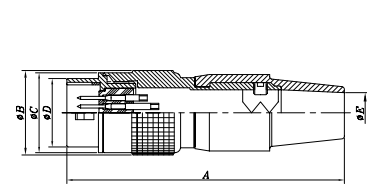


Product Number	A	B	C	D	E	F	φ G	H	φ I	J
SNH-10-12(LRPCB)	11,9	20	24,9	15,4	8,5	6	0,7	M2,0 ×0,4P	11,9	M2,6 ×0,45P



Product Number	A	B	C	D	E	F	G	φ H	I
SNH-10-9(LRPCB)K	12	14	14,3	15	4	11,9	13,9	0,7	2,5

■ SNHA Adapter



Product Number	A	φ B	φ C	φ D	φ E
SNHA-8-4	40,2	11,5	10,9	8,8	5,1
SNHA-8-5					
SNHA-8-6					
SNHA-10-2	48,0	14,9	13,9	11,9	7,0
SNHA-10-3					
SNHA-10-4					
SNHA-10-9					
SNHA-10-10					
SNHA-10-12					

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

## General Instruction / Information

- Diagram 1 shows a sample wiring for SN series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.
- Specification of Nut

Size	Nut Specification	Nut Tightening force
SN - 8	M8 × 0,5P	15~18(kgf · cm)
SN - 10	M11 × 0,75P	20~23(kgf · cm)

## Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0,129mm<sup>2</sup>(AWG#26).
- ② Insert RUBBER BUSHING to cable.
- ③ Insert PLUG HOUSING to cable.
- ④ Strip cable per dimension given and loosen braid.
- ⑤ Secure PLUG BODY to jig for soldering.
- ⑥ Solder stripped cable to pin.
- ⑦ Fasten CRIMP using hand crimp tool (SA-HCT<sup>①</sup>)
- ⑧ Lock PLUG HOUSING and PLUG BODY using tightening force displayed on Table 1.
- ⑨ Tighten WRENCH BOLT using 0.3N force onto one of two embossed parts of crimp.
- ⑩ Cover RUBBER BUSHING onto PLUG HOUSING.

<sup>①</sup> See below for information on SA-HCT.

Diagram 1

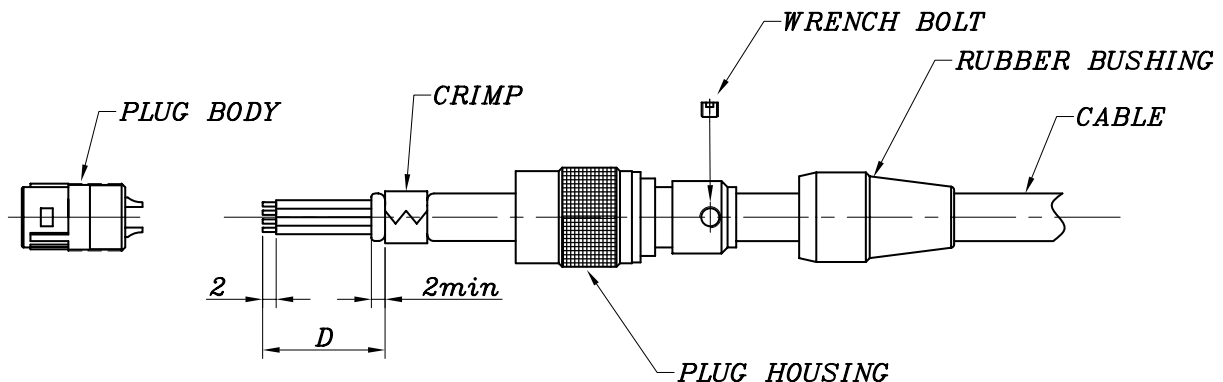


Table 1

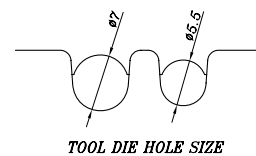
Size	Spanner Jaw	D (Dimension)	Tightening Force	Notes
SN - 8	8	10	1,5N · m (15kgf · cm)	SA-HCT size $\varnothing$ 5,5
SN - 10	10	16	2,0N · m (20kgf · cm)	SA-HCT size $\varnothing$ 7,0

unit : mm

## SA-HCT (Hand Crimp Tool)



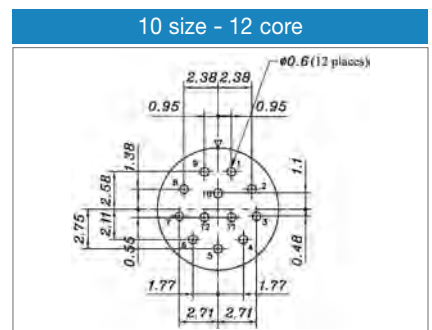
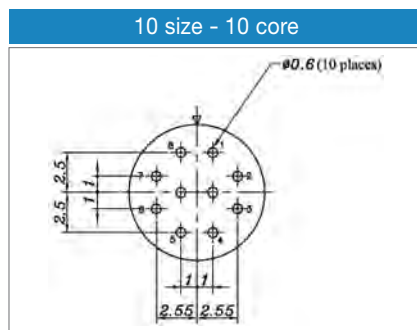
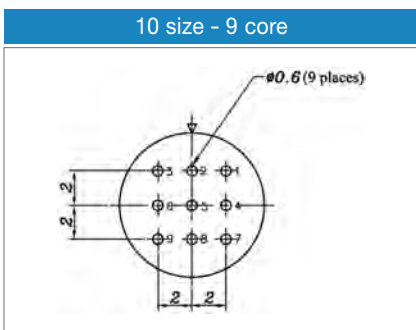
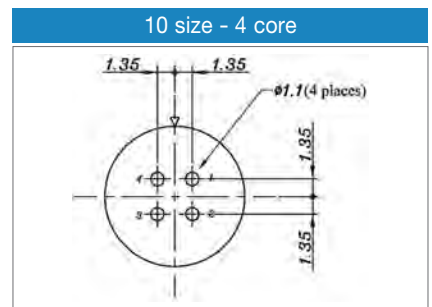
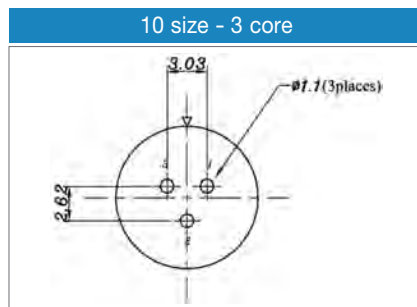
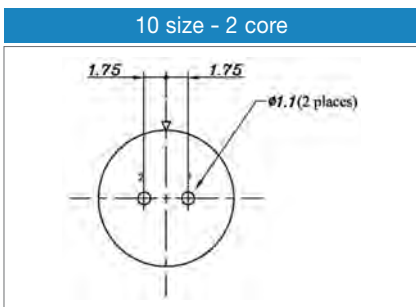
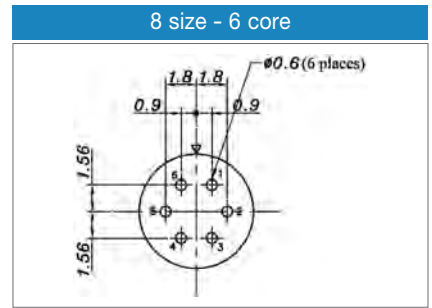
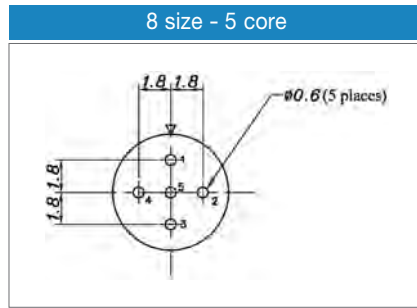
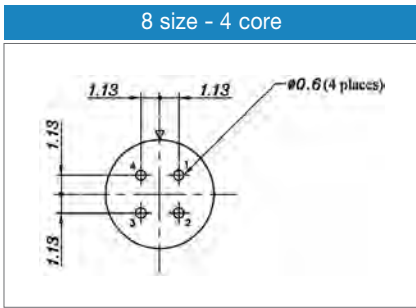
Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results.



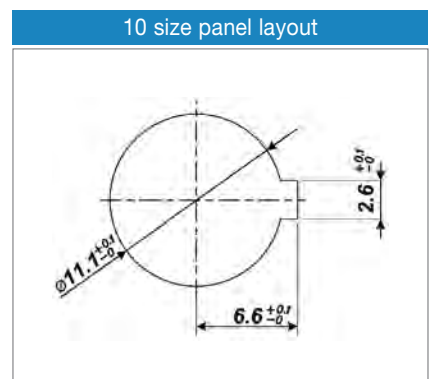
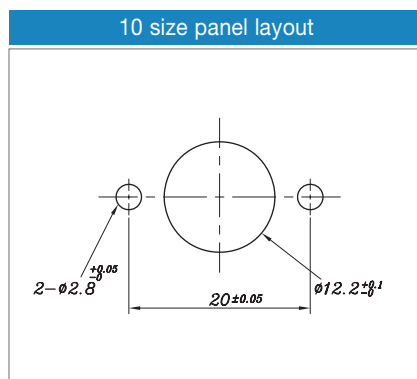
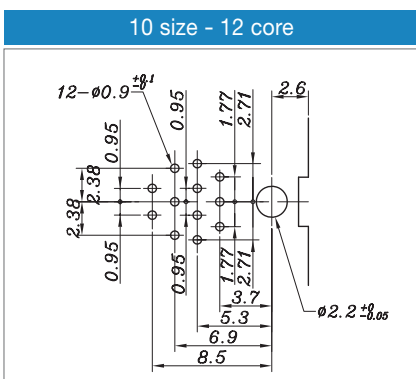
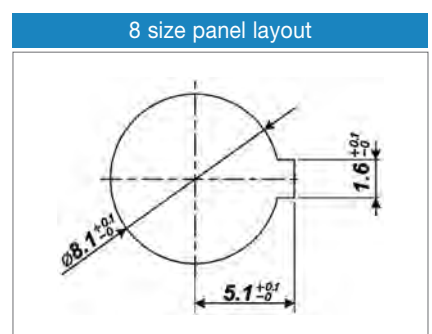
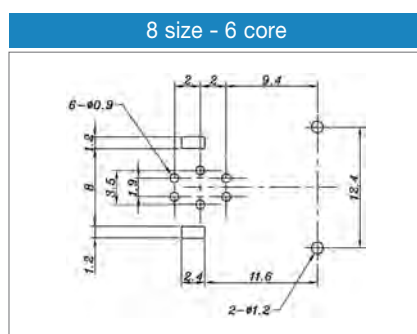
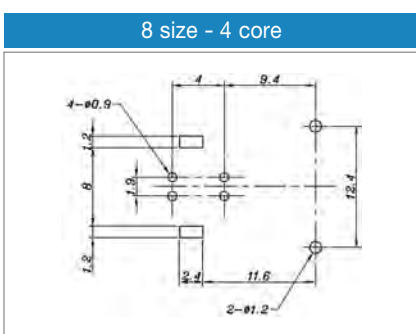
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ SN Receptacle PCB Hole Layout



■ SN Receptacle Right Angle PCB Hole Layout



■ SN Receptacle Panel Layout

# SN Series Cable Assembly



## Features

- Push-pull technology
- Miniature circular
- Light weight
- Low cost
- Standard and Custom Design

## Applications

- Professional audio and video
- CCTV system
- Portable wireless radio
- Factory Automation
- Computers and peripherals
- Medical, and much more.

## Part Numbering



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit { Plug : m  
       Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

## Plug Cable Assembly



Type	Construction
A	SN Connector + Cable + Housing
B	SN Connector + Cable + SN Connector

※ Design and Customization Service Available

## Receptacle Cable Assembly



Type	Construction
A	SN Connector + wire + open end
B	SN Connector + wire + Housing
C	SN Connector + wire + Housing with core

※ Design and Customization Service Available


Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



# SP Series Part Numbering



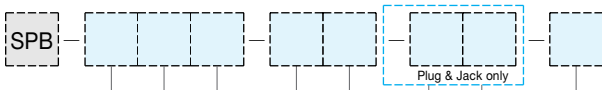
## Features

- Push-pull self latching technology
- Ultra precision
- High contact density
- High reliability / durability
- High vibration and outer force resistance
- UL Recognized 

## Applications

- Telecommunications
- Professional A/V
- HDTV panel system
- Vision related equipment
- and much more
- Optical testing equipment
- Portable wireless radio
- CCTV
- Medical equipment

## ■ SPB Part Numbering - Mechanical keying system



Ordering Part Number  
(see examples)



### Size

00,0,1,2,3

### Body Type

P : Plug  
 LP : Right-angle plug type  
 PS : Plug (Non-latch sleeve)  
 PT : Plug-threaded type  
 PT1 : Plug-threaded type & crimp type

J : Jack

R : Receptacle

BR : Bulkhead Receptacle

R9 : Two-Nut Receptacle

RS : Insertion Receptacle type

RT : Receptacle-threaded type

RT1 : Right-angle Receptacle-threaded type

RT2 : Right-angle Receptacle-threaded type+H cut

**! To order Nut for receptacle separately, see page 74**

### Key Angles

See page 65

### Contact Code

See page 56

### Contact Type

P : Male                      S : Female  
 LSB : Right-angle PCB Female  
 SB : PCB Female

### Screw Cap Code (Plug and Jack only)

A : Screw Cap Terminated  
 B : Screw Cap + Boot type  
 C : Nut Terminated

### Collet Code (Plug and Jack only)

See page 66

### Material and Female Contact Cut Code

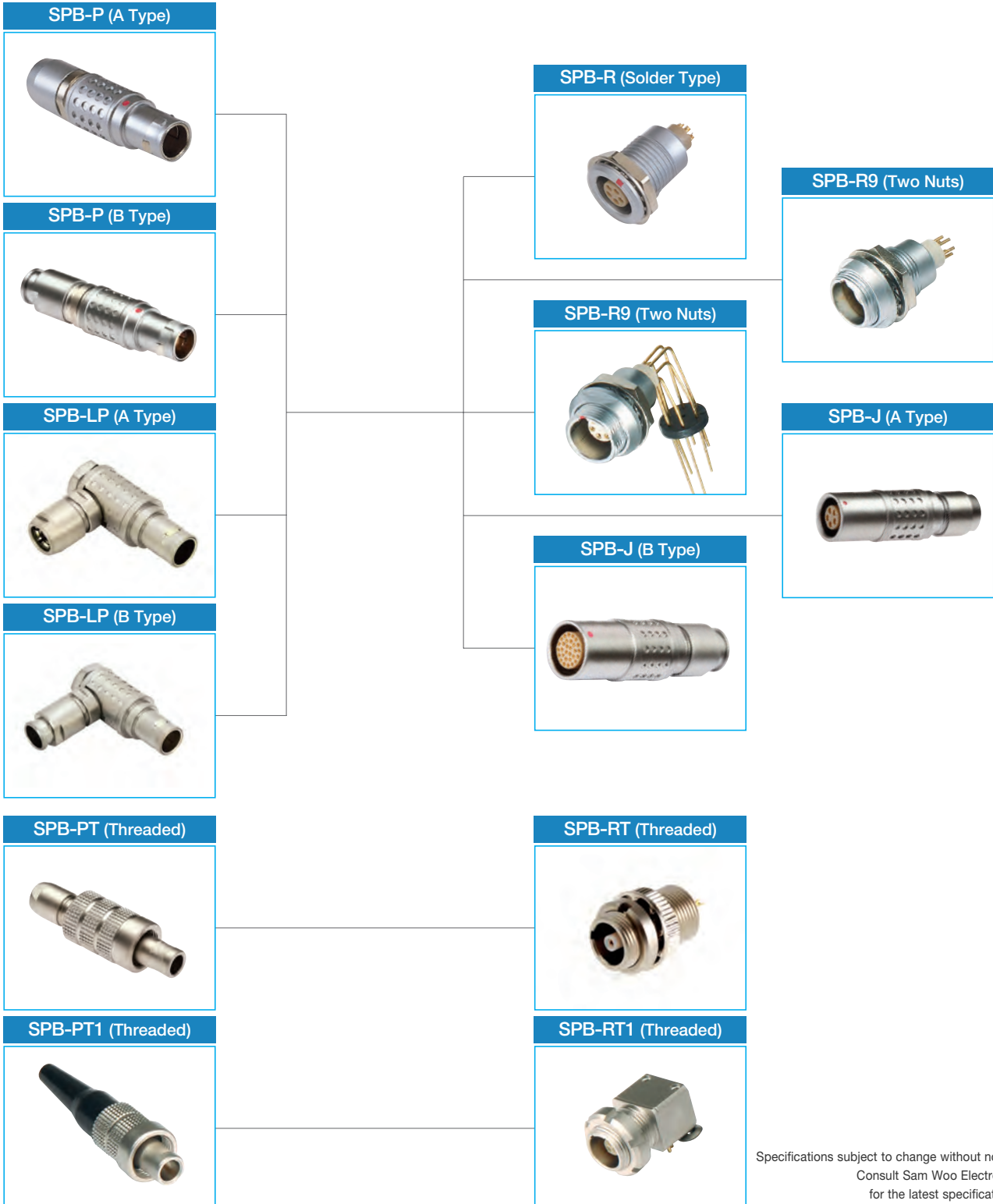
See page 66

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ Performance

Performance	Endurance	Humidity	Temperature Range	Vibration Resistance	Shock Resistance	Corrosion Test	Mated IP Rating
Value	>5,000 cycles	95%rh 140°F	-67°F +482°F	10~2000Hz, 15g	100g, 6ms	>144h	IP50

■ Mini-map



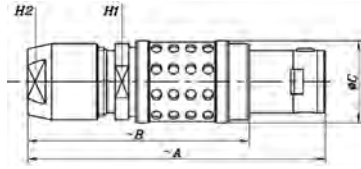
Specifications subject to change without notice.  
Consult Sam Woo Electronics  
for the latest specifications.

# SP Series B Model Plug / Receptacle (Size & Shell Selection)

## ■ SPB Plug



SPB (A Type)

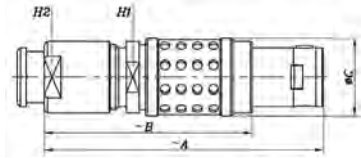


Product Number						A	B	ØC	H1	H2
SPB	00	P	P	A		28,5	20,5	7,0	5,5	5,0
SPB	0	P	P	A		36,0	26,0	9,5	8,0	7,0
SPB	1	P	P	A		43,0	32,0	12,0	10,9	9,0
SPB	2	P	P	A		50,0	38,0	15,0	13,0	12,0
SPB	3	P	P	A		58,0	43,0	18,0	15,0	14,0

Material : Page 66  
Collet code : Page 66  
Contact code : Page 56



SPB (B Type)



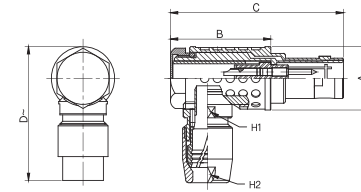
Product Number						A	B	ØC	H1	H2
SPB	0	P	P	B		35,0	25,0	9,5	8,0	7,0
SPB	1	P	P	B		42,0	33,0	12,0	10,0	9,0
SPB	2	P	P	B		48,0	36,0	15,0	13,0	12,0
SPB	3	P	P	B		56,5	41,5	18,0	15,0	14,0

Material : Page 66  
Collet code : Page 66  
Contact code : Page 56

## ■ SPB Right-angle Plug



SPB LP (A Type)

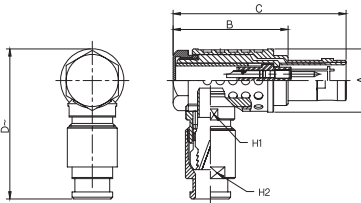


Product Number						ØA	B	C	D	H1	H2
SPB	00	LP	P	A		Coming soon					
SPB	0	LP	P	A		10,9	19,8	29,8	23	8	7
SPB	1	LP	P	A		13,5	25	36	29	10	9
SPB	2	LP	P	A		Coming soon					
SPB	3	LP	P	A		Coming soon					

Material : Page 66  
Collet code : Page 66  
Contact code : Page 56



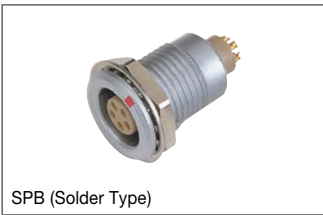
SPB LP (B Type)



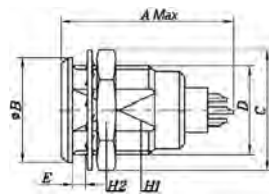
Product Number						ØA	B	C	D	H1	H2
SPB	00	LP	P	B		Coming soon					
SPB	0	LP	P	B		10,9	19,8	29,8	25	8	7
SPB	1	LP	P	B		13,5	25	36	33	10	9
SPB	2	LP	P	B		Coming soon					
SPB	3	LP	P	B		Coming soon					

Material : Page 66  
Collet code : Page 66  
Contact code : Page 56

## ■ SPB Receptacle



SPB (Solder Type)

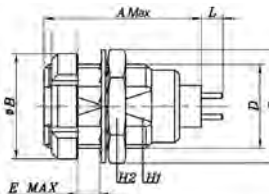


Product Number						A	ØB	C	D	E	H1	H2
SPB	00	R	S			15,5	8,0	10,3	M7×0,5P	5,5	6,3	9,0
SPB	0	R	S			20,7	10,0	12,5	M9×0,6P	7,0	7,5	11,0
SPB	1	R	S			23,0	14,0	16,0	M12×1,0P	7,5	10,5	14,0
SPB	2	R	S			26,7	18,0	19,5	M15×1,0P	8,5	13,5	17,0
SPB	3	R	S			30,7	22,0	25,0	M18×1,0P	11,5	16,5	22,0

Material : Page 66  
Contact code : Page 56



SPB (Two Nut PCB)

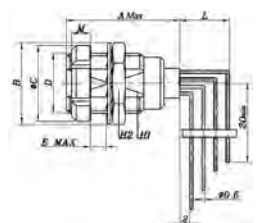


Product Number						A	ØB	C	D	E	H1	H2
SPB	0	R9	S	SB		17,9	12,0	12,5	M9×0,6P	5,5	8,2	11,0
SPB	1	R9	S	SB		19,8	16,0	16,0	M12×1,0P	6,0	10,5	14,0
SPB	2	R9	S	SB		21,8	20,0	20,0	M15×1,0P	6,5	13,5	17,0
SPB	3	R9	S	SB		25,8	24,0	25,0	M18×1,0P	9,0	16,5	22,0

Material : Page 66  
Contact code : Page 56



SPB (Two Nut Right-Angle-PCB)

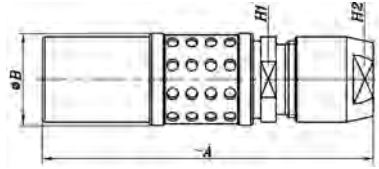


Product Number						A	B	ØC	D	E	H1	H2
SPB	0	R9	S	LSB		18,3	12,5	12,0	M9×0,6P	2,4	8,2	11,0
SPB	1	R9	S	LSB		20,3	19,5	16,0	M12×1,0P	6,0	10,5	14,0
SPB	2	R9	S	LSB		22,3	20,0	20,0	M15×1,0P	6,5	13,5	17,0
SPB	3	R9	S	LSB		25,8	25,0	24,0	M18×1,0P	9,0	16,5	22,0

Material : Page 66  
Contact code : Page 56

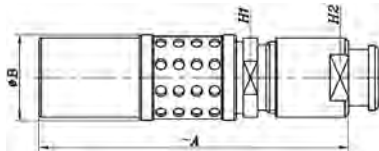
! Length (L) depends on number of contacts  
For detailed information on Nut, refer to catalogue p.74

## ■ SPB Jack



Product Number		A	∅ B	H1	H2
SPB	00 J S A	27,0	6,4	5,5	5,0
SPB	0 J S A	35,5	9,5	8,0	7,0
SPB	1 J S A	40,5	12,5	10,0	9,0
SPB	2 J S A	47,0	16,5	13,0	12,0
SPB	3 J S A	56,0	19,0	15,0	14,0

Material : Page 66  
 Collet code : Page 66  
 Contact code : Page 56



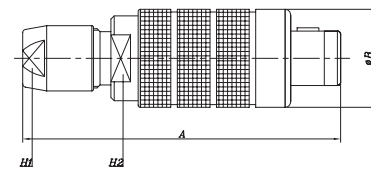
Product Number		A	∅ B	H1	H2
SPB	00 J S B	26,0	6,4	5,5	5,0
SPB	0 J S B	34,5	9,5	8,0	7,0
SPB	1 J S B	39,5	12,5	10,0	9,0
SPB	2 J S B	46,0	16,5	13,0	12,0
SPB	3 J S B	54,5	19,0	15,0	15,0

Material : Page 66  
 Collet code : Page 66  
 Contact code : Page 56

# B Model Screw Mounting Plug / Receptacle

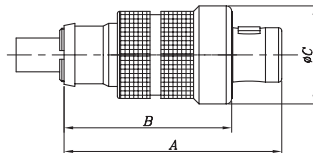
# SP Series

## ■ SPB Plug (Threaded-mounting)



Product Number		A	∅ B	H1	H2
SPB	00 PT P A	29,2	9	5	6,5

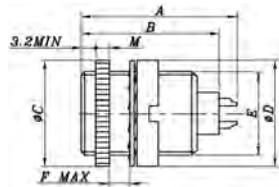
Material : Page 66  
 Collet code : Page 66  
 Contact code : Page 56  
 key angles : Page 65



Product Number		A	B	C
SPB	00 PT1 P C	20,0	15,4	9,0

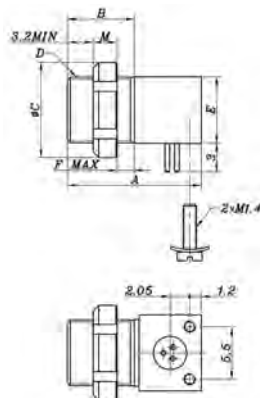
Material : Page 66  
 Collet code : Page 66  
 Contact code : Page 56  
 key angles : Page 65

## ■ SPB Receptacle (Threaded-mounting)



Product Number		A	B	C	∅ D	E	F	M
SPB	00 RT S	15,5	13,7	9,5	9,0	M7×0,5P	4,2	2,0

Material : Page 66  
 Contact code : Page 56



Product Number		A	B	∅ C	D	E	F	M
SPB	00 RT2 S	14,0	7,0	10,0	M7×0,5P	7,0	1,8	2,5

Material : Page 66  
 Contact code : Page 56  
 key angles : Page 65  
 Body : Page 52

For detailed information on Nut, refer to catalogue p.74

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

# SP Series B Model Contact Code

## Contact Code

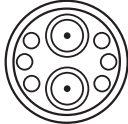
Series & Model	Size	Contact Code	Current	Contact $\phi$	No. of Contacts	Wire Gauge (Maximum)	Contact Arrangement			
SPB	00	250	4A	50	1-2-5-6	1,09+11.f				
Series & Model	Size	Contact			Current	Contact $\phi$	No. of Contacts	Wire Gauge (Maximum)	Contact Arrangement	
		Code	Type							
			S <sup>1)</sup>	C <sup>2)</sup>	P <sup>3)</sup>					
SPB	00	302	○		○	5A	0,5	2	AWG 28	
		303	○		○	3A	0,5	3	AWG 28	
		304	○		○	2A	0,5	4	AWG 28	
	0	302	○		○	10A	0,9	2	AWG 22	
		303	○		○	8A	0,9	3	AWG 22	
		304	○		○	7A	0,7	4	AWG 24	
		305	○		○	6,5A	0,7	5	AWG 24	
		306	○		○	2,5A	0,7	6	AWG 26	
		307	○		○	2,5A	0,7	7	AWG 26	
		309	○		○	2A	0,5	9	AWG 26	
	1	302	○		○	15A	1,3	2	AWG 20	
		303	○		○	12A	1,3	3	AWG 20	
		304	○	○	○	10A	0,9	4	AWG 20	
		305	○		○	9A	0,9	5	AWG 20	
		306	○		○	7A	0,7	6	AWG 24	
		307	○		○	7A	0,7	7	AWG 24	
		308	○		○	5A	0,7	8	AWG 24	
		314	○		○	2A	0,5	14	AWG 28	
		316	○		○	1,5A	0,5	16	AWG 28	
	2	308	○	○	○	10A	0,9	8	AWG 22	
		310	○	○	○	8A	0,9	10	AWG 22	
	3	330	○		○	3,5A	0,7	30	AWG 22	

Contact Type : S<sup>1)</sup>-Solder C<sup>2)</sup>-Crimp P<sup>3)</sup>-PCB

Note : Connector contact arrangement is from mating surface.

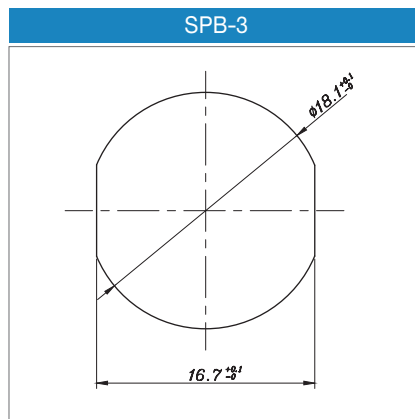
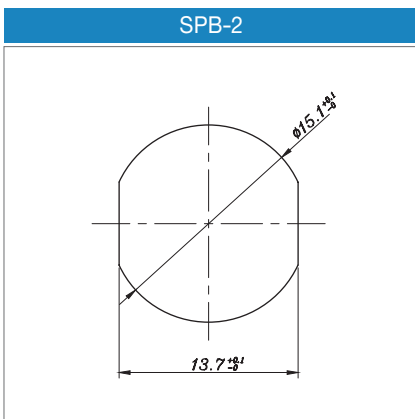
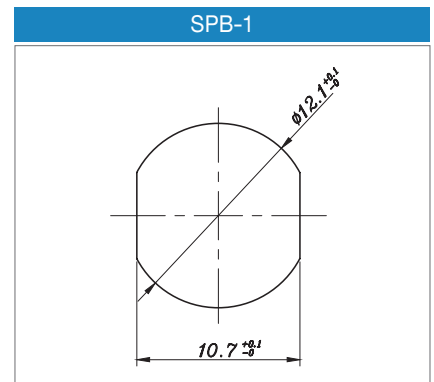
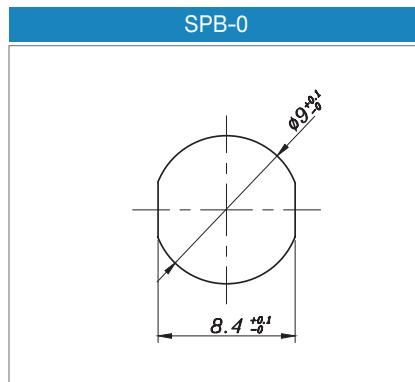
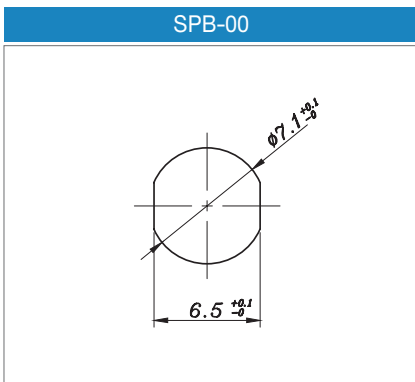
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



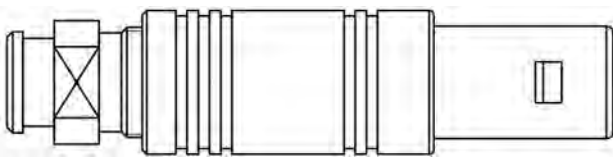
Series & Model	Size	Contact Code	Number of Contacts	Contact $\phi$	Current	Coax cable group /Wire max AWG	Coax Impedance & Contact Type	Contact Arrangement
SPB	3	846	2 coax	0.7	2A	1-2-3	50 $\Omega$ Type C	
			6LV	0.9	8A	AWG 22		

Note : Connector contact arrangement is from mating surface.

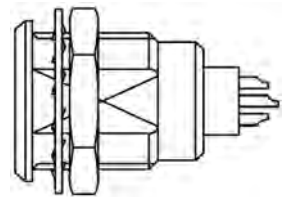
■ SPB Series Panel Layout



# SP Series S Model Part Numbering



## SPS Series



### ■ SPS Part Numbering - Hermaphroditic keying system



**Size**  
00,0,1,2,3

**Body Type**  
P : Plug                      J : Jack  
R : Receptacle              R9 : Two-Nut Receptacle  
RT : Receptacle-Threaded type  
LP : Plug With Right Angle Contact

**Contact Code**  
See page 61

**Contact Type**  
P : Male                      S : Female  
SP : Female and Male  
SPB : PCB Female and Male  
LSB : Right-angle PCB Female  
LSPB : Right-angle PCB Female and Male

**Screw Cap Code (Plug and Jack only)**  
A : Screw Cap Terminated  
B : Screw Cap + Boot type

**Collet Code (Plug and Jack only)**  
See page 66

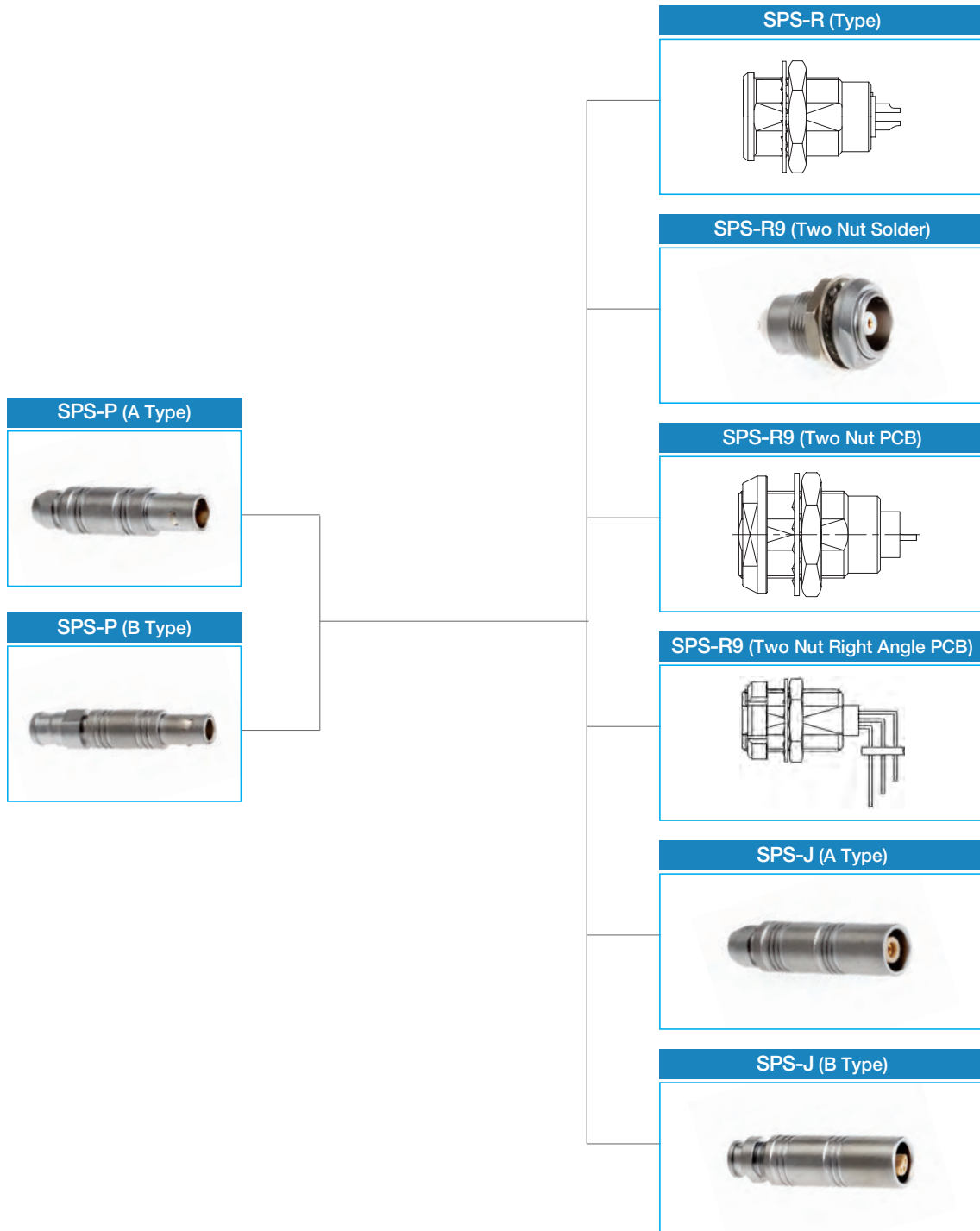
**Material and Female Contact Cut Code**  
See page 66

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ Performance

Performance	Endurance	Humidity	Temperature Range	Vibration Resistance	Shock Resistance	Corrosion Test	Mated IP Rating
Value	>5,000 cycles	95%rh 140°F	-67°F +482°F	10~2000Hz, 15g	100g, 6ms	>144h	IP50

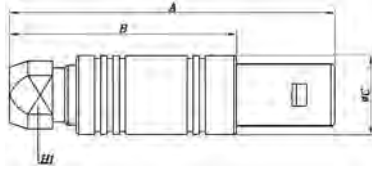
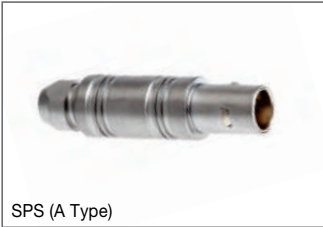
■ Mini-map



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

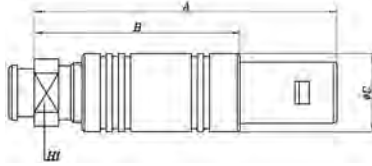
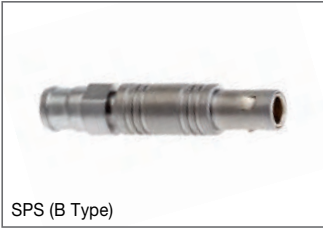
# SP Series S Model Plug / Receptacle (Size & shell selection)

## SPS Plug



Product Number					A	B	φC	H1
SPS	00	P		A	26,0	18,0	6,4	4,5
SPS	0	P		A	34,5	24,5	9,0	6,5
SPS	1	P		A	42,5	31,5	12,0	8,5
SPS	2	P		A	52,0	40,0	14,8	11,0
SPS	3	P		A	61,0	46,0	17,8	14,0

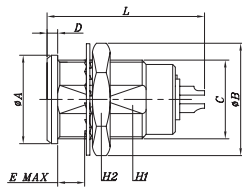
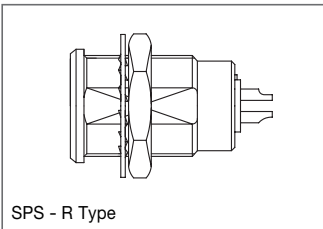
Material : Page 66  
 Collet code : Page 66  
 P : Male Contact SP : Female and Male Contact  
 Contact code : Page 61



Product Number					A	B	φC	H1
SPS	00	P		B	26,0	18,0	6,4	6,0
SPS	0	P		B	34,5	24,5	9,0	7,0
SPS	1	P		B	42,5	31,5	12,0	9,0
SPS	2	P		B	52,0	40,0	14,8	12,0
SPS	3	P		B	61,0	46,0	17,8	14,0

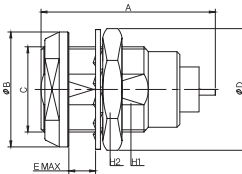
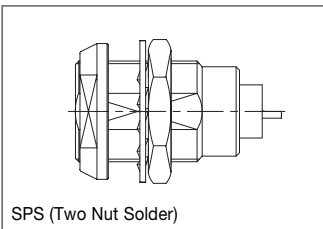
Material : Page 66  
 Collet code : Page 66  
 P : Male Contact SP : Female and Male Contact  
 Contact code : Page 61

## SPS Receptacle



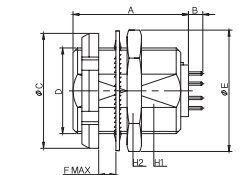
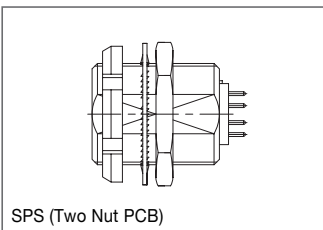
Product Number					A	φB	C	D	E	L	L <sup>1)</sup>	H1	H2
SPS	00	R			8	10,3	M7×0,5P	1,0	5,5	-	15,2	6,3	9
SPS	0	R			10	12,5	M9×0,6P	1,2	5,5	17,5	18,5	8,2	11
SPS	1	R			14	16,0	M12×1,0P	1,5	5,5	20,2	21,5	10,5	14
SPS	2	R			18	19,5	M15×1,0P	1,8	5,5	24,5	26,0	13,5	17
SPS	3	R			22	25,2	M18×1,0P	2,0	5,5	29,0	30,0	16,5	22

Material : Page 66  
 S : Female Contact SP : Female and Male Contact  
 Contact code : Page 61  
 1) L : Single Contact



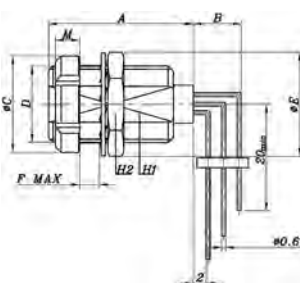
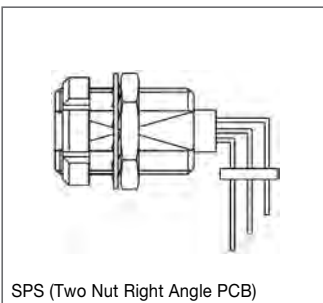
Product Number					A	φB	C	φD	E	H1	H2
SPS	0	R <sub>S</sub>			17,5	12,0	M9×0,6P	12,5	8,5	8,2	11,0
SPS	1	R <sub>S</sub>			20,2	16,0	M12×1,0P	16,0	10,0	10,5	14,0
SPS	2	R <sub>S</sub>			24,5	19,5	M15×1,0P	20,0	11,0	13,5	17,0
SPS	3	R <sub>S</sub>			29,0	24,0	M18×1,0P	25,2	14,0	16,5	22,0

Material : Page 66  
 S : Female Contact SP : Female and Male Contact  
 Contact code : Page 61



Product Number					A	B	φC	D	φE	F	H1	H2
SPS	0	R <sub>SB</sub>			15,0	3,0	12,0	M9×0,6P	12,5	8,5	8,2	11,0
SPS	1	R <sub>SB</sub>			17,5	3,0	16,0	M12×1,0P	16,0	10,0	10,5	14,0
SPS	2	R <sub>SB</sub>			20,0	3,0	20,0	M15×1,0P	19,5	11,0	13,5	17,0
SPS	3	R <sub>SB</sub>			24,0	3,0	24,0	M18×1,0P	25,2	14,0	16,5	22,0

Material : Page 66  
 SB : PCB Female Contact  
 SPB : PCB Female and Male Contact  
 Contact code : Page 61

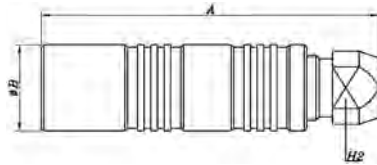
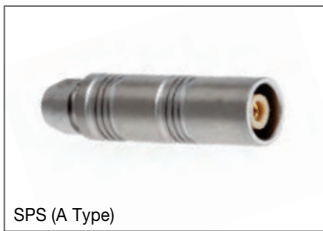


Product Number					A	B	φC	D	φE	F	H1	H2
SPS	0	R <sub>LSB</sub>										
SPS	1	R <sub>LSB</sub>										
SPS	2	R <sub>LSB</sub>										
SPS	3	R <sub>LSB</sub>										

Material : Page 66  
 LSB : Right-angle PCB Female Contact  
 LSPB : Right-angle PCB Female and Male Contact  
 Contact code : Page 61

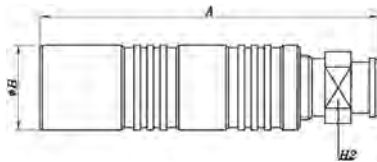
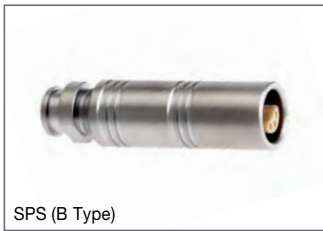
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SPS Jack



Product Number				A	∅ B	H2
SPS	00	J	A	25,0	6,5	4,5
SPS	0	J	A	33,5	8,9	6,5
SPS	1	J	A	40,5	11,9	8,5
SPS	2	J	A	50,0	14,8	11,0
SPS	3	J	A	59,0	17,8	14,0

Material : Page 66  
 Collet code : Page 66  
 S : Female Contact SP : Female and Male Contact  
 Contact code : Page 61



Product Number				A	∅ B	H2
SPS	00	J	B	25,0	6,5	6,0
SPS	0	J	B	33,5	8,9	7,0
SPS	1	J	B	40,5	11,9	9,0
SPS	2	J	B	50,0	14,8	12,0
SPS	3	J	B	59,0	17,8	14,0

Material : Page 66  
 Collet code : Page 66  
 S : Female Contact SP : Female and Male Contact  
 Contact code : Page 61

■ Contact Code (single contact)

Series & Model	Size	Contact Code	Current	Contact ∅	Wire Gauge (Maximum)	Male Contact Arrangement	Female Contact Arrangement
SPS	00	113	8A	1.3	AWG20		
	0	116	12A	1.6	AWG18		
	1	120	18A	2.0	AWG14-16		
		130	25A	3.0	AWG10-12		

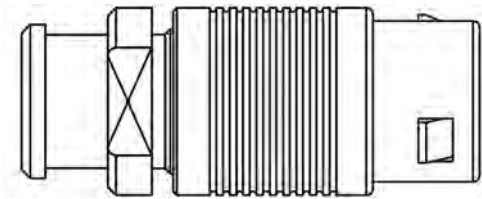
■ Contact Code (coaxial)

Series & Model	Size	Contact Code	Current	Impedance	Cable Group	VSWR (GHz)	Contact Arrangement
SPS	00	250	4A	50	1-3-5-6	1,09+11,f	
	0	250	6A	50	1-2-3-4	1,02+25f	
	1	250	12A	50	1-2-3-4-6	1,01+0,8f	
		275	10A	75	5-6-7	1,02+0,8f	

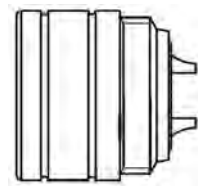
■ Contact Code (multi-contact)

Series & Model	Size	Contact Code	Current	Contact ∅	No. of Contacts	Wire Gauge (Maximum)	Contact Arrangement
SPS	0	302	10A	0.9	2	AWG22	
		304	7A	0.7	4	AWG24	
	1	302	15A	1.3	2	AWG20	
		304	10A	0.9	4	AWG22	
	2	310	7A	0.9	10	AWG22	
	3	302	23A	2.0	2	AWG14	
		310	9A	1.3	10	AWG20	

Note : Connector contact arrangement is from mating surface.



SPC Series



■ SPC Part Numbering - Hermaphroditic keying system (short dimension)



**Size**  
2

**Body Type**  
P : Plug                      PF : Fixed plug  
R3 : Receptacle              J : Jack

**Contact Code**  
306 : 3 Female & 3 Male

**Contact Type**  
SP : Female and Male contact

**Screw Cap Code (Plug and Jack only)**  
A : Screw Cap Terminated  
B : Screw Cap + Boot type

**Collet Code (Plug and Jack only)**  
See page 66

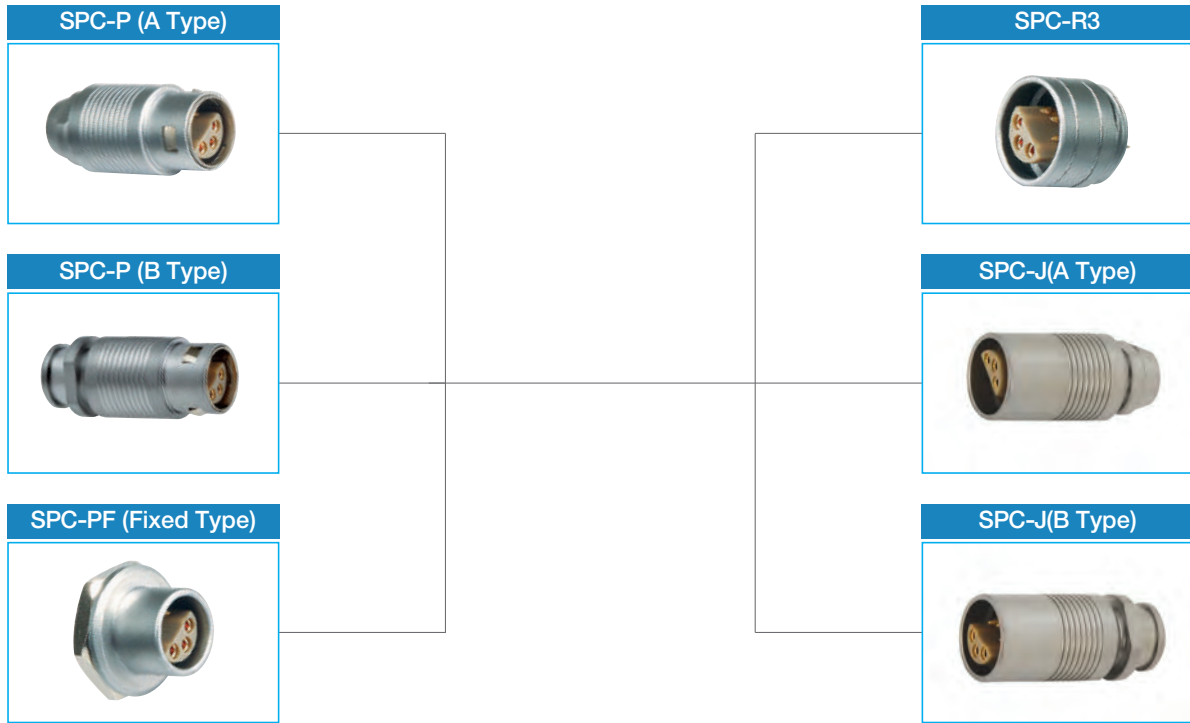
**Material and Female Contact Cut Code**  
See page 66

■ Performance

Performance	Endurance	Humidity	Temperature Range	Corrosion Test	Mated IP Rating
Value	>5,000 cycles	95%rh 140 °F	-67 °F +482 °F	>144h	IP50

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

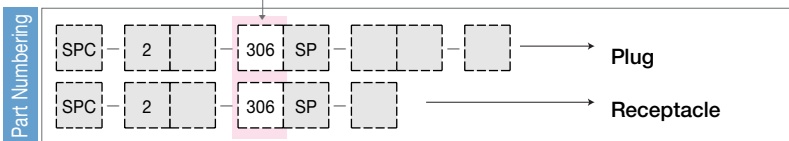
■ Mini-map



■ Contact Code

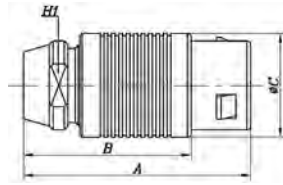
Series & Model	Size	Contact Code	Current	Contact $\phi$	No. of Contacts	Wire Gauge (Maximum)	Contact Arrangement
SPC	2	306	12A	1.3	6	AWG20	

Note : Connector contact arrangement is from mating surface.



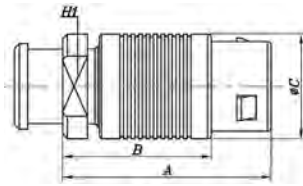
# SP Series C Model Plug / Receptacle / Jack(Size & Shell Selection)

## ■ SPC Plug



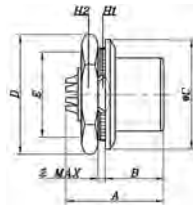
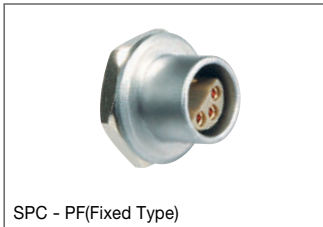
Product Number	A	B	ø C	H1
SPC 2 P 306 SP A 1	30	22	14	10,5

Material : Page 66  
Collet code : Page 66



Product Number	A	B	ø C	H1
SPC 2 P 306 SP B 1	28,4	20,4	14	12

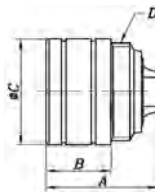
Material : Page 66  
Collet code : Page 66



Product Number	A	B	ø C	D	E	H1	H2
SPC 2 PF 306 SP B 1	17	9,5	18	19,5	M15×1P	13,8	17

Material : Page 66  
Collet code : Page 66

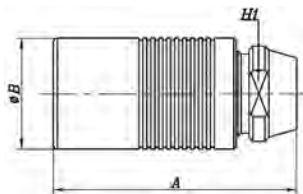
## ■ SPC Receptacle



Product Number	A	B	ø C	D
SPC 2 R3 306 SP	14,2	8,5	14,0	M13×0,75P

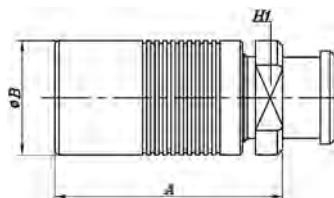
Material : Page 66

## ■ SPC Jack



Product Number	A	ø B	H1
SPC 2 J 306 SP A 1	28	14	1,5

Material : Page 66  
Collet code : Page 66

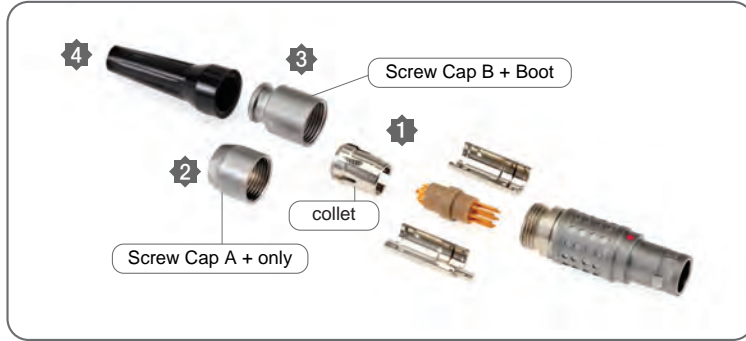


Product Number	A	ø B	H1
SPC 2 J 306 SP B 1	26,4	14	12

Material : Page 66  
Collet code : Page 66

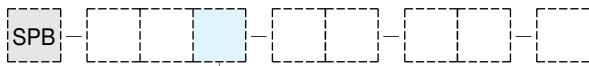
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.





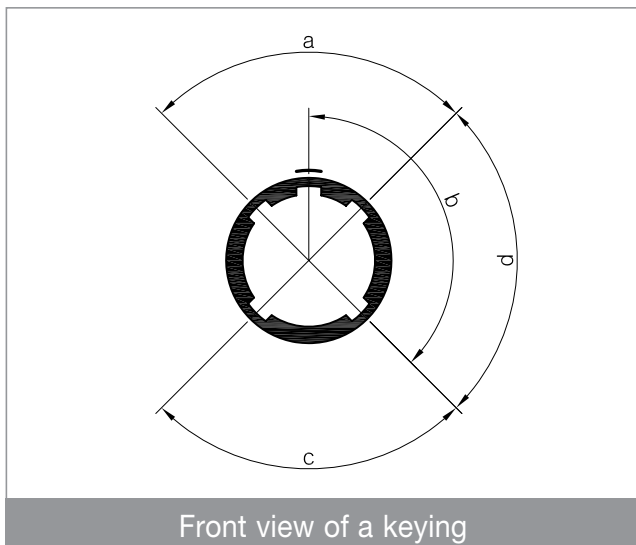
- 1) Collet
- 2) Screw Cap A
- 3) Screw Cap B
- 4) Boot  
Screw Cap B + Boot

■ Key Angles Code - For all SP series



Key Angles

Angles	a									b				c					d	
	0°	30°	40°	45°	60°	90°	37.5°	52.5°	80°	120°	135°	145°	155°	45°	70°	75°	80°	95°	110°	
Part No.	Blank	A	N	D	B	C	E	F	L	K	M	U	X	D1	H	H1	L1	Z	Q	
Application size	00	o	o			o								o						
	0	o	o	o		o	o				o	o	o	o	o	o	o		o	
	1	o	o	o		o	o		O (SP)		o	o	o	o	o		o			
	2	o	o	o	o	o		o	o		o		o			o			o	
	3	o	o		o	o		o	o		o		o			o			o	






Front view of a keying

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SP Series Collet Code / Material Code

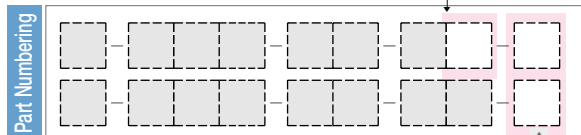
## ■ Collet Code Information

Series & Model	Size	Collet Code								
			Collet		Cable ø		Screw Cap Type A	Screw Cap Type B		
			ø A	ø B	max	min				
SPB	00	D22	2,2	—	2,2	1,4	●			
		D27	2,7	—	2,7	> 2,2	●			
		D30	3,1	2,8	3,0	2,5	●			
		D35	3,5	2,8	3,4	2,9	●			
	0	D21	2,1	—	2,0	1,5	●	●		
		D31	3,1	—	3,0	2,1	●	●		
		B32	3,2	—	3,2	> 2,2	●	●		
		D42	4,2	—	4,0	3,1	●	●		
		D52	5,2	4,7	5,0	4,1	●	●		
		D56	5,6	4,7	5,5	5,1	●	●		
		D72	7,2	6,7	7,0	6,1	●	●		
	1	M27	2,7	—	2,7	> 2,2	●	●		
		M31	3,1	—	3,1	> 2,7	●	●		
		D42	4,2	—	4,0	3,1	●	●		
		D52	5,2	—	5,0	4,1	●	●		
		D62	6,2	—	6,0	5,1	●	●		
		D76	7,6	6,7	7,5	7,1	●	●		
		D72	7,2	—	7,0	6,1	●	●		
	2	M21	2,1	—	2,2	1,4	●	●		
		M32	3,1	—	3,2	> 2,2	●	●		
		D42	4,2	—	4,0	3,1	●	●		
		D52	5,2	—	5,0	4,1	●	●		
		D62	6,2	—	6,0	5,1	●	●		
		D72	7,2	—	7,0	6,1	●	●		
		D82	8,2	—	8,0	7,1	●	●		
		D92	9,2	8,6	9,0	8,1	●	●		
		D99	9,9	8,6	9,7	9,1	●	●		
		D10	10,2	—	10,0	9,1	●	●		
3	M52	5,2	—	5,0	4,1	●	●			
	D62	6,2	—	6,0	5,1	●	●			
	D72	7,2	—	7,0	6,1	●	●			
	D82	8,2	—	8,0	7,1	●	●			
	D92	9,2	—	9,0	8,1	●	●			
	D10	10,2	—	10,0	9,1	●	●			
	D11	11,2	10,2	11,0	10,1	●	●			
	D12	11,9	10,2	11,7	11,1	●	●			
SPS	00	L29	2,9	—	2,8	2,4	●	●		
		L31	3,1	—	3,0	2,6	●	●		
	0	L42	4,2	—	4,1	3,7	●	●		
		L44	4,4	—	4,3	3,5	●	●		
1	L62	6,2	—	6,1	5,3	●	●			
SPC	2	L37	3,7	—	3,6	3,2	●	●		
		L42	4,0	—	4,1	3,7	●	●		
		L52	5,2	—	5,1	4,7	●	●		
		L62	6,2	—	6,1	5,7	●	●		
		L72	7,2	—	7,1	6,7	●	●		
		L82	8,2	—	8,1	7,7	●	●		

Collet Code

## ■ Material Code (For all SP Metal series)

Contact		Insulator		Female Contact Cut		Latch Sleeve	
code 1	Material	code 2	Material	code 3	Method	code 4	Material
A	Brass	L	PEEK	S	Side	R	Brass
P	Bronze	N	PA	H	Half	P	Bronze
R	Bronze (press)	T	Teflon				



Material Code

### Material Code Instruction

Plug + Male Contact : Code 1, 2, 4

Plug + Female Contact : Code 1, 2, 3, 4

Plug + Male & Female Contact : Code 1, 2, 3, 4


Receptacle/Jack + Female Contact : Code 1, 2, 3

Receptacle/Jack + Male Contact : Code 1, 2

Receptacle/Jack + Male & Female Contact : Code 1, 2, 3



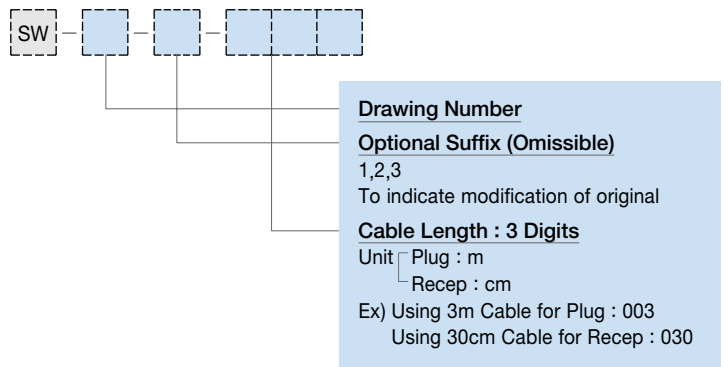
**Features**

- Push-pull self latching technology
- Ultra precision
- High contact density
- High reliability / durability
- High vibration and outer force resistance
- UL Recognized 
- Standard and Custom Design

**Applications**

- Telecommunications
- Professional A/V
- HDTV panel system
- Vision related equipment
- and much more
- Optical testing equipment
- Portable wireless radio
- CCTV
- Medical equipment

■ Part Numbering



■ Plug Cable Assembly



Type	Construction
A	SP Connector + Cable + Housing
B	SP Connector + Cable + SP Connector

※ Design and Customization Service Available

■ Receptacle Cable Assembly



Type	Construction
A	SP Connector + wire + open end
B	SP Connector + wire + Housing
C	SP Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



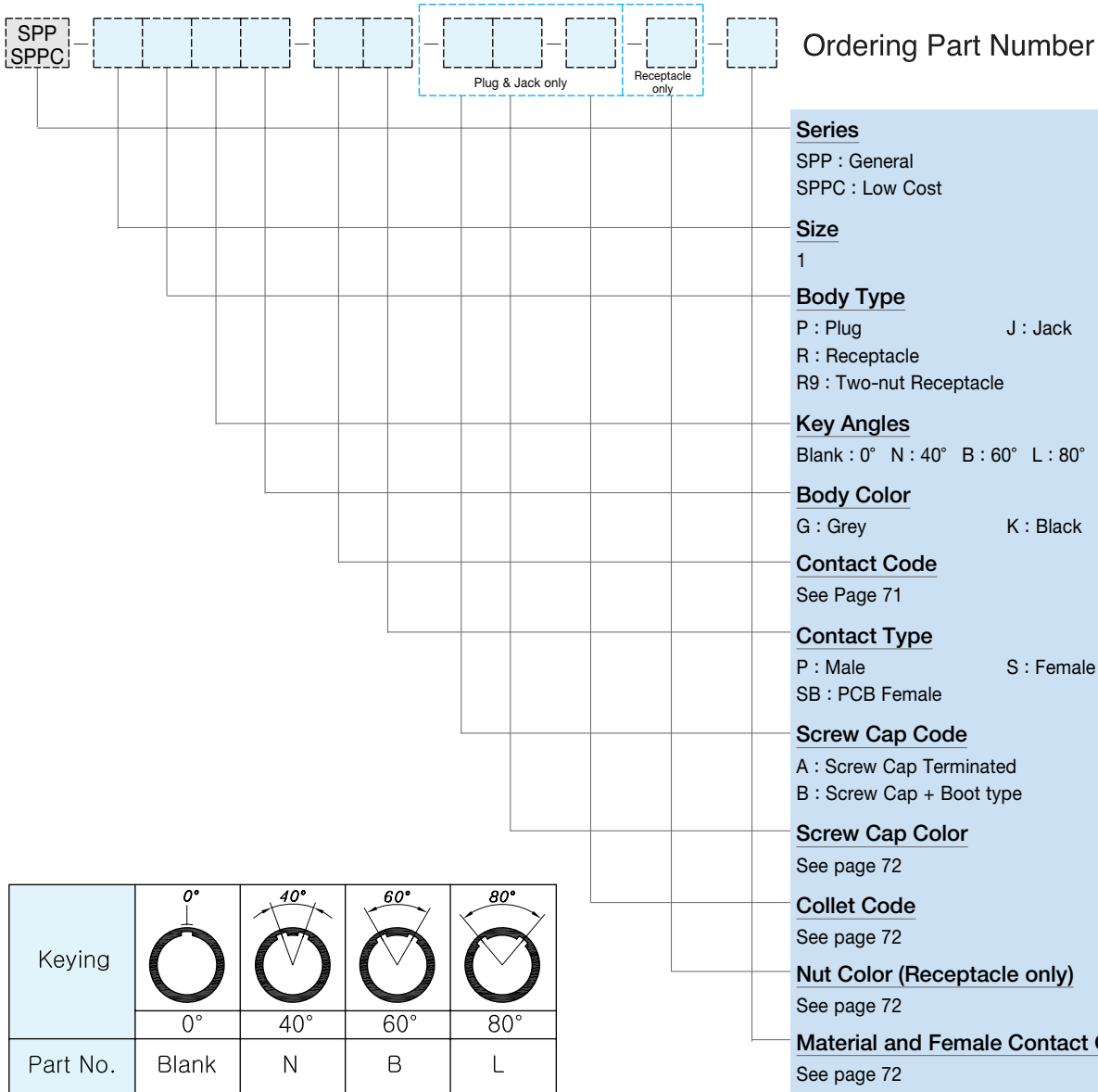
### Features

- User friendly and robust
- Secure multi-contact push-pull mechanism that allows quick connection and disconnection while providing reliable strain relief
- Overmolded with silicone or urethane,
- Available in cable collet or flexible boot
- Withstands extensive steam or chemical sterilization with rugged PSU or PEI housing materials
- Precise connection with color codes and multiple-key configurations
- Lightweight and durable for more than 1,000 mating cycles
- UL Recognized
- Protection rating of IP 50        • Autoclave(SPP)

### Applications

- Medical electronics
- Test and measurement
- Industrial electronics
- Automotive

## SPP Part Numbering - Plastic



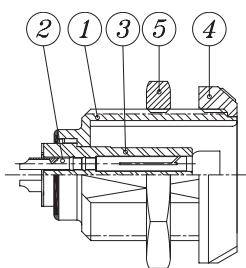
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ Performance

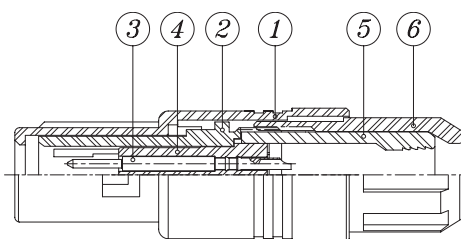
Characteristics	Value	Standards
Average retention force when pulling on the cable 1N=0,102kg	90N	IEC 60512-8 test 15f
Cable retention force (depends on cable construction) 1N=0,102kg	50 - 150N	IEC 60512-9 test 17c
Endurance (Shell)	> 1000 cycles	IEC 60512-5 test 9a
Working temperature range (PSU shell, Color : Black, Grey)	-50 / + 150℃	-
Working temperature range (PEI shell, Color : Black, Grey)	-50 / + 170℃	-
Working temperature range (PC shell, Color : Black, Grey)	-25 / + 85℃	-

■ Standard Model

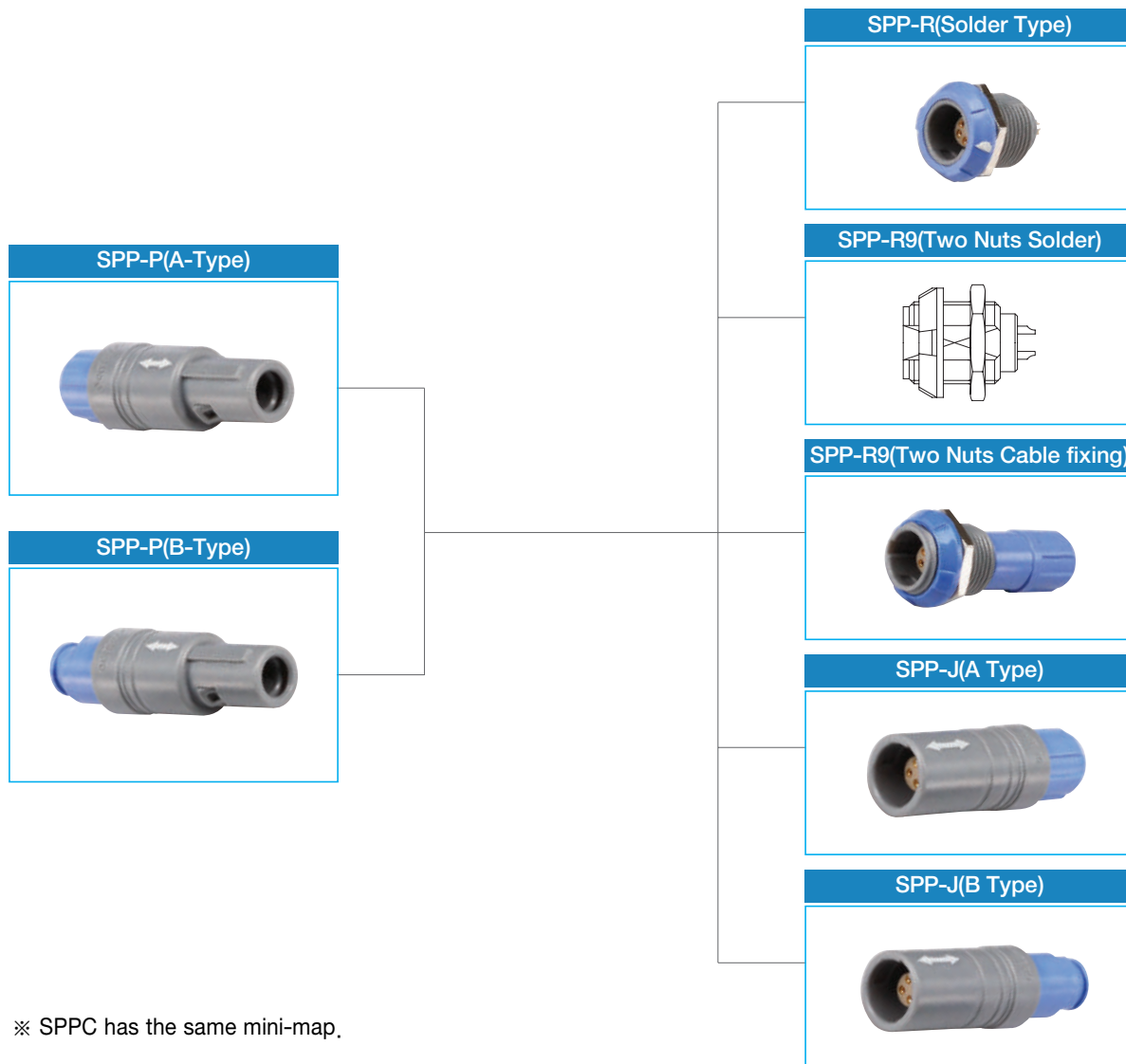
- Fixed Receptacle
- ① Body
  - ② Female contact
  - ③ Insulator
  - ④ Front nut
  - ⑤ Nut



- Straight Plug
- ① Body
  - ② Latch sleeve
  - ③ Male contact
  - ④ Insulator
  - ⑤ Collet
  - ⑥ Screw cap



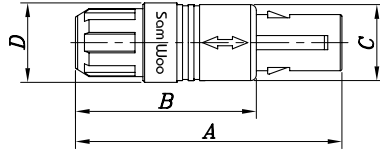
■ Mini-map



※ SPPC has the same mini-map.

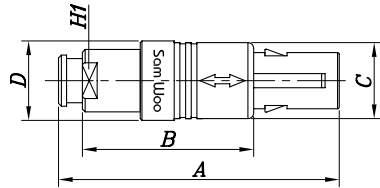
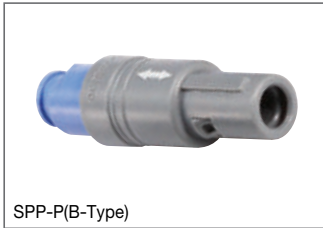
# SPP Series P Model Plug / Receptacle (Size & shell selection)

## ■ SPP Plug



Product Number	A	B	∅ C	∅ D
SPP-SPPC-11P-11P-11A-11	45,0	30,0	13,4	14,0

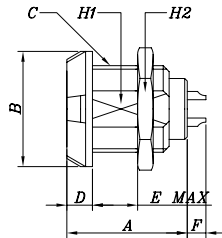
Material & Female contact Cut code : Page 72  
 Collet Code : Page 72  
 Screw Cap Color : Page 72  
 Contact Code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68



Product Number	A	B	∅ C	∅ D	H1
SPP-SPPC-11P-11P-11B-11	35,0	28,7	13,4	14,0	9,0

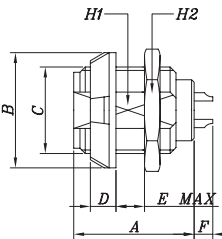
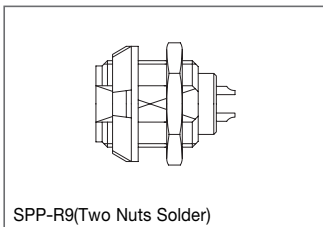
Material & Female contact Cut code : Page 72  
 Collet Code : Page 72  
 Screw Cap Color : Page 72  
 Contact Code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68

## ■ SPP Receptacle



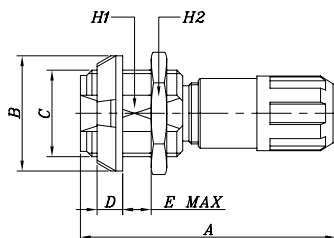
Product Number	A	B	C	D	E	F	H1	H2
SPP-SPPC-11R1-11S-11	20,5	18,5	M14×1,0P	4,0	9,0	2,5	12,5	17,0

Material & Female contact Cut code : Page 72  
 Nut Color : Page 72  
 Contact code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68



Product Number	A	B	C	D	E	F	H1	H2
SPP-SPPC-11R9-11S-11	20,5	18,5	M14×1,0P	4	9	2,5	12,5	17

Material & Female contact Cut code : Page 72  
 Nut Color : Page 72  
 Contact code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68

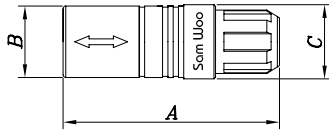
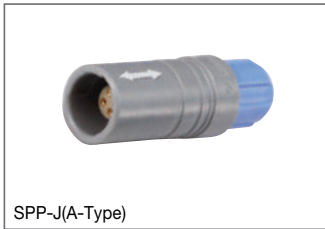


Product Number	A	B	C	D	E	H1	H2
SPP-SPPC-11R9-11S-11A-11	40,0	18,5	M14×1,0P	4,0	9,0	12,5	17,0

Material & Female contact Cut code : Page 72  
 Collet Code : Page 72  
 Screw Cap Color : Page 72  
 Contact Code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68

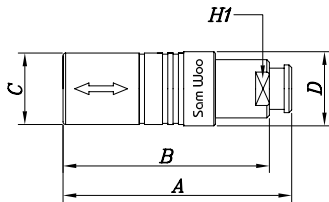
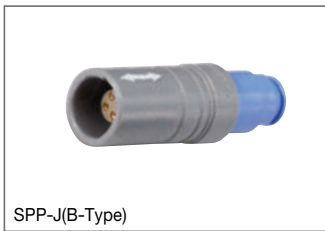
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

■ SPP Jack



Product Number	A	∅ B	∅ C
SPP- SPPC- T J I S A	40,0	13,5	14,0

Material & Female contact Cut code : Page 72  
 Collet Code : Page 72  
 Screw Cap Color : Page 72  
 Contact Code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68



Product Number	A	B	∅ C	∅ D	H1
SPP- SPPC- T J I S B	43,0	38,7	13,5	14,0	9,0

Material & Female contact Cut code : Page 72  
 Collet Code : Page 72  
 Screw Cap Color : Page 72  
 Contact Code : Page 71  
 Body Color : G(Grey) or K(Black)  
 Key angles : Page 68

■ Contact Code

Series & Model	Size	Contact Code	Current		Contact ∅	No. of Contacts	Wire Gauge (Maximum)	Contact Arrangement
			SPP	SPPC				
SPP & SPPC	1	302	10A	5A	1,3	2	AWG20	
		304	8A	3A	0,9	4	AWG22	
		305	7A	3A	0,9	5	AWG22	
		306	6A	2A	0,7	6	AWG26	
		307	5A	2A	0,7	7	AWG26	
		308	5A	2A	0,7	8	AWG26	
		310	3A	1A	0,5	10	AWG28	

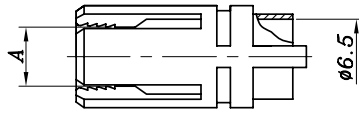
Note : Connector contact arrangement is from solder pot.

# SPP Series P Model Contact Code

## ■ Screw cap color / Nut color

Code	BK	GY	WH	RD	GN	BU	OR	YE	BR
Color	Black	Grey	White	Red	Green	Blue	Orange	Yellow	Brown

## ■ Collet Code



Series & Model	Size	Collet Code	A	Cable Ø	
				Max	Min
SPP SPPC	1	D39	3,9	3,9	2,7
		D52	5,2	5,2	4
		D65	6,5	6,5	5,3

## ■ Material Code (For all SP Plastic series)

Contact		Insulator		Female Contact Cut		Latch Sleeve / Receptacle Body	
Code 1	Material	Code 2	Material	Code 3	Material	Code 4	Material
A	Brass	N	PA	H	Half	C	PC
P	Bronze	L	PEEK	S	Side	J	PEI
R	Bronze					U	PSU

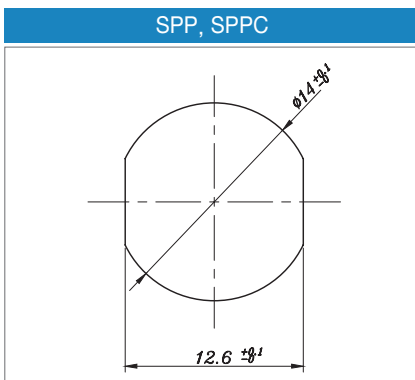
### Material Code Instruction

Plug + Male Contact : Code 1, 2, 4

Receptacle + Female Contact : Code 1, 2, 3, 4

Jack + Female Contact : Code 1, 2, 3, 4

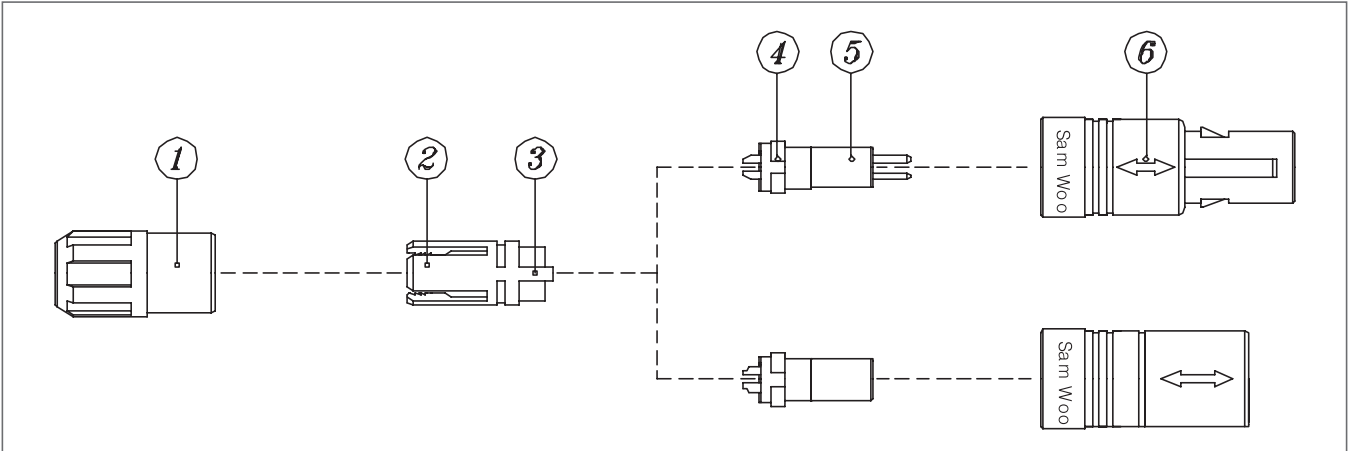
## ■ SPP, SPPC Series Panel Layout



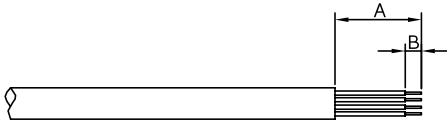
Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



## ■ Solder contacts



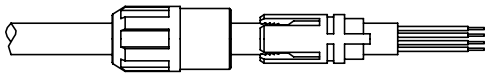
1.



1. Strip the cable according to the lengths given in the table. Tin the conductors.

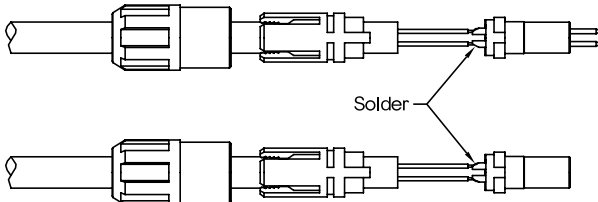
Configuration	Dimensions(mm)	
	A	B
302	14,0	4,0
304, 305	13,0	3,0
306 to 314	12,5	2,5

2.



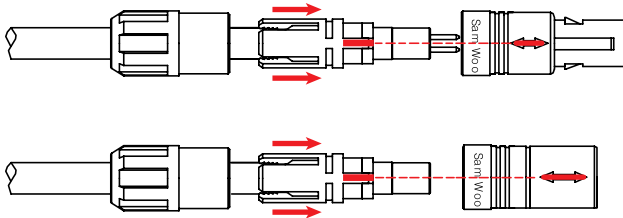
2. Slide the screw cap ① and then the collet ② onto the cable.

3.



3. Solder conductors into contacts, making sure that neither solder nor flux gets onto the insulator or cable insulation.

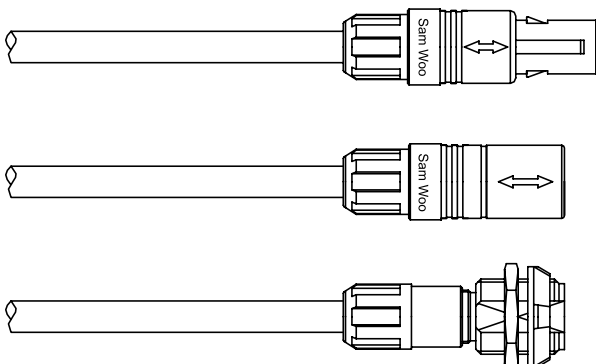
4.



4. Slide the collet ② forward and locate tag ③ in the slot ④ on the insulator ⑤. Slide screw cap ① over collet ② and then push the whole assembly into p)body ⑥ whilst turning it to ensure that the tag ③ locates in the inside slot of the p) body. Tighten the screw cap ① to the maximum torque of 0,25 Nm.

◆ Receptacle mounting nut torque = 1,5 Nm.

5.

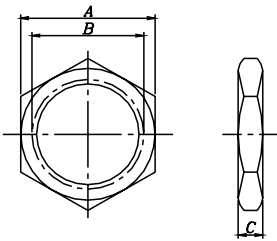


5. Completion

■ Applied Nut per Receptacle type

Receptacle Type	Applied Nut
R : Receptacle	Hexagonal Nut
BR : Bulkhead Receptacle	Hexagonal Nut or Optional Nut
R9 : Two-Nut Receptacle	Hexagonal Nut and Optional Nut
RT : Receptacle-threaded type	Hexagonal Nut or Optional Nut
RT1 : Right-angle Receptacle-threaded type	Hexagonal Nut or Optional Nut
RT2 : Right-angle Receptacle-threaded type + H cut	Hexagonal Nut or Optional Nut

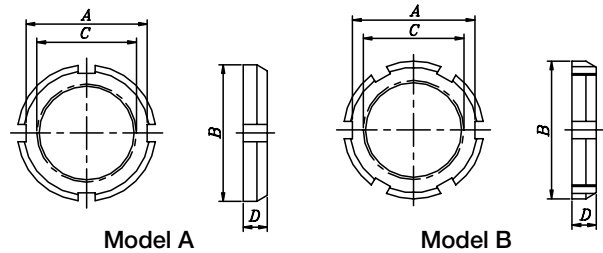
■ Hexagonal Nut



Product Number	Series	Dimensions (mm)		
		A	B	C
SPHN-00R-M7	00	9	M7×0,5	2,0
SPHN-0R-M9	0	11	M9×0,6	2,0
SPHN-0R-M10	0	12	M10×0,75	2,5
SPHN-0R-M14	0	17	M14×1,0	2,5
SPHN-1R-M14	1			
SPHN-1R-M12	1	14	M12×1,0	2,5
SPHN-1R-M12	1			
SPHN-1R-M16	1	19	M16×1,0	3,0
SPHN-2R-M16	2			
SPHN-2R-M15	2	17	M15×1,0	2,7
SPHN-2R-M20	2	24	M20×1,0	4,0
SPHN-3R-M18	3	22	M18×1,0	3,0
SPHN-3R-M24	3	30	M24×1,0	5,0

■ 1. Notched Nuts

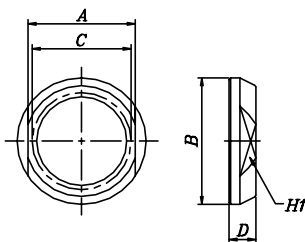
► Optional Nut



Product Number	Model	Dimensions (mm)			
		A	B	C	D
SPNN-00R-M7	A	8,7	10,0	M7×0,5	2,5
SPNN-0R-M9	A	10,5	12,0	M9×0,6	2,5
SPNN-0R-M14	A	15,8	18,0	M14×1,0	3,5
SPNN-1R-M12	A	14,0	16,0	M12×1,0	3,5
SPNN-1R-M16	B	17,5	20,0	M16×1,0	3,5
SPNN-1R-M11	A	12,1	14,0	M11×0,5	3,5
SPNN-2R-M15	B	17,5	20,0	M15×1,0	3,5
SPNN-2R-M19	B	20,5	24,0	M19×1,0	3,5
SPNN-2R-M20	B	22,5	25,0	M20×1,0	3,5

■ 2. Conical Nuts

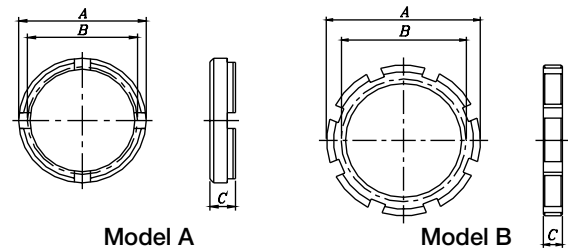
► Optional Nut



Product Number	Dimensions (mm)				
	A	B	C	D	H1
SPCN-00R-M7	8,0	10,0	M7×0,5	2,5	8
SPCN-0R-M9	10,0	12,0	M9×0,6	2,5	10
SPCN-0R-M14	16,0	18,0	M14×1,0	3,0	16
SPCN-1R-M12	13,0	16,0	M12×1,0	3,2	13
SPCN-1R-M16	17,0	20,0	M16×1,0	4,0	17
SPCN-1R-M11	12,0	14,0	M11×0,5	3,2	12
SPCN-2R-M15	17,0	20,0	M15×1,0	3,8	17
SPCN-2R-M19	20,0	24,0	M19×1,0	5,8	20
SPCN-2R-M20	22,0	25,0	M20×1,0	5,0	20
SPCN-3R-M18	20,0	24,0	M18×1,0	4,5	20
SPCN-3R-M24	27,0	30,0	M24×1,0	4,5	24

■ 3. Round Nuts

► Optional Nut



Product Number	Model	Dimensions (mm)		
		A	B	C
SPRN-00R-M7	A	9,0	M7×0,5	4,0
SPRN-0R-M9	A	11,0	M9×0,6	4,0
SPRN-0R-M14	A	18,0	M14×1,0	5,0
SPRN-1R-M12	A	14,0	M12×1,0	5,0
SPRN-1R-M16	A	20,0	M16×1,0	5,0
SPRN-2R-M15	A	18,0	M15×1,0	5,5
SPRN-2R-M15	A	17,5	M15×0,75	2,5
SPRN-3R-M18	A	22,0	M18×1,0	5,5

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



**Size**

0, 1, 2, 3

**Accessory Type**

B : Boot

**Color Code**

- BK : Black
- GY : Grey
- WH : White
- RD : Red
- GN : Green
- BU : Blue
- OR : Orange
- YE : Yellow
- BR : Brown

**Boot Size Code**

Insert  $\phi A$  from below chart "Min Cable  $\phi$ "

**Material**

- Blank : Polyurethane
- S : Silicon

■ Boot Size Code (example with color black)



Boot Product Number	Size	Dimension		Cable $\phi$		Color
		$\phi A$	L	max	min	
SPA-0B-BK25	0	2,5	24	2,9	2,5	
SPA-0B-BK30		3,0	24	3,4	3,0	
SPA-0B-BK35		3,5	24	3,9	3,5	
SPA-0B-BK40		4,0	24	4,4	4,0	
SPA-0B-BK45		4,5	24	5,2	4,5	
SPA-1B-BK25	1	2,5	30	2,9	2,5	
SPA-1B-BK30		3,0	30	3,4	3,0	
SPA-1B-BK35		3,5	30	3,9	3,5	
SPA-1B-BK40		4,0	30	4,4	4,0	
SPA-1B-BK45		4,5	30	4,9	4,5	
SPA-1B-BK54		5,4	30	6,0	5,4	
SPA-1B-BK65	6,5	30	7,0	6,5		
SPA-2B-BK40	2	4,0	36	4,5		4,0
SPA-2B-BK45		4,5	36	5,0		4,5
SPA-2B-BK50		5,0	36	5,5		5,0
SPA-2B-BK60		6,0	36	6,5		6,0
SPA-2B-BK70		7,0	36	7,7		7,0
SPA-2B-BK78	7,8	36	8,8	7,8		
SPA-3B-BK70	3	7,0	42	7,9		7,0
SPA-3B-BK80		8,0	42	8,9		8,0
SPA-3B-BK90		9,0	42	10,0	9,0	
SPA-3B-BK110		11,0	42	11,0	10,5	

! To change color from above example, change "BK" to color of preference.

■ Material

Material	Temperature range
Silicon	-60 $^{\circ}$ C ~ +200 $^{\circ}$ C
Polyurethane	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.



**Features**

- User friendly and robust
- Secure multi-contact push-pull mechanism that allows quick connection and disconnection while providing reliable strain relief
- Overmolded with silicone or urethane,
- Available in cable collet or flexible boot
- Withstands extensive steam or chemical sterilization with rugged PSU or PEI housing materials
- Precise connection with color codes and multiple-key configurations
- Lightweight and durable for more than 1,000 mating cycles
- UL Recognized
- Protection rating of IP 50
- Autoclave(SPP)
- Standard and Custom Design

**Applications**

- Medical electronics
- Industrial electronics
- Test and measurement
- Automotive

**Part Numbering**



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit | Plug : m  
       | Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

**Plug Cable Assembly**



Type	Construction
A	SPP Connector + Cable + Housing
B	SPP Connector + Cable + SPP Connector

※ Design and Customization Service Available

**Receptacle Cable Assembly**



Type	Construction
A	SPP Connector + wire + open end
B	SPP Connector + wire + Housing
C	SPP Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.





### Features

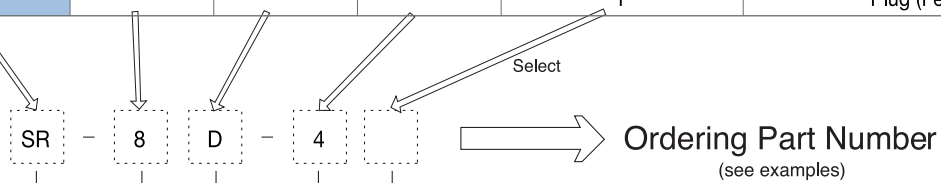
- Protection rating of IP67 with over molding
- M12 threaded locking

### Applications

- Factory Automation and Sensors
- Process control
- Industrial instrumentation
- Commercial electronics

## Part Numbering

Series	Size	Mating Part Type	No. of Contacts	Suffix (Contact Type)	Notes
SR	8	D	4	J	Jack (Male contact)
				P	Plug (Female contact)



#### Connector Series

SR Series

#### Size

8

#### Mating Part Type

D : DC Type

#### No. of Contacts

4

#### Body Type

J : Jack

P : Plug

### Examples

SR - 8D - 4J

SR series - Size 8 Jack - 4 Male Contact

SR - 8D - 4P



SR series - Size 8 Plug - 4 Female Contact

## Material Used / Finish

	Material	Finish
Cap	Brass	Ni Plating
Insulator	PBT	Black
Outer sheath	PVC	-
Contacts	Male	Brass Gold or Silver Plating
	Female	Phosphor bronze Gold or Silver Plating

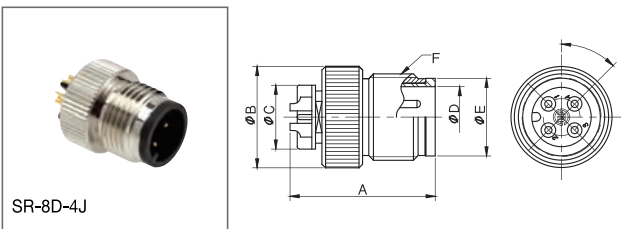
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

Major Performances / Contact Arrangements

Size/No of Contacts	Size 8	
Performance	4	
Withstanding Voltage (per min)	AC 1500V	
Rated Current	3A	
Rated Voltage	DC 125V	
Insulation Resistance (Minimum)	100M $\Omega$ or more at DC500V	
Contact Resistance (Maximum)	$\leq 10m \Omega$	
IP Protection Rating	IP 67	
Contact Arrangement	Male	Female
		
Note : Figure Male No.		

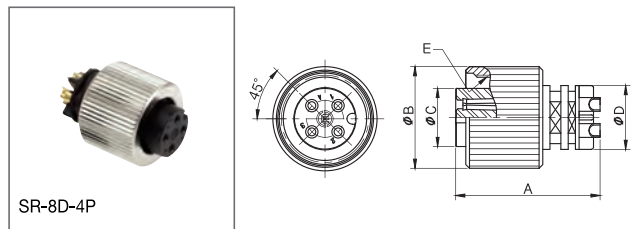
- <sup>1</sup> Withstanding voltage is the tested voltage value in this table.
- <sup>2</sup> Insulation resistance is measured at DC 100V.
- <sup>3</sup> Contact resistance is measured at DC 1A.
- Values are from tested items and may not apply to all connectors.
- Specifications subject to change without notice.
- Consult Sam Woo Electronics for the latest specifications.
- <sup>4</sup> Connector contact arrangement is from mating surface.

SR-8D-4J



Product Number	A	$\phi B$	$\phi C$	$\phi D$	$\phi E$	F
SR-8D-4J	20,1	14	8,9	8,3	10,7	M12 $\times$ 1,0P

SR-8D-4P



Product Number	A	$\phi B$	$\phi C$	$\phi D$	E
SR-8D-4P	20,2	14	8	9	M12 $\times$ 1,0P

SR Series Mini-map



# SR IP67 Series Cable Assembly



## Features

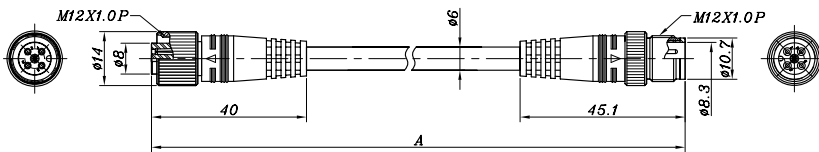
- Protection rating of IP67 with over molding
- M12 threaded locking
- Standard and Custom Design

## Applications

- Factory Automation and Sensors
- Process control
- Industrial instrumentation
- Commercial electronics

### SW-4366 | Type A : Plug + Jack

Unit : mm



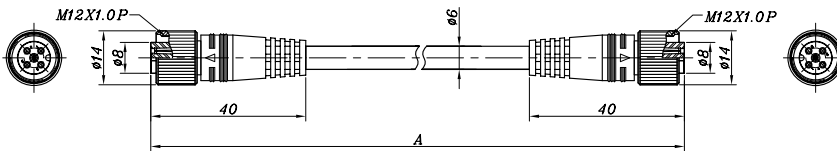
SR-8D-4P + Cable + SR-8D-4J

Type A		
Product Number	Connector	A
SW-4366-001	SR-8D-4P + SR-8D-4J	1000
SW-4366-002	SR-8D-4P + SR-8D-4J	2000
SW-4366-003	SR-8D-4P + SR-8D-4J	3000
SW-4366-005	SR-8D-4P + SR-8D-4J	5000

※ Custom lengths available, Consult Sam Woo Electronics,

### SW-4369 | Type B : Plug + Plug

Unit : mm



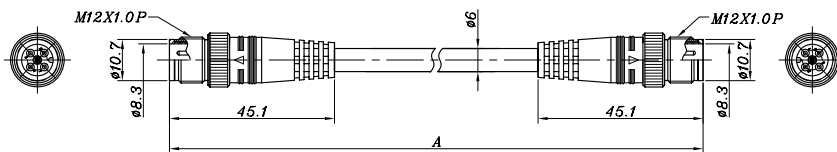
SR-8D-4P + Cable + SR-8D-4P

Type B		
Product Number	Connector	A
SW-4369-001	SR-8D-4P + SR-8D-4P	1000
SW-4369-002	SR-8D-4P + SR-8D-4P	2000
SW-4369-003	SR-8D-4P + SR-8D-4P	3000
SW-4369-005	SR-8D-4P + SR-8D-4P	5000

※ Custom lengths available, Consult Sam Woo Electronics,

### SW-4370 | Type C : Jack + Jack

Unit : mm



SR-8D-4J + Cable + SR-8D-4J

Type C		
Product Number	Connector	A
SW-4370-001	SR-8D-4J + SR-8D-4J	1000
SW-4370-002	SR-8D-4J + SR-8D-4J	2000
SW-4370-003	SR-8D-4J + SR-8D-4J	3000
SW-4370-005	SR-8D-4J + SR-8D-4J	5000

※ Custom lengths available, Consult Sam Woo Electronics,

## Standard Cable Information

Standard Cable Specifications	
Conductor AWG	20
No. of wires	4 wires
Outer dia.	φ 6,0 ± 0,2
Color	Grey

Standard Cable Specifications	
Contact Numbers	Wire Color
1	Brown
2	White
3	Blue
4	Black

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

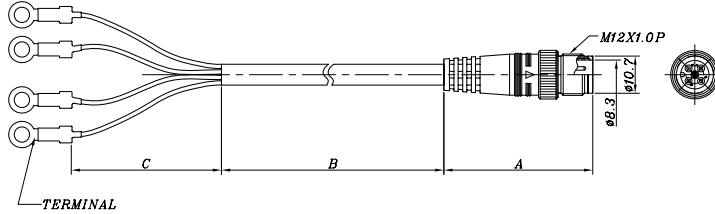


■ Cable Assembly With Jack Connector



Unit : mm

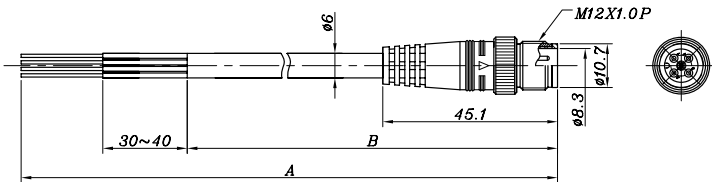
SW-4120 / Jack Connector



Product Number	Connector	A	B	C
SW-4120	SR-8D-4J	45,1	305	60

※ Custom lengths available, Consult Sam Woo Electronics,

SW-4367 / Jack Connector

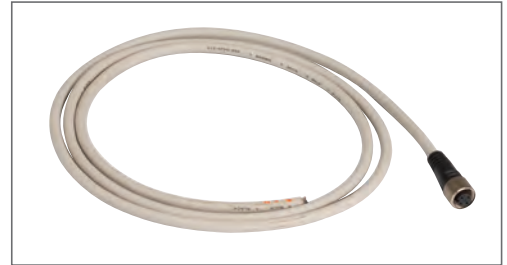


Unit : mm

Product Number	Connector	A	B
SW-4367-0005	SR-8D-4J	550	500
SW-4367-001	SR-8D-4J	1050	1000
SW-4367-0022	SR-8D-4J	2200	2150
SW-4367-003	SR-8D-4J	3050	3000
SW-4367-005	SR-8D-4J	5050	5000

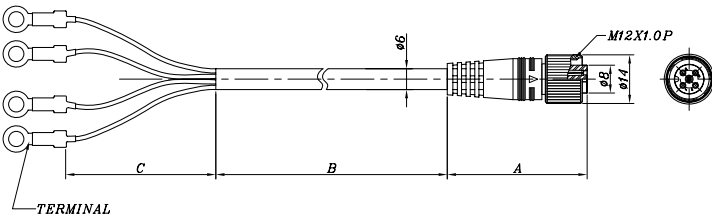
※ Custom lengths available, Consult Sam Woo Electronics,

■ Cable Assembly With Plug Connector



Unit : mm

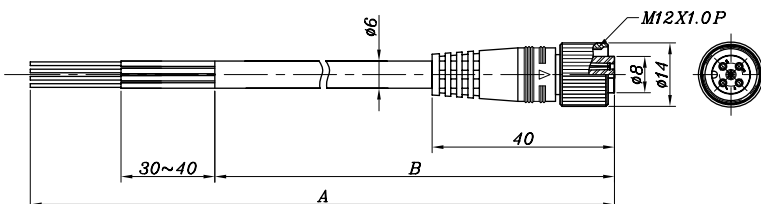
SW-4368 / Plug Connector



Product Number	Connector	A	B	C
SW-4368	SR-8D-4P	40	305	60

※ Custom lengths available, Consult Sam Woo Electronics,

SW-4119 / Plug Connector



Unit : mm

Product Number	Connector	A	B
SW-4119-0005	SR-8D-4P	550	500
SW-4119-001	SR-8D-4P	1050	1000
SW-4119-0022	SR-8D-4P	2200	2150
SW-4119-003	SR-8D-4P	3050	3000
SW-4119-0047	SR-8D-4P	4700	4640
SW-4119-005	SR-8D-4P	5050	5000

※ Custom lengths available, Consult Sam Woo Electronics,

Specifications subject to change without notice, Consult Sam Woo Electronics for the latest specifications.

# SRC Series Part Numbering



## Features

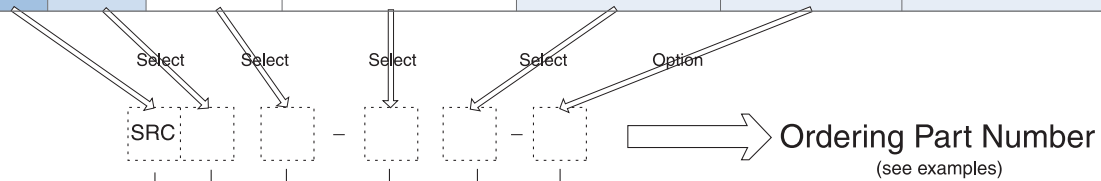
- Bayonet Locking System
- Rugged
- Light-weight
- Low cost
- General purpose

## Applications

- Professional Audio / Video
- Vision Testing
- Factory Automation
- Measuring Equipment
- Medical

## Part Numbering

Product Number		Size	Number of Contacts	Suffix (Contact Type)	Optional Suffix	Notes
Series	Prefix (Body)				G	
SRC	6A	21	10,16,26	P	●	Plug (Male)
				S	●	Plug (Female)
	2A			P	●	Receptacle (Male)
				S	●	Receptacle (Female)
	A		PS	●	Adapter (Round)	
	AP		PS	●	Adapter (Panel)	



### Connector Series

- SRC6A - Plug
- SRC2A - Receptacle
- SRCA - Adapter (Round Type)
- SRCAP - Adapter (Panel Type)

### Size

21

### No. of Contacts

10,16,26

### Contact Type

- P : Male
- S : Female
- PS : Male and Female

### Shell Type

G : Gold plating contact

### Examples

SRC6A 21 - 10 P

SRC series Plug - Size 21 Plug - 10 Male Contact

SRC2A 21 - 16 S

SRC series Receptacle - Size 21 Receptacle - 16 Female Contact

SRCA 21 - 26 PS

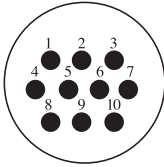
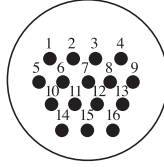
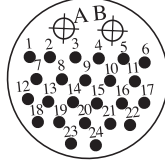
SRC series Round Adapter - Size 21 Adapter - 26 Male & Female Contact

SRCAP 21 - 16 PS - G

SRC series Panel Adapter - Size 21 Adapter - 16 Male & Female Contact - Gold Plating Contact

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Major Performances / Contact Arrangements

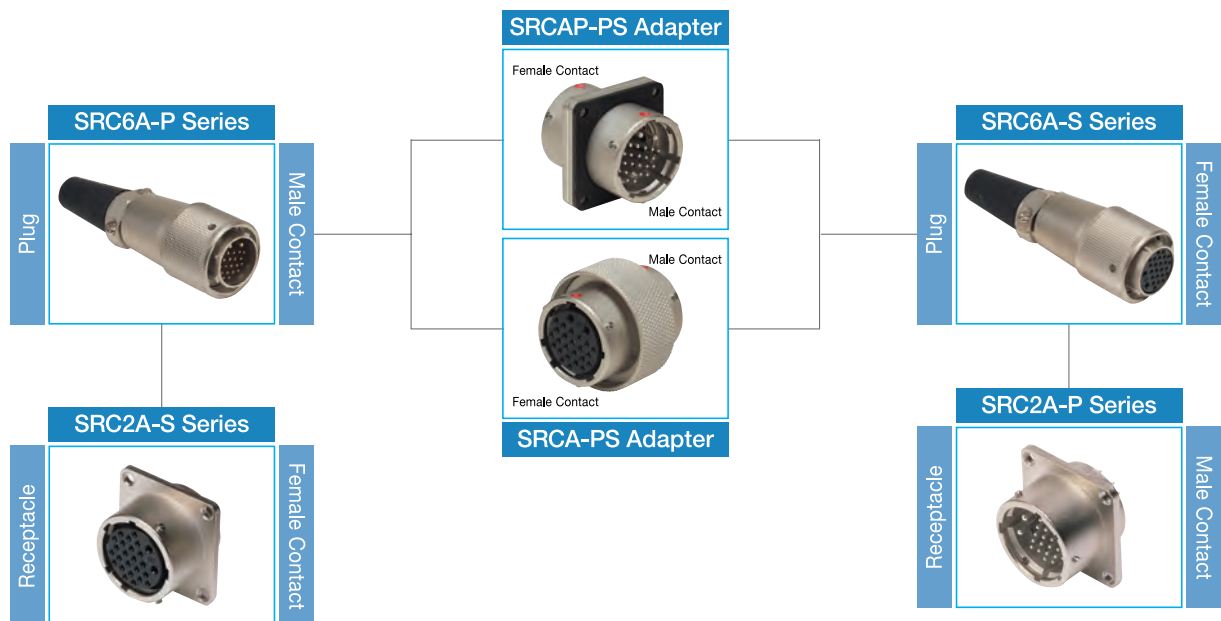
Performance	Size / No. of Contacts	Size 21		
		10	16	26
Withstanding Voltage (per min) <sup>1</sup>		AC 1000V	AC 1000V	AC 1000V
Current		10A	5A	5A / 10A
Insulation Resistance (Minimum) <sup>2</sup>		1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>		5m Ω	5m Ω	5m Ω
Solder Pot Inside Diameter		∅ 1,5	∅ 1,0	∅ 1,0 / ∅ 1,5
Wire Gauge (Maximum)		AWG18	AWG20	AWG20 / AWG18
Contact Arrangement				

! <sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

■ Material Used / Finish

	Material	Finish
Body	Alluminum alloy	Ni or Gold Plating
Insulator	Thermosetting resin	Black
Contacts	Male	Brass
	Female	Phosphor bronze

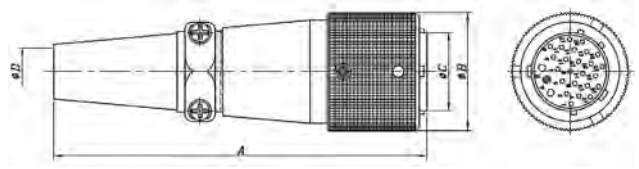
■ SRC Series Mini-map



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SRC Series Male / Female Plug, Receptacle, Adapter

## ■ SRC6A Plug



Product Number	A	∅ B	∅ C	∅ D
SRC6A21-10P	98,0	31,0	20,4	12,2
SRC6A21-16P				
SRC6A21-26P				
SRC6A21-10P-G				
SRC6A21-16P-G				
SRC6A21-26P-G				

## ■ SRC6A Plug

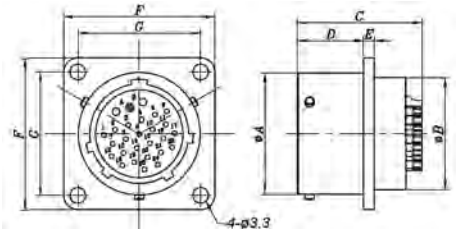


Product Number	A	∅ B	∅ C	∅ D
SRC6A21-10S	98,0	31,0	20,4	12,2
SRC6A21-16S				
SRC6A21-26S				
SRC6A21-10S-G				
SRC6A21-16S-G				
SRC6A21-26S-G				

## ■ SRC2A Receptacle



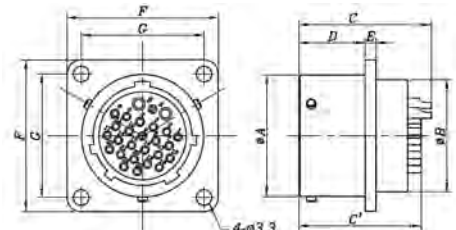
Product Number	∅ A	∅ B	C	D	E	F	G
SRC2A21-10P	25,6	23,6	26,4	14	2,3	32	26
SRC2A21-16P							
SRC2A21-26P							
SRC2A21-10P-G							
SRC2A21-16P-G							
SRC2A21-26P-G							



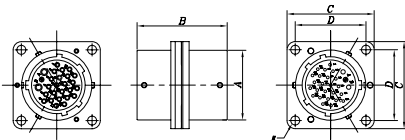
## ■ SRC2A Receptacle



Product Number	∅ A	∅ B	C(C')	D	E	F	G
SRC2A21-10S	25,6	23,6	27,7 (25,5)	14	2,3	32	26
SRC2A21-16S							
SRC2A21-26S							
SRC2A21-10S-G							
SRC2A21-16S-G							
SRC2A21-26S-G							

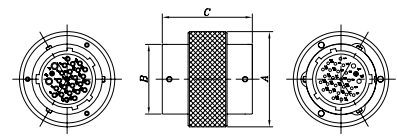


## ■ SRCAP Adapter (Panel, Male to Female)



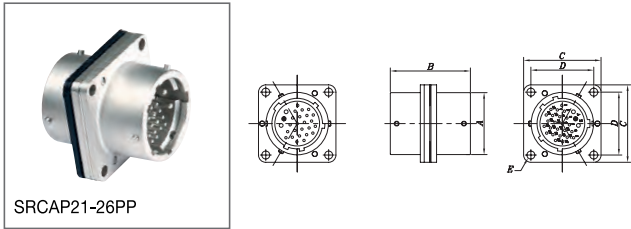
Product Number	∅ A	B	C	D	E
SRCAP21-10PS	25,6	33	32	26	4-∅ 3,3
SRCAP21-16PS					
SRCAP21-26PS					
SRCAP21-10PS-G					
SRCAP21-16PS-G					
SRCAP21-26PS-G					

## ■ SRCA Adapter (Round, Male to Female)



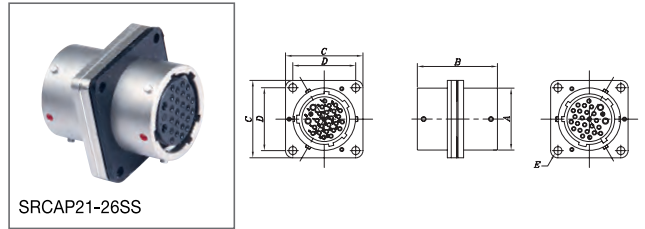
Product Number	∅ A	∅ B	C
SRCA21-10PS	35	25,6	35,0
SRCA21-16PS			
SRCA21-26PS			
SRCA21-10PS-G			
SRCA21-16PS-G			
SRCA21-26PS-G			

■ SRCAP Adapter (Panel, Male to Male)



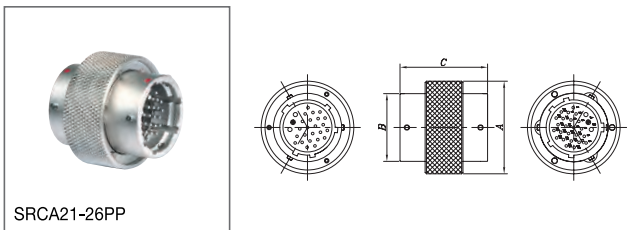
Product Number	∅ A	B	C	D	E
SRCAP21-10PP	25,6	33	32	26	4 - ∅ 3,3
SRCAP21-16PP					
SRCAP21-26PP					
SRCAP21-10PP-G					
SRCAP21-16PP-G					
SRCAP21-26PP-G					

■ SRCAP Adapter (Panel, Female to Female)



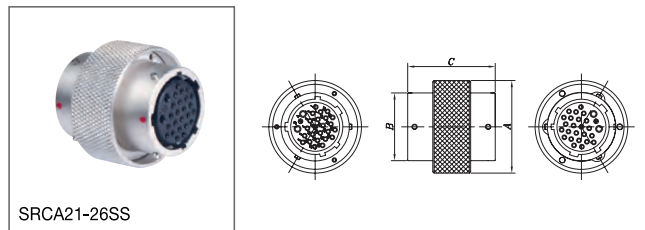
Product Number	∅ A	B	C	D	E
SRCAP21-10SS	25,6	33	32	26	4 - ∅ 3,3
SRCAP21-16SS					
SRCAP21-26SS					
SRCAP21-10SS-G					
SRCAP21-16SS-G					
SRCAP21-26SS-G					

■ SRCA Adapter (Round, Male to Male)



Product Number	∅ A	∅ B	C
SRCA21-10PP	35	25,6	35,0
SRCA21-16PP			
SRCA21-26PP			
SRCA21-10PP-G			
SRCA21-16PP-G			
SRCA21-26PP-G			

■ SRCA Adapter (Round, Female to Female)



Product Number	∅ A	∅ B	C
SRCA21-10SS	35	25,6	35,0
SRCA21-16SS			
SRCA21-26SS			
SRCA21-10SS-G			
SRCA21-16SS-G			
SRCA21-26SS-G			



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



## Features

- Bayonet Locking System
- Rugged
- Light-weight
- Low cost
- General purpose
- Standard and Custom Design

## Applications

- Professional Audio / Video
- Vision Testing
- Factory Automation
- Measuring Equipment
- Medical

## Part Numbering



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit Plug : m  
       Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

## Plug Cable Assembly



Type	Construction
A	SRC Connector + Cable + Housing
B	SRC Connector + Cable + SRC Connector

※ Design and Customization Service Available

## Receptacle Cable Assembly



Type	Construction
A	SRC Connector + wire + open end
B	SRC Connector + wire + Housing
C	SRC Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



# ST Series Part Numbering



## Features

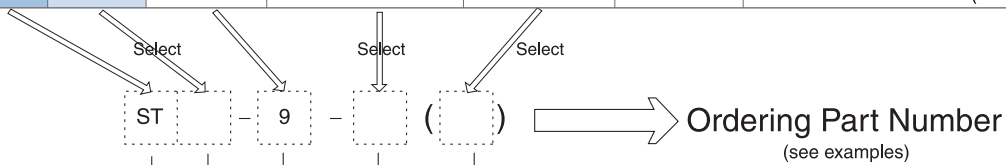
- Super-miniature size with multiple contact
- Safe insert system preventing male damage

## Applications

- Professional A/V
- Measuring equipment
- Sensors
- Wireless radio
- Medical

## Part Numbering

Product Number		Size	Number of Contacts	Suffix	Mount Type	Notes	
Series	Prefix						
ST	H	8 or 8B	14	P	Screw-on	Main ST series Plug	
				R/RPCB		ST Receptacle	
				RGPCB		ST Receptacle (PCB termination with ground male)	
				P		STH Series Plug	
				R/RPCB		STH Receptacle	
				RGPCB		ST Receptacle (PCB termination with ground male)	
	H	9	12,16,20	P		Main ST series Plug	
				PLM1		Molding Type ST Plug	
				R/RPCB		ST Receptacle	
				P		STH Series Plug	
				PLM1		Molding Type STH Plug	
				R/RPCB		STH Receptacle	
	A	9A	12,16,20	P		Push-pull	STA Series (Adapter for ST series)
				R/RPCB			STHA Series (Adapter for STH series)
A	9A	12,16,20	P	Main ST series Plug			
			R/RPCB	ST Receptacle			
					STA Series (Adapter for ST series)		



### Examples

- ST - 9 - 12 ( P )  
ST series - Size 9 Plug - 12 Male Contact
- ST - 9 - 16 ( R )  
ST series - Size 9 Receptacle - 16 Solder Type Female Contact
- ST - 9 - 16 ( RPCB )  
ST series - Size 9 Receptacle - 16 PCB Type Female Contact
- STA - 9 - 20  
Adapter for ST series - Size 9 Adapter - 20 Female Contact
- STHA - 9 - 20  
Adapter for STH series - Size 9 Adapter - 20 Male Contact

### Connector Series

- ST series
- STH - reverse contact
- STA - adapter for ST series
- STHA - adapter for STH series

### Size

- 8,8B,9 - Screw-on Type
- 9A - Push-pull Type

### No. of Contacts

- 12,14,16,20

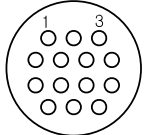
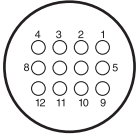
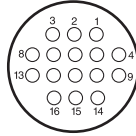
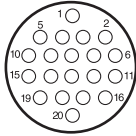
### Shell Type

- P : Plug
- R : Receptacle (solder termination)
- RPCB : Receptacle (PCB termination)
- RGPCB : Receptacle (PCB termination with grounding male)
- blank : Adapter

Specifications subject to change without notice.  
Consult Sam Woo Electronics for the latest specifications.



■ Major Performances / Contact Arrangements

Performance	Size / No. of Contacts		Size 8		
			14		
Withstanding Voltage (per min)			AC 300V		
Current			1A		
Insulation Resistance (Minimum)			1,000M Ω		
Contact Resistance (Maximum)			30m Ω		
Solder Pot Inside Diameter			∅ 0,5		
Wire Gauge (Maximum)			AWG28		
Contact Arrangement			 Plug		
Performance	Size / No. of Contacts		Size 9, 9A		
			12	16	20
Withstanding Voltage (per min) <sup>1</sup>			AC 300V	AC 300V	AC 300V
Current			1A	1A	1A
Insulation Resistance (Minimum) <sup>2</sup>			1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>			30m Ω	30m Ω	30m Ω
Solder Pot Inside Diameter			∅ 0,5	∅ 0,5	∅ 0,5
Wire Gauge (Maximum)			AWG28	AWG28	AWG28
Contact Arrangement			 Receptacle	 Receptacle	 Receptacle

<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from solder pot.

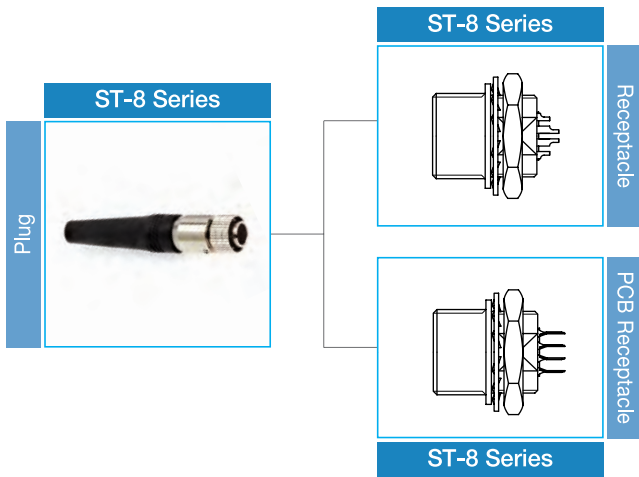
■ Material Used / Finish

	Material	Finish
Body	Brass & Zinc alloy	Ni Plating
Insulator	PPS resin	Black
Contacts	Male	Phosphor bronze and Beryllium
	Female	Phosphor bronze

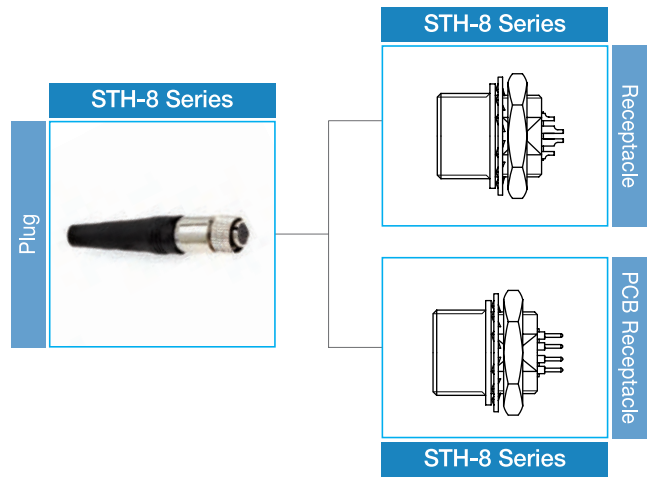
# ST Series

## Screw-on Type mini-map

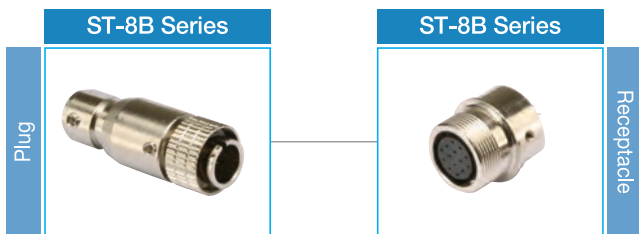
### ■ ST-8 Series



### ■ STH-8 Series



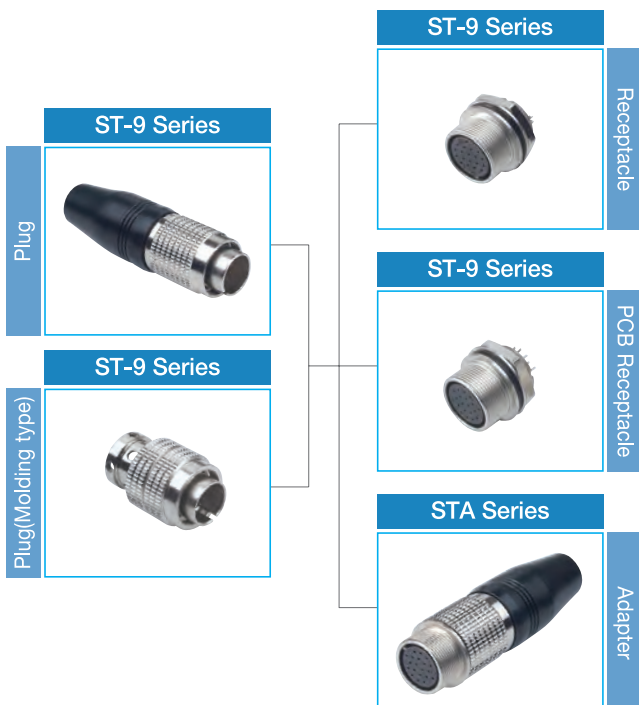
### ■ ST-8B Series



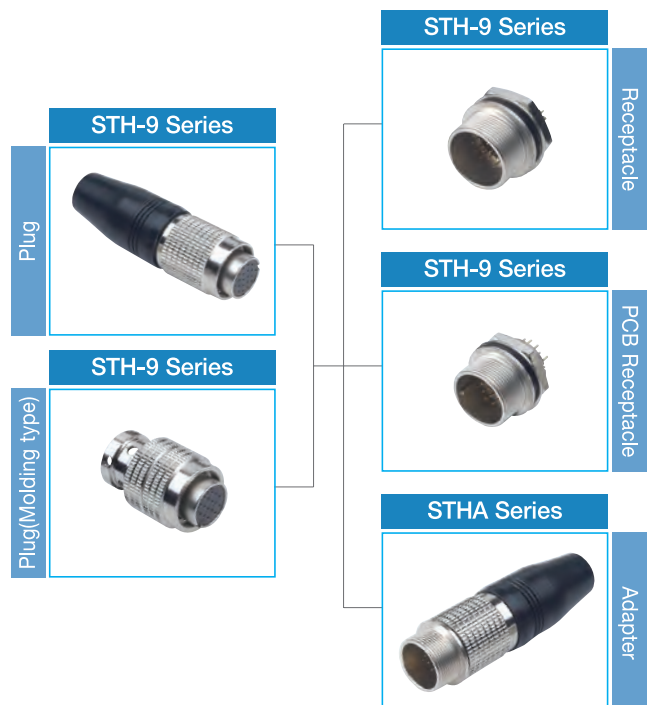
### ■ STH-8B Series



### ■ ST-9 Series

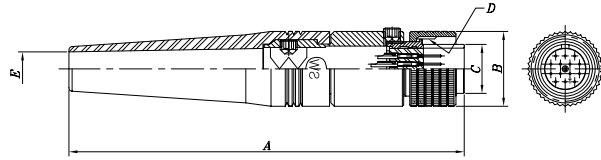


### ■ STH-9 Series



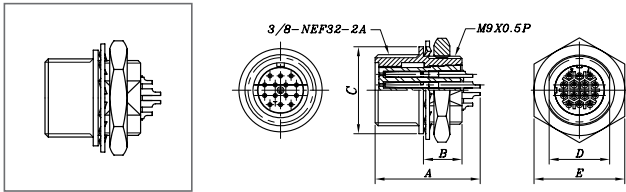
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ ST-8 Plug



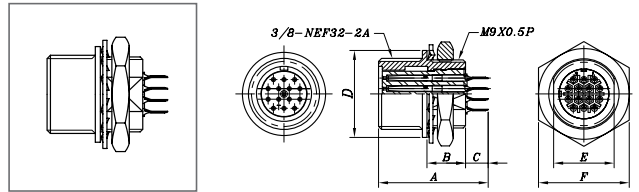
Product Number	A	B	C	D	E
ST-8-14(P)	58	11	7,2	3/8-32NEF-2B	5

■ ST-8 solder Type Receptacle



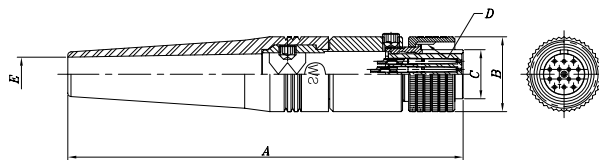
Product Number	A	B	C	D	E
ST-8-14(R)	13,9	5,1	11,5	8	12

■ ST-8 PCB Type Receptacle



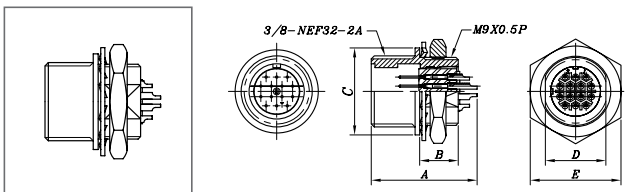
Product Number	A	B	C	D	E	F
ST-8-14(RPCB)	14,5	5,1	3	11,5	8	12

■ STH-8 Plug



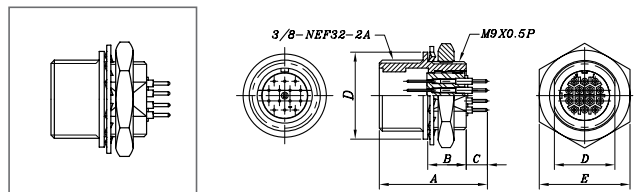
Product Number	A	B	C	D	E
STH-8-14(P)	58	11	7,2	3/8-32NEF-2B	5

■ STH-8 solder Type Receptacle



Product Number	A	B	C	D	E
STH-8-14(R)	14	5,1	11,5	8	12

■ STH-8 PCB Type Receptacle



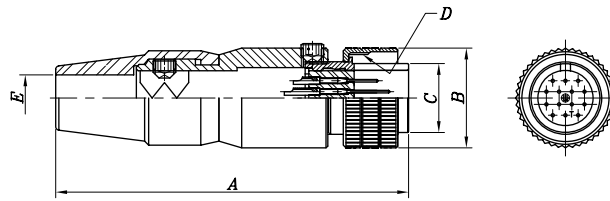
Product Number	A	B	C	D	E	F
STH-8-14(RPCB)	14,3	5,1	2,8	11,5	8	12

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# ST-8B Series

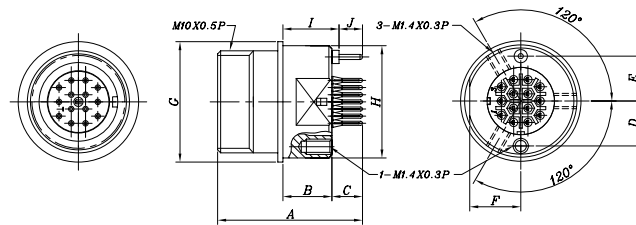
# Screw-on Type Male / Female Plug, Receptacle

## ST-8B Plug



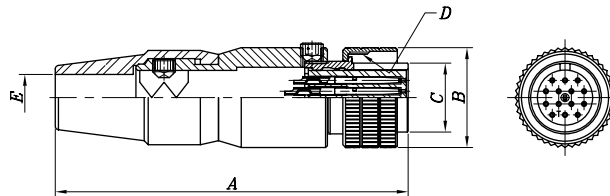
Product Number	A	B	C	D	E
ST-8B-14(P)	38,9	11	7,6	M14×1,0P	5,1

## ST-8B Receptacle



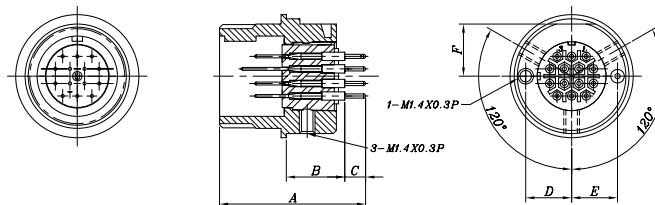
Product Number	A	B	C	D	E	F	G	H	I	J
ST-8B-14(RGPCB)	14,2	4,8	3	4,4	4,4	5	11,8	10,95	5,5	2,3

## STH-8B Plug



Product Number	A	B	C	D	E
STH-8B-14(P)	38,9	11	7,6	M14×1,0P	5,1

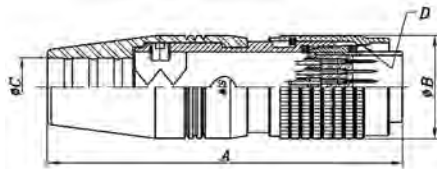
## STH-8B Receptacle



Product Number	A	B	C	D	E	F	G	H	I	J
STH-8B-14(RGPCB)	14,2	4,8	3	4,4	4,4	5	11,8	10,95	5,5	2,3

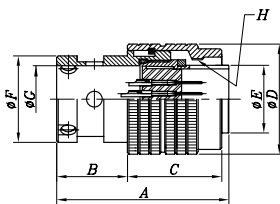
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ ST-9 Plug



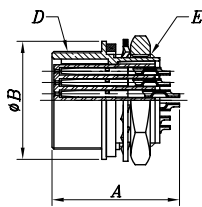
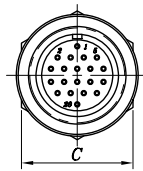
Product Number	A	∅ B	∅ C	D
ST-9-12(P)	43,0	12,5	7,0	M10,5×0,5P
ST-9-16(P)				
ST-9-20(P)				

■ ST-9 Molding Type Plug



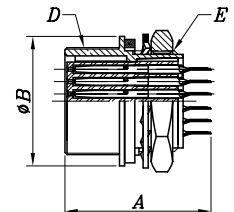
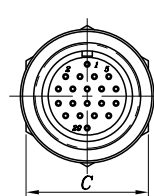
Product Number	A	B	C	∅ D	∅ E	∅ F	∅ G	H
ST-9-12(PLM1)	22	9	12	14	8,6	11	8,5	M10,5×0,5P
ST-9-16(PLM1)								
ST-9-20(PLM1)								

■ ST-9 Solder Type Receptacle



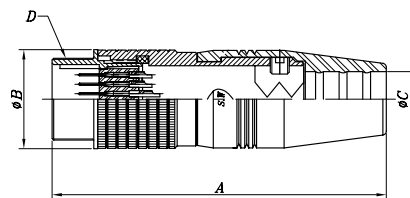
Product Number	A	∅ B	C	D	E
ST-9-12(R)	13,6	12,6	12,0	M10,5×0,5P	M10×0,75P
ST-9-16(R)					
ST-9-20(R)					

■ ST-9 PCB Type Receptacle



Product Number	A	∅ B	C	D	E
ST-9-12(RPCB)	14,1	12,6	12,0	M10,5×0,5P	M10×0,75P
ST-9-16(RPCB)					
ST-9-20(RPCB)					

■ STA-9 Adapter

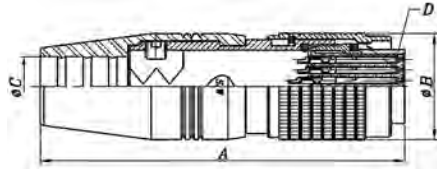


Product Number	A	∅ B	∅ C	D
STA-9-12	42,6	12,6	7,0	M10,5×0,5P
STA-9-16				
STA-9-20				

# ST-9 Series

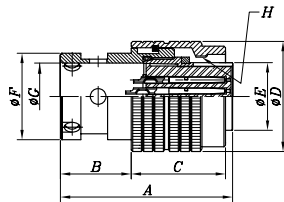
# Screw-on type Male / Female Plug, Receptacle, Adapter

## ■ STH-9 Plug



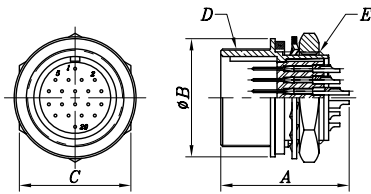
Product Number	A	ø B	ø C	D
STH-9-12(P)				
STH-9-16(P)	43,0	12,5	7,0	M10,5×0,5P
STH-9-20(P)				

## ■ STH-9 Molding Type Plug



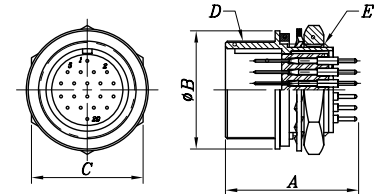
Product Number	A	B	C	ø D	ø E	ø F	ø G	H
STH-9-12(PLM1)								
STH-9-16(PLM1)	22	9	12	14	8,6	11	8,5	M10,5×0,5P
STH-9-20(PLM1)								

## ■ STH-9 Solder Type Receptacle



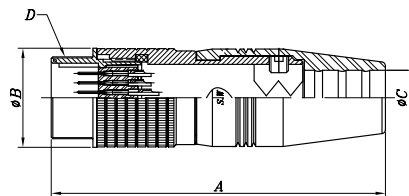
Product Number	A	ø B	C	D	E
STH-9-12(R)					
STH-9-16(R)	13,6	12,6	12,0	M10,5×0,5P	M10×0,75P
STH-9-20(R)					

## ■ STH-9 PCB Type Receptacle



Product Number	A	ø B	C	D	E
STH-9-12(RPCB)					
STH-9-16(RPCB)	14,1	12,6	12,0	M10,5×0,5P	M10×0,75P
STH-9-20(RPCB)					

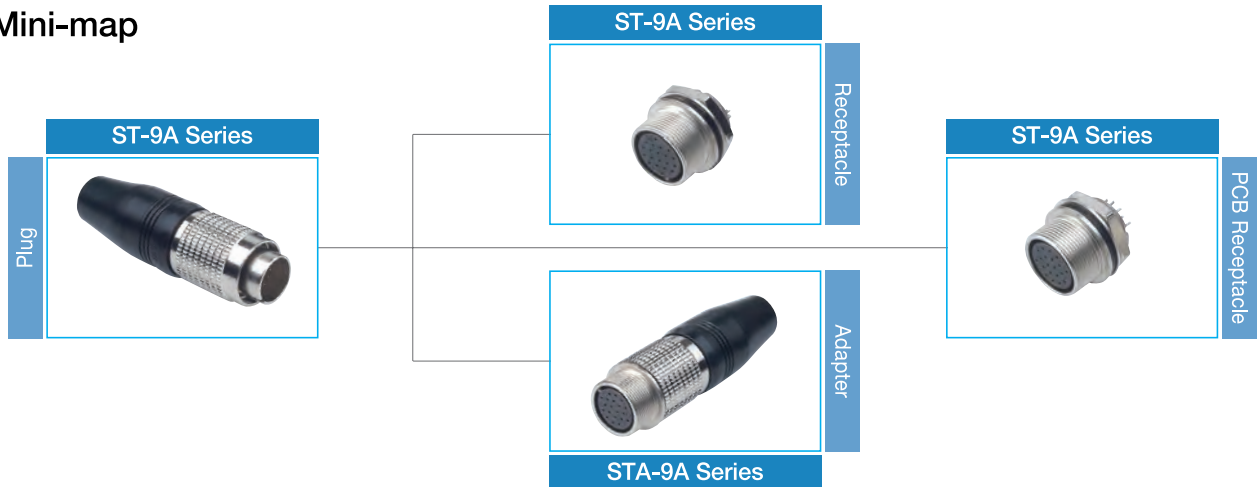
## ■ STHA-9 Adapter



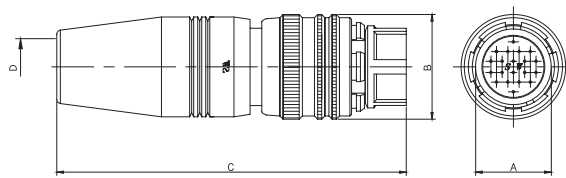
Product Number	A	ø B	ø C	D
STHA-9-12				
STHA-9-16	42,6	12,6	7,0	M10,5×0,5P
STHA-9-20				

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Mini-map

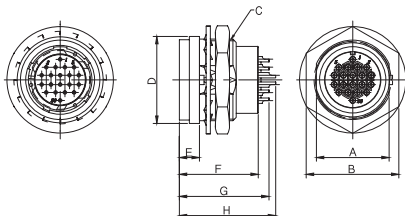


■ ST-9A Plug



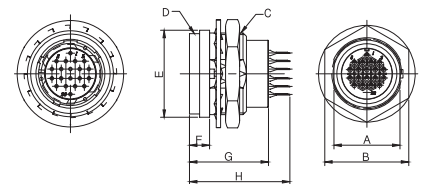
Product Number	∅ A	∅ B	C	∅ D
ST-9A-12(P)	9,4	13	(43,4)	7
ST-9A-16(P)				
ST-9A-20(P)				

■ ST-9A Receptacle



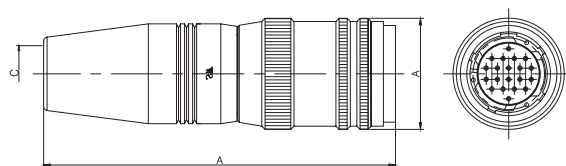
Product Number	A	B	C	∅ D	E	F	G	H
ST-9A-12(R)	11	14	M12×0,75P	13	3	11,8	13,4	14,4
ST-9A-16(R)								
ST-9A-20(R)								

■ ST-9A PCB Receptacle



Product Number	A	B	C	D	∅ E	F	G	H
ST-9A-12(RPCB)	11	14	M10×0,75P	M10×0,75P	13	3	11,8	15
ST-9A-16(RPCB)								
ST-9A-20(RPCB)								

■ STA-9A Adapter



Product Number	∅ A	B	∅ C
STA-9A-12(P)	13,8	(43,7)	7
STA-9A-16(P)			
STA-9A-20(P)			

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## General Instruction / Information

- Diagram 1 shows a sample wiring for ST series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.
- Specification of Nut

Size	Nut Specification	Nut tightening force
ST - 9	M10×0,75P	20~23(kgf · cm)
ST - 9A	M12×0,75P	20~23(kgf · cm)

## Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0,08mm<sup>2</sup>(AWG#28).
- ② Insert RUBBER BUSHING to cable.
- ③ Insert PLUG HOUSING to cable.
- ④ Strip cable per dimension given and loosen braid.
- ⑤ Secure PLUG BODY to jig for soldering.
- ⑥ Solder stripped cable to pin.
- ⑦ Fasten CRIMP using hand crimp tool (SA-HCT<sup>①</sup>)
- ⑧ Lock PLUG HOUSING and PLUG BODY using tightening force displayed on Table 1.
- ⑨ Tighten WRENCH BOLT using 0,3N force onto one of two embossed parts of crimp.
- ⑩ Cover RUBBER BUSHING onto PLUG HOUSING.

<sup>①</sup> See below for information on SA-HCT.

Diagram 1

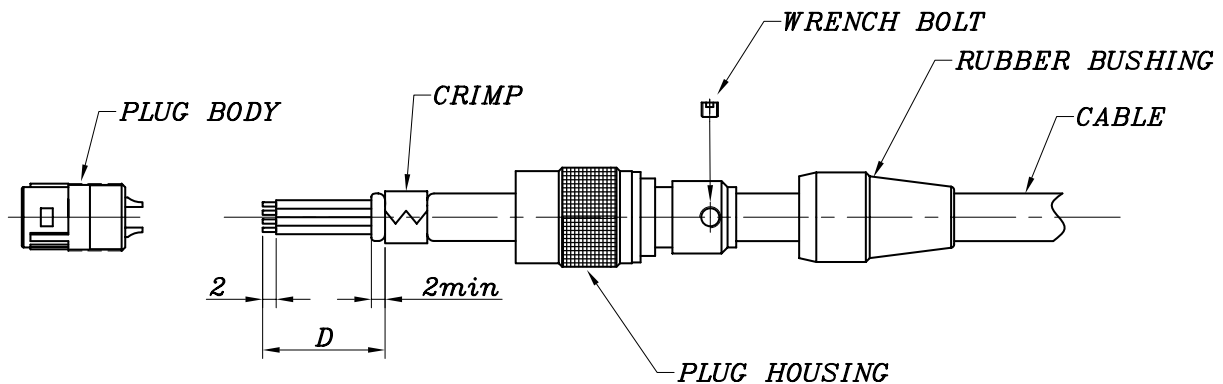


Table 1

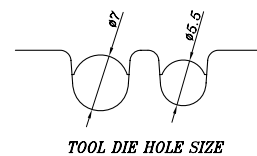
unit : mm

Size	Spanner Jaw	D (Dimension)	Tightening Force	Notes
ST	10	15	1,0N · m (10kgf · cm)	SA-HCT size $\varnothing$ 7,0

## SA-HCT (Hand Crimp Tool)



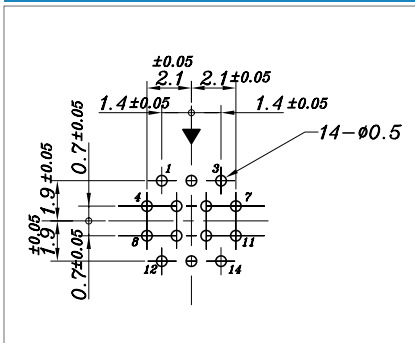
Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results.



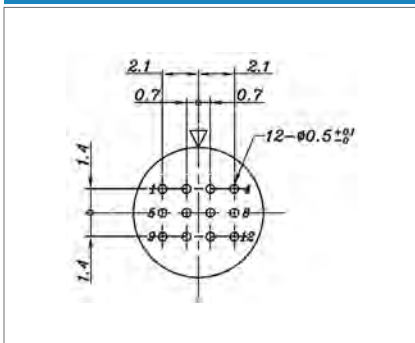


■ ST Receptacle PCB Hole Layout

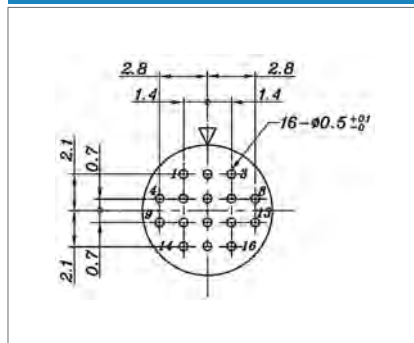
8 size - 14 core



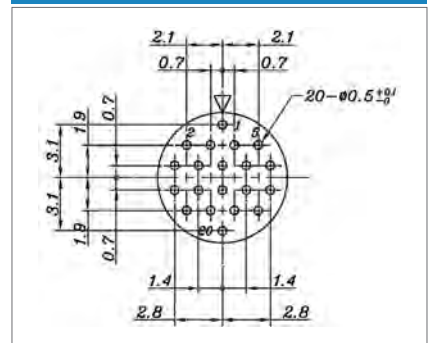
9 size - 12 core



9 size - 16 core

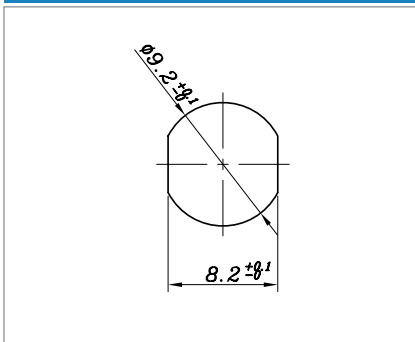


9 size - 20 core

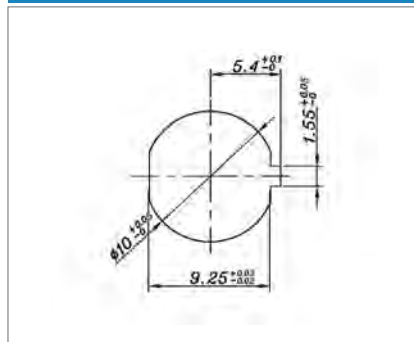


■ ST Receptacle Panel Layout

8 size receptacle



9 size receptacle





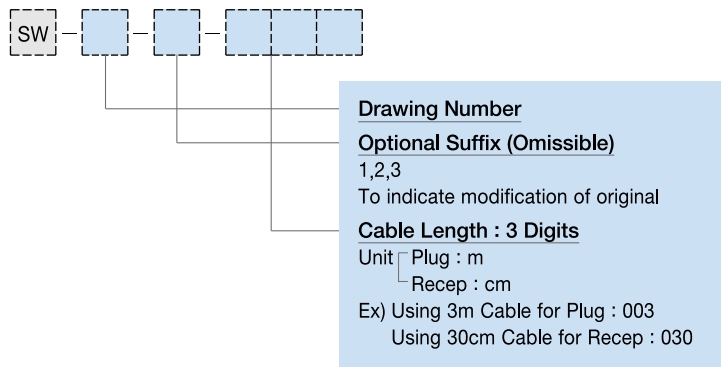
**Features**

- Super-miniature size with multiple contact
- Safe insert system preventing male damage
- Standard and Custom Design

**Applications**

- Professional A/V
- Measuring equipment
- Sensors
- Wireless radio
- Medical

**Part Numbering**



**Plug Cable Assembly**



Type	Construction
A	ST Connector + Cable + Housing
B	ST Connector + Cable + ST Connector

※ Design and Customization Service Available

**Receptacle Cable Assembly**



Type	Construction
A	ST Connector + wire + open end
B	ST Connector + wire + Housing
C	ST Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



# ST IP67 Series

## Part Numbering



### Features

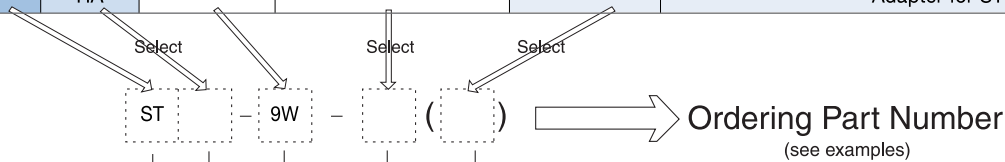
- Super-miniature size with multiple contact
- Safe insert system preventing pin damage
- Protection rating of IP67 with over molding

### Applications

- Professional A/V
- Measuring equipment
- Sensors
- Wireless radio
- Medical

### Part Numbering

Product Number		Size	Number of Contacts	Suffix	Notes
Series	Prefix				
ST	H	9W	12,16,20	P	ST series Plug
				PLM	Molding Type ST Plug
				R/RPCB	ST Receptacle
				P	STH series Plug
	PLM			Molding Type STH Plug	
	R/RPCB			STH Receptacle	
	A			Adapter for ST series	
	HA			Adapter for STH series	



**Connector Series**  
 ST series  
 STH - reverse contact  
 STA - adapter for ST series  
 STHA - adapter for STH series

**Size & IP67 type**  
 9W

**No. of Contacts**  
 12,16,20

**Shell Type**  
 P : Plug  
 R : Receptacle  
 RPCB : Receptacle (PCB termination)  
 PLM : Plug (Molding type)  
 blank : Adapter

### Examples

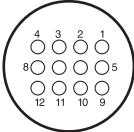
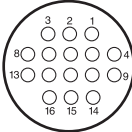
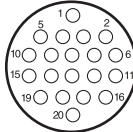
ST - 9W - 12 ( P )  
 ST IP67 Series - Size 9 Plug -12 Male Contact

STH - 9W - 16 ( R )  
 STH IP67 Series - Size 9 Receptacle - 16 Female Contact

STA - 9W - 20  
 Adapter for ST IP67 Series - Size 9 Adapter - 20 Female Contact

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

Major Performances / Contact Arrangements


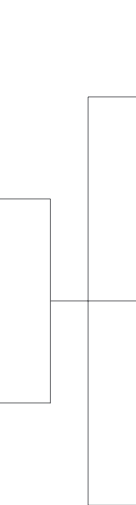


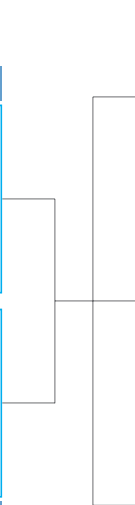






Performance	Size / No. of Contacts		
	12	16	20
Withstanding Voltage (per min) <sup>1</sup>	AC 300V	AC 300V	AC 300V
Current	1A	1A	1A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	30m Ω	30m Ω	30m Ω
Solder Pot Inside Diameter	∅ 0,5	∅ 0,5	∅ 0,5
Wire Gauge (Maximum)	AWG28	AWG28	AWG28
Contact Arrangement	 Receptacle	 Receptacle	 Receptacle
IP Protection Rating	IP 67		

<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from solder pot.

Material Used / Finish

		Material	Finish
Body		Brass & Zinc alloy	Ni Plating
Insulator		PPS resin	Black
Contacts	Male	Phosphor bronze and Beryllium	Gold Plating
	Female	Phosphor bronze	Gold Plating

ST IP67 Series Mini-map

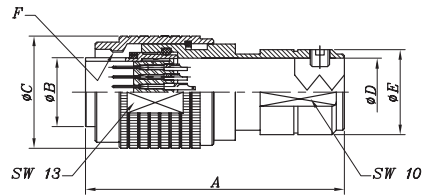
ST-9W IP67 Series			STH-9W IP67 Series		
					
					
					

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# ST IP67 Series

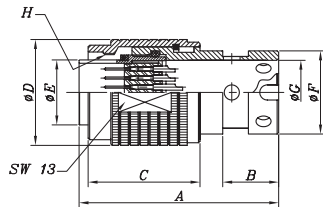
## Male Plug, Female Receptacle / Adapter

### ■ ST-9W Plug



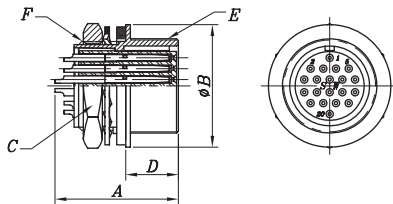
Product Number	A	ø B	ø C	ø D	ø E	F
ST-9W-12(P)						
ST-9W-16(P)	32,3	8,6	14	8,5	10,6	M10,5×0,5P
ST-9W-20(P)						

### ■ ST-9W Molding Type Plug



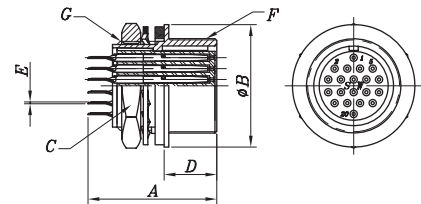
Product Number	A	B	C	ø D	ø E	ø F	ø G	H
ST-9W-12(PLM)								
ST-9W-16(PLM)	26,4	7,4	14,8	14	8,6	11	8,5	M10,5×0,5P
ST-9W-20(PLM)								

### ■ ST-9W Solder Type Receptacle



Product Number	A	ø B	C	D	E	F
ST-9W-12(R)						
ST-9W-16(R)	13,6	13,5	12	5,9	M10,5×0,5P	M10×0,75P
ST-9W-20(R)						

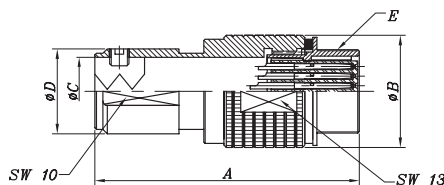
### ■ ST-9W PCB Type Receptacle



Product Number	A	ø B	C	D	E	F	G
ST-9W-12(RPCB)							
ST-9W-16(RPCB)	14,1	13,5	12	5,9	0,4	M10,5×0,5P	M10×0,75P
ST-9W-20(RPCB)							

### ■ STA-9W Adapter

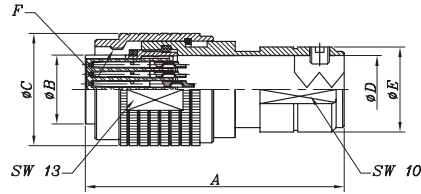
Product Number	A	ø B	ø C	ø D	E
STA-9W-12					
STA-9W-16	33	14	8,5	10,6	M10,5×0,5P
STA-9W-20					



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

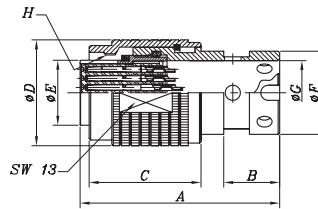
■ STH-9W Plug

Product Number	A	∅B	∅C	∅D	∅E	F
STH-9W-12(P)						
STH-9W-16(P)	32,3	8,6	14	8,5	10,6	M10,5×0,5P
STH-9W-20(P)						

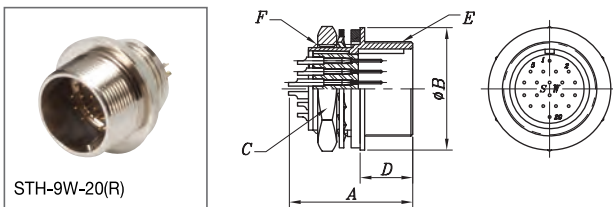


■ STH-9W Molding Type Plug

Product Number	A	B	C	∅D	∅E	∅F	∅G	H
STH-9W-12(PLM)								
STH-9W-16(PLM)	26,4	7,4	14,8	14	8,6	11	8,5	M10,5×0,5P
STH-9W-20(PLM)								

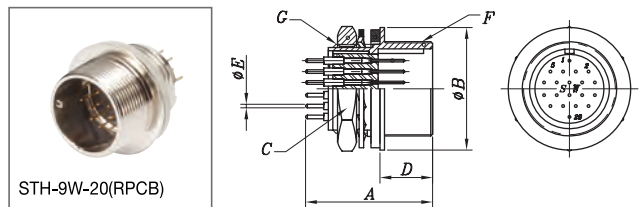


■ STH-9W Solder Type Receptacle



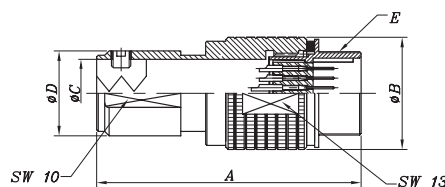
Product Number	A	∅B	C	D	E	F
STH-9W-12(R)						
STH-9W-16(R)	13,6	13,5	12	5,9	M10,5×0,5P	M10×0,75P
STH-9W-20(R)						

■ STH-9W PCB Type Receptacle



Product Number	A	∅B	C	D	E	F	G
STH-9W-12(RPCB)							
STH-9W-16(RPCB)	14,1	13,5	12	5,9	0,4	M10,5×0,5P	M10×0,75P
STH-9W-20(RPCB)							

■ STHA-9W Adapter



Product Number	A	∅B	∅C	∅D	E
STHA-9W-12					
STHA-9W-16	33	14	8,5	10,6	M10,5×0,5P
STHA-9W-20					

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## General Instruction / Information

- Diagram 1 shows a sample wiring for ST series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.
- Specification of Nut

Size	Nut Specification	Nut tightening force
ST - 9W	M10×0,75P	20~23(kgf · cm)

## Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0,08mm<sup>2</sup>(AWG#28).
- ② Insert Plug Housing to cable.
- ③ Strip cable per dimension given and loosen braid.
- ④ Secure Plug Body to jig for soldering.
- ⑤ Solder stripped cable to pin.
- ⑥ Fasten Crimp using hand crimp tool(SA-HCT<sup>①</sup>).
- ⑦ Lock Plug Housing and Plug Body using tightening force displayed on Table 1.
- ⑧ Tighten Wrench Bolt using 0,3N force onto one of two embossed parts of crimp.
- ⑨ Plug Housing must be over molded in order to achieve IP67 rating.

<sup>①</sup> See below for information on SA-HCT.

Diagram 1

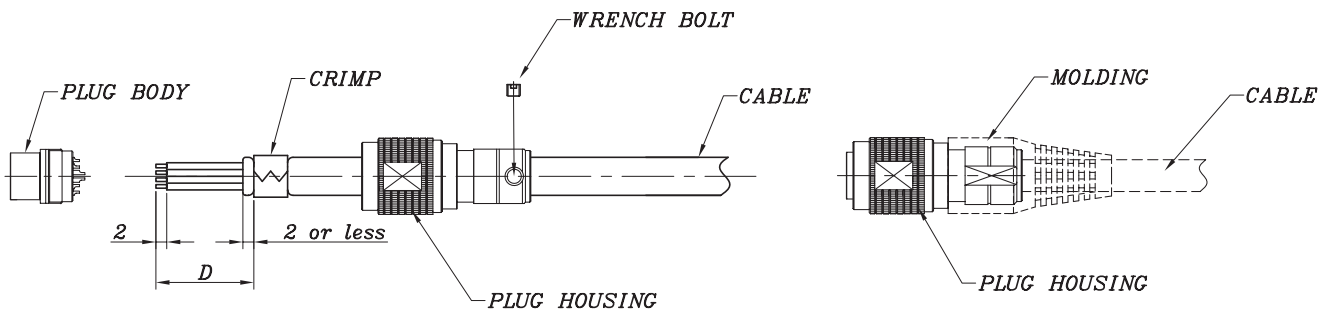


Table 1

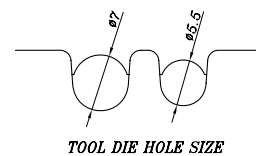
unit : mm

Size	Spanner Jaw	D (Dimension)	Tightening Force	Notes
ST-9W	10	15	1,0N · m (10kgf · cm)	SA-HCT size $\phi$ 7,0

## SA-HCT (Hand Crimp Tool)



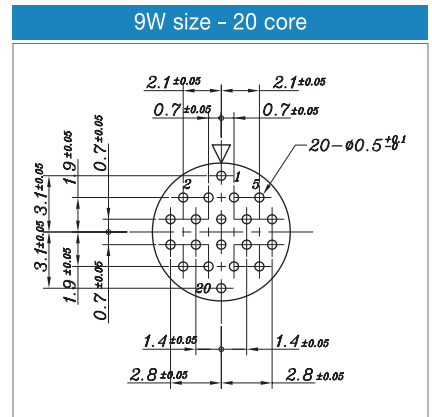
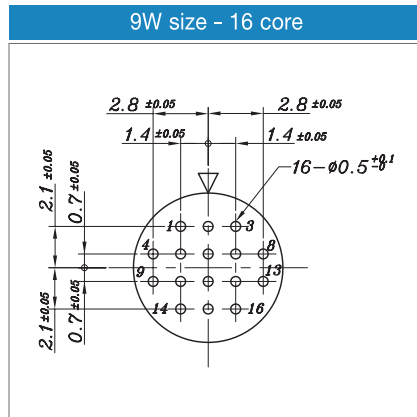
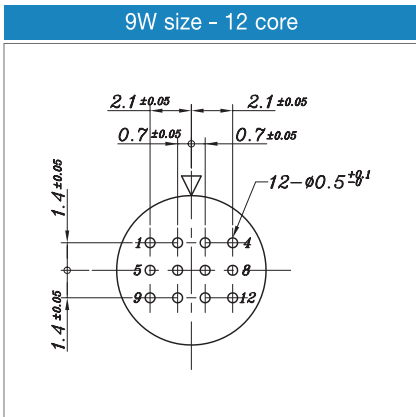
Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results.



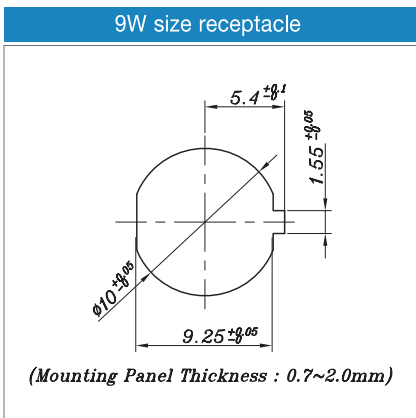
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ Receptacle PCB Hole Layout



■ Receptacle Panel Layout





**Features**

- Super-miniature size with multiple contact
- Safe insert system preventing pin damage
- Protection rating of IP67 with over molding
- Standard and Custom Design

**Applications**

- Professional A/V
- Measuring equipment
- Sensors
- Wireless radio
- Medical

**Part Numbering**



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit Plug : m  
       Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

**Plug Cable Assembly**



Type	Construction
A	ST IP67 Connector + Cable + Housing
B	ST IP67 Connector + Cable + ST IP67 Connector

※ Design and Customization Service Available

**Receptacle Cable Assembly**



Type	Construction
A	ST IP67 Connector + wire + open end
B	ST IP67 Connector + wire + Housing
C	ST IP67 Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



# SU Series Part Numbering



## Features

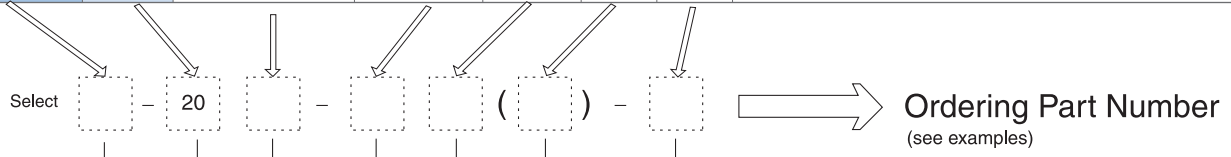
- Safe connection / Easy mounting
- Antenna Interface Standards Group(AISG) Specification
- Electromagnetic Protection
- Protection rating of IP67
- UL Recognized 
- IEC 61076-2-106 and AISG Specification

## Applications

- Electronic Precision Equipment
- Control Engineering
- Automation
- Medical

## Part Numbering

Series	Size	Body Type	No. of Contacts	Contact Type	Option		Notes
					PCB	Potting	
SU	20	SP	3,4,5,6 8,A5,12,14	P			Plug (Male Contact)
		P		S			Plug (Female Contact)
		SBR		S	●		Receptacle (Female Contact)
		SBR1		S	●	●	Receptacle (Female Contact)
		BR		P	●	●	Receptacle (Male Contact)
		SRB		S	●	●	Receptacle (Female Contact, Rear mount)
		SPR		S	●	●	Receptacle (Female Contact, Flange type)
		SPR2					
		SPR5					
		PR		P	●	●	Receptacle (Male Contact, Flange type)
		PR3					
		PR6		P	●	●	Receptacle (Male Contact, Long Flange type)











### Examples

- SU - 20SP - 3P  
SU series - Size 20 Plug - 3 Male Contact
- SU - 20P - 8S  
SU series - Size 20 Plug - 8 Female Contact
- SU - 20SBR - 12S  
SU series - Size 20 Receptacle - 12 Female Contact
- SU - 20BR - 8P ( PCB )  
SU series - Size 20 Receptacle - 8 PCB termination Contact

<b>Connector Series</b> SU 20 Series(IP67 type)
<b>Body Type</b> SP : Plug P : Plug SBR : Receptacle SBR1 : Receptacle BR : Receptacle SRB : Receptacle, Rear mount SPR : Receptacle, Flange type SPR2 : Receptacle, Flange type SPR5 : Receptacle, Flange type PR : Receptacle, Flange type PR3 : Receptacle, Long Flange type PR6 : Receptacle, Long Flange type BRC : Receptacle cap (accessory) SBRC : Receptacle cap (accessory)
<b>No. of Contacts</b> 3,4,5,6,8,A5,12,14
<b>Contact Type</b> P : Male S : Female None : Receptacle cap
<b>Contact Option(for receptacle)</b> PCB : PCB contact termination
<b>Potting Option</b> 1 : Silicon 2 : Epoxy

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Major Performance / Contact Arrangements

Size / No. of Contacts Performance	Standard	Size 20							
		3	4	5	6	8	A5	12	14
Contact Arrangement									
	IEC 61076-2-106	○	○	○	○	○		○	○
	IEC 60130-9	○	○		○	○			
Rated Voltage	IEC 60664-1	300V		300V		100V		150V	
	IEC 61076-2-106	100V		63V		32V		32V	
	UL 1977	60V							
Rated Current(40℃)	IEC 60512-5-2	5A						3A	
Rated Impulse Withstand Voltage	IEC 61076-2-106	840V				500V			
	IEC 60664-1	1500V				500V		1200V	
Insulation Resistance	IEC 60512, Test 3a	≥10 <sup>8</sup> Ω							
Contact Resistance	IEC 60512, Test 2a	≤5m Ω							
Wire Gauge(Maximum)		0,75mm (AWG 20)						0,25mm (AWG 24)	
Cable Diameter		∅ 4 ~ ∅ 8							
Temperature Range		- 40℃ ~ +85℃							
IP Protection Rating		IP67 / IP68							

■ Material Used / Finish

		Material	Finish
Body		Zinc Alloy, Brass Aluminum	Ni Plating
Insulator		PA	Black
Contacts	Male	Brass	Gold Plating
	Female	Phosphor bronze	Gold Plating

## SU Series Mini-map

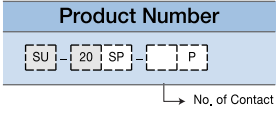


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

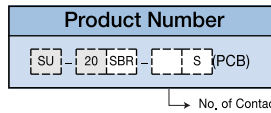
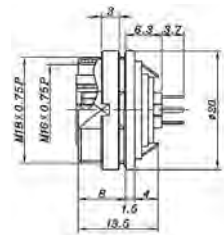
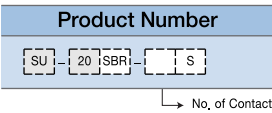
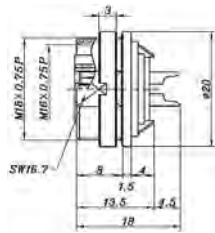


# SU Series Plug, Receptacle(Solder / PCB type)

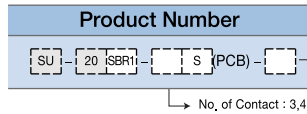
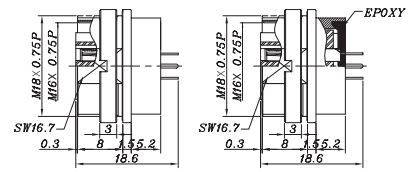
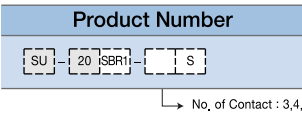
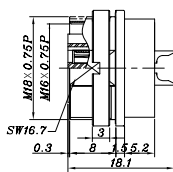
## ■ SU-20SP Series



## ■ SU-20SBR Series | Bulkhead

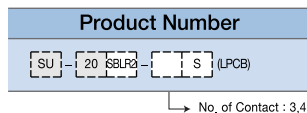
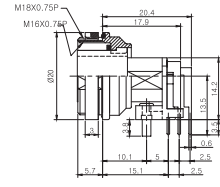
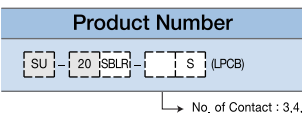
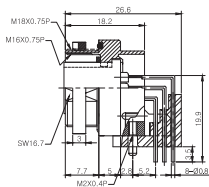


## ■ SU-20SBR1 Series | Bulkhead, Potting



With Epoxy

## ■ SU-20SBLR Series | Bulkhead, Right Angle PCB Type



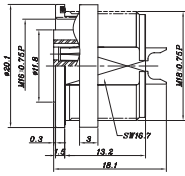
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ SU-20SRB Series | Rear mount



SU-20SRB-8S



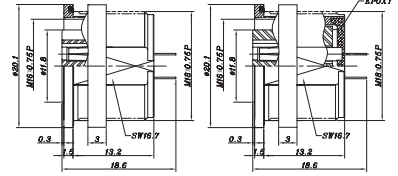
Product Number

SU - 20 SRB - S

No. of Contact : 3,4,5,6,8,12,14



SU-20SRB-8S(PCB)



Product Number

SU - 20 SRB - S (PCB) -

Potting option  
1, Silicon 2, Epoxy

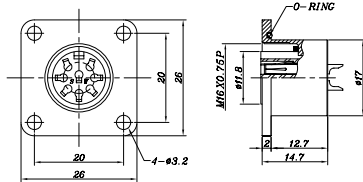
No. of Contact : 3,4,5,6,8,12,14

With Epoxy

■ SU-20SPR Series | Flange, Potting



SU-20SPR-8S



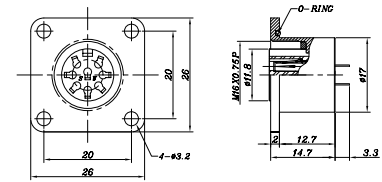
Product Number

SU - 20 SPR - S

No. of Contact : 3,4,5,6,8,12,14



SU-20SPR-8S(PCB)



Product Number

SU - 20 SPR - S (PCB) -

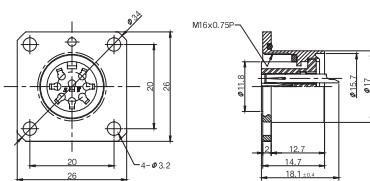
Potting option  
1, Silicon 2, Epoxy

No. of Contact : 3,4,5,6,8,12,14

With Epoxy



SU-20SPR2-8S



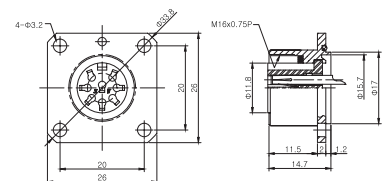
Product Number

SU - 20 SPR2 - S

No. of Contact : 3,4,5,6,8,12,14



SU-20SPR5-8S



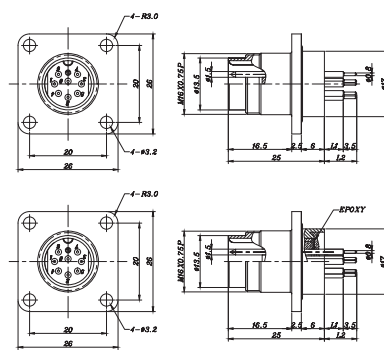
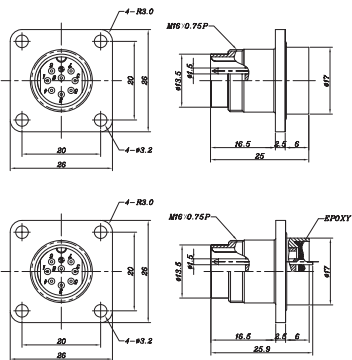
Product Number

SU - 20 SPR5 - S

No. of Contact : 3,4,5,6,8,12,14



■ SU-20PR3 Series | Flange, Potting

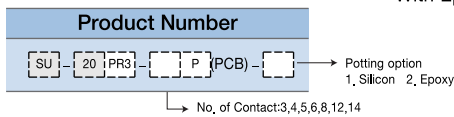
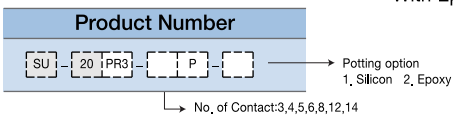


L1 and L2 customizable upon request.

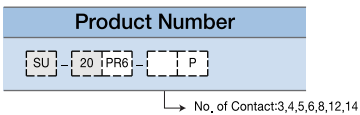
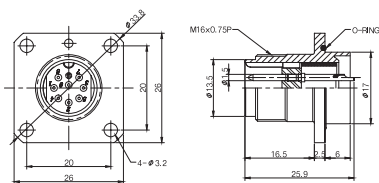
L <sub>1</sub>	L <sub>2</sub>
4,8	8,4

With Epoxy

With Epoxy



■ SU-20PR6 Series



# SU Series Cable Assembly for Plug



## Features

- AISG 1,1/2,0 Protocol
- Protection rating of IP 67/IP68
- Available in UL 20549
- Female to Female, Male to Male, Female to Male
- Available in 1m to 100 m
- RoHS Compliant
- PVC Free
- IEC 61076-2-106 and AISG Specification

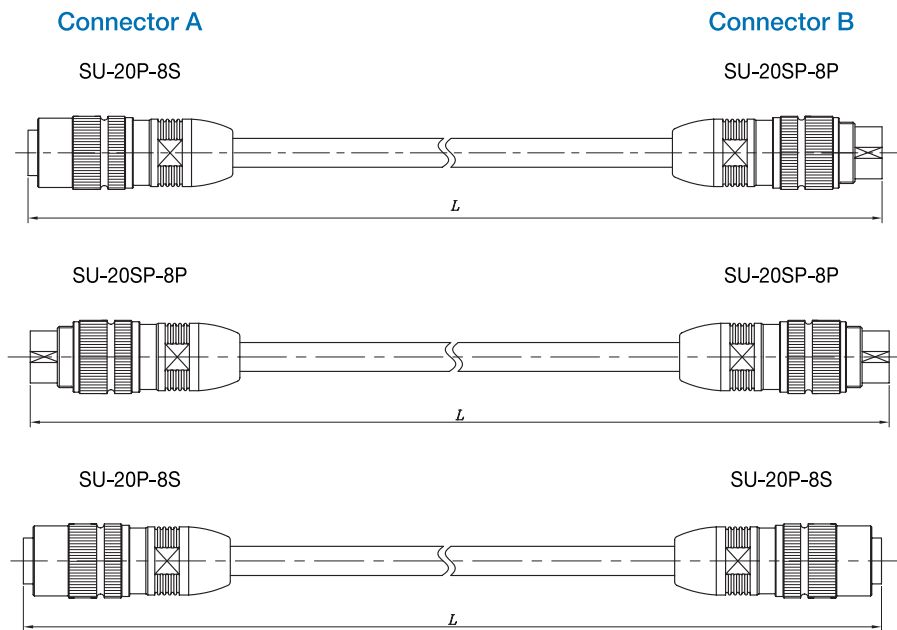
## Applications

- Telecommunication
- RET Control Cable
- Adapter Cable
- General Industrial

## ■ Plug Cable Assembly

Connector A		Connector B		Cable Length, L(m)	Product Number
SU-20SP-8P	Male contact	SU-20P-8S	Female contact	1m ~ 100m	SW - 4509 - ***
SU-20SP-8P	Male contact	SU-20SP-8P	Male contact	1m ~ 100m	SW - 4510 - ***
SU-20P-8S	Female contact	SU-20P-8S	Female contact	1m ~ 100m	SW - 4994 - ***

\* The last three digits of product number indicates cable length, Cable length can be customized,



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



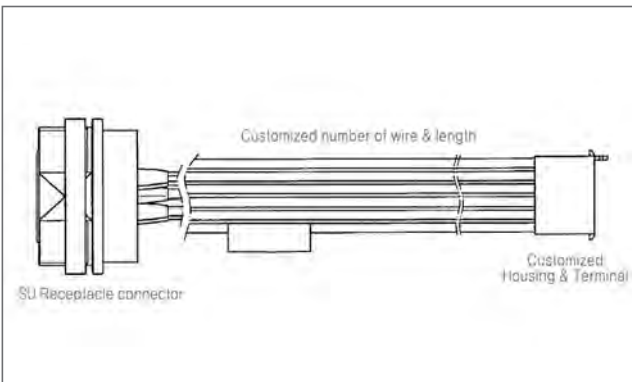
### Features

- IP 67/IP68 with Epoxy
- UL1569, UL1015, UL 1431
- Plastic/Metal Caps Available

### Applications

- CCU (Central Control Unit)
- RCU (Remote Control Unit)
- Junction Box
- Lightning Protection Unit
- Actuator

## ■ Part Numbering



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit Plug : m  
           Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

## ■ Cable Assembly for Receptacle



**Female Contact Receptacle Cable Assembly**



**Male Contact Receptacle Cable Assembly**

Type	Construction
A	Female Contact Receptacle + Wire + Housing & Terminal
B	Female Contact Flange Receptacle + Wire + Housing & Terminal
C	Female Contact Flange Receptacle + Wire(Short) + Housing & Terminal

※ Design and Customization Service Available

Type	Construction
D	Male Contact Receptacle + Wire + Housing & Terminal
E	Male Contact Receptacle + Wire (Short) + Housing & Terminal

※ Design and Customization Service Available

## ■ Protecting Caps for SU series

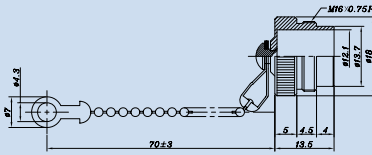


SU Female Contact type Receptacle



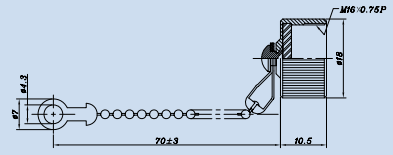
SU Male Contact type Receptacle

### SU-20SBRC, SU-20SBRC1



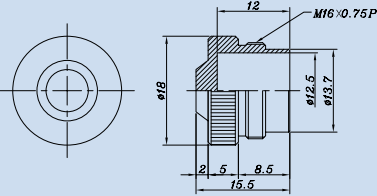
- SU-20SBRC : 70mm
- SU-20SBRC1 : Long chain type (120mm)

### SU-20BRC, SU-20BRC1

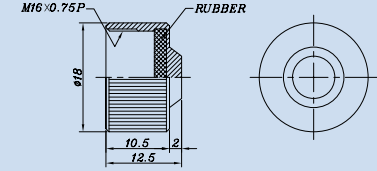


- SU-20BRC : 70mm
- SU-20BRC1 : Long chain type (120mm)

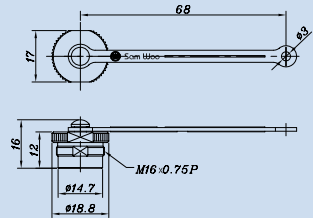
### SU-20SBRC2



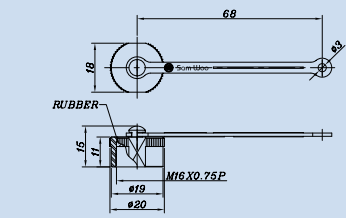
### SU-20BRC2



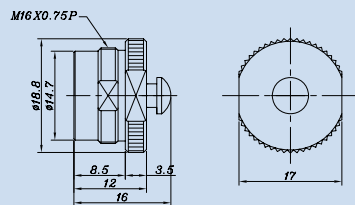
### SU-20SBRC4



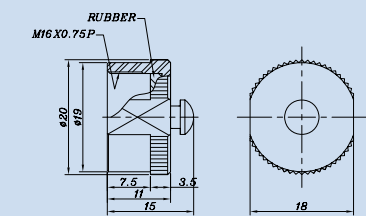
### SU-20BRC4



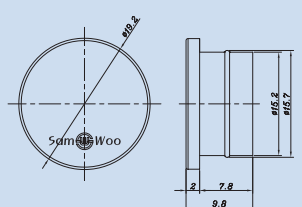
### SU-20SBRC5



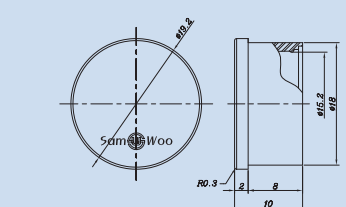
### SU-20BRC5



### SU-20SBR-DUST CAP

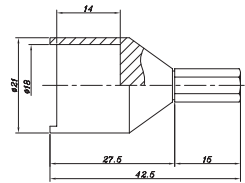
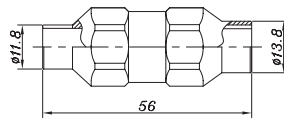
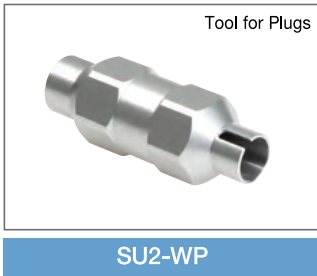
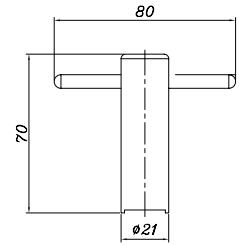
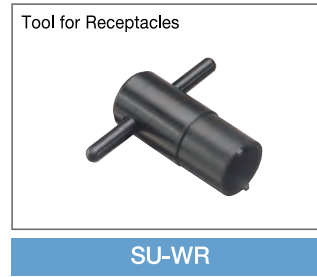
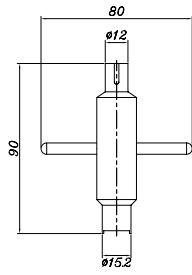


### SU-20BR-DUST CAP

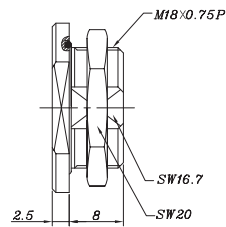
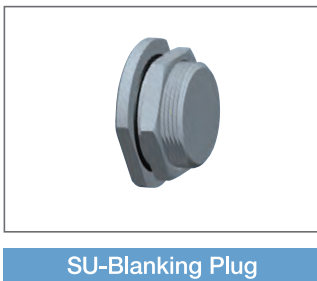


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

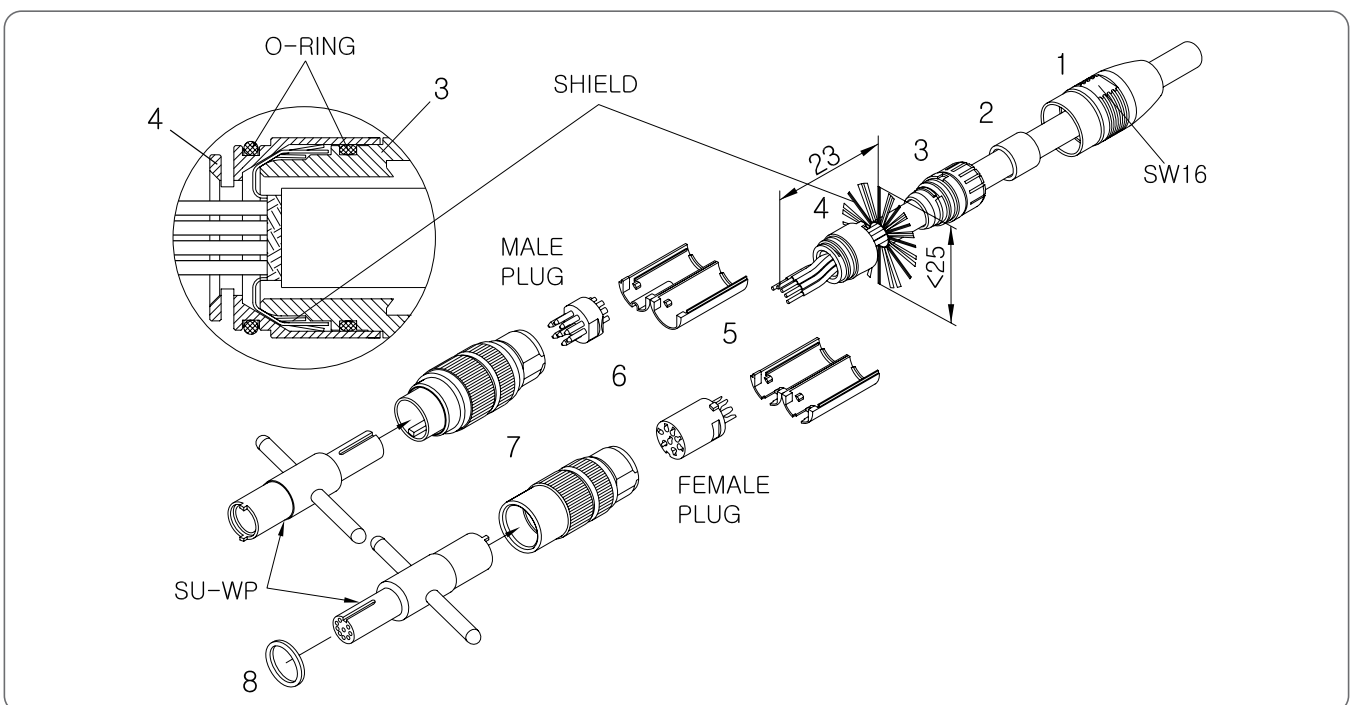
■ Tool for SU series



■ Below should go under Accessories



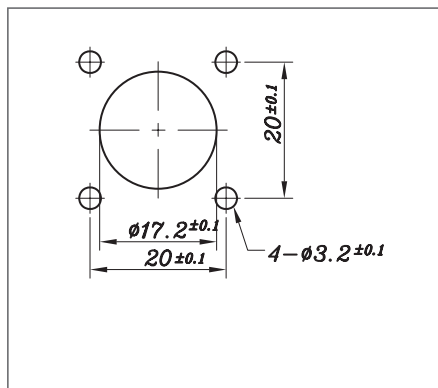
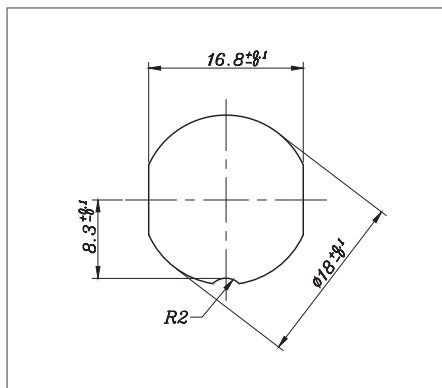
■ SU Cable Assembly Instruction



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

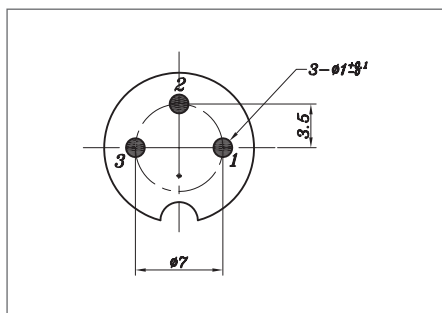
# SU Series

## ■ Panel Layout

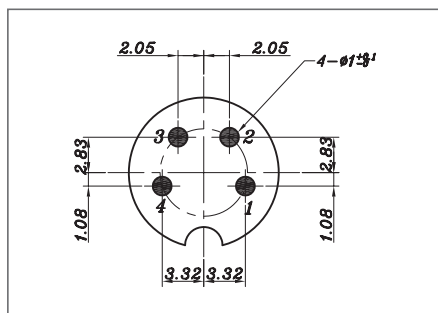


## ■ PCB Layout

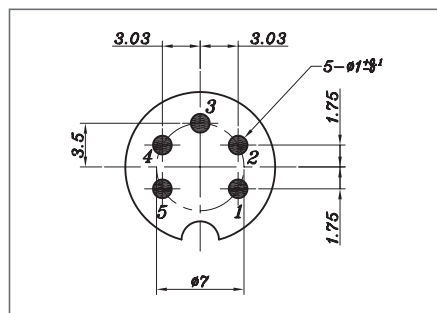
20 Size - 3 Core



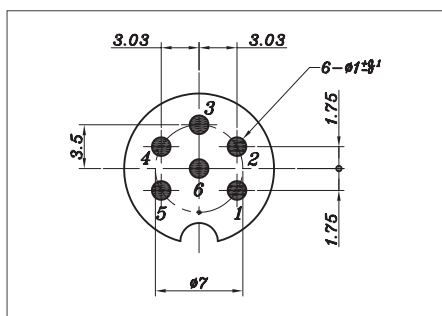
20 Size - 4 Core



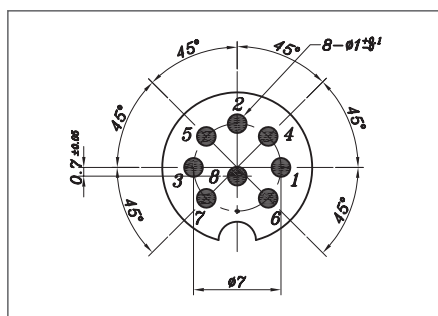
20 Size - 5 Core



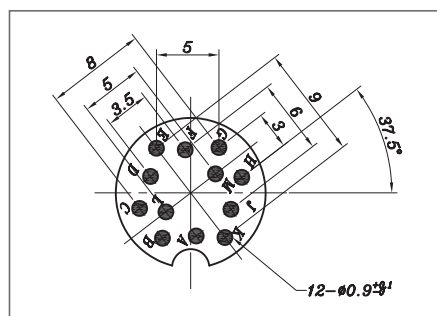
20 Size - 6 Core



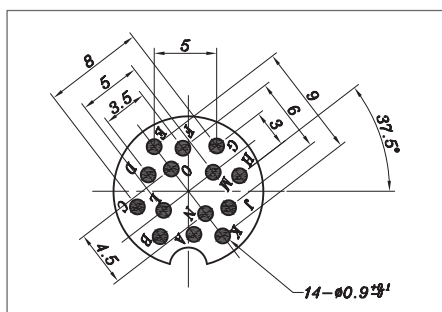
20 Size - 8 Core



20 Size - 12 Core



20 Size - 14 Core



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.





# SU2 / SU3 Series Part Numbering



## Features

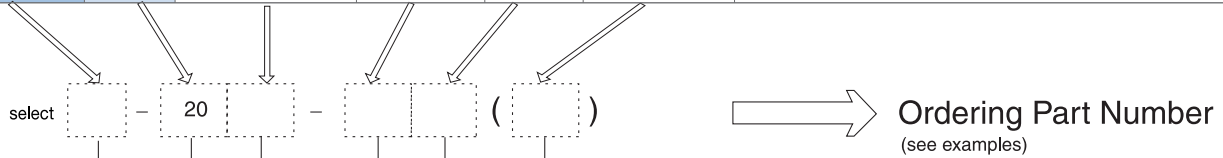
- AISG 1,1/2,0 Protocol Standard
- Protection rating of IP67
- IEC 61076-2-106 and AISG Specification
- RoHS Compliant   • UL Recognized
- Cost Effective
- Safe Connection / Easy Mounting

## Applications

- Telecommunication
- Smart Bias Tee
- Lightning Protection Unit
- RCU (Remote Control Unit)
- General Industrial
- CCU (Central Control Unit)
- Junction Box
- RET Control Cable
- Power Signal Splitter

## Part Numbering

Series	Size	Body Type	No. of Contacts	Contact Type	Cable Option	Notes
SU2	20	SP	3,4,5,6	P	6,0 / 8,0 / 9,0	Plug (Male Contact)
SU3		P	8,12,14	S	/ M	Plug (Female Contact)



**Connector Series**  
 SU2 20 Series(IP67 type)  
 SU3 20 Series(IP67 type, Hexagonal Body)

**Body Type**  
 SP : Plug  
 P : Plug

**No. of Contacts**  
 3,4,5,6,8,A5,12,14

**Contact Type**  
 P : Male  
 S : Female

**Cable Option (Applicable Cable Size)**  
 6,0 :  $\varnothing$  4,1mm~ $\varnothing$  6,0mm  
 8,0 :  $\varnothing$  6,1mm~ $\varnothing$  8,0mm  
 9,0 :  $\varnothing$  8,1mm~ $\varnothing$  9,0mm  
 M : Molding Type (Max  $\varnothing$  8mm)

## Examples

SU2 - 20SP - 5P - 6,0  
 SU2 Series - Size 20 Plug - 5 Male Contact - Cable Option 6,0

SU2 - 20P - 8S - 8,0  
 SU2 Series - Size 20 Plug - 8 Female Contact - Cable Option 8,0

SU3 - 20SP - 8P - 9,0  
 SU3 Series - Size 20 Plug - 8 Male Contact - Cable Option 9,0

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Major Performance / Contact Arrangements

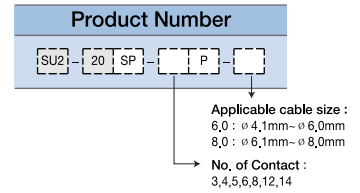
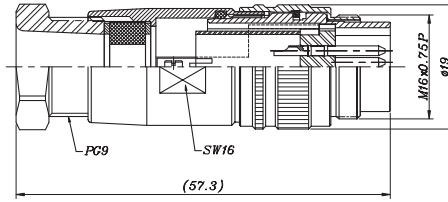
Performance	Standard	Size 20							
		3	4	5	6	8	A5	12	14
Contact Arrangement									
	IEC 61076-2-106	○	○	○	○	○		○	○
	IEC 60130-9	○	○		○	○			
Rated Voltage	IEC 60664-1	300V		300V		100V		150V	
	IEC 61076-2-106	100V		63V		32V		32V	
	UL 1977	60V							
Rated Current(40℃)	IEC 60512-5-2	5A						3A	
Rated Impulse Withstand Voltage	IEC 61076-2-106	840V				500V			
	IEC 60664-1	1500V				500V		1200V	
Insulation Resistance	IEC 60512, Test 3a	≥10 <sup>8</sup> Ω							
Contact Resistance	IEC 60512, Test 2a	≤5m Ω							
Wire Gauge(Maximum)		0,75mm <sup>2</sup> (AWG 20)						0,25mm <sup>2</sup> (AWG 24)	
Cable Diameter		ø 4 ~ ø 9							
Temperature Range		- 40℃ ~ +85℃							
IP Protection Rating		IP67 / IP68							

■ Material Used / Finish

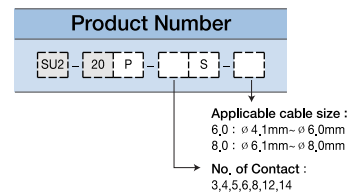
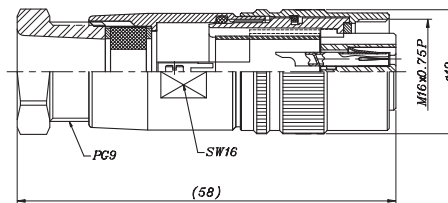
		Material	Finish
Body		Zinc Alloy, Brass	Ni Plating
Insulator		PA	Black
Contacts	Male	Brass	Gold Plating
	Female	Phosphor Bronze	Gold Plating

# SU2 / SU3 Series Plug(Male/ Female Contact)

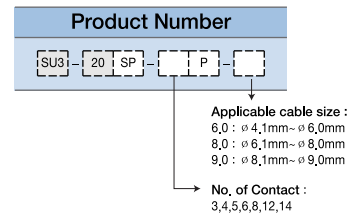
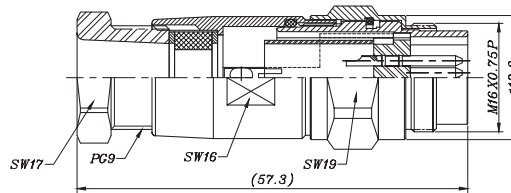
## ■ SU2-20SP Series



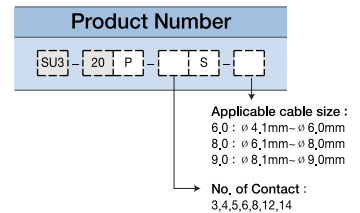
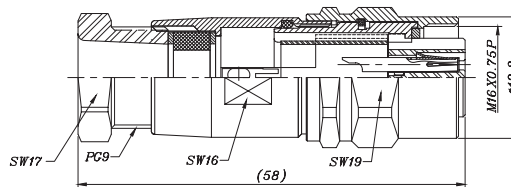
## ■ SU2-20P Series



## ■ SU3-20SP Series



## ■ SU3-20P Series



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



**Features**

- AISG 1,1/2,0 Protocol
- DIN 45326 Standard
- Available in UL20549
- Female to Female, Male to Male, Female to Male
- Available in 1m to 100m
- RoHS Compliant
- IP 67/IP 68 Protection
- PVC Free

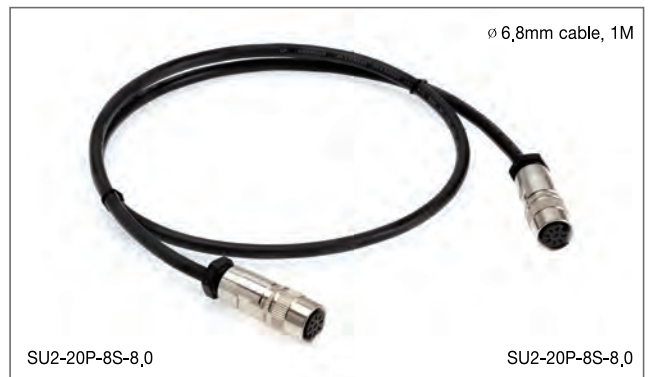
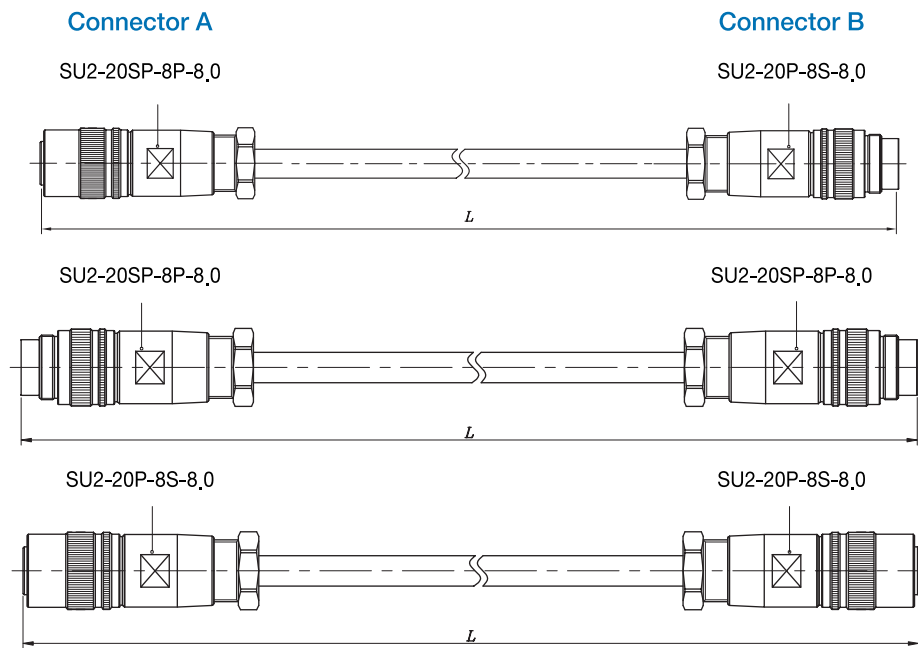
**Applications**

- Telecommunications
- RET Control Cable
- Adapter Cable
- General Industrial

■ **Part Numbering**

Connector A		Connector B		Cable Length, L(m)	Product Number
SU2-20SP-8P-8,0	Male contact	SU2-20P-8S-8,0	Female contact	1m ~ 100m	SW - 5266 - ***
SU2-20SP-8P-8,0	Male contact	SU2-20SP-8P-8,0	Male contact	1m ~ 100m	SW - 5505 - ***
SU2-20P-8S-8,0	Female contact	SU2-20P-8S-8,0	Female contact	1m ~ 100m	SW - 5506 - ***

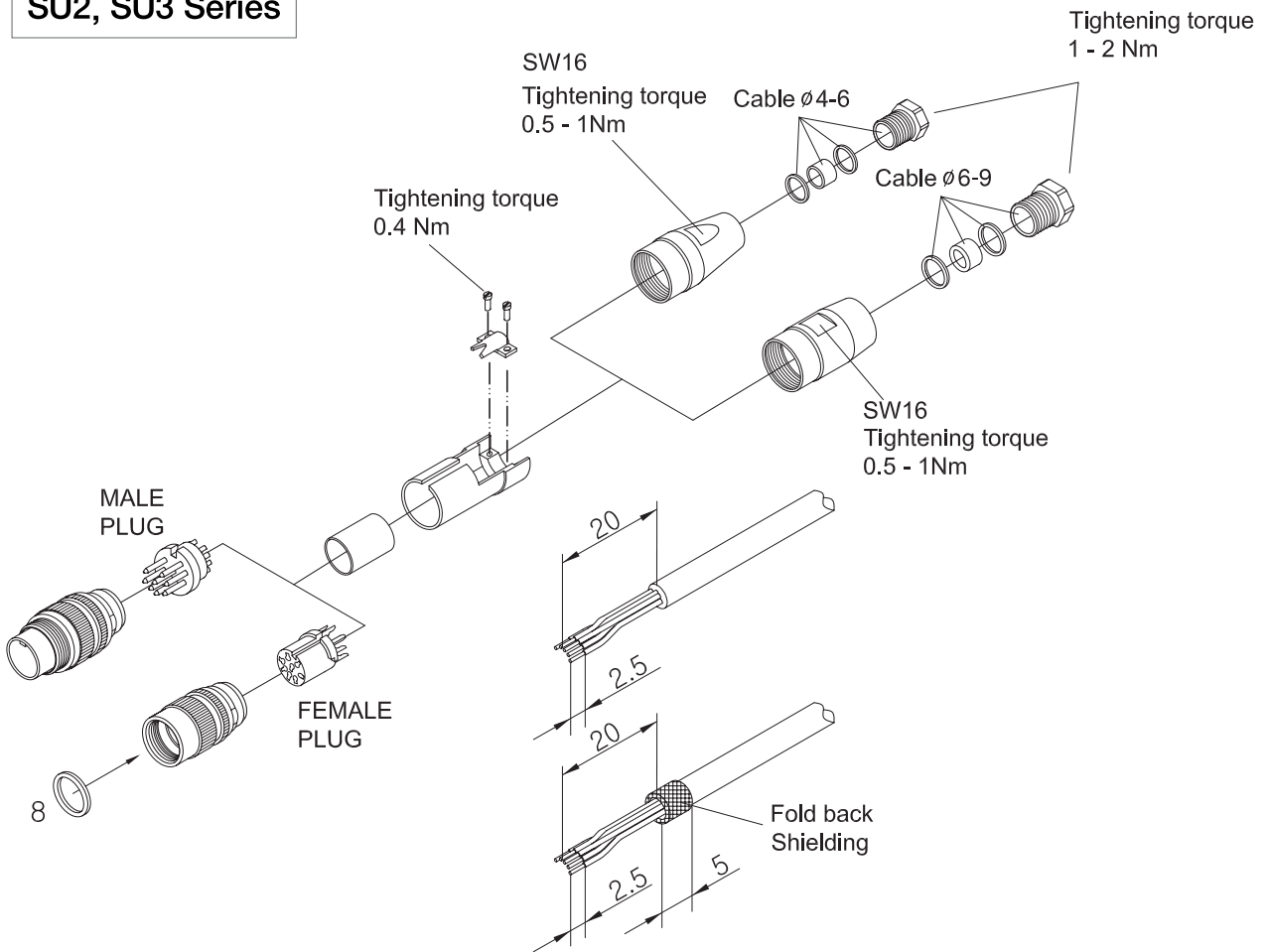
\* The last three digits of product number indicates cable length, Cable length can be customized,



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SU2, SU3 Cable Assembly Instruction

SU2, SU3 Series



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



# SW Series Part Numbering



## Features

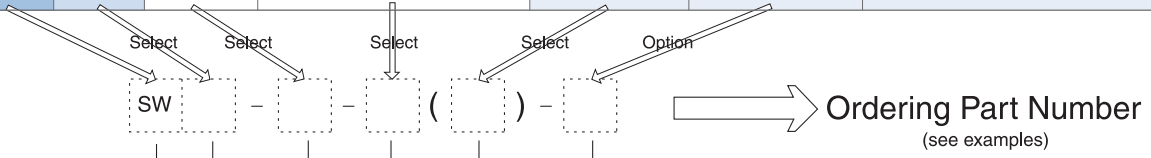
- Excellent performance at low cost
- Screw mounting assures solid connection
- Manufactured with precision

## Applications

- Professional audio and video
- CCTV system
- Vision related testing equipment
- Portable wireless radio
- Measuring equipment
- Computers and peripherals
- Medical, and much more.

## Part Numbering

Product Number		Size	Number of Contacts	Suffix	Optional Suffix	Notes	
Series	Prefix				S		
SW	H	8 or 10	8 size : 4,5,6 10 size : 2,3,4,9,10,12	P	•	Main SW Series	
				R / RPCB	•		
				A	P	•	SWH Series (SW with reverse contacts)
					R / RPCB	•	SWA Series (Adapter for SW series)
	HA			blank	•	SWHA Series (Adapter for SWH series)	
				blank	•		



### Examples

- SW - 8 - 4 ( P )  
SW series - Size 8 Plug - 4 Male Contact ( Plug shell )
- SW - 10 - 12 ( R ) - S  
SW series - Size 10 Receptacle - 12 Female Contact - Silver Plating Contact
- SWA - 10 - 2  
SW series - Size 10 Adapter - 2 Female Contact
- SWHA - 8 - 6 - S  
SWH series - Size 8 Adapter - 6 Male Contacts - Silver Plating Contact

**Connector Series**  
 SW  
 SWH - reverse contact  
 SWA - adapter for SN series  
 SWHA - adapter for SNH series

**Size**  
 8,10

**No. of Contacts**  
 8 Size : 4,5,6  
 10 Size : 2,3,4,9,10,12

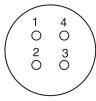
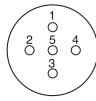
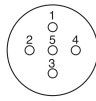
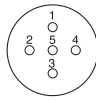
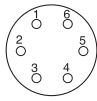
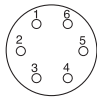
**Body Type**  
 P : Plug  
 R : Receptacle (solder termination)  
 RPCB : Receptacle (PCB termination)  
 blank : Adapter

**Optional**  
 S : Silver Plating Contact







Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



Major Performances / Contact Arrangements

Performance	Size / No. of Contacts		Size 8			
	4	5	5	5	6	6
Withstanding Voltage (per min) <sup>1</sup>	AC 300V	AC 300V	AC 300V	AC 300V	AC 300V	AC 300V
Current	2A	2A	2A	2A	2A	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω
Solder Pot Inside Diameter	∅ 0,7	∅ 0,7	∅ 0,7	∅ 0,7	∅ 0,7	∅ 0,7
Wire Gauge(Maximum)	AWG26	AWG26	AWG26	AWG26	AWG26	AWG26
Contact Arrangement						

Performance	Size / No. of Contacts		Size 10			
	2	3	4	9	10	12
Withstanding Voltage (per min) <sup>1</sup>	AC 500V	AC 500V	AC 500V	AC 300V	AC 300V	AC 300V
Current	3A	3A	3A	2A	2A	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω
Solder Pot Inside Diameter	∅ 1,0	∅ 1,0	∅ 1,0	∅ 0,7	∅ 0,7	∅ 0,7
Wire Gauge(Maximum)	AWG20	AWG20	AWG20	AWG26	AWG26	AWG26
Contact Arrangement						

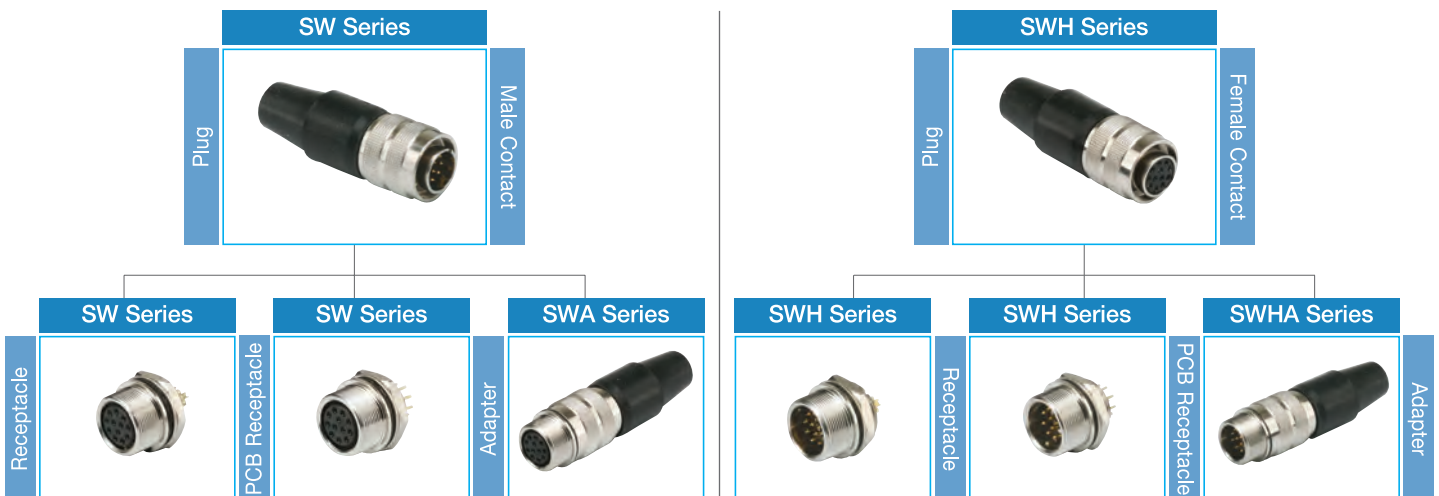
Contact Diameter  
∅ 0,55mm ∅ 1,0mm

<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

Material Used / Finish

	Material	Finish
Body	Brass	Ni Plating
Insulator	PA	Black
Contacts	Male	Brass
	Female	Phosphor bronze
		Gold Plating

SW Series Mini-map

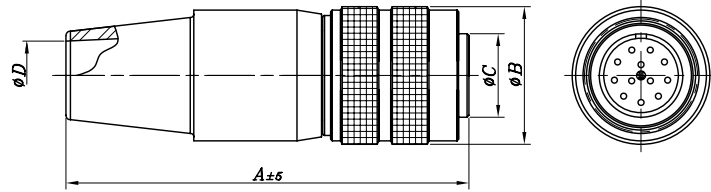


# SW Series

# SW Male Plug, Female Receptacle / Adapter



## SW Plug



Product Number	A	Ø B	Ø C	Ø D
SW-8-4 (P)	35	11	6,7	5,1
SW-8-5 (P)				
SW-8-6 (P)				

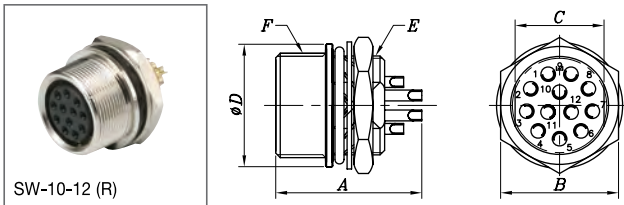
Product Number	A	Ø B	Ø C	Ø D
SW-10- 2 (P)	42	14	8,5	7
SW-10- 3 (P)				
SW-10- 4 (P)				
SW-10- 9 (P)				
SW-10-10 (P)				
SW-10-12 (P)				

→ SW Series  
 → Size  
 → No. of Contacts

### Silver contact

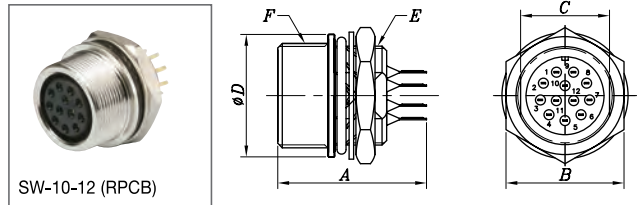
Include '-S' at end of Product Number.  
 EX) SW-8-4 (P)-S  
 SW-10-12 (P)-S

## SW Solder Type Receptacle



Product Number	A	B	C	Ø D	E	F
SW- 8- 4 (R)	14,5	10	7,5	10	M8×0,5P	M9×0,5P
SW- 8- 5 (R)						
SW- 8- 6 (R)						
SW-10- 2 (R)	15	13	9,8	13,5	M11×0,75P	M11,5×0,5P
SW-10- 3 (R)						
SW-10- 4 (R)						
SW-10- 9 (R)						
SW-10-10 (R)						
SW-10-12 (R)						

## SW PCB Type Receptacle

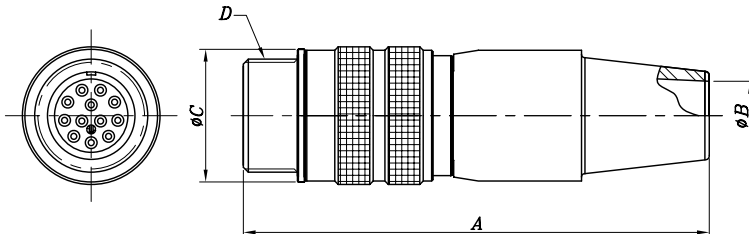


Product Number	A	B	C	Ø D	E	F
SW- 8- 4 (RPCB)	15,7	10	7,5	10	M8×0,5P	M9×0,5P
SW- 8- 5 (RPCB)						
SW- 8- 6 (RPCB)						
SW-10- 9 (RPCB)	15,7	13	9,8	13,5	M11×0,75P	M11,5×0,5P
SW-10-10(RPCB)						
SW-10-12(RPCB)						

### Silver contact

Include '-S' at end of Product Number.  
 EX) SW-8-4 (RPCB)-S  
 SW-10-12 (R)-S

## SW Adapter



Product Number	A	Ø B	Ø C	D	Product Number	A	Ø B	Ø C	D
SWA-8-4	39,3	5,1	10	M9×0,5P	SWA-10- 2	47	7	13,5	M11,5×0,5P
SWA-8-5					SWA-10- 3				
SWA-8-6					SWA-10- 4				
	SWA-10- 9								
	SWA-10-10								
	SWA-10-12								

→ SWA Series  
 → Size  
 → No. of Contacts

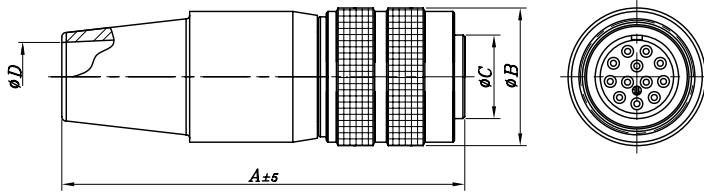


### Silver contact

Include '-S' at end of Product Number.  
 EX) SWA-8-4-S  
 SWA-10-12-S

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ SWH Plug



SWH-10-12(P)

Product Number	A	ø B	ø C	ø D
SWH-8-4 (P)	35	11	6,7	5,1
SWH-8-5 (P)				
SWH-8-6 (P)				

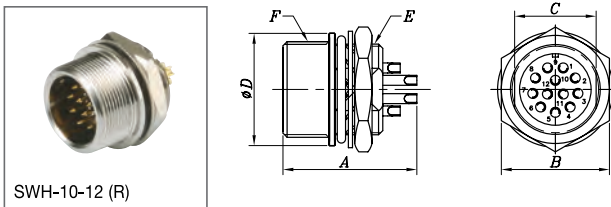
Product Number	A	ø B	ø C	ø D
SWH-10- 2 (P)	42	14	8,5	7
SWH-10- 3 (P)				
SWH-10- 4 (P)				
SWH-10- 9 (P)				
SWH-10-10 (P)				
SWH-10-12 (P)				

**Silver Plating Contact**

Include '-S' at end of Product Number,  
EX) SWH-8-4 (P)-S  
SWH-10-12 (P)-S

→ SWH Series  
→ Size  
→ No. of Contacts

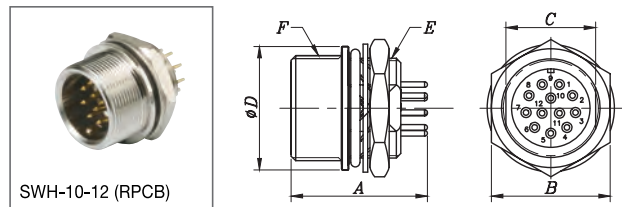
■ SWH Solder Type Receptacle



SWH-10-12 (R)

Product Number	A	B	C	ø D	E	F
SWH- 8- 4 (R)	14,2	10	7,5	10	M8×0,5P	M9×0,5P
SWH- 8- 5 (R)						
SWH- 8- 6 (R)						
SWH-10- 2 (R)	16,2	13	9,8	13,5	M11×0,75P	M11,5×0,5P
SWH-10- 3 (R)						
SWH-10- 4 (R)						
SWH-10- 9 (R)						
SWH-10-10 (R)						
SWH-10-12 (R)						

■ SWH PCB Type Receptacle



SWH-10-12 (RPCB)

Product Number	A	B	C	ø D	E	F
SWH- 8- 4 (RPCB)	15	10	7,5	10	M8×0,5P	M9×0,5P
SWH- 8- 5 (RPCB)						
SWH- 8- 6 (RPCB)						
SWH-10- 9(RPCB)	15	13	9,8	13,5	M11×0,75P	M11,5×0,5P
SWH-10-10(RPCB)						
SWH-10-12(RPCB)						

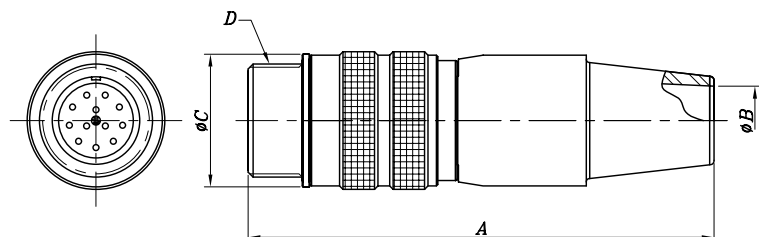
**Silver Plating Contact**

Include '-S' at end of Product Number,  
EX) SWH-8-4 (RPCB)-S  
SWH-10-12 (R)-S



SWHA-10-12

■ SWHA Adapter



Product Number	A	ø B	ø C	D
SWHA-8-4	39,3	5,1	10	M9×0,5P
SWHA-8-5				
SWHA-8-6				

Product Number	A	ø B	ø C	D
SWHA-10- 2	47	7	13,5	M11,5×0,5P
SWHA-10- 3				
SWHA-10- 4				
SWHA-10- 9				
SWHA-10-10				
SWHA-10-12				

→ SWHA Series  
→ Size  
→ No. of Contacts

**Silver Plating Contact**  
Include '-S' at end of Product Number,  
EX) SWHA-8-4-S  
SWHA-10-12-S

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## General Instruction / Information

- Diagram 1 shows a sample wiring for SW series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.
- Specification of Nut

Size	Nut Specification	Nut tightening force
SW - 8	M8 × 0,5P	15~18(kgf · cm)
SW - 10	M11 × 0,75P	20~23(kgf · cm)

## Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0,129mm<sup>2</sup>(AWG#26).
- ② Insert RUBBER BUSHING to cable.
- ③ Insert PLUG HOUSING to cable.
- ④ Strip cable per dimension given and loosen braid.
- ⑤ Secure PLUG BODY to jig for soldering.
- ⑥ Solder stripped cable to pin.
- ⑦ Fasten CRIMP using hand crimp tool (SA-HCT<sup>①</sup>)
- ⑧ Lock PLUG HOUSING and PLUG BODY using tightening force displayed on Table 1.
- ⑨ Tighten WRENCH BOLT using 0,3N force onto one of two embossed parts of crimp.
- ⑩ Cover RUBBER BUSHING onto PLUG HOUSING.

<sup>①</sup> See below for information on SA-HCT.

Diagram 1

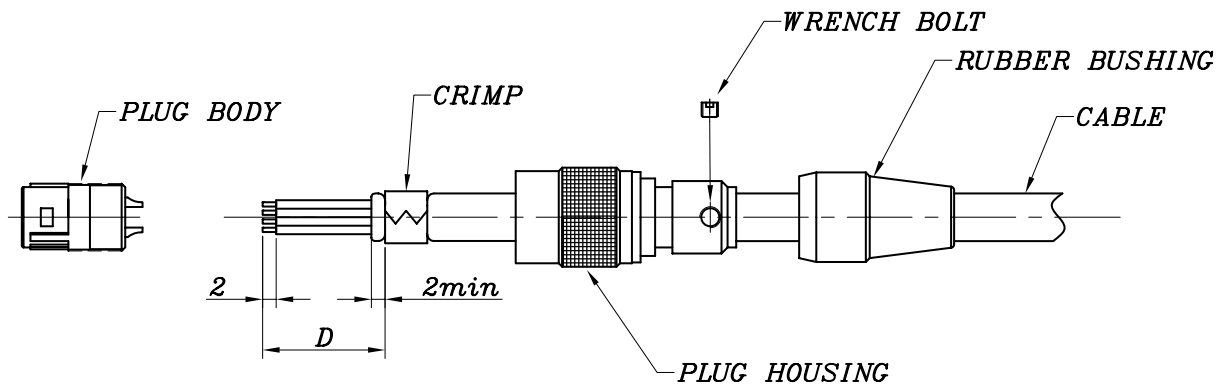


Table 1

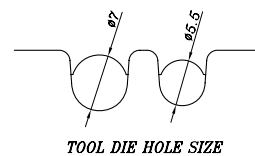
unit : mm

Size	Spanner Jaw	D (Dimension)	Tightening Force	Notes
SW - 8	8	10	1,5N · m (15kgf · cm)	SA-HCT size $\varnothing$ 5,5
SW - 10	10	16	2,0N · m (20kgf · cm)	SA-HCT size $\varnothing$ 7,0

## SA-HCT (Hand Crimp Tool)



Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results.



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



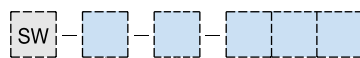
**Features**

- Excellent performance at low cost
- Screw mounting assures solid connection
- Manufactured with precision
- Standard and Custom Design

**Applications**

- Professional audio and video
- CCTV system
- Vision related testing equipment
- Portable wireless radio
- Measuring equipment
- Computers and peripherals
- Medical, and much more.

■ Part Numbering



**Drawing Number**  
**Optional Suffix (Omissible)**  
 1,2,3  
 To indicate modification of original  
**Cable Length : 3 Digits**  
 Unit Plug : m  
           Recep : cm  
 Ex) Using 3m Cable for Plug : 003  
       Using 30cm Cable for Recep : 030

■ Plug Cable Assembly



Type	Construction
A	SW Connector + Cable + Housing
B	SW Connector + Cable + SW Connector

※ Design and Customization Service Available

■ Receptacle Cable Assembly



Type	Construction
A	SW Connector + wire + open end
B	SW Connector + wire + Housing
C	SW Connector + wire + Housing with core

※ Design and Customization Service Available

# SW IP67 Series Part Numbering



## Features

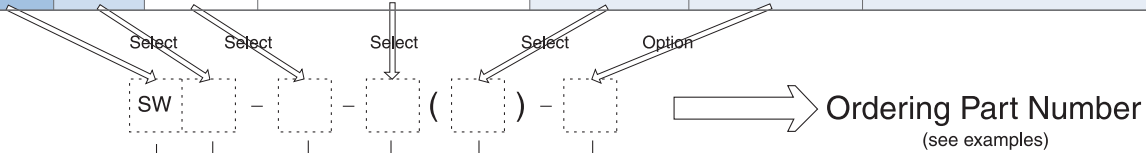
- Excellent performance at low cost
- Screw mounting assures solid connection
- Rubber gasket assures water resistance
- Manufactured with precision
- Protection rating of IP67 with over molding

## Applications

- Professional audio and video
- CCTV system
- Vision related testing equipment
- Portable wireless radio
- Measuring equipment
- Computers and peripherals
- Medical, and much more.

## Part Numbering

Product Number		Size	Number of Contacts	Suffix	Optional Suffix	Notes
Series	Prefix				S	
SW		8W, 10W, 16W	8W size : 4,5,6 10W size : 2,3,4,9,10,12 16W size : 28	P	•	Main SW Series
				R / RPCB	•	
	H			P	•	SWH Series (SW with reverse contacts)
	A			R / RPCB	•	
	HA				•	SWA Series (Adapter for SW series)
					•	SWHA Series (Adapter for SWH series)



**Connector Series**  
 SW  
 SWH - reverse contact  
 SWA - adapter for SN series  
 SWHA - adapter for SNH series

**Size**  
 8W,10W,16W

**No. of Contacts**  
 8 Size : 4,5,6  
 10 Size : 2,3,4,9,10,12  
 16 Size : 28

**Body Type**  
 P : Plug  
 R : Receptacle (solder termination)  
 PR : Receptacle (Flange type)  
 RPCB : Receptacle (PCB termination)  
 blank : Adapter

**Optional**  
 S : Silver Plating Contact

### Examples

- SW - 8W - 4 ( P )  
SW Waterproof series - Size 8 Plug - 4 Male Contact
- SW - 10W - 12 ( RPCB ) - S  
SW Waterproof series - Size 10 Receptacle - 12 PCB Termination Contact - Silver Plating Contact
- SWHA - 10W - 12  
SWH Waterproof series - Size 10 Adapter - 12 Male Contact

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

Major Performances / Contact Arrangements

Size / No. of Contacts	Size 8			Size 16		
	4	5	6	28		
Performance	IP 67					
Withstanding Voltage (per min) <sup>1</sup>	AC 300V	AC 300V	AC 300V	AC 300V		
Current	2A	2A	2A	2A		
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω		
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω	10m Ω	10m Ω		
Solder Pot Inside Diameter	∅ 0,7	∅ 0,7	∅ 0,7	∅ 0,7		
Wire Gauge(Maximum)	AWG26	AWG26	AWG26	AWG26		
Contact Arrangement						
Environmental Protection	IP 67					
Size / No. of Contacts	Size 10					
	2	3	4	9	10	12
Performance	IP 67					
Withstanding Voltage (per min) <sup>1</sup>	AC 500V	AC 500V	AC 500V	AC 300V	AC 300V	AC 300V
Current	3A	3A	3A	2A	2A	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω	10m Ω
Solder Pot Inside Diameter	∅ 1,0	∅ 1,0	∅ 1,0	∅ 0,7	∅ 0,7	∅ 0,7
Wire Gauge(Maximum)	AWG20	AWG20	AWG20	AWG26	AWG26	AWG26
Contact Arrangement						
Environmental Protection	IP 67					

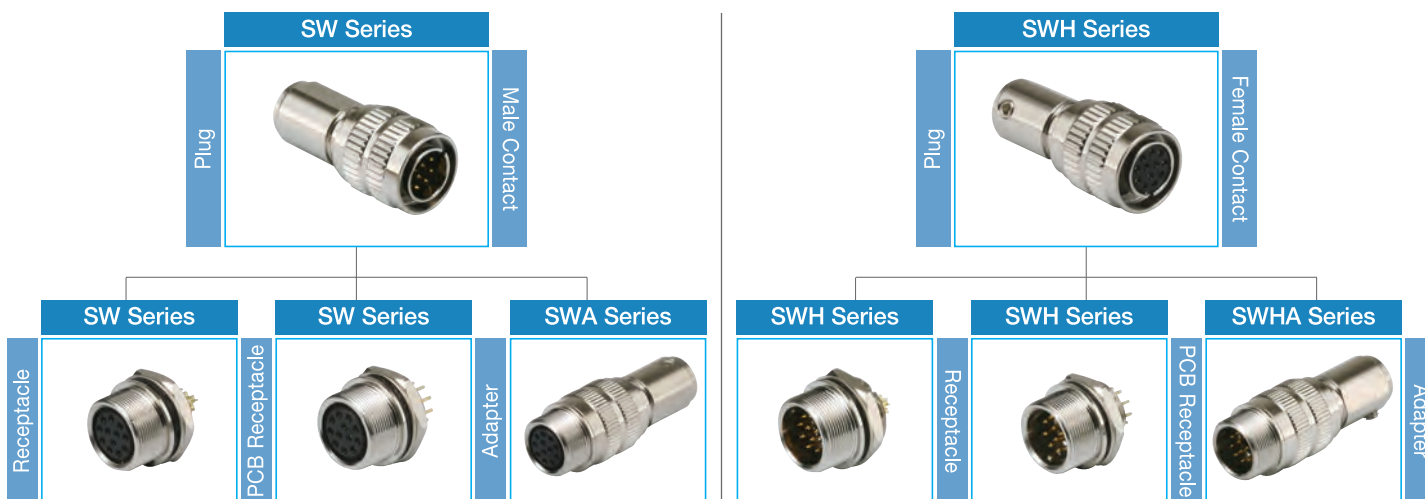
<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

Contact Diameter  
 ∅ 0,55mm • 1,0mm

Material Used / Finish

	Material	Finish
Body	Brass	Ni Plating
Insulator	PA	Black
Contacts	Male	Brass
	Female	Phosphor bronze
		Gold Plating

SW Series Mini-map

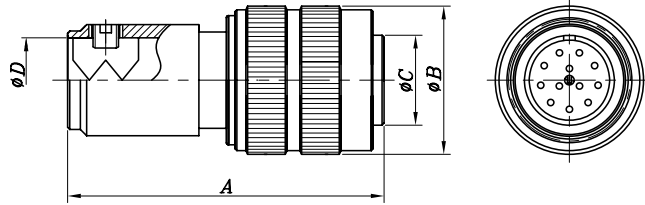


# SW IP67 Series

## Male Plug, Female Receptacle/Adapter



### SW Plug



SW-10W-12(P)

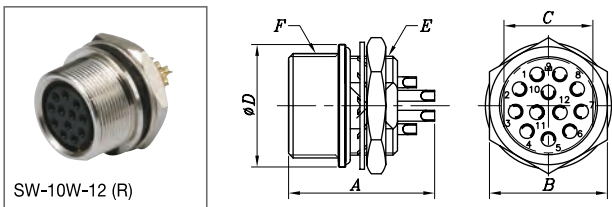
Product Number	A	∅ B	∅ C	∅ D	Product Number	A	∅ B	∅ C	∅ D
SW-8W-4 (P)	24,5	12	6,7	6,0	SW-10W- 2 (P)	30	15	9,5	7
SW-8W-5 (P)					SW-10W- 3 (P)				
SW-8W-6 (P)					SW-10W- 4 (P)				
	SW-10W- 9 (P)								
	SW-10W-10 (P)								
	SW-10W-12 (P)								

→ SW Series  
 → Size & Type  
 → No. of Contacts

#### Silver Plating Contact

Include '-S' at end of Product Number,  
 EX) SW-8W-4 (P)-S  
 SW-10W-12 (P)-S

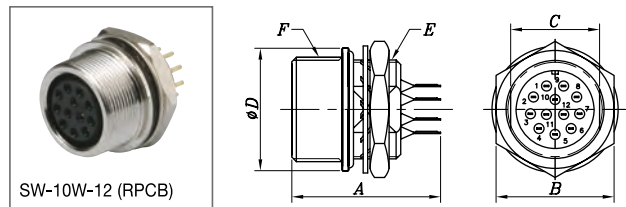
### SW Solder Type Receptacle



SW-10W-12 (R)

Product Number	A	B	C	∅ D	E	F
SW- 8W-4 (R)	14,2	10	7,5	11	M8×0,5P	M10×0,5P
SW- 8W-5 (R)						
SW- 8W-6 (R)						
SW-10W-2 (R)	15,8	13	9,8	14,5	M11×0,75P	M12,5×0,5P
SW-10W-3 (R)						
SW-10W-4 (R)						
SW-10W-9 (R)						
SW-10W-10 (R)	16,2					
SW-10W-12 (R)						

### SW PCB Type Receptacle



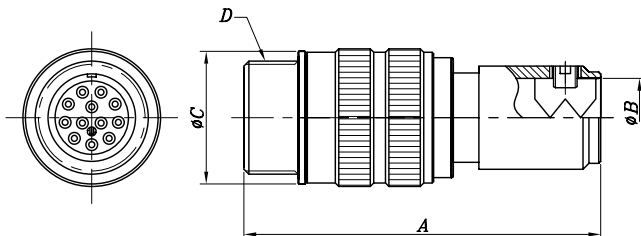
SW-10W-12 (RPCB)

Product Number	A	B	C	∅ D	E	F
SW- 8W-4 (RPCB)	15,7	10	7,5	11	M8×0,5P	M10×0,5P
SW- 8W-5 (RPCB)						
SW- 8W-6 (RPCB)						
SW-10W-9(RPCB)	16,4	13	9,8	14,5	M11×0,75P	M12,5×0,5P
SW-10W-10(RPCB)						
SW-10W-12(RPCB)						

#### Silver Plating Contact

Include '-S' at end of Product Number,  
 EX) SW-8W-4 (RPCB)-S  
 SW-10W-12 (R)-S

### SWA Adapter



SWA-10W-12

Product Number	A	∅ B	∅ C	D	Product Number	A	∅ B	∅ C	D
SWA-8W-4	31	6,0	11	M10×0,5P	SWA-10W-2	37	7	14,5	M12,5×0,5P
SWA-8W-5					SWA-10W-3				
SWA-8W-6					SWA-10W-4				
	SWA-10W-9								
	SWA-10W-10								
	SWA-10W-12								

→ SWA Series  
 → Size & Type  
 → No. of Contacts

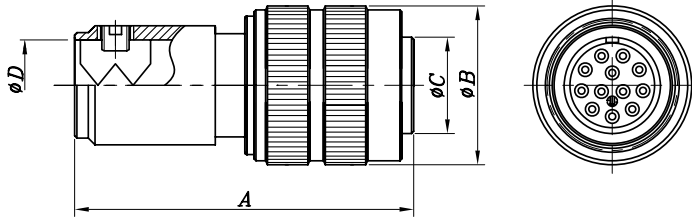
#### Silver Plating Contact

Include '-S' at end of Product Number,  
 EX) SWA-8W-4-S  
 SWA-10W-12-S

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ SWH Plug



SWH-10W-12(P)

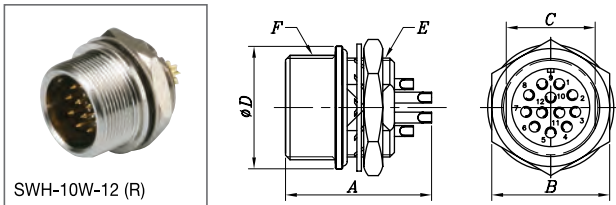
Product Number	A	ø B	ø C	ø D	Product Number	A	ø B	ø C	ø D
SWH-8W-4 (P)	24,5	12	6,7	6,0	SWH-10W- 2 (P)	30	15	9,5	7
SWH-8W-5 (P)					SWH-10W- 3 (P)				
SWH-8W-6 (P)					SWH-10W- 4 (P)				
	SWH-10W- 9 (P)								
	SWH-10W-10 (P)								
	SWH-10W-12 (P)								

**Silver Plating Contact**

Include '-S' at end of Product Number,  
EX SWH-8W-4 (P)-S  
SWH-10W-12 (P)-S

SWH Series  
Size & Type  
No. of Contacts

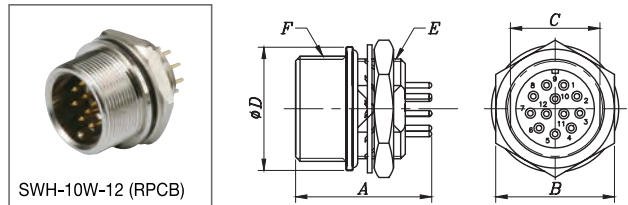
■ SWH Solder Type Receptacle



SWH-10W-12 (R)

Product Number	A	B	C	ø D	E	F
SWH- 8W- 4 (R)	14,2	10	7,5	11	M8×0,5P	M10×0,5P
SWH- 8W- 5 (R)						
SWH- 8W- 6 (R)						
SWH-10W- 2 (R)	16,3	13	9,8	14,5	M11×0,75P	M12,5×0,5P
SWH-10W- 3 (R)						
SWH-10W- 4 (R)						
SWH-10W- 9 (R)						
SWH-10W-10 (R)						
SWH-10W-12 (R)						

■ SWH PCB Type Receptacle



SWH-10W-12 (RPCB)

Product Number	A	B	C	ø D	E	F
SWH- 8W- 4 (RPCB)	15,1	10	7,5	11	M8×0,5P	M10×0,5P
SWH- 8W- 5 (RPCB)						
SWH- 8W- 6 (RPCB)						
SWH-10W- 9(RPCB)	15,1	13	9,8	14,5	M11×0,75P	M12,5×0,5P
SWH-10W-10(RPCB)						
SWH-10W-12(RPCB)						

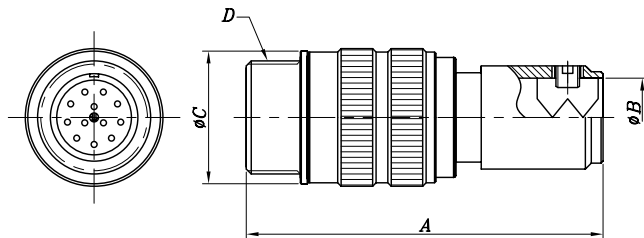
**Silver Plating Contact**

Include '-S' at end of Product Number,  
EX SWH-8W-4 (RPCB)-S  
SWH-10W-12 (R)-S



SWHA-10W-12

■ SWHA Adapter



Product Number	A	ø B	ø C	D	Product Number	A	ø B	ø C	D
SWHA-8W-4	31	6,0	11	M10×0,5P	SWHA-10W- 2	37	7	14,5	M12,5×0,5P
SWHA-8W-5					SWHA-10W- 3				
SWHA-8W-6					SWHA-10W- 4				
	SWHA-10W- 9								
	SWHA-10W-10								
	SWHA-10W-12								

**Silver Plating Contact**

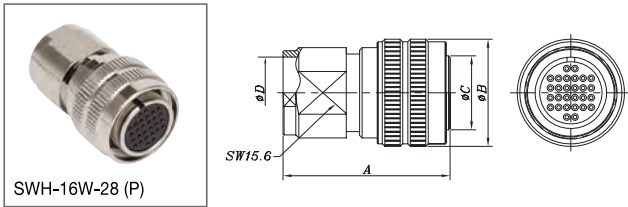
Include '-S' at end of Product Number,  
EX SWHA-8W-4-S  
SWHA-10W-12-S

SWHA Series  
Size & Type  
No. of Contacts

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

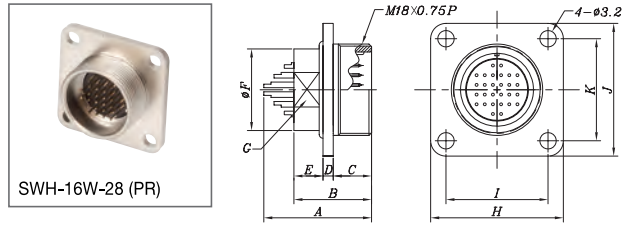
# SW IP67 Series Female Plug, Male Receptacle

## ■ SWH-16W Plug



Product Number	A	∅ B	∅ C	∅ D
SWH-16W-28 (P)	32,8	21	14,5	14

## ■ SWH-16W Receptacle



Product Number	A	B	C	D	E	∅ F	G	H	I	J	K
SWH-16W-28(PR)	21	15,2	7,5	2	5,7	16	14,5	26	20	26	20



General Instruction / Information

- Diagram 1 shows a sample wiring for SW IP67 Waterproof Series.
- Soldering must be done quickly and carefully to prevent damage to insulator.
- Receptacles do not require additional instructions.
- Specification of Nut

Size	Nut Specification	Nut tightening force
SW - 8W	M8×0,5P	15~18(kgf · cm)
SW - 10W	M11×0,75P	20~23(kgf · cm)

Wiring Sequence

- ① Select cable according to outer diameter and cross section, lower than 0,129mm<sup>2</sup>(AWG#26).
- ② Insert PLUG HOUSING to cable.
- ③ Strip cable per dimension given and loosen braid.
- ④ Secure PLUG BODY to jig for soldering.
- ⑤ Solder stripped cable to pin.
- ⑥ Fasten CRIMP using hand crimp tool (SA-HCT<sup>①</sup>)
- ⑦ Lock PLUG HOUSING and PLUG BODY using tightening force displayed on Table 1.
- ⑧ Tighten WRENCH BOLT using 0,3N force onto one of two embossed parts of crimp.
- \* ⑨ Plug Housing must be overmolded in order to achieve IP67 rating.

<sup>①</sup> See below for information on SA-HCT.

Diagram 1

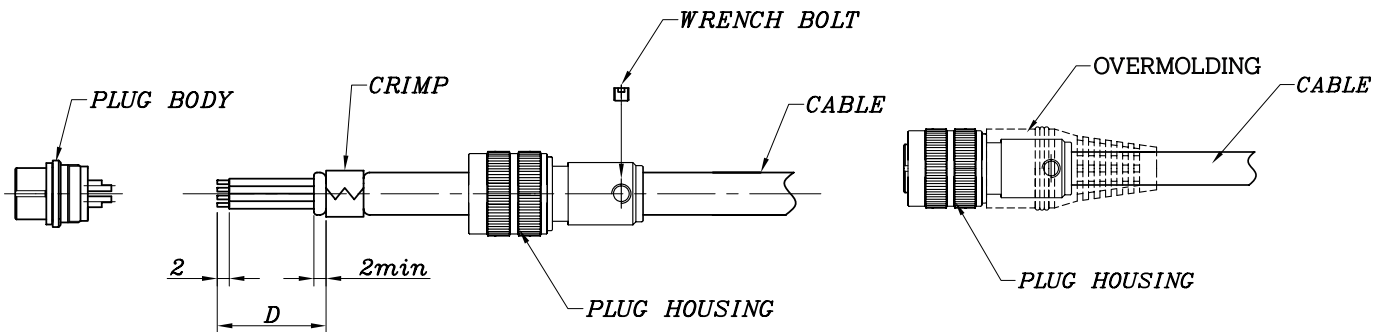


Table 1

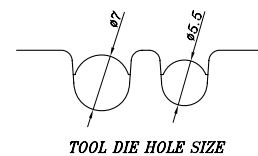
Size	Spanner Jaw	D (Dimension)	Tightening Force	Notes
SW - 8	8	10	1,5N · m (15kgf · cm)	SA-HCT size $\phi$ 5,5
SW - 10	10	16	2,0N · m (20kgf · cm)	SA-HCT size $\phi$ 7,0

unit : mm

SA-HCT (Hand Crimp Tool)



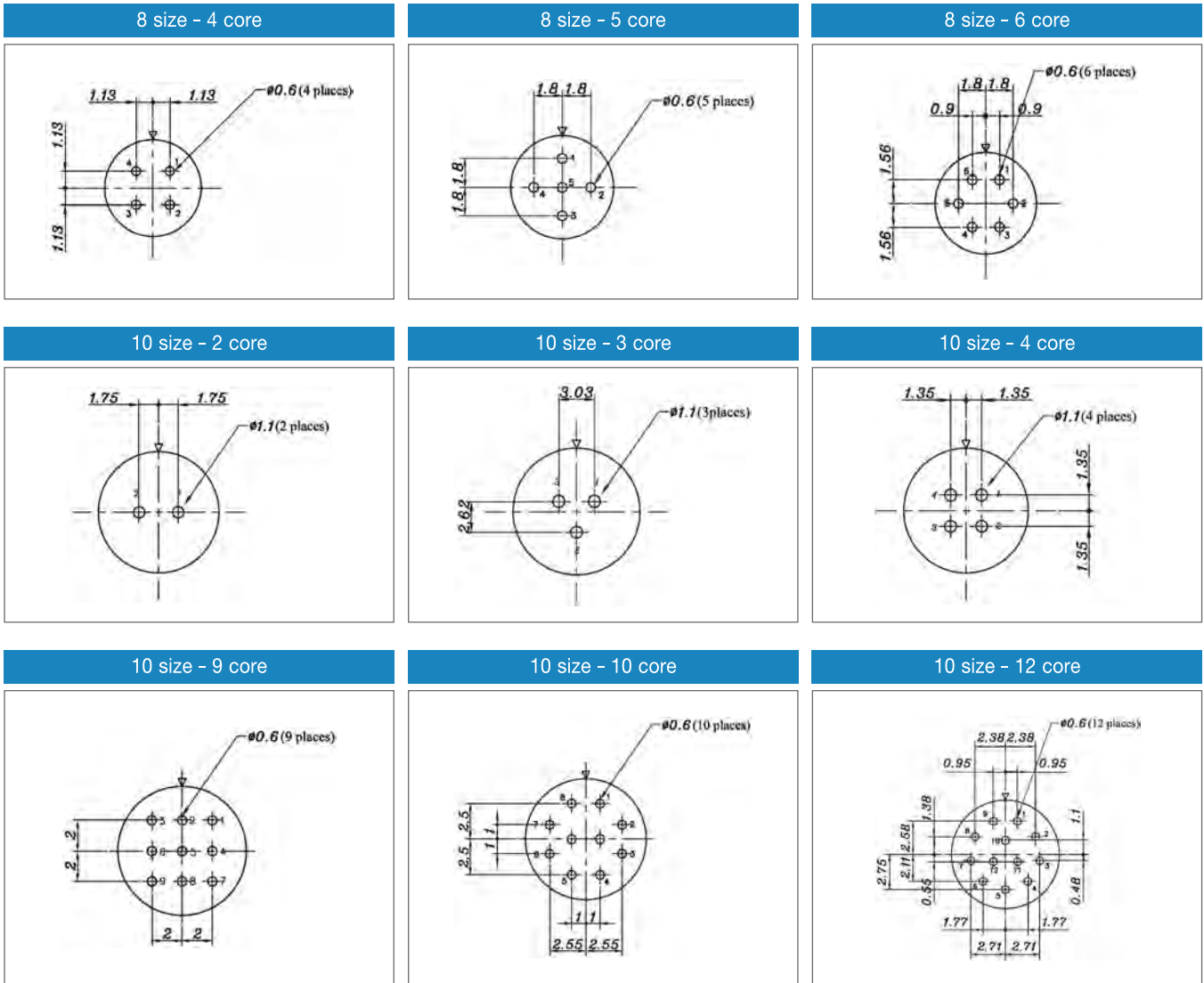
Specially designed for Sam Woo's connector, the low-cost and efficient SA-HCT provides the best crimping results.



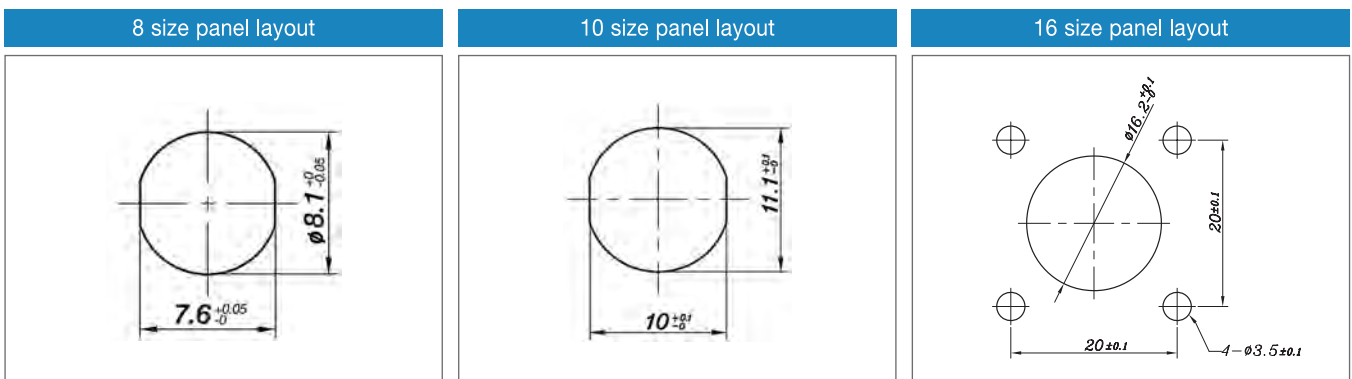
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SW IP67 Series Mounting Hole Layout

## SW Receptacle PCB Hole Layout



## SW Receptacle Panel Layout



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



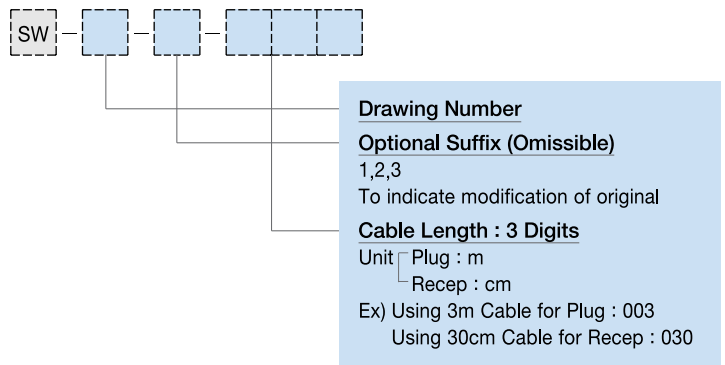
**Features**

- Excellent performance at low cost
- Screw mounting assures solid connection
- Rubber gasket assures water resistance
- Manufactured with precision
- Protection rating of IP67 with over molding
- Standard and Custom Design

**Applications**

- Professional audio and video
- Vision related testing equipment
- Measuring equipment
- Medical, and much more.
- CCTV system
- Portable wireless radio
- Computers and peripherals

■ **Part Numbering**



■ **Plug Cable Assembly**



Type	Construction
A	SW Connector + Cable + Housing
B	SW Connector + Cable + SW Connector

※ Design and Customization Service Available

■ **Receptacle Cable Assembly**



Type	Construction
A	SW Connector + wire + open end
B	SW Connector + wire + Housing
C	SW Connector + wire + Housing with core

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SXR Series Part Numbering



## Features

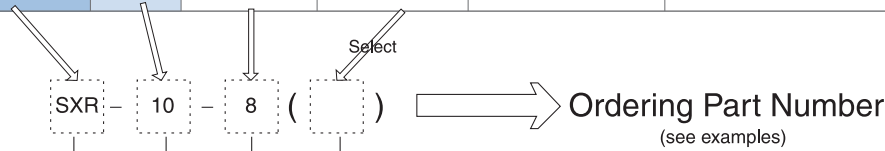
- Miniature
- Ultra Light Weight
- Ground Function

## Applications

- Professional Audio
- Professional Video
- Camera

## Part Numbering

Series	Size	Number of Contacts	Suffix	Contact Type	Notes
SXR	10	8	P	Male	SXR Series Plug
			R	Female	SXR Series Receptacle



<b>Connector Series</b>
SXR Series
<b>Size</b>
10
<b>No. of Contacts</b>
8
<b>Body Type</b>
P : Plug
R : Receptacle (solder termination)

## Examples

SXR - 10 - 8 ( P )  
SXR series - Size 10 Plug - 8 Male Contact

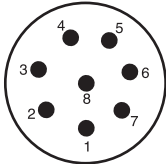
SXR - 10 - 8 ( R )  
SXR series - Size 10 Receptacle - 8 Female Contact

## Material Used / Finish

		Material	Finish
Body		Alluminum alloy	Ni Plating
Insulator		PBT resin	Black
Contacts	Male	Brass	Silver Plating
	Female	Phosphor bronze	Silver Plating

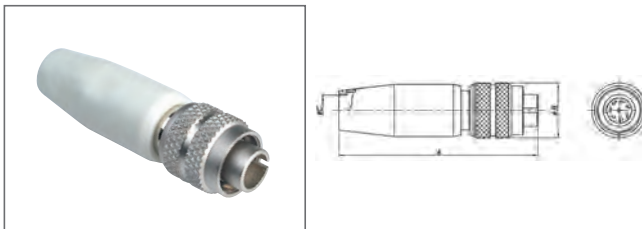
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ Major Performances / Contact Arrangements

Size / No. of Contacts	Size 10
Performance	8
Withstanding Voltage (per min) <sup>1</sup>	AC 300V
Rated Current	2A
Insulation Resistance (Minimum) <sup>2</sup>	1,000M Ω
Contact Resistance (Maximum) <sup>3</sup>	20m Ω
Solder Pot Inside Diameter	φ 0,9
Wire Gauge (Maximum)	AWG20
Contact Arrangement	

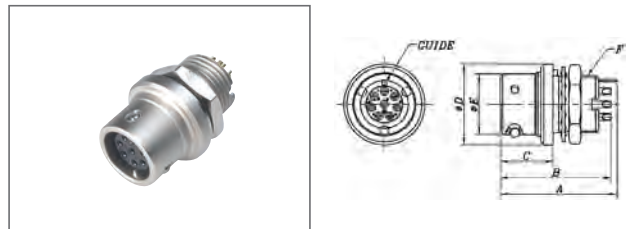
<sup>1</sup> Withstanding voltage is the tested voltage value in this table.  
<sup>2</sup> Insulation resistance is measured at DC 100V.  
<sup>3</sup> Contact resistance is measured at DC 1A.  
 • Values are from tested items and may not apply to all connectors.  
 • Specifications subject to change without notice.  
 • Consult Sam Woo Electronics for the latest specifications.  
<sup>4</sup> Connector contact arrangement is from mating surface.

■ SXR Plug



Product Number	A	φ B	φ C
SXR-10-8 (P)	50,0	14,0	8,0

■ SXR Receptacle



Product Number	A	B	C	φ D	φ E	F
SXR-10-8 (R)	20,2	19,1	9,1	14	10,5	M10×0,75P

■ SXR Series Mini-map







# RF/Microwave Connectors

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## SB Series

P.150



### Applications

Professional TV Camera  
Broadcasting Industry

### Features

Triaxial 75  $\Omega$   
High-performance  
Rigorous design

### Material / Finish

Body - Brass (Ni & Chrome III Plating)  
Insulator - PTFE  
Contacts - Brass (Gold Plating)  
Latch Sleeve - Brass (Ni Plating) or  
Beryllium copper (Ni Plating)

## STE

P.160



### Features

Screw Locking System  
Patented Design  
Easy Soldering

### Material / Finish

Nousing / Shell - Brass (Ni Plating)  
Insulator - POM  
Contacts - Brass (Ni Plating)  
Strain Relief - Crimp Brass (Ni Plating)  
Boot - Silicon

## SMA

P.165



### Features

Ideal for 18GHz or higher  
Maximum reliability  
Superb robustness  
MIL-C-39012 specification

### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

## SMB

P.167



### Features

Snap-on quick connection  
Frequency of 4GHz  
MIL-C-39012 specification

### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

## MCX

P.168



### Features

MIL-C-39012 specification  
Frequency up to 2GHz

### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

## MMCX

P.170



### Features

MIL-C-39012 specification  
Frequency up to 2GHz  
50% less space than MCX  
Snap-on

### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

## BNCCHD

P.172



### Features

Top-quality performing 75  $\Omega$  BNC  
High density  
Quick and reliable connection

### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass / Gold Plating Cu-Be /  
Gole plating

## BNC 75 $\Omega$

P.176



### Applications

TV broadcasting, CCTV,  
CATV Transmitters, LAN,  
Telecommunications,  
Satellite receivers, medical, etc.

### Features

Top quality 75  $\Omega$   
Frequency from 0 to 3GHz

### Material / Finish

Body - Zinc alloy or Brass / Ni Plating  
Insulator - PTFE  
Contacts - Brass / Gold Plating / Beryllium  
copper / Gold Plating

## RF / Microwave Connector

### BNC 50 $\Omega$ , N,M,TNC

P.184



#### Features

High frequency coaxial  
75  $\Omega$  available upon request

#### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

### Between-Series Adapter

P.192



#### Features

- BNC-N
- BNC-SMA
- M-RCA
- N-SMA
- BNC-M
- BNC-TNC
- N-M
- N-TNC

#### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

### MRF

P.194



#### Features

- MRF-SW-5708
- MRF-SW-5759-XX
- MRF-SW-5706-XX
- MRF-N-RC
- MRF-PIN
- MRF-SMASH-JPR-4H
- MRF-N-J-RB-RC

#### Material / Finish

Body - Brass  
Insulator - PTFE  
Contacts - Brass

### D-Tap

P.196



#### Features

- SW-DTAP-20
- SW-DTAP-2J

#### Material / Finish

Body - PC  
Insulator - PC  
Contacts - Brass / Gold Plating

## POWER PIN

P.198



### Features

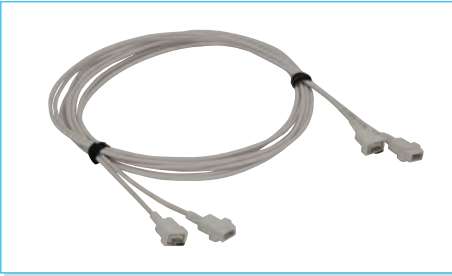
POWER PIN (Ni / Au) - 2,1  
POWER PIN (Ni / Au) - 4,0

### Material / Finish

PIN - Brass  
Tension Plate - Brass

## Micro USB IP67 Cable Assembly

P.199



### Features

Micro USB 5PIN Male Cable Assembly (IP67)  
Micro USB 5PIN Female Cable Assembly (IP67)



# SB Series Triaxial



## Features

- High performance
- Rigorous design

## Applications

- Professional TV Camera
- Broadcasting Industry

### ■ SB-101 Part Numbering (European Standard)



#### Body Type

- P : Plug
- PFC : Plug Fixed with Clamping Device
- PFC1 : Plug Fixed with Short Clamping Device
- J : Jack
- RC : Receptacle with Clamping Device
- RC1 : Receptacle with Short Clamping Device
- APJF : Adapter (Plug - Jack) Flange

#### Accessory Code

- 1,0 / 4,5 / 8,7
- 1,0 / 4,5 / 9,4
- 1,4 / 4,5 / 9,4
- 1,4 / 6,6 / 11,3
- 1,4 / 6,6 (for PFC1)

### ■ SB-102 Part Numbering (American Standard)



#### Body Type

- P : Plug
- J : Jack

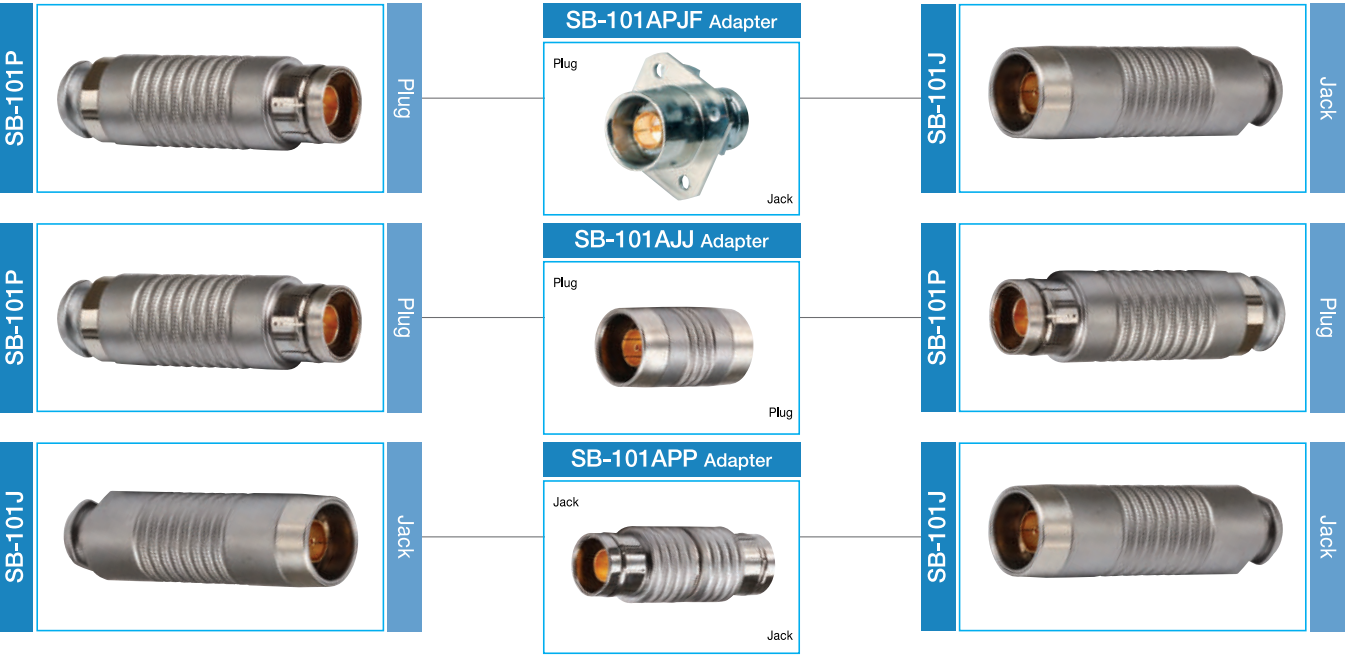
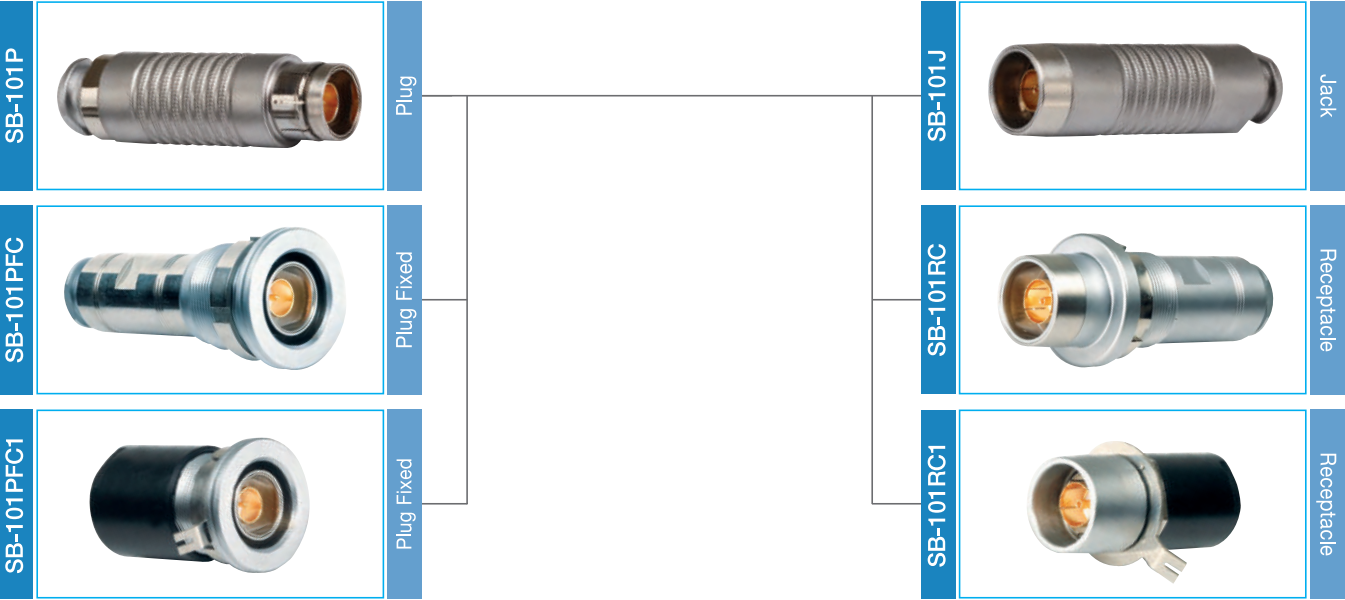
#### Accessory Code

- 0,81/3,7/9,5

### ■ Major Performances

Specification	101 Model	102 Model	770Model
Impedance	75 Ω	75 Ω	75 Ω
VSWR	<1,2 upto 1,5GHz	<1,2 upto 1GHz	<1,2 upto 1GHz
Contact Resistance	<3m Ω	<3m Ω	<1m Ω
Operating Temperature	-55℃ ~ +135℃	-55℃ ~ +135℃	-20℃ ~ +70℃

SB Series Mini-map (European Standard)



SB Series Mini-map (American Standard)

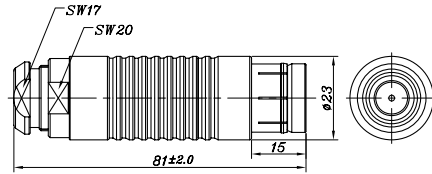
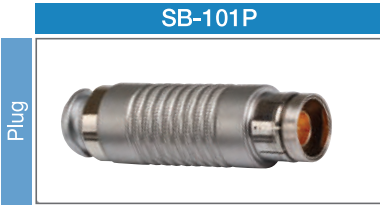


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SB Series Triaxial

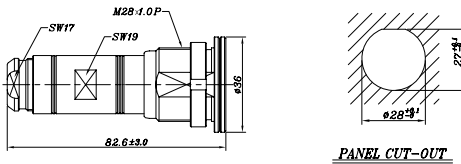
## SB-101 Model (European Standard)

Includes accessories,  
Accessories available separately.



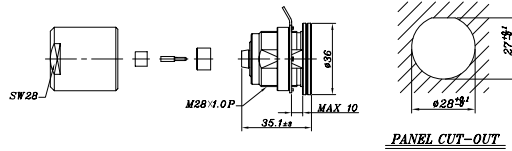
### Product Number

- SB-101P-1,0/4,5/8,7
- SB-101P-1,0/4,5/9,4
- SB-101P-1,4/4,5/9,4
- SB-101P-1,4/6,6/11,3



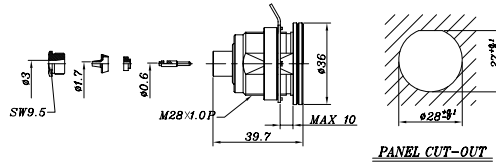
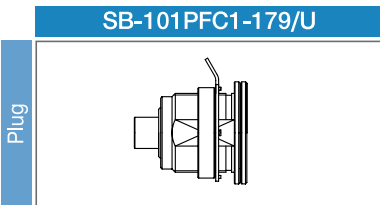
### Product Number

- SB-101PFC-1,0/4,5/8,7
- SB-101PFC-1,0/4,5/9,4
- SB-101PFC-1,4/4,5/9,4
- SB-101PFC-1,4/6,6/11,3



### Product Number

- SB-101PFC1-1,4/6,6

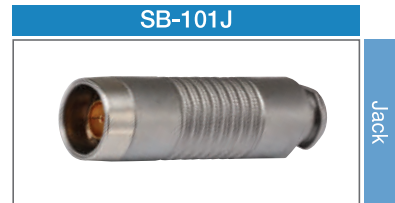
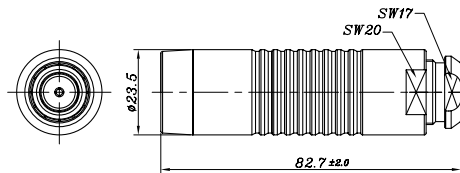


### Product Number

- SB-101PFC1-179/U
- Plug for cable assembly

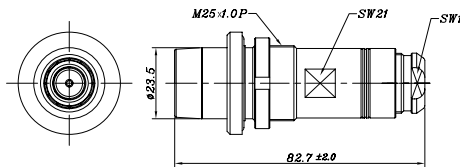
### Product Number

- SB-101J-1,0/4,5/8,7
- SB-101J-1,0/4,5/9,4
- SB-101J-1,4/4,5/9,4
- SB-101J-1,4/6,6/11,3



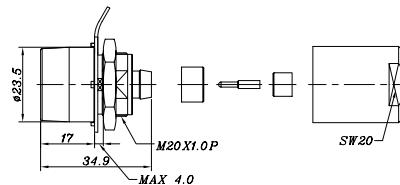
### Product Number

- SB-101RC-1,0/4,5/8,7
- SB-101RC-1,0/4,5/9,4
- SB-101RC-1,4/4,5/9,4
- SB-101RC-1,4/6,6/11,3



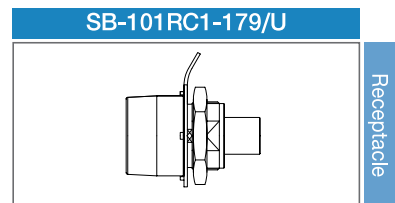
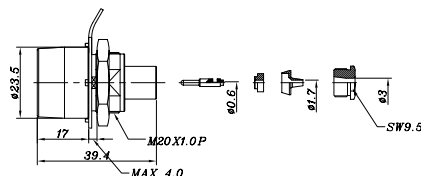
### Product Number

- SB-101RC1-1,4/6,6



### Product Number

- SB-101RC1-179/U
- Receptacle for cable assembly

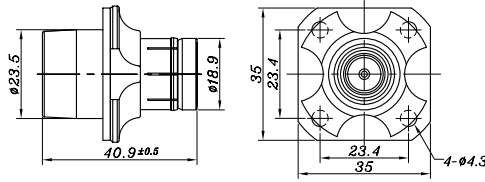


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

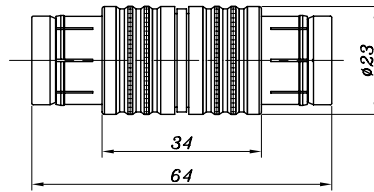


■ **SB-101 Model (European Standard)**

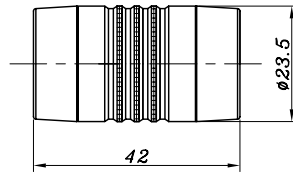
Adapter



**Product Number**  
SB-101APJF  
Adapter : Jack



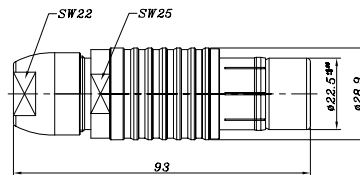
**Product Number**  
SB-101APP  
Adapter : Jack + Jack



**Product Number**  
SB-101AJJ  
Adapter : Plug + Plug

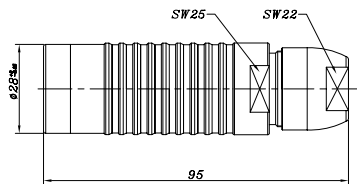
■ **SB-102 Model (American Standard)**

Includes accessories,  
Accessories available separately,



**Product Number**  
SB-102P-0,81/3,7/9,5

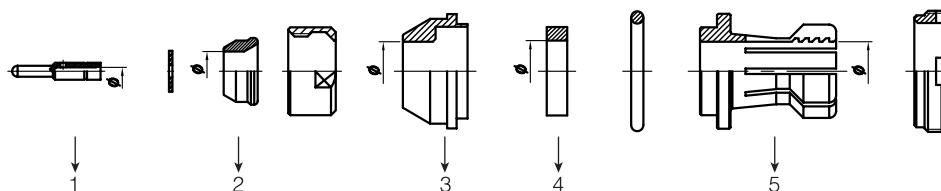
**Product Number**  
SB-102J-0,8/3,7/9,5



Jack

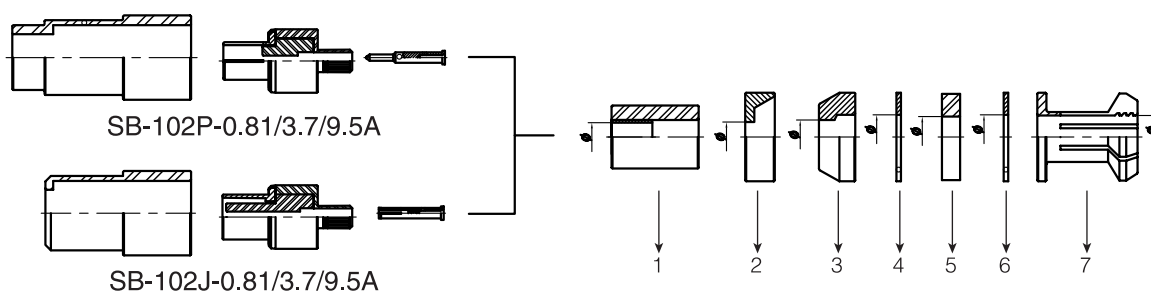
# SB Series Accessories(Triaxial)

## SB-101 Accessory



Product Number	Diameter( $\phi$ )				
	1	2	3	4	5
SB-101-1,0 / 4,5 / 8,7A	1,15	5,8	8,7	8,8	8,7
SB-101-1,0 / 4,5 / 9,4A	1,15	5,8	9,4	9,4	9,4
SB-101-1,4 / 4,5 / 9,4A	1,5	5,8	9,4	9,4	9,4
SB-101-1,4 / 6,6 / 11,3A	1,5	7,5	11,3	10,3	11,3

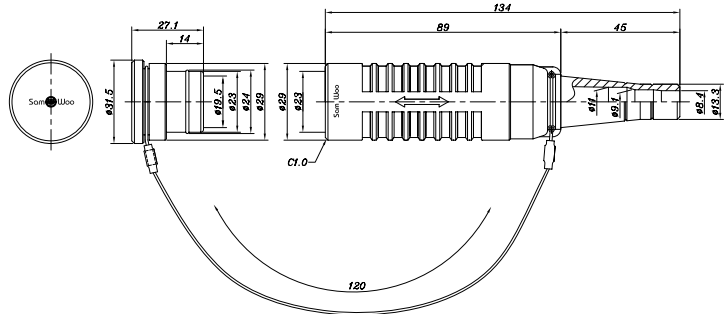
## SB-102 Accessory



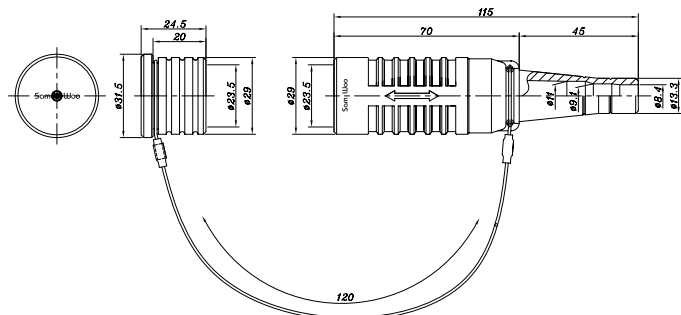
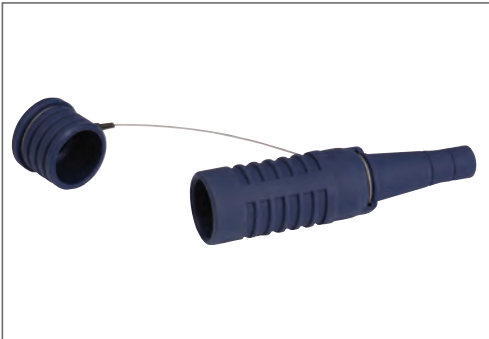
Product Number	Diameter( $\phi$ )						
	1	2	3	4	5	6	7
SB-102P-0,81/3,7/9,5A	6,3	6,6	7,5	9,8	9,0	9,8	9,5
SB-102J-0,81/3,7/9,5A							

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

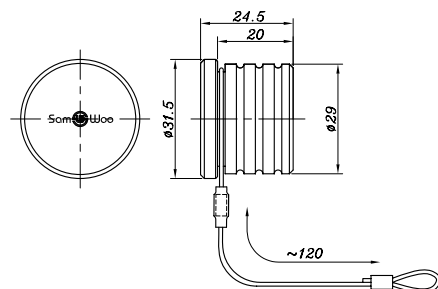
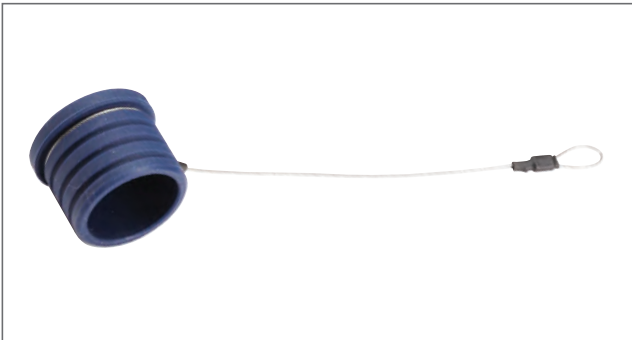
■ SB-101P BOOT



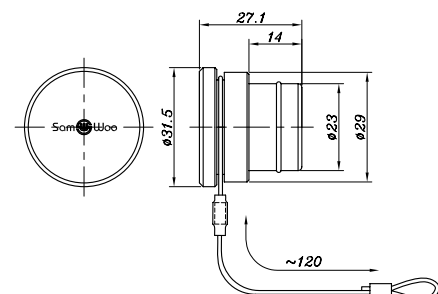
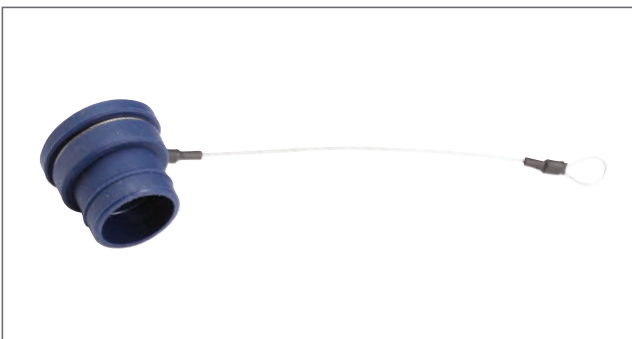
■ SB-101J BOOT



■ SB-101J CAP

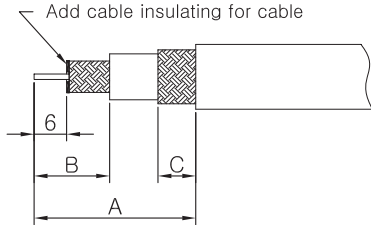


■ SB-101P CAP



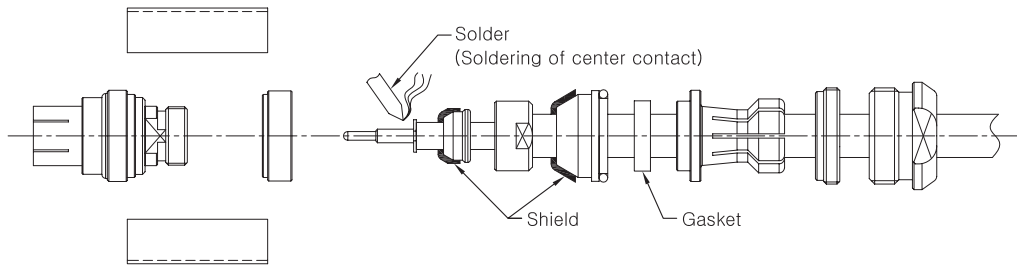
## SB-101 Model (European Standard)

### ■ SB-101J & SB-101P

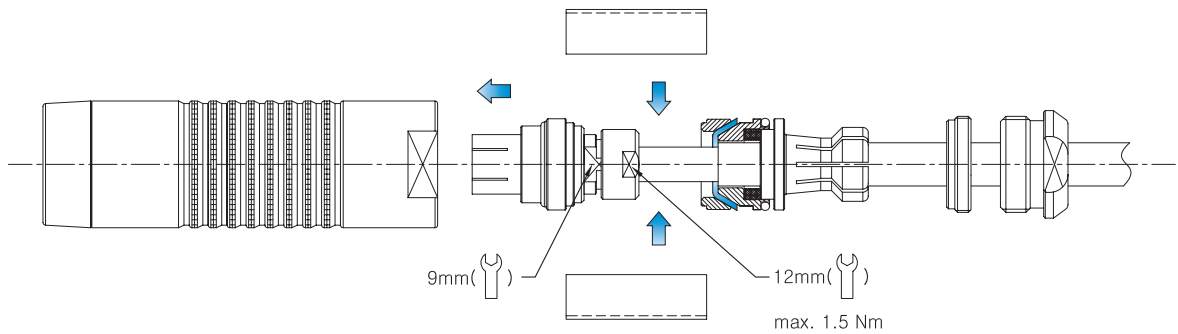


REF.	A	B	C
SB-101P+SB-101J-1,0/4,5	24	14	7
SB-101PFC+SB-101RC-1,0/4,5	25	14	7
SB-101P+SB-101J-1,4/4,5	27	12	7
SB-101PFC+SB-101RC-1,4/4,5	27	12	7
SB-101P+SB-101J-1,4/6,6	27	13	5
SB-101PFC+SB-101RC-1,4/4,6	27	13	5

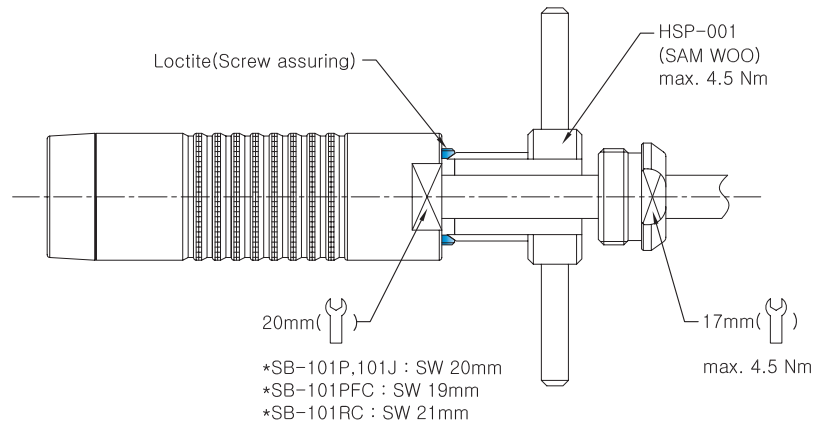
#### A



#### B



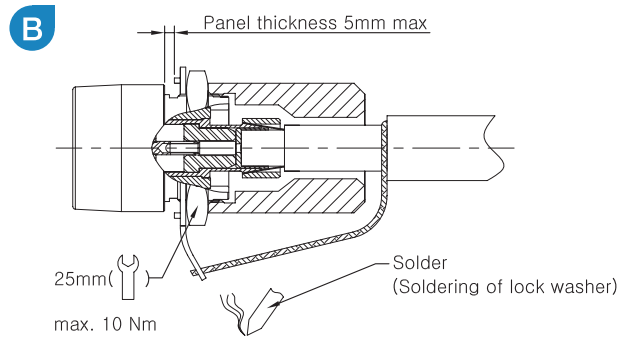
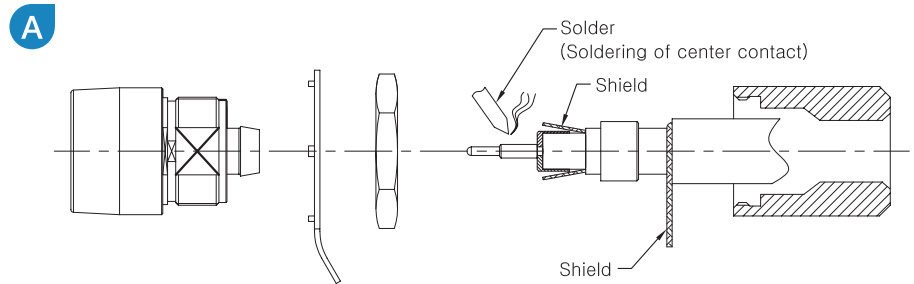
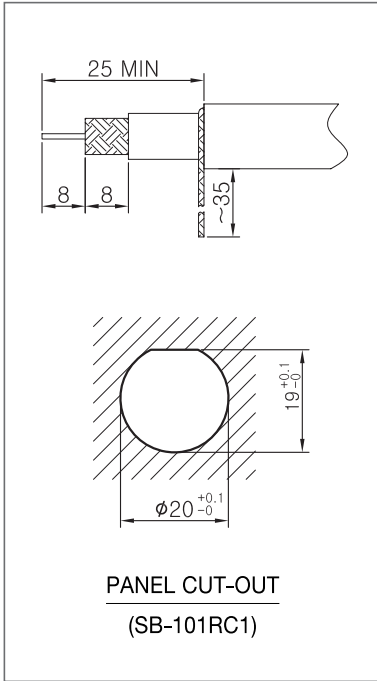
#### C



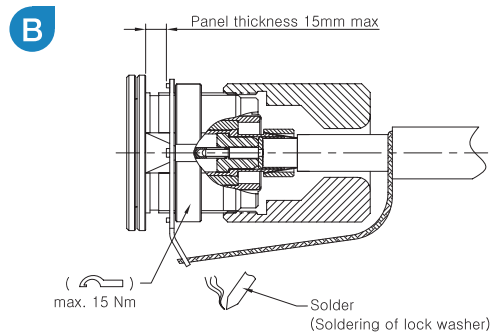
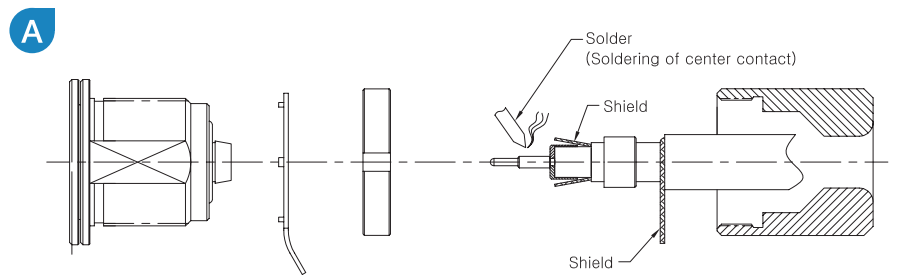
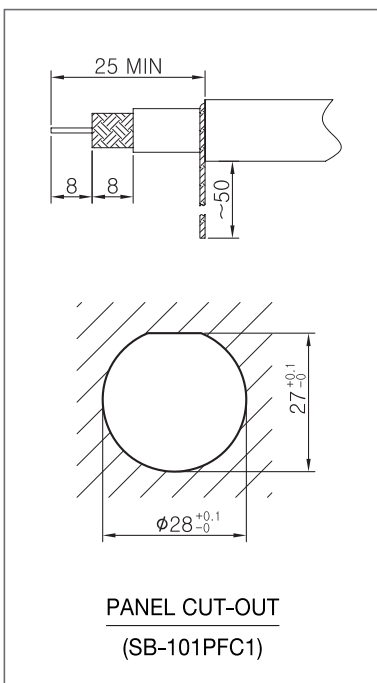
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## SB-101 Model (European Standard)

### ■ SB-101RC1

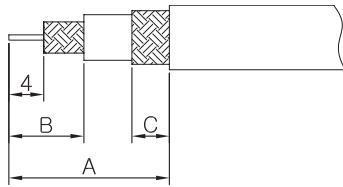


### ■ SB-101PFC1



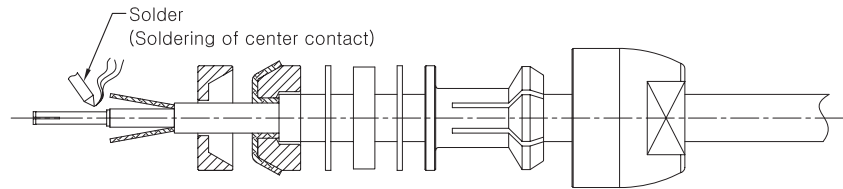
## SB-102 Model (American Standard)

### SB-102P & SB-102J

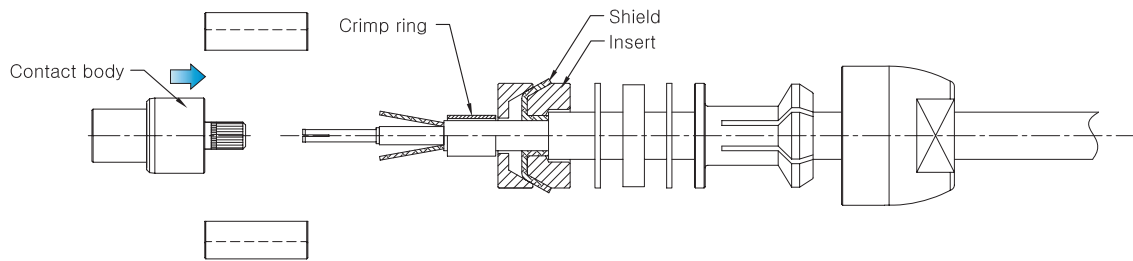


REF.	A	B	C
SB-102P-0,81/3,7/9,5	36	16	13
SB-102J-0,81/3,7/9,5	36	16	13

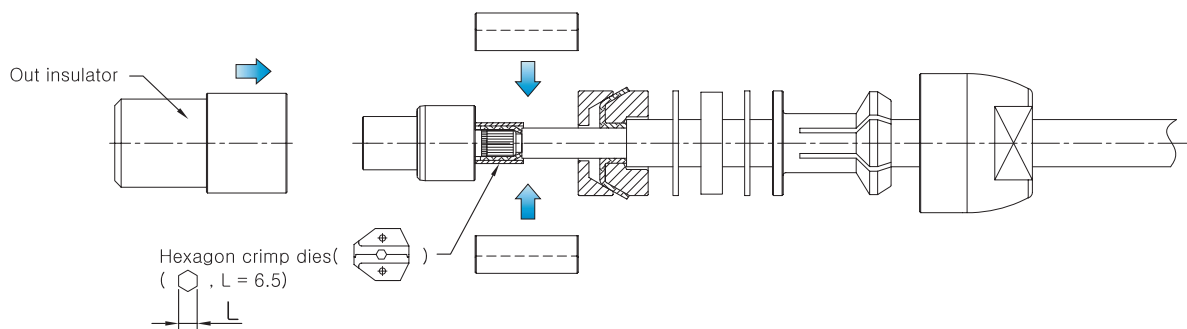
**A**



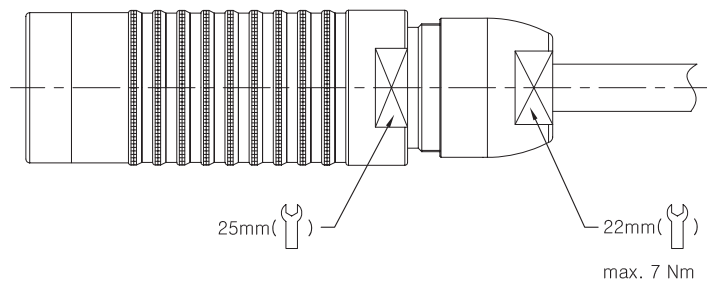
**B**



**C**



**D**



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



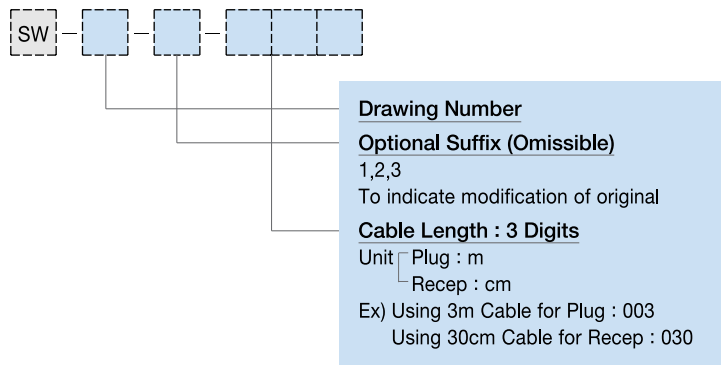
**Features**

- High performance
- Rigorous design
- Standard and Custom Design

**Applications**

- Professional TV Camera
- Broadcasting Industry

■ **Part Numbering**



■ **Plug Cable Assembly**



Type	Construction
A	SB Connector + Cable + Housing
B	SB Connector + Cable + SB Connector

※ Design and Customization Service Available

■ **Jack Cable Assembly**



Type	Construction
A	SB Connector + Cable + open end
B	SB Connector + Cable + Housing
C	SB Connector + Cable + Housing with core

※ Design and Customization Service Available

# STEREO PLUG



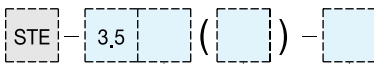
## Features

- Screw Locking System
- Patented Design
- Easy Soldering
- Boot to fit cable diameter :  $\varnothing 2,5$ ,  $\varnothing 3,5$  or  $\varnothing 4,5$

## Applications

- Audio Signal Transmission
- Stereo Headphones
- Professional Headset Microphones

## ■ Stereo Plug Part Numbering



### Body Color

Blank : Ni plating  
B : Black plating

### Body Type

P : Plug  
PL : Right-angle plug  
PM : Plug for molding

### Variation

1 : Easy Mechanism for Repair

## ■ Electrical Performance

Rated Current	Depends on Mating Connector
Contact Resistance	Depends on Mating Connector
Dielectric Strength	AC 500V for 10 seconds

## ■ Mechanical Performance

Mating Cycle	5,000
Solderability	Heat+270 $\pm$ 5 $^{\circ}$ C for 2–3 seconds
Operating Temperature	–20 $^{\circ}$ C – +65 $^{\circ}$ C

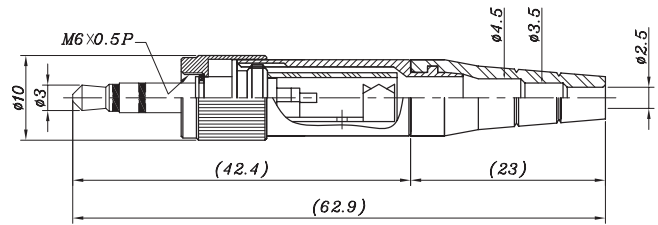
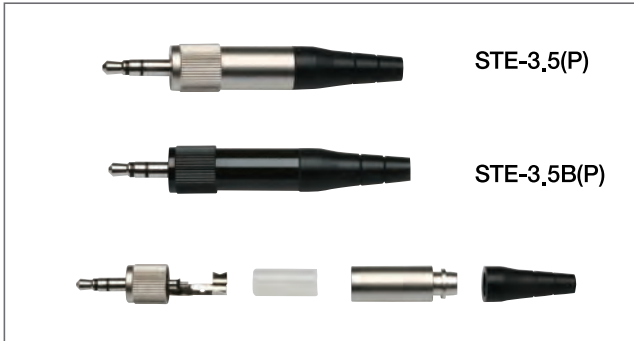
## ■ Material

General	Material	Finish
Housing / Shell	Brass	Ni Plating
Insulation	POM	
Contacts	Brass	Ni Plating
Strain Relief-Crimp	Brass	Ni Plating
Boot	Silicon	Black, Red, Yellow, Grey

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



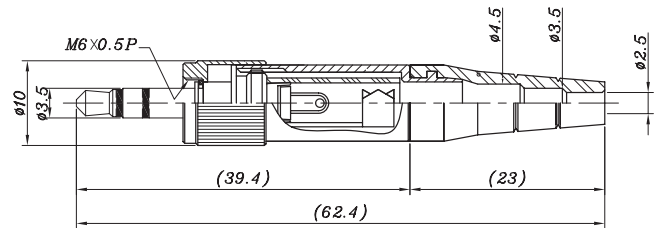
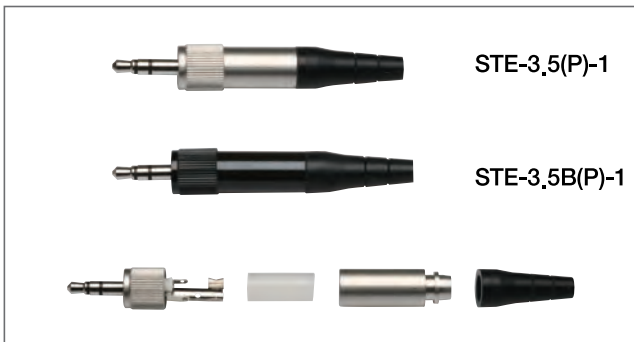
## ■ STE-3.5(P), STE-3.5B(P)



STE-3.5(P), STE-3.5B(P)

## ■ STE-3.5(P)-1, STE-3.5B(P)-1

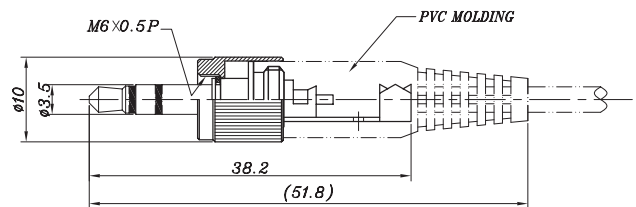
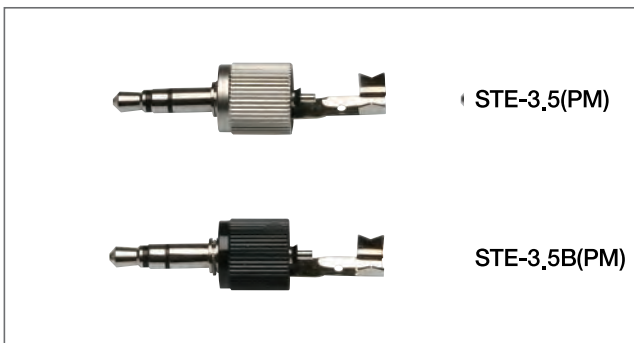
Easy Mechanism for Repair



STE-3.5(P)-1, STE-3.5B(P)-1

## ■ STE-3.5(PM), STE-3.5B(PM)

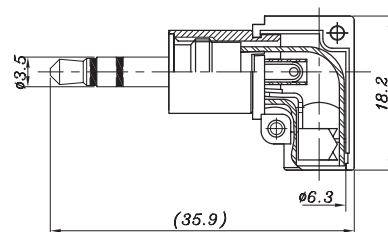
Molding Type



STE-3.5(PM), STE-3.5B(PM)

## ■ STE-3.5(PL), STE-3.5B(PL)

Right-angle Type



STE-3.5(PL), STE-3.5B(PL)

# STEREO PLUG



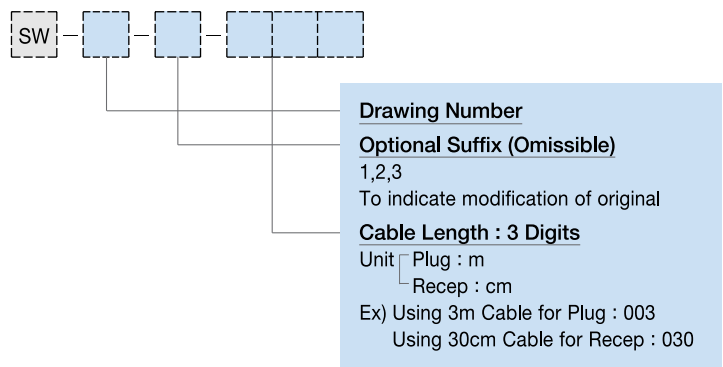
## Features

- Screw Locking System
- Patented Design
- Easy Soldering
- Boot to fit cable diameter :  $\varnothing 2,5$ ,  $\varnothing 3,5$  or  $\varnothing 4,5$
- Standard and Custom Design

## Applications

- Audio Signal Transmission
- Stereo Headphones
- Professional Headset Microphones

## Part Numbering



## STE Cable Assembly with Coil Cable



Type	Construction
A	STE Connector + Coil Cable + Other Connector
B	STE Connector + Coil Cable + SET Connector

※ Design and Customization Service Available

## STE Cable Assembly with Straight Cable



Type	Construction
A	STE Connector + Straight Cable + Open end
B	STE Connector + Straight Cable + Other Connector
C	STE Connector + Straight Cable + STE Connector

※ Design and Customization Service Available

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.





## SMA Features

- 18 GHz MIL-C-39012 SMA specifications
- High quality finish and optimum electrical properties
- Special version offers housing elements made of copper beryllium or stainless steel for higher mechanical strength
- Copper beryllium of the special version is gold plating, while stainless steel connectors are passivated
- SSMA also available.

## SMB Features

- DC to 4GHz MIL-C-39012 SMB specifications
- Snap-on for rapid connection and disconnection

## MCX Features

- Up to 2GHz MIL-C-39012 MCX specifications
- 30% less space than SMB
- Offers equal contact reliability as SMB

## Major Performance

SMA	Impedance	50 $\Omega$		Contact resistance	Center Contacts	3,0m $\Omega$
	Frequency range	Semi-rigid	DC 18GHz		Outer Contacts	2,5m $\Omega$
		Flexible	DC 12,4GHz	Insulation resistance	500M $\Omega$ min	
	Contact current	DC 2,0A max		Insertion loss	0,05 f(GHz)db	
	Working voltage	Semi-rigid	1000V		V,S,W,R	<1,15+0,02f(GHz)
Flexible		750V				

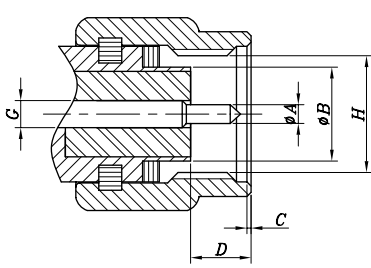
SMB	Impedance	50 $\Omega$		Insulation resistance	1000M $\Omega$ min	
	Frequency range	DC to 4GHz		Insertion loss	0,6dB max	
	Contact current	DC 1,5A max		V,S,W,R	Straight	1,3+0,04f
	Voltage rating	250V R,M,S				
	Contact resistance	Center Contacts	0,3m $\Omega$			
Outer Contacts		0,5m $\Omega$				

MCX	Impedance	50 $\Omega$		Contact resistance	Center Contacts	5,0m $\Omega$
	Frequency range	up to 2 GHz			Outer Contacts	1,0m $\Omega$
	Contact current	DC 1,5A		Insulation resistance	1000M $\Omega$ min	
	Voltage rating	250V R,M,S		V,S,W,R	Straight	1,3 max
			Right-angle		1,35 max	

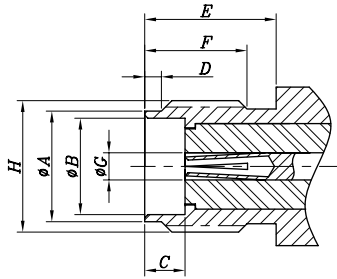
## Material Used / Finish

General		Material	Finish
Body		Brass	Gold Plating
Insulator		PTFE	White
Contacts	Male	Brass	Gold Plating
	Female	Brass	Gold Plating

■ SMA Interface Dimensions



Plug



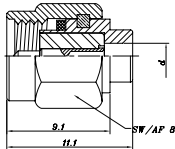
Jack

Interface Dimension

SMA	Plug mm		Jack mm	
	min.	max.	min.	max.
∅ A	0.9	0.94	5.28	5.49
∅ B		4.59	4.59	
C	0.38	1.14	1.88	1.98
D		3.43	0.38	1.14
E			5.54	
F			4.32	
∅ G	1.24	1.29	1.24	1.29
H	1/4-36 UNS-2B		1/4-36 UNS-2A	

■ SMA Plugs

Straight - Semi-rigid Cable - Direct Solder

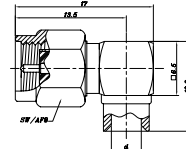


Product Number

SMA-P-402/U

SMA-P-405/U

Right-angle - Semi-rigid Cable - Direct Solder

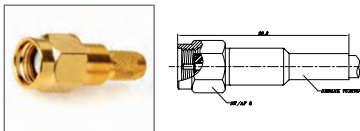


Product Number

SMA-LP-402/U

SMA-LP-405/U

Flexible Cable - Crimp



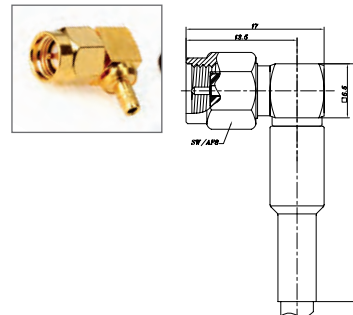
Product Number

SMA-PC-58/U

SMA-PC-178/U

SMA-PC-316/U

Right-angle - Semi-rigid Cable - Crimp



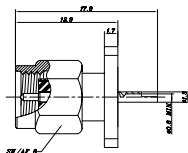
Product Number

SMA-LP-58/U

SMA-LP-178/U

SMA-LP-316/U

Fixed Plug - Flange - Solder Pot Terminated

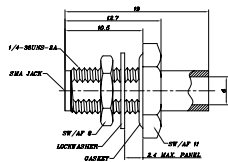


Product Number

SMA-PR

■ SMA Jacks

Bulkhead - Semi-rigid Cable - Direct Solder

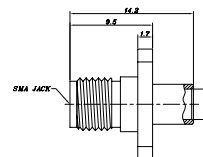


Product Number

SMA-BJR-402/U

SMA-BJR-405/U

Fixed Jack - Flange - Semi-rigid Cable - Direct Solder

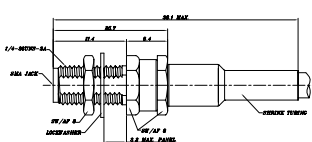


Product Number

SMA-JR-402/U

SMA-JR-405/U

Bulkhead - Flexible Cable - Crimp



Product Number

SMA-BJC-58/U

SMA-BJC-178/U

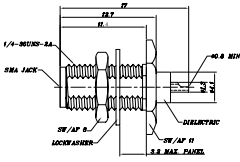
SMA-BJC-316/U

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# SMA Series Miniature

## SMA Receptacles

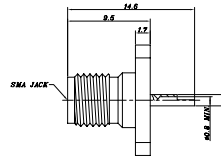
### Bulkhead - Front Screw - Solder Pot Terminated



Product Number

SMA-JBR

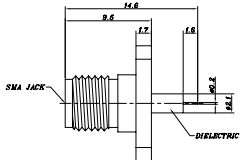
### Flange - Flush Dielectric - Solder Pot Terminated



Product Number

SMA-JR

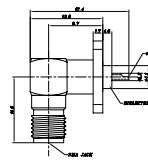
### Flange - Extended Dielectric - Stub Terminated



Product Number

SMA-JR-PCB

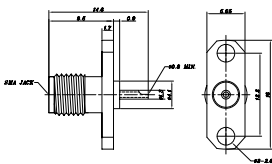
### Right-angle - Flange - Extended Dielectric - Solder Pot Terminated



Product Number

SMA-LJR

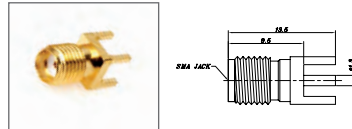
### Narrow Flange - Extended Dielectric - Solder Pot Terminated



Product Number

SMA-J2R

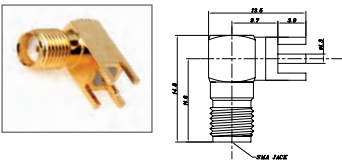
### PCB Receptacle - 4 leg - Stub Terminated



Product Number

SMA-J4R-PCB

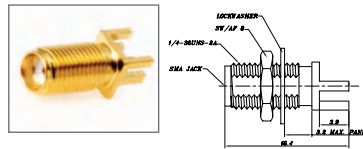
### Right-angle - PCB Receptacle - 4 leg - Stub Terminated



Product Number

SMA-LJ4R-PCB

### PCB Side-Mount Receptacle

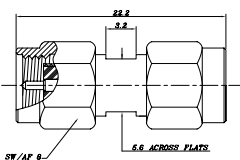


Product Number

SMA-BJ-4RPCB

## SMA Adapters

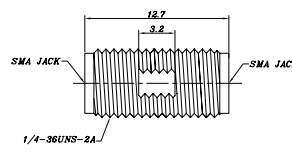
### Plug-Plug



Product Number

SMA-A-PP

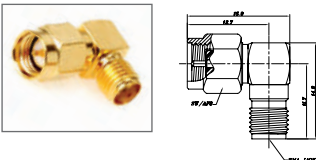
### Jack-Jack



Product Number

SMA-A-JJ

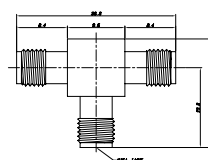
### Right-angle - Plug-Jack



Product Number

SMA-LA-PJ

### 3 Way T-Adapters



Product Number

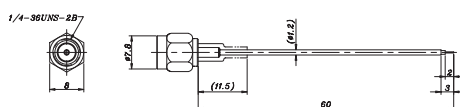
SMA-TA-JJJ

SMA-TA-JPJ

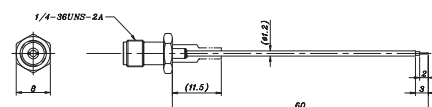
SMA-TA-PJP

## SMA Cable Assembly

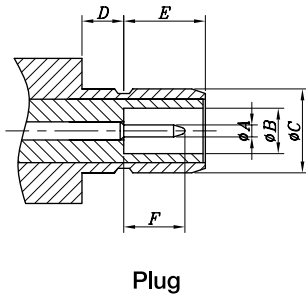
### SMA-P-Semirigid-CA



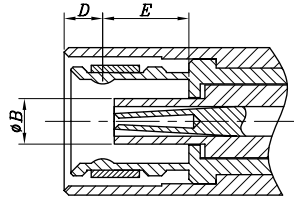
### SMA-J-Semirigid-CA



■ SMB Interface Dimensions



Plug



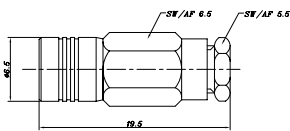
Jack

Interface Dimension

SMB	Plug		Jack	
	min.	max.	min.	max.
$\phi A$	0,48	0,53		
$\phi B$	2,08			2,06
$\phi C$	3,66	3,71		
D	1,65			1,63
E	3,33	3,58	3,58	
F		2,97	2,97	

■ SMB Jack

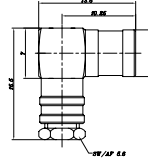
Flexible Cable - Clamp



Product Number

- SMB-J-58/U
- SMB-J-178/U
- SMB-J-316/U

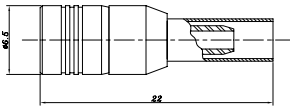
Right-angle - Flexible - Clamp



Product Number

- SMB-LJ-58/U
- SMB-LJ-178/U
- SMB-LJ-316/U

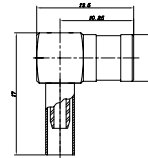
Flexible Cable - Crimp



Product Number

- SMB-JC-58/U
- SMB-JC-178/U
- SMB-JC-316/U

Right-angle - Flexible Cable - Crimp

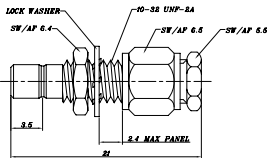


Product Number

- SMB-LJC-58/U
- SMB-LJC-178/U
- SMB-LJC-316/U

■ SMB Plug

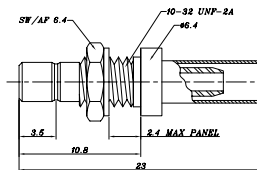
Bulkhead - Flexible - Clamp



Product Number

- SMB-BP-58/U
- SMB-BP-178/U
- SMB-BP-316/U

Bulkhead - Flexible Cable - Crimp

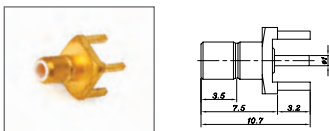


Product Number

- SMB-BPC-58/U
- SMB-BPC-178/U
- SMB-BPC-316/U

■ SMB Receptacles

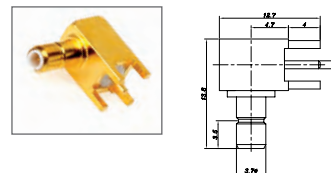
PCB Receptacle - 4 leg - Stub Terminated



Product Number

- SMB-J4R-PCB

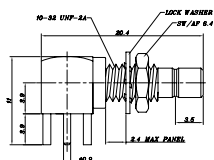
Right-angle - PCB Receptacle - 4 leg - Stub Terminated



Product Number

- SMB-LJ4R-PCB

Right-angle - Bulkhead - PCB Receptacle - 4 leg - Stub



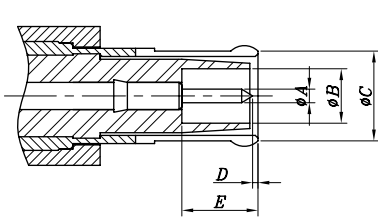
Product Number

- SMB-LB4R-PCB

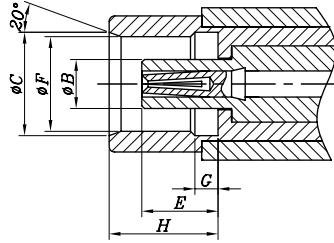
Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# MCX Series Miniature

## MCX Interface Dimensions



Plug



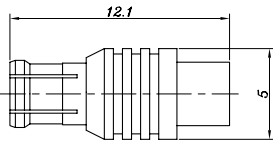
Jack

Interface Dimension

MCX	Plug		Jack	
	mm		mm	
	min.	max.	min.	max.
$\phi A$	0,48	0,53		
$\phi B$	2			1,98
$\phi C$		3,6	3,8	
D	0,15			
E	2,8		2,6	2,8
$\phi F$			3,42	3,48
G			0,75	0,85
H			4	4,12

## MCX Plugs

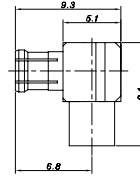
Semi-rigid - Direct Solder



Product Number

MCX-P-402/U  
MCX-P-405/U

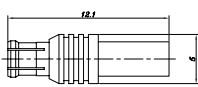
Right-angle - Semi-rigid - Direct Solder



Product Number

MCX-LP-402/U  
MCX-LP-405/U

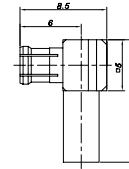
Flexible Cable - Crimp



Product Number

MCX-PC-58/U  
MCX-PC-178/U  
MCX-PC-316/U

Right-angle - Flexible Cable - Crimp

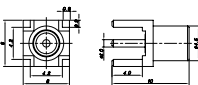


Product Number

MCX-LPC-58/U  
MCX-LPC-178/U  
MCX-LPC-316/U

## MCX Terminator

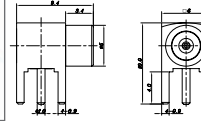
PCB Receptacle - 4 leg - Stub Terminated



Product Number

MCX-J4R-PCB

Right - angle - PCB Receptacle - 4 leg - Stub Terminated



Product Number

MCX-LJ4R-PCB



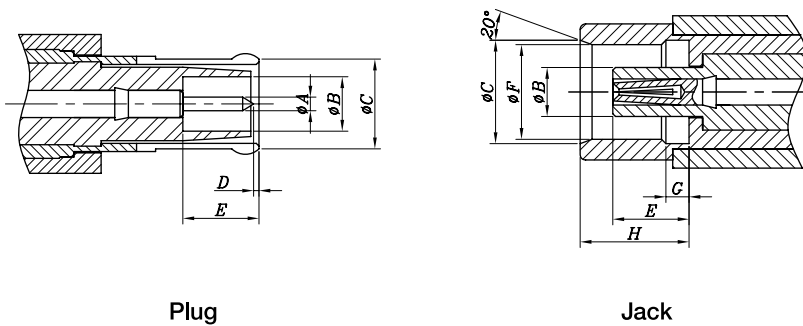




## MMCX Features

- Up to 2GHz MIL-C-39012 MMCX specifications
- 50% less space than MCX
- Snap-on for rapid connection and disconnection

## MMCX Interface Dimensions



Interface Dimension

MMCX	Plug		Jack	
	Min.	Max.	Min.	Max.
∅ A	0,38	0,42		
∅ B			0,7	
∅ C	1,58	1,62	3	3,04
∅ D		2,4	2,41	
E	1,45		2,88	2,9
F			0,9	1,2
G	2,8		2,6	

## MMCX Major Performance

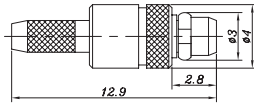
MMCX	Impedance	50 Ω	Contact resistance	Center contacts	5m Ω
	Frequency range	up to 2GHz		Outer contacts	2,5m Ω
	Contact current	DC 1A max.	Insulation resistance	1000M Ω	
	Working voltage	170V, 50Hz	V.S.W.R	Straight	1,2Max
				Right-angle	1,3max

## Material Used / Finish

General		Material	Finish
Body		BRASS	Gold Plating
Insulator		PTFE	White
Contacts	Male	BRASS	Gold Plating
	Female	BRASS	Gold Plating

■ **MMCX Plugs**

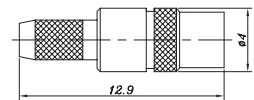
Flexible Cable - Crimp



**Product Number**

MMCX-PC-178/U

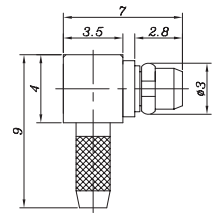
MMCX-PC-316/U



**Product Number**

MMCX-JC-316/U

Right - angle - Flexible Cable - Crimp



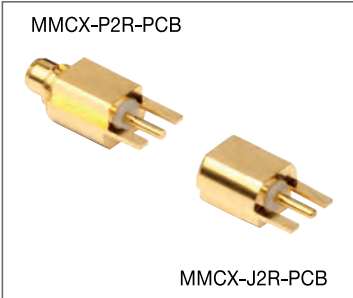
**Product Number**

MMCX-LPC-178/U

MMCX-LPC-316/U

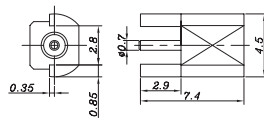
■ **MMCX Terminator**

PCB Receptacle - 2leg - Stub Terminated



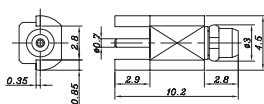
MMCX-P2R-PCB

MMCX-J2R-PCB



**Product Number**

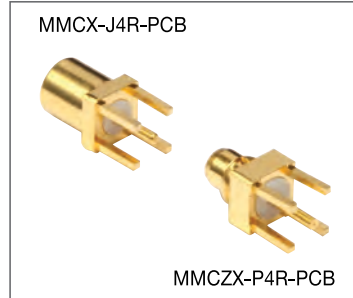
MMCX-J2R-PCB



**Product Number**

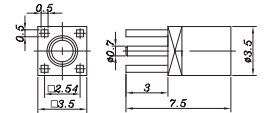
MMCX-P2R-PCB

PCB Receptacle - 4leg - Stub Terminated



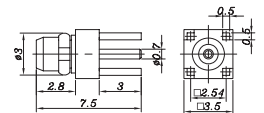
MMCX-J4R-PCB

MMCZX-P4R-PCB



**Product Number**

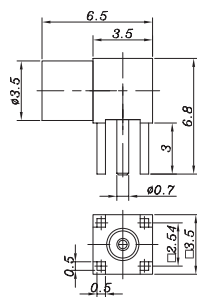
MMCX-J4R-PCB



**Product Number**

MMCX-P4R-PCB

Right - angle - PCB Receptacle - 4 leg - Stub Terminated



**Product Number**

MMCX-LJ4R-PCB

# BNCCHD High Frequency / Part Numbering



## Features

- Top-quality performing 75 Ω BNC
- High density
- Quick and reliable connection

## Applications

- TV broadcasting
- CCTV
- CATV transmitters
- Telecommunications
- Computer networking
- Medical imaging equipment

## Part Numbering

Products	Product Number	Description	Impedance (Ohms)
Jack	BNCCHD-J3R-PCB	HD-BNC PCB Jack, Straight-3Legs	75 Ω
	BNCCHD-J3R1-PCB	HD-BNC PCB Jack, Straight-3Legs	
	BNCCHD-J4R-PCB	HD-BNC PCB Jack, Straight	
	BNCCHD-J4R1-PCB	HD-BNC PCB Jack, Straight	
	BNCCHD-BJ4R-PCB	HD-BNC PCB Jack, Straight, Bulkhead	
	BNCCHD-BJ3RE-PCB	HD-BNC PCB Jack, Straight, Bulkhead	
	BNCCHD-LBJ4R-PCB	HD-BNC PCB Jack, Right-angle, Bulkhead	
Adapter	BNCCHD-A-JJ	HD-BNC Jack to HD-BNC Jack	75 Ω
	BNCCHD-BA-JJ	HD-BNC Jack to HD-BNC Jack, Isolated, Bulkhead	

## Major Performances

Impedance (Ohms)	75 Ω	Insulation resistance	10,000M Ω min	
Frequency range	DC-3GHz	Contact resistance	Center Contact	5m Ω Max
Voltage rating	170V		Outer Contact	2,5m Ω Max
Dielectric withstanding voltage	500 VRMS	V.S.W.R	Straight	1,2
			Right-angle	1,2
Mating	Bayonet type	Durability	500 cycle	

## Material Used / Finish

General	Material	Finish
Body	Brass	Ni or Gold Plating
Insulator	PTFE	White
Contacts	Male	Gold Plating
	Female	Cu-Be

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ BNCCHD JACK

Product Number	Picture	Drawing	Panel hole layout	PCB hole layout
BNCCHD-J3R-PCB				
BNCCHD-J3R1-PCB				
BNCCHD-J4R-PCB				
BNCCHD-J4R1-PCB				

## ■ BNCCHD JACK

Product Number	Picture	Drawing	Panel hole layout	PCB hole layout
BNCCHD-BJ4R-PCB				
BNCCHD-BJ3RE-PCB				
BNCCHD-LBJ4R-PCB				

## ■ BNCCHD ADAPTER

Product Number	Picture	Drawing
BNCCHD-A-JJ		
BNCCHD-BA-JJ		

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.





**Features**

- Top-quality performing 75 Ω BNC
- Quick, reliable connection
- Intermateable with 50 Ω series

**Applications**

- TV broadcasting
- CCTV
- Satellite receivers
- Medical imaging equipment, etc.
- CATV transmitters
- Telecommunications
- Computer networking

■ **BNC Part Numbering (plug & adapter)**



**Connector Series**  
BNCC-BNC 75 Ω series

**Body Type**  
PC : Plug (crimp type)      AJJ : Adapter (jack-jack)  
APJ : Adapter (plug-jack)      APP : Adapter (plug-plug)

**Cable code**

Code	Cable in use
1,5C	1,5C 2V
2,5C	2,5C 2V
3C	3C 2V
5C	5C 2V
6CHF	6CHFB
7C	7C 2V
7CHF	7CHF
6	RG6/U
59U	RG59/U, Belden 1505A
179U	RG179/U
1855A	Belden 1855A
VK2	Percon VK2
VK5/6,0	Percon VK5/0,6
VK6/0,8	Percon VK6/0,8
VK7/1,0	Percon VK7/1,0
VK95	Percon VK95

**Frequency**  
1 : 1GHz      3 : 3GHz

**Boot Color Code**

BK - Black	BU - Blue	BR - Brown
GY - Gray	GN - Green	OR - Orange
PR - Purple	RD - Red	WH - White
YE - Yellow		

**Boot Code**  
01 : RG - 179, 1,5C 2V  
02 : 2,5C 2V, 3C 2V  
03 : 1505A, RG - 59/U

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



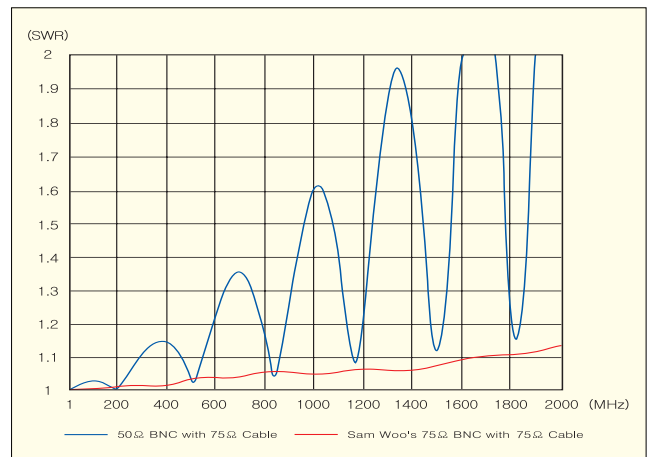
■ Major Performance

Impedance	75 Ω	Insulation resistance	5,000MΩ	
Frequency range	0~3 GHz	Contact resistance	Center Contact	3,5m Ω max
Voltage rating	500V R,M,S		Outer Contact	2,5m Ω max
Dielectric withstanding voltage	1,500V@sea level	V,S,W,R	<1,2	

■ BNC 75 Ω Advantage

Why use BNC 75 Ω Connectors?

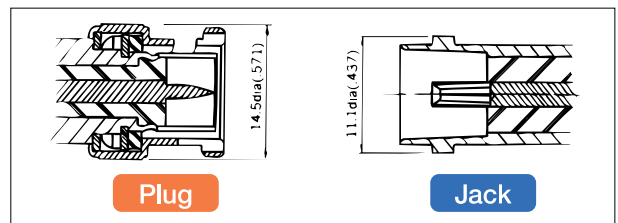
The 50 Ω BNC connector that terminates to the 75 Ω video coax is not sufficient in producing maximum performance for today's high analog and digital transmission, causing a mismatch that results in signal degradation and reduction in picture quality. The data on the right shows that the 75 Ω connectors outperform the 50 Ω in terms of VSWR. Thirty-centimeter long cables with both BNC ends are used to generate the data.



■ Material Used / Finish

General		Material	Finish
Body		Zinc alloy or Brass	Ni plating
Insulator		PTFE	White
Contacts	Male	Brass	Gold plating
	Female	Beryllium copper	Gold plating

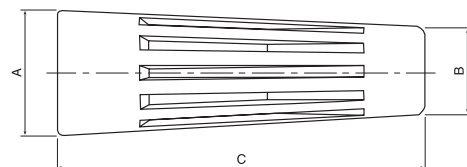
■ Interface Dimension



■ 1GHz and 3GHz Compared



■ Boot Dimension / Part Numbering(for boot only)

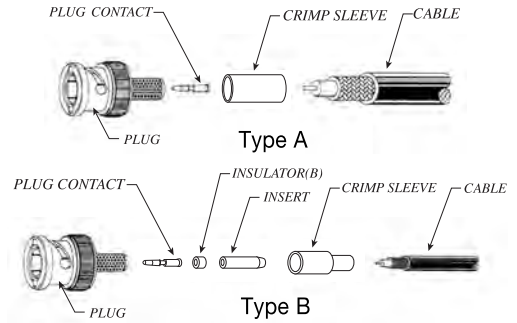
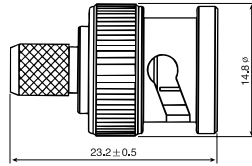


Model	Cable	∅ A	∅ B	C
BNC-color 01	RG-179/U, 1,5C 2V	12,5	5,5	28
BNC-color 02	2,5C 2V, 3C 2V	12,5	6	32
BNC-color 03	1505A, RG-59/U	12,5	8,5	36

- ↓  
**Color Code**  
 BK - Black      BU - Blue      BR - Brown  
 GY - Grey      GN - Green      OR - Orange  
 PR - Purple      RD - Red      WH - White  
 YE - Yellow

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

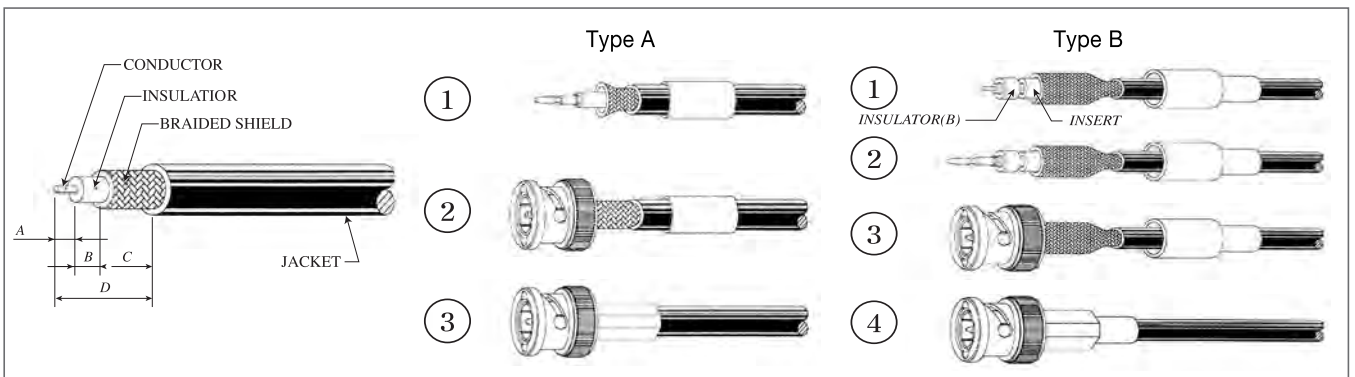
■ **BNC Plugs**



No.	Product Number	Cable Type	Frequency	Cable Stripping(mm)				Assembly Type
				A	B	C	D	
1	BNCC-PC-1,5C-1	1,5C 2V	1	3,5	5,5	8	17	B
2	BNCC-PC-2,5C-1	2,5C 2V	1	3,5	5,5	7	16	A
3	BNCC-PC-3C-1	3C 2V	1	3,5	5,5	7	16	A
4	BNCC-PC-5C-1	5C 2V	1	3	4	8	15	A
5	BNCC-PC-6CHF-1	6CHFB	1	3,5	3,5	9	16	A
6	BNCC-PC-7C-1	7C 2V	1					
7	BNCC-PC-7CHF-1	7CHF	1	3,5	3,5	9	16	A
8	BNCC-PC-6-1	RG6/U	1					
9	BNCC-PC-59U-1	RG59/U, Belden 1505A	1	3,5	5,5	7	16	A
10	BNCC-PC-179U-1	RG179/U	1	3,5	5,5	8	17	B
11	BNCC-PC-1,5C-3	1,5C 2V	3	3	4	8	15	B
12	BNCC-PC-2,5C-3	2,5C 2V	3	3	4	7	14	A
13	BNCC-PC-3C-3	3C 2V	3	3	4	7	14	A
14	BNCC-PC-5C-3	5C 2V	3					
15	BNCC-PC-6CHF-3	6CHFB	3	3	3	9	15	A
16	BNCC-PC-7CHF-3	7CHF	3	3	3	9	15	A
17	BNCC-PC-59U-3	RG59/U, Belden 1505A	3	3	3	9	15	B
18	BNCC-PC-179U-3	RG179/U	3	3	4	8	15	B
19	BNCC-PC-1855A-3	Belden 1855A	3	3	3	9	15	A
20	BNCC-PC-VK2-4	Percon VK2	3	3	4	7	14	B
21	BNCC-PC-VK5/0,6-3	Percon VK5/0,6	3	3	4	7	14	A
22	BNCC-PC-VK6/0,8-3	Percon VK6/0,8	3	3	4	7	14	A
23	BNCC-PC-VK7/1,0-3	Percon VK7/1,0	3	3	4	7	14	A
24	BNCC-PC-VK9-3	Percon VK9	3	3	4	7	14	A

■ **Cable Assembly Instruction**

- Use above cable stripping dimensions



■ Crimp Tools



Sam Woo Tool (SW-HT)



Tool Die



Canare Tool (TC-1)

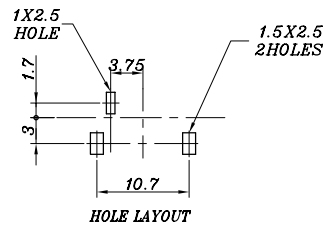
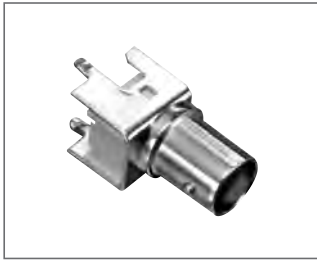
Tool	Color of Handles	Tool Die	Hexagon		Square		Hexagon		Square		Hexagon	
			A	B	C	D	E	F				
SW-HT	Red	HTD-02		5,87		1,36		6,48		1,59		5,41
TC-1	Blue	TCD-5CFB	A		B		C	8,05	D	1,2	E	
		TCD-7CA						10,23		1,93		

No.	Product Number	Cable Type	Die Spec(mm)					Tool	Tool Die	Tool Maker
			Sleeve			Contact				
			A	C	E	B	D			
1	BNCC-PC-1,5C-1	1,5C 2V			●	●		SW-HT	HTD-02	Sam Woo
2	BNCC-PC-2,5C-1	2,5C 2V	●			●		SW-HT	HTD-02	Sam Woo
3	BNCC-PC-3C-1	3C 2V	●			●		SW-HT	HTD-02	Sam Woo
4	BNCC-PC-5C-1	5C 2V		●		●				
5	BNCC-PC-6CHF-1	6CHF B		●		●		TC-1	TCD-7CA	Canare
6	BNCC-PC-7C-1	7C 2V								
7	BNCC-PC-7CHF-1	7CHF		●			●	TC-1	TCD-7CA	Canare
8	BNCC-PC-6-1	RG6/U								
9	BNCC-PC-59U-1	RG59/U, Belden 1505A		●			●	SW-HT	HTD-02	Sam Woo
10	BNCC-PC-179U-1	RG179/U			●	●		SW-HT	HTD-02	Sam Woo
11	BNCC-PC-1,5C-3	1,5C 2V			●	●		SW-HT	HTD-02	Sam Woo
12	BNCC-PC-2,5C-3	2,5C 2V	●			●		SW-HT	HTD-02	Sam Woo
13	BNCC-PC-3C-3	3C 2V	●			●		SW-HT	HTD-02	Sam Woo
14	BNCC-PC-5C-3	5C 2V								
15	BNCC-PC-6CHF-3	6CHF B		●			●	TC-1	TCD-7CA	Canare
16	BNCC-PC-7CHF-3	7CHF		●			●	TC-1	TCD-7CA	Canare
17	BNCC-PC-59U-3	RG59/U, Belden 1505A		●			●	SW-HT	HTD-02	Sam Woo
18	BNCC-PC-179U-3	RG179/U			●	●		SW-HT	HTD-02	Sam Woo
19	BNCC-PC-1855A-3	Belden 1855A		●		●		SW-HT	HTD-02	Sam Woo
20	BNCC-PC-VK2-4	Percon VK2			●	●		SW-HT	HTD-02	Sam Woo
21	BNCC-PC-VK5/0,6-3	Percon VK5/0,6			●	●		SW-HT	HTD-02	Sam Woo
22	BNCC-PC-VK6/0,8-3	Percon VK6/0,8			●	●		SW-HT	HTD-02	Sam Woo
23	BNCC-PC-VK7/1,0-3	Percon VK7/1,0		●		●		TC-1	TCD-5CFB	Canare
24	BNCC-PC-VK9-3	Percon VK9		●		●		TC-1	TCD-5CFB	Canare

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

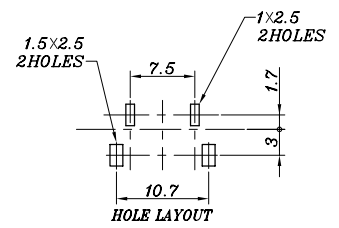
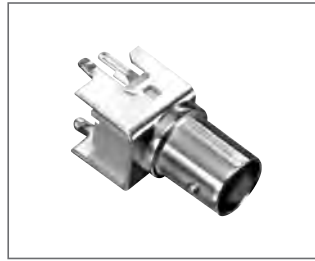
■ **BNC Receptacles**

SW-2497B-PCB



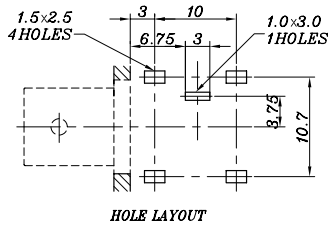
Vertical w/o Switch

SW-2520B-PCB



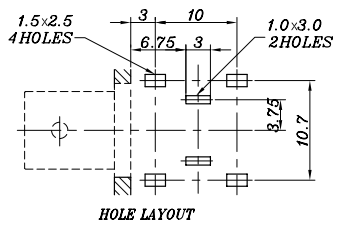
Vertical with Switch

SW-2639B-LPCB



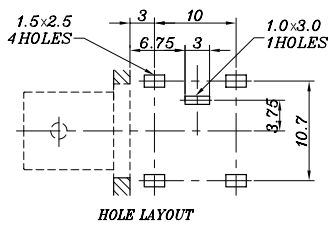
Horizontal w/o Switch

SW-2521B-LPCB



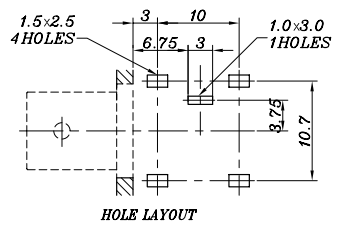
Horizontal with Switch

SW-2635B-LPCB



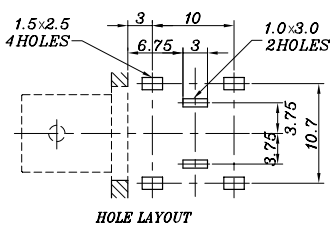
Horizontal w/o Switch (Short)

SW-2645B-LPCB



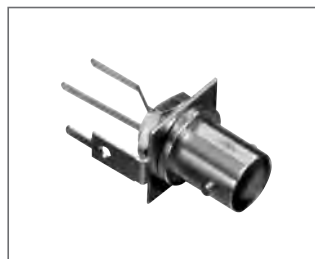
Horizontal w/o Switch (Short, Brass)

SW-2584B-LPCB



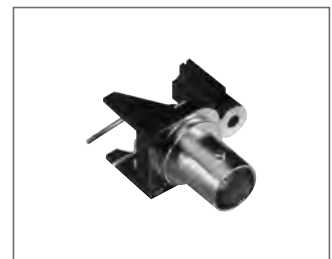
Horizontal with Switch (Short)

BNC-RB-2P



Bulkhead with Switch

BNC-PCL



Horizontal w/o Switch

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

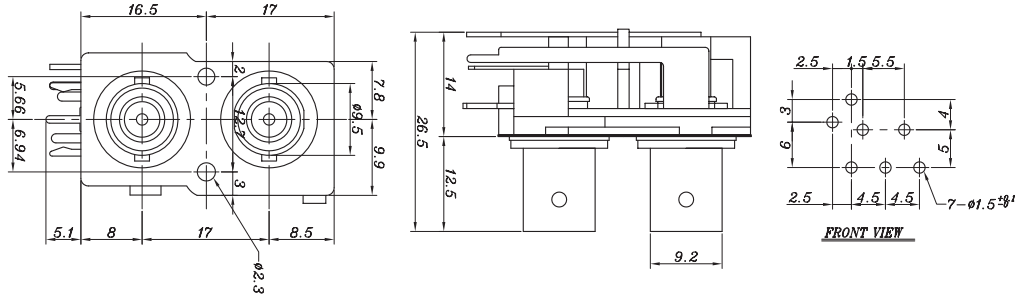
## ■ BNC Receptacles

With Switches

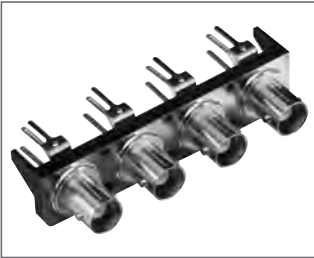
### BNC2-P/B



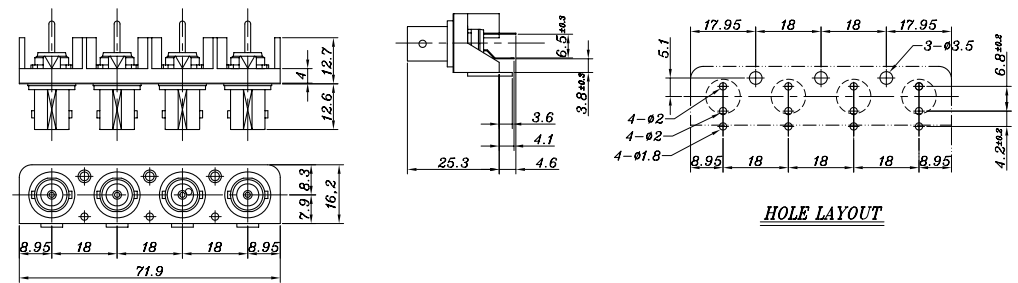
Vertical with 2 Switches



### BNC4-P/B



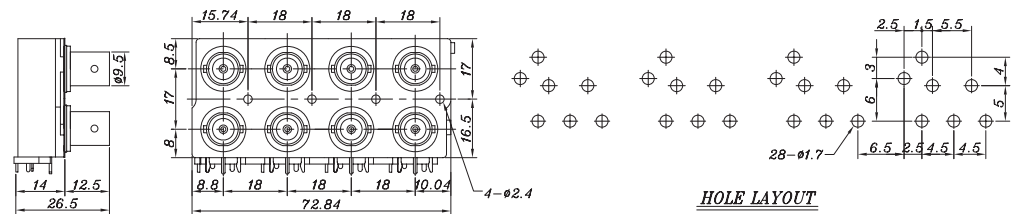
Vertical with 4 Switches



### BNC8-P/B



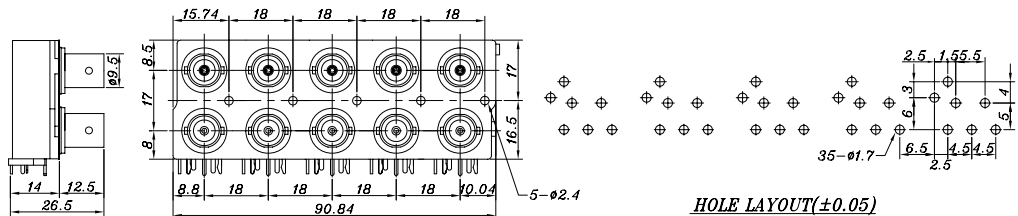
Vertical with 8 Switches



### BNC10-P/B



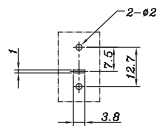
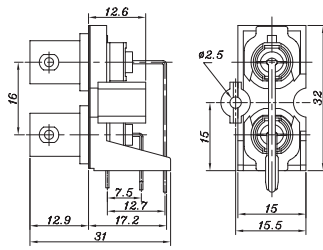
Vertical with 10 Switches



Without Switches

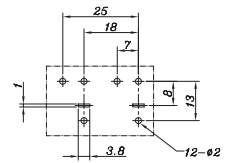
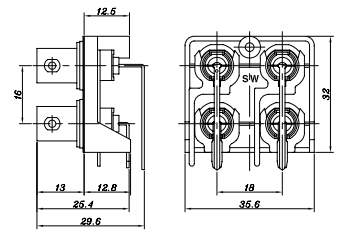
■ **BNC Receptacles**

**BNC2-P/B (N/S)**



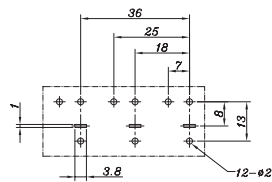
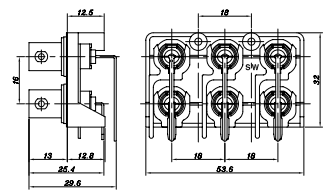
*Front View*

**BNC4-P/B (N/S)**



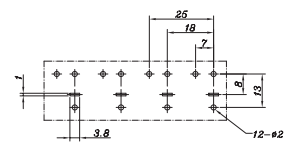
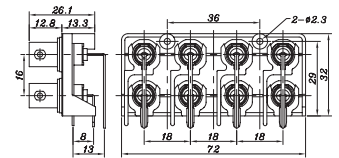
*Front View*

**BNC6-P/B (N/S)**



*Front View*

**BNC8-P/B (N/S)**



*Front View*

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

Up to 3GHz

Major Performance

Product Number	Description	Stud position	Panel Mount	V,S,W,R
BNCC-JPR-LPCB	Right angle	Horizontal	Front : M2,6 screw	Up to 1GHz : 1,1 or less Up to 3GHz : 1,2 or less
BNCC-2JPR-LPCB	Right angle,Dual Jack	Horizontal	Front : M2,6 screw	Up to 1GHz : 1,1 or less Up to 2,5GHz : 1,2 or less
BNCC-JBR-LPCB	Right angle,Low-cost	Vertical	Front : Hex nut & lock washer	Up to 1GHz : 1,1 or less Up to 2,5GHz : 1,2 or less

75 Ω BNC PCB Mount Receptacle Screw type

Product Number	Picture	Drawing	Panel hole layout	PCB hole layout
BNCC-JPR-LPCB				
BNCC-2JPR-LPCB				

75 Ω BNC PCB Mount Receptacle Hexagonal Nut type

Product Number	Picture	Drawing	Panel hole layout	PCB hole layout
BNCC-JBR-LPCB				 t:2,0mm max

\* Note : Please avoid any cleaning soldering. This occurs to insulation problem.

# BNC 50 Ω , N, M, TNC, Series



## BNC 50 Ω , N, M, TNC, Features

- High quality Sam Woo medium-size coaxial connectors provide best performance for various applications.
- 75 Ω products available upon request.

## Adapter Basic Features

- Between-series adapter,
  - BNC-N
  - BNC-SMA
  - N-M
  - N-TNC
  - BNC-M
  - BNC-TNC
  - N-SMA
- Other Types available upon request.

## Major Performance

BNC 50 Ω	Impedance	50 Ω		Contact resistance	Center Contacts	3,0m Ω	
	Frequency range	Semi-rigid	DC 18GHz		Insulation resistance	Outer Contacts	
		Flexible	DC 12,4GHz	5000M Ω min			
	Contact current	DC 2,0A max		Insertion loss	0,05 f(GHz)db		
Working voltage	Semi-rigid	1000V	V,S,W,R		(1,15+0,02f(GHz))		
	Flexible	750V					
N	Impedance	50 Ω		Insulation resistance	1000M Ω min		
	Frequency range	DC to 4GHz			Insertion loss	0,6dB max	
	Contact current	DC 1,5A max		V,S,W,R		Straight	1,3+0,04f
	Voltage rating	250V R,M,S				Right-angle	1,4+0,06f
	Contact resistance	Center Contacts	0,3m Ω				
Outer Contacts		0,5m Ω					
M	Impedance	50 Ω		Contact resistance	Center Contacts	5m Ω	
	Frequency range	up to 2 GHz			Insulation resistance	Outer Contacts	1m Ω
	Contact current	DC 1,5A		V,S,W,R		1000M Ω min	
	Voltage rating	250V R,M,S			Straight	1,3 max	
Right-angle	1,35 max						
TNC	Impedance	50 Ω		Contact resistance	Center Contacts	5m Ω	
	Frequency range	up to 2 GHz			Insulation resistance	Outer Contacts	1m Ω
	Contact current	DC 1,5A		V,S,W,R		1000M Ω min	
	Voltage rating	250V R,M,S			Straight	1,3 max	
Right-angle	1,35 max						

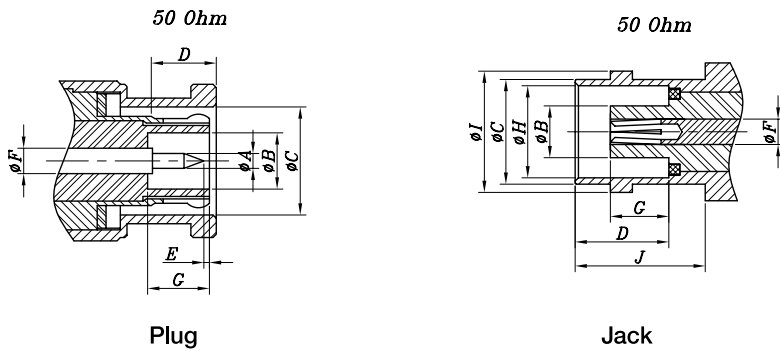
## Material Used / Finish

General	Material	Finish
Body	Zinc alloy or Brass	Ni plating
Insulator	PTFE	White
Contacts	Male	Brass
	Female	Brass
		Gold plating
		Gold plating

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



■ BNC 50 Ω Interface Dimensions

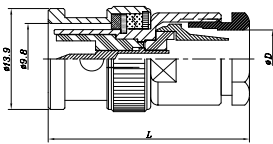


Interface Dimension

BNC	Plug mm		Jack mm	
	min.	max.	min.	max.
∅ A	1,32	1,37		
∅ B	4,83			4,72
∅ C	9,78	9,91	9,6	9,7
D	5,38		8,31	8,51
E	0,35		4,95	
∅ F	2,14		2,14	
G	5,28		max1,5	5,28
∅ H			8,1	8,15
∅ I			10,97	11,07
J			10,52	

■ BNC Plugs

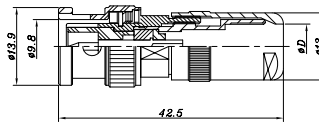
BNC Straight Plug (Clamp)



Product Number

- BNC-P-5
- BNC-P-7
- BNC-P-8/U
- BNC-P-58/U
- BNC-P-59/U

BNC King Size Plug (Clamp)

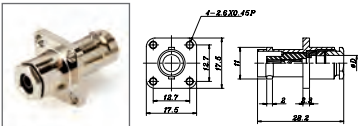


Product Number

- BNC-PK-58/U
- BNC-PK-59/U
- BNC-PK-5V
- BNC-PK-5W
- BNC-PK-7C
- BNC-PK-10C

■ BNC Jack

Straight Panel (Clamp)

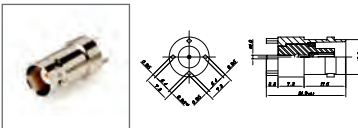


Product Number

- BNC-PJ-58/U
- BNC-PJ-59/U

■ BNC Receptacles

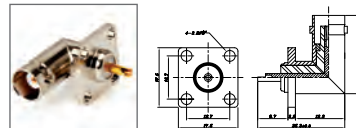
Straight PCB Mount



Product Number

- BNC-JR

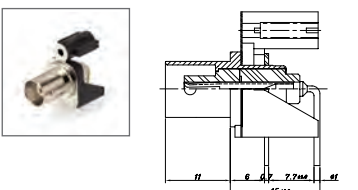
Right-angle Flange Panel



Product Number

- BNC-LR

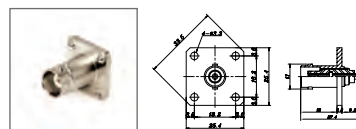
Horizontal w/o Switch



Product Number

- BNC-PCL

Flange Panel



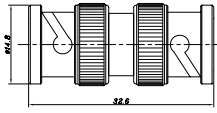
Product Number

- BNC-R

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## ■ Adapters

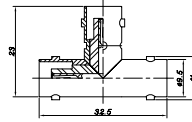
Plug - Plug Adapter



Product Number

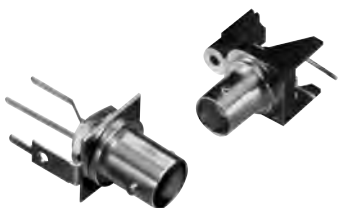
BNC-A-PP

Jack - Jack - Jack Adapter



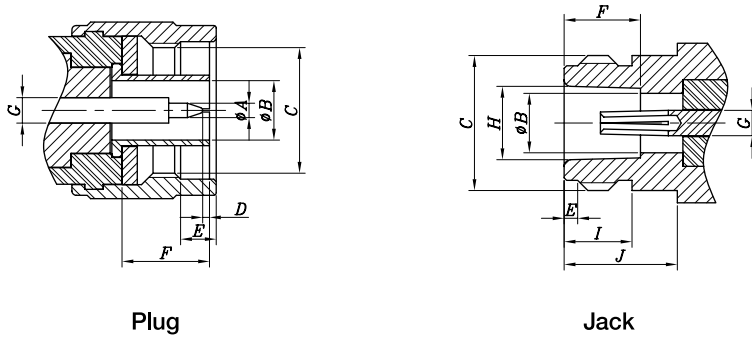
Product Number

BNC-TA-JJJ



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## ■ N Interface Dimensions

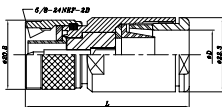


Interface Dimension

N	Plug		Jack	
	min.	max.	min.	max.
$\phi A$	1,6	1,676		
$\phi B$	7			7,06
C	5/8-24 UNEF-2B		5/8-24 UNEF-2A	
D	0	1,57		
E	4,013	4,267	1,19	1,96
F	9,25		9,05	9,19
G	3,04		3,04	
H			8,54	8,74
I			6,76	
J			10,72	

## ■ N Plugs

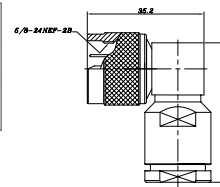
### Straight (Clamp)



#### Product Number

N-P-3  
 N-P-5  
 N-P-7  
 N-P-8/U  
 N-P-10  
 N-P-14/U  
 N-P-17/U  
 N-P-58/U  
 N-P-59/U

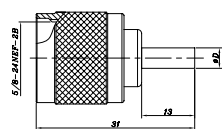
### Right-angle (Clamp)



#### Product Number

N-LP-8/U  
 N-LP-58/U  
 N-LP-59/U

### Straight (Crimp)

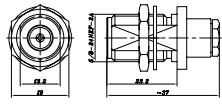


#### Product Number

N-PC-58/U  
 N-PC-59/U  
 N-PC-178/U  
 N-PC-316/U

## ■ N Jacks

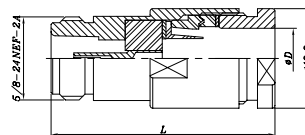
### Bulkhead (Clamp)



#### Product Number

N-BJ-58/U  
 N-BJ-59/U

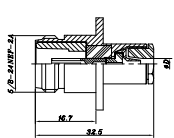
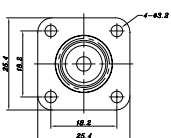
### Straight (Clamp)



#### Product Number

N-J-8/U  
 N-J-10  
 N-J-17/U  
 N-J-58/U  
 N-J-59/U

### Panel (Clamp)

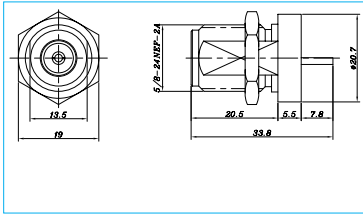


#### Product Number

N-PJ-8/U  
 N-PJ-10  
 N-PJ-58/U  
 N-PJ-59/U

## N Receptacles

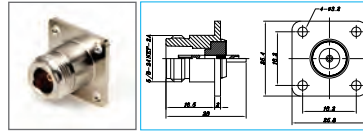
### Bulkhead



#### Product Number

N-BR

### Panel

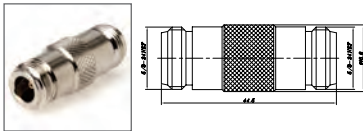


#### Product Number

N-R

## N Adapter & Others

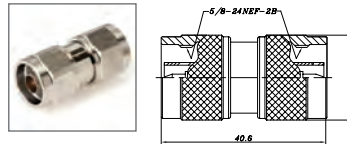
### Jack - Jack Adapter



#### Product Number

N-A-JJ

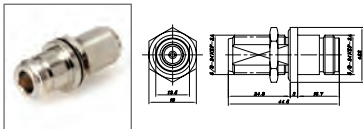
### Plug - Plug Adapter



#### Product Number

N-A-PP

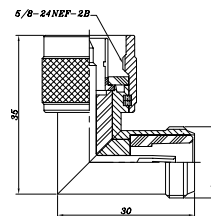
### Jack - Jack Bulkhead Adapter



#### Product Number

N-BA-JJ

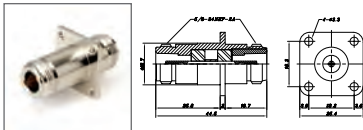
### Plug - Jack Right-angle Adapter



#### Product Number

N-LA-PJ

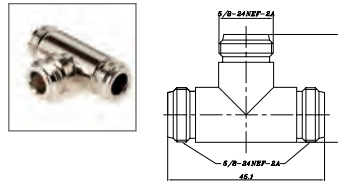
### Jack - Jack Panel Adapter



#### Product Number

N-PA-JJ

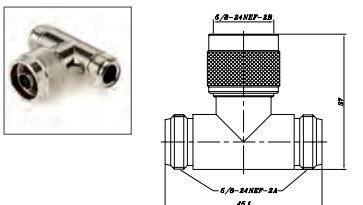
### Jack - Jack - Jack Adapter



#### Product Number

N-TA-JJJ

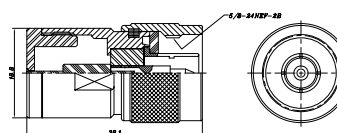
### Jack - Plug - Jack Adapter



#### Product Number

N-TA-JPJ

### Plug Terminator

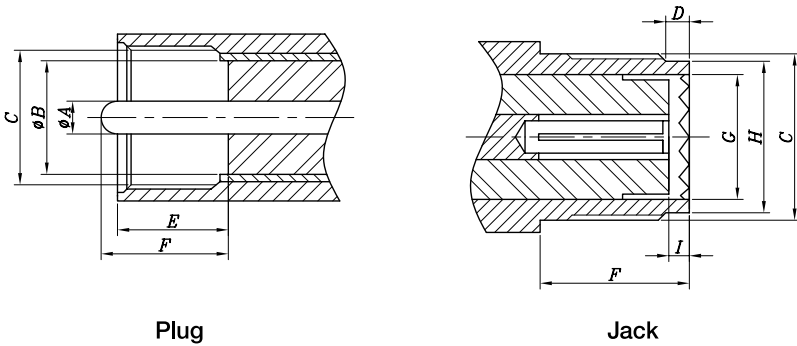


#### Product Number

N-DUMMY

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## M Interface Dimensions

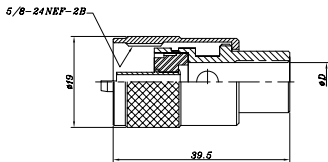


Interface Dimension

SMA	Plug		Jack	
	min.	max.	min.	max.
$\phi A$	3,91			
$\phi B$	11,56			
C	5/8-24 UNEF-2B		5/8-24 UNEF-2A	
D			1,19	
E	9,91			
F	11,1			
G			12,22	
H			13,92	
I			6,76	

## M Plugs

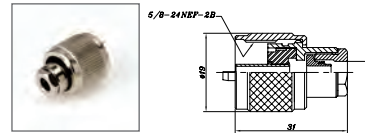
Straight



Product Number

- M-P-5
- M-P-7
- M-P-10

Straight (Clamp)

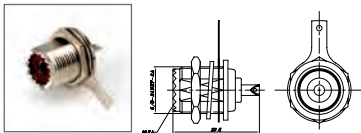


Product Number

- M-P-58/U
- M-P-59/U

## M Receptacles

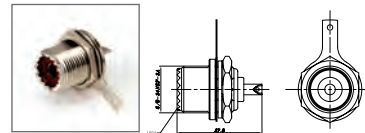
Bulkhead Front Nut



Product Number

CH-239(A)

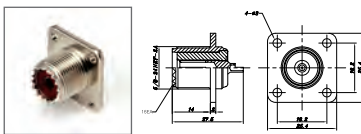
Bulkhead Back Nut



Product Number

CH-239(B)

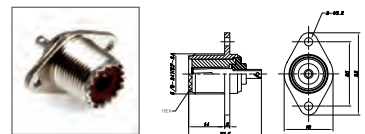
Panel



Product Number

SO-239

Panel (Narrow Flange)

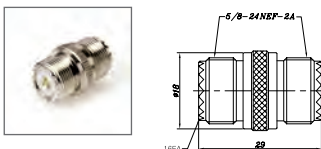


Product Number

SO-239(D)

## M Adapter & Others

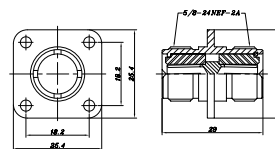
Jack-Jack Adapter



Product Number

M-A-JJ

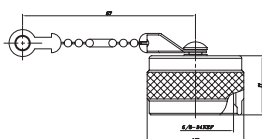
Jack-Jack Panel Adapter



Product Number

M-PA-JJ

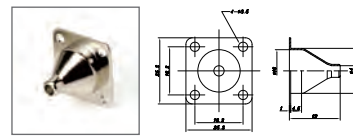
Jack Cap



Product Number

M-JC

Hood

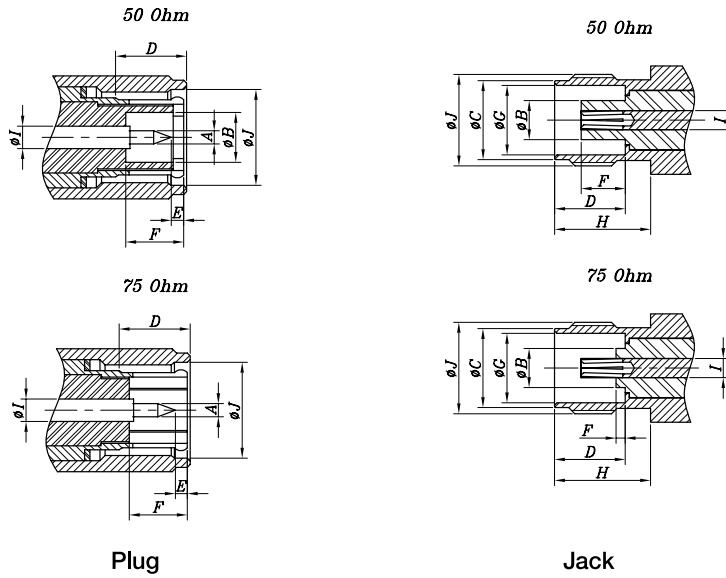


Product Number

M-H

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## TNC Interface Dimensions

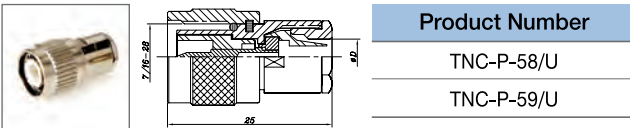


Interface Dimension

TNC	Plug mm		Jack mm	
	min.	max.	min.	max.
A	1,32	1,37		
φ B	4,83			4,72
φ C			9,6	9,7
D	5,38		8,31	8,51
E	0,35			
F	5,28		max,1,5	5,28
φ G			8,1	8,15
H			10,52	
I	2,14		2,14	
J	7/16-28 UNEF-2B		7/16-28 UNEF-2A	

## TNC Plugs

Straight (Clamp)

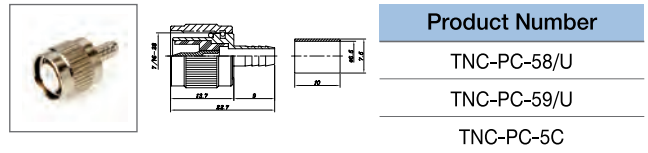


Product Number

TNC-P-58/U

TNC-P-59/U

Straight (Crimp)



Product Number

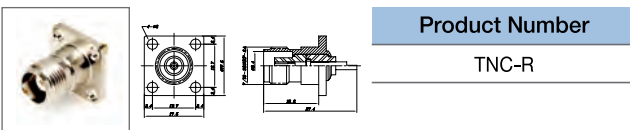
TNC-PC-58/U

TNC-PC-59/U

TNC-PC-5C

## TNC Receptacles

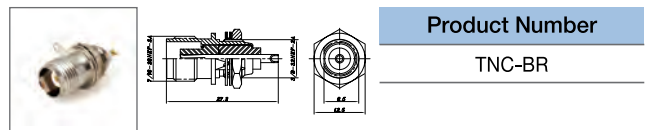
Panel Receptacle



Product Number

TNC-R

Bulkhead Receptacle

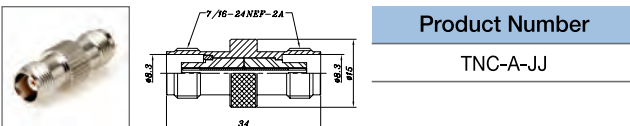


Product Number

TNC-BR

## TNC Adapter

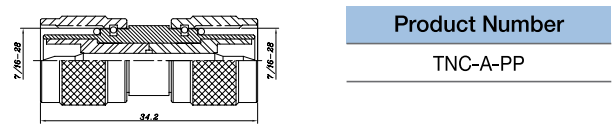
Jack-Jack Adapter



Product Number

TNC-A-JJ

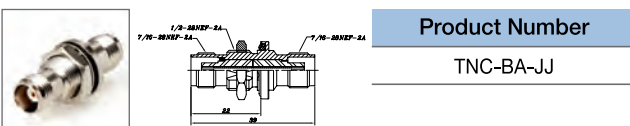
Plug-Plug Adapter



Product Number

TNC-A-PP

Jack-Jack Bulkhead Adapter



Product Number

TNC-BA-JJ

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

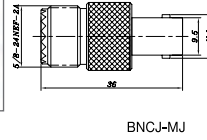


# Between Series Part Numbering



## Between-Series Adapter

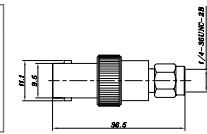
### BNC - M Adapter



BNCJ-MJ

Product Number	BNC	M
BNCP-MP	Plug	Plug
BNCP-MJ	Plug	Jack
BNCJ-MP	Jack	Plug
BNCJ-MJ	Jack	Jack

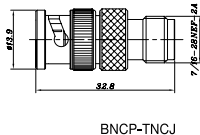
### BNC - SMA Adapter



BNCJ-SMAP

Product Number	BNC	SMA
BNCP-SMAP	Plug	Plug
BNCP-SMAJ	Plug	Jack
BNCJ-SMAP	Jack	Plug
BNCJ-SMAJ	Jack	Jack

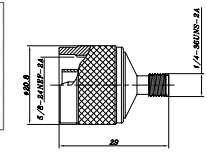
### BNC - TNC Adapter



BNCP-TNCJ

Product Number	BNC	TNC
BNCP-TNCP	Plug	Plug
BNCP-TNCJ	Plug	Jack
BNCJ-TNCP	Jack	Plug
BNCJ-TNCJ	Jack	Jack

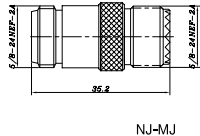
### N - SMA Adapter



NJ-BNCJ

Product Number	BNC	SMA
NP-SMAP	Plug	Plug
NP-SMAJ	Plug	Jack
NJ-SMAP	Jack	Plug
NJ-SMAJ	Jack	Jack

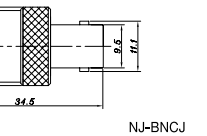
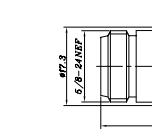
### N - M Adapter



NJ-MJ

Product Number	N	M
NP-MP	Plug	Plug
NP-MJ	Plug	Jack
NJ-MP	Jack	Plug
NJ-MJ	Jack	Jack

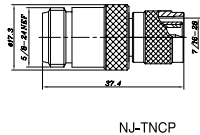
### N - BNC Adapter



NJ-BNCJ

Product Number	BNC	BNC
NP-BNCP	Plug	Plug
NP-BNCJ	Plug	Jack
NJ-BNCP	Jack	Plug
NJ-BNCJ	Jack	Jack

### N - TNC Adapter



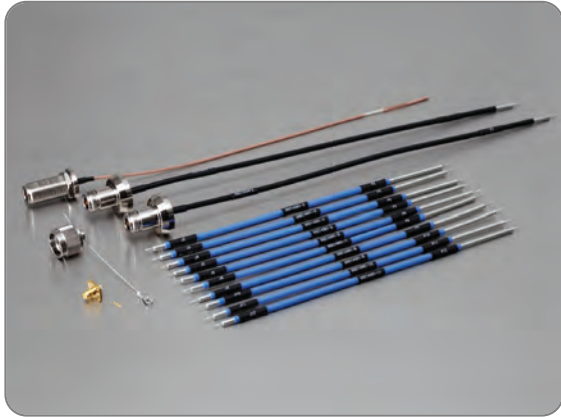
NJ-TNCP

Product Number	N	TNC
NP-TNCP	Plug	Plug
NP-TNCJ	Plug	Jack
NJ-TNCP	Jack	Plug
NJ-TNCJ	Jack	Jack

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



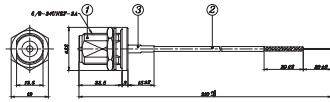




**Applications**

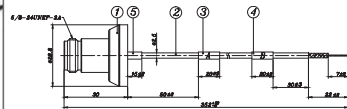
- Military communication

■ **MRF-SW-5708**



Major Performance		Material Used / Finish		
Impedance	50 Ω	General	Material	Finish
Frequency range	DC~2,5 GHz	Body	Brass	무연에Ni Plating
V,S,W,R.	≤ 1,35	Insulator	PTFE	White
Insertion Loss	≤ 0,5 dB	Contact(Female)	Cu-Be	Gold Plating
Dielectric withstanding Voltage	750 V	RG-316/U Cable	-	Brown

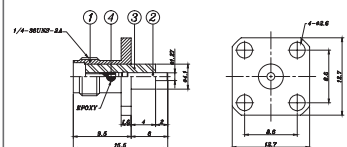
■ **MRF-SW-5759-XX**



Major Performance		Material Used / Finish		
Impedance	50 Ω	General	Material	Finish
Frequency range	DC~2,5 GHz	Body	Brass	무연에Ni Plating
V,S,W,R.	≤ 1,35	Insulator	PTFE	White
Insertion Loss	≤ 0,5 dB	Contact(Female)	Cu-Be	Gold Plating
Dielectric withstanding Voltage	1,000 V	SF-141J Cable	-	Black

P/N	Part	Reference
MRF-SW-5759-01	A	50214352-1
	B	P1
MRF-SW-5759-02	A	50214352-2
	B	P7

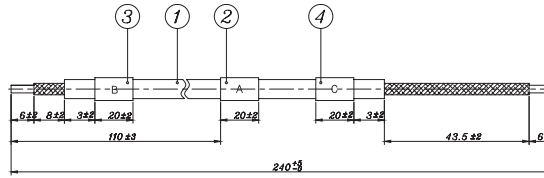
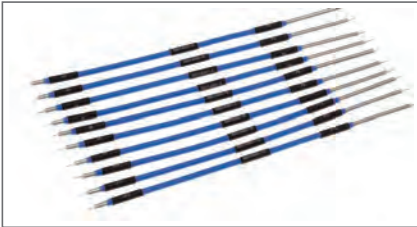
■ **MRF-SMASH-JPR-4H**



Major Performance		Material Used / Finish		
Impedance	50 Ω	General	Material	Finish
Frequency range	DC~2,5 GHz	Body	Stainless Steel	Gold Plating
V,S,W,R.	≤ 1,35	Insulator	PTFE	White
Dielectric withstanding Voltage	1,000 V	Contact(Female)	-	Gold Plating

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

■ MRF-SW-5760-XX



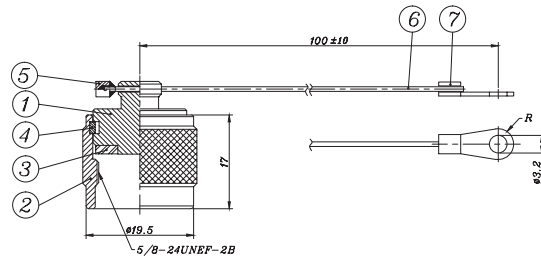
Material Used / Finish		
General	Material	Finish
SF-141J Cable	-	Blue

Product Number	Part	Reference
MRF-SW-5760-01	A	50214361-2
	B	J2
	C	P2
MRF-SW-5760-02	A	50214361-3
	B	J3
	C	P3
MRF-SW-5760-03	A	50214361-4
	B	J4
	C	P4
MRF-SW-5760-04	A	50214361-5
	B	J5
	C	P5

Product Number	Part	Reference
MRF-SW-5760-05	A	50214361-6
	B	J6
	C	P6
MRF-SW-5760-06	A	50214361-7
	B	J8
	C	P8
MRF-SW-5760-07	A	50214361-8
	B	J9
	C	P9
MRF-SW-5760-08	A	50214361-9
	B	J10
	C	P10

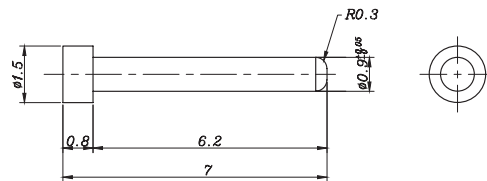
Product Number	Part	Reference
MRF-SW-5760-09	A	50214361-10
	B	J11
	C	P11
MRF-SW-5760-10	A	50214361-11
	B	J12
	C	P12

■ MRF-N-RC



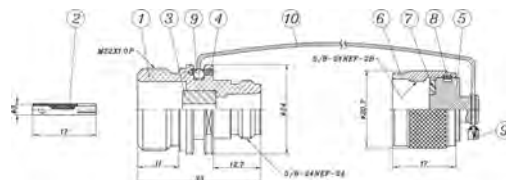
Material Used / Finish		
General	Material	Finish
CAP	Brass	무연해(Ni Plating)
Wire	Stainless Steel	-

■ MRF-PIN



Material Used / Finish		
General	Material	Finish
Male	Cu-Be	Gold Plating

■ MRF-N-J-RB-RC



Material Used / Finish		
General	Material	Finish
CAP	Brass	Ni Plating
Wire	Stainless Steel	-
Body	Brass	Ni Plating
Insulator	PTFE	White
Male	Cu-Bu	Gold Plating

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# D-tap Series D-tap Plug / Jack

## ■ D-tap



## Features

- SW-DTAP-2P
- SW-DTAP-2J
- Standard and Custom Design

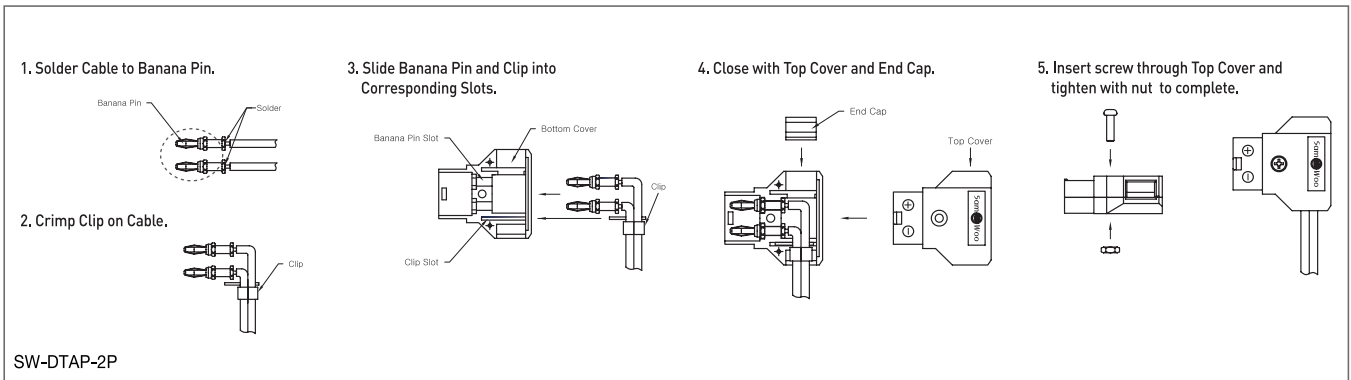
## Applications

- Power LED Light
- LCD Monitor
- HDV
- Power Supply
- Battery Power

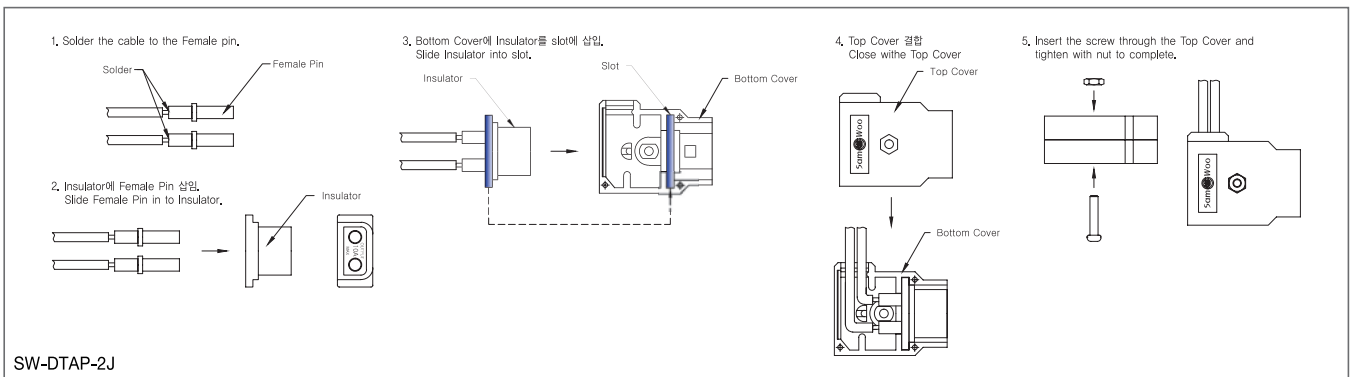
## ■ Major Performance

No	Item	Standard Data
1	Working Temperature	-25℃ ~ + 85℃
2	Rated Current	10A Max(DC)
3	Test voltage	300V(DC)
4	Contact Resistance	10mΩ (Max)
5	Insulation Resistance	10MΩ , 300V min

## ■ Cable Assembly Instruction



## ■ Cable Assembly Instruction



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



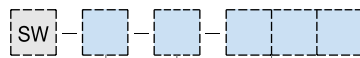
## Features

- SW-DTAP-2P
- SW-DTAP-2J
- Standard and Custom Design

## Applications

- Power LED Light
- LCD Monitor
- HDV
- Power Supply
- Battery Power

## Part Numbering



### Drawing Number

#### Optional Suffix (Omissible)

1,2,3

To indicate modification of original

#### Cable Length : 3 Digits

Unit Plug : m

Recep : cm

Ex) Using 3m Cable for Plug : 003

Using 30cm Cable for Recep : 030

## Cable Assembly



Type	Construction
A	D-tap + Cable + Other Connector

※ Design and Customization Service Available

# POWER PIN Series



## Features

- POWER PIN(Ni / Au)-2,1
- POWER PIN(Ni / Au)-4,0

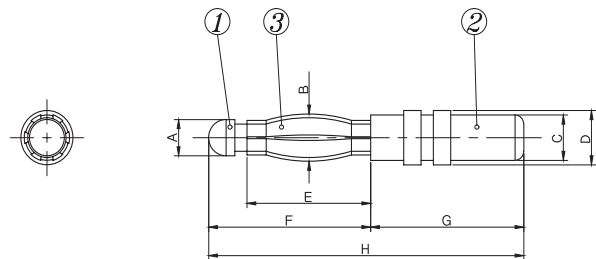
## Applications

- Power supply
- Battery power

## Material

No.	Components	Material	Finish
①	PIN(A)	Brass	Ni or Au Plating
②	PIN(B)	Brass	Ni or Au Plating
③	Tension Plate	Brass	Ni or Au Plating

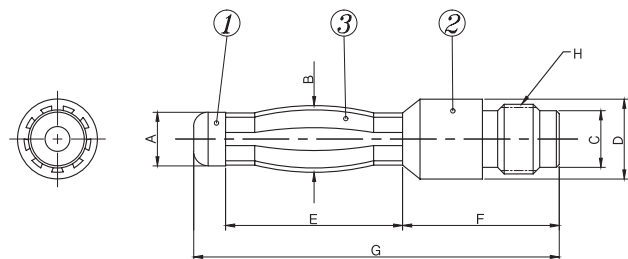
### POWER PIN (Ni / Au) - 2,1



Unit : mm

øA	øB	øC	øD	E	F	G	H
2	2,6	2,5	3	7,1	9,3	8,9	18,1

### POWER PIN (Ni / Au) - 4,0



Unit : mm

øA	øB	øC	øD	E	F	G	H
3,7	4,6	3,9	5,5	12,2	10,8	25,2	M5×0,8P

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

# Micro USB IP67 Cable Assembly



## Features

- Micro USB 5PIN Male Cable Assembly (IP67)
- Micro USB 5PIN Female Cable Assembly (IP67)

## Applications

- Smart Phones and Mobile Devices
- Medical PC Monitors
- Digital Devices (Camera, Media Player, Laptop, etc)
- Telecommunications

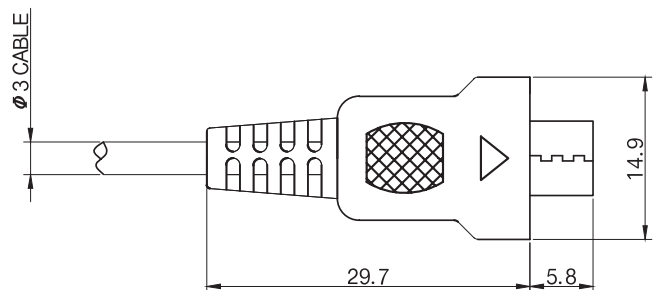
## Major Performance

No.	Item	Standard Data
①	Contact Resistance (Max.)	30m $\Omega$
②	Insulation Resistance (Min.)	1,000M $\Omega$
③	Dielectric Withstanding Voltage (Min.)	500V AC

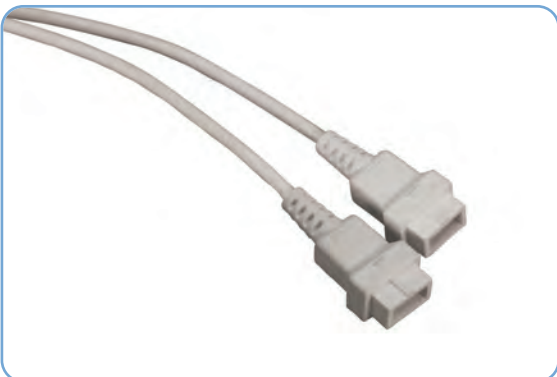
### Micro USB 5PIN Male Cable Assembly (IP67)



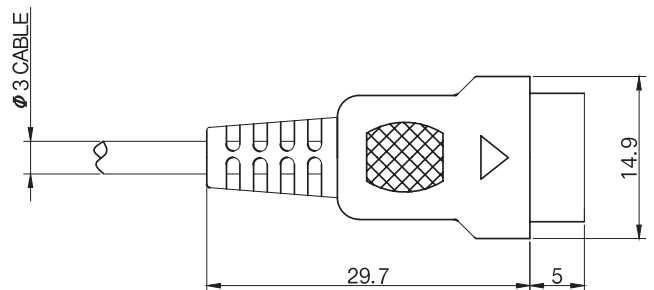
※ Customization Service Available



### Micro USB 5PIN Female Cable Assembly (IP67)



※ Customization Service Available



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

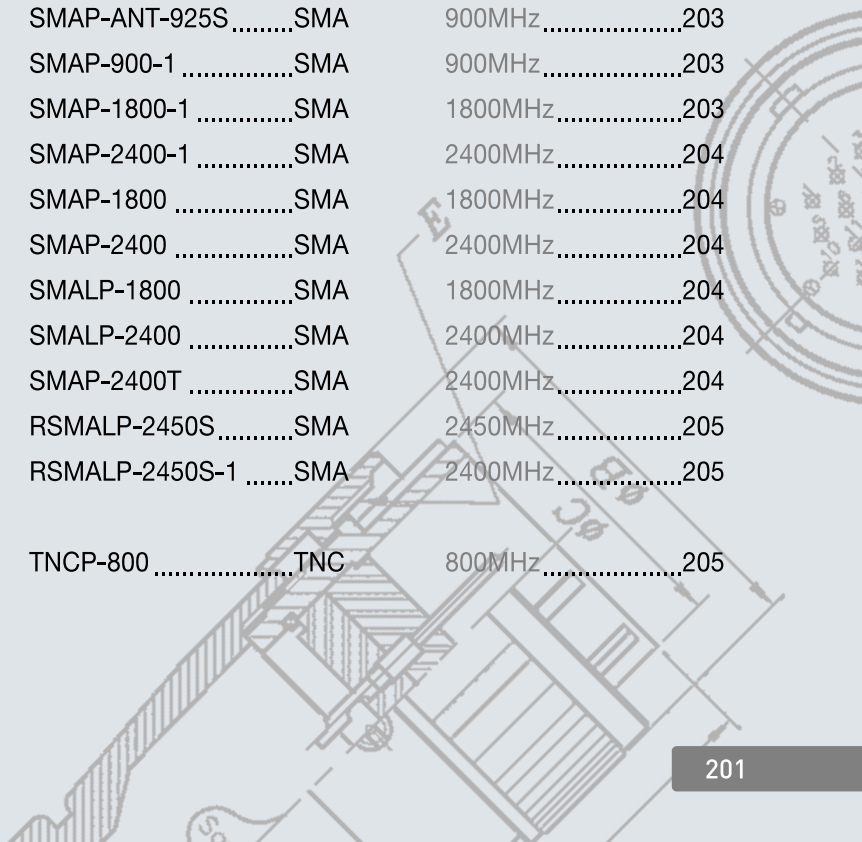




# Antenna

## Antenna

Custom Band	SPB-450 .....	SP	400~900MHz .....	202
	SMAP-450 .....	SMA	400~900MHz .....	202
	SMALP-450 .....	SMA	400~900MHz .....	202
	SSMAP-450 .....	SSMA	400~900MHz .....	202
	SPU-450 .....	SP	400~900MHz .....	202
SMA	SMAP-434 .....	SMA	200~900MHz .....	203
	SMALP-434 .....	SMA	135~900MHz .....	203
	SMAP-447 .....	SMA	450MHz .....	203
	SMAP-ANT-925S .....	SMA	900MHz .....	203
	SMAP-900-1 .....	SMA	900MHz .....	203
	SMAP-1800-1 .....	SMA	1800MHz .....	203
	SMAP-2400-1 .....	SMA	2400MHz .....	204
	SMAP-1800 .....	SMA	1800MHz .....	204
	SMAP-2400 .....	SMA	2400MHz .....	204
	SMALP-1800 .....	SMA	1800MHz .....	204
	SMALP-2400 .....	SMA	2400MHz .....	204
	SMAP-2400T .....	SMA	2400MHz .....	204
	RSMALP-2450S .....	SMA	2450MHz .....	205
	RSMALP-2450S-1 .....	SMA	2400MHz .....	205
	TNC Antenna	TNCP-800 .....	TNC	800MHz .....



# Antenna Customizable Band Antenna

## ■ SPB-450-Super miniature antenna

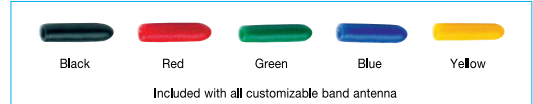
The SPB-450 is one of the versatile antenna series customizable from a bandwidth of 400MHz to 900MHz. This new 1/4 wavelength whip antenna brings wireless applications to a new paradigm.

- 1/4 Wavelength Whip antenna
- Customizable band using cutting chart
- 400MHz ~ 900MHz
- Sam Woo' s High-quality SPB connector



Electrical Performance	Specifications
Frequency Range	400MHz-900MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 2.0:1
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30℃ ~ + 70℃



Bare SPB plug and receptacle also available.  
For more information on Circular Connectors refer to p. 39.



SPB-00PT1



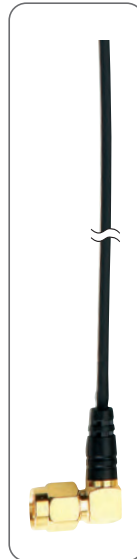
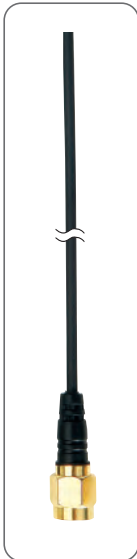
SPB-00RT1

## ■ SMAP-450

- 1/4 Wavelength Whip Antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SMA connector
- Cap(s) included

Electrical Performance	Specifications
Frequency Range	400MHz-900MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 2.0:1
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30℃ ~ + 70℃



## ■ SMALP-450

- 1/4 Wavelength Whip Antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- Right-angle SMA connector
- Cap(s) included

Electrical Performance	Specifications
Frequency Range	400MHz-900MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 2.0:1
Gain	0dB

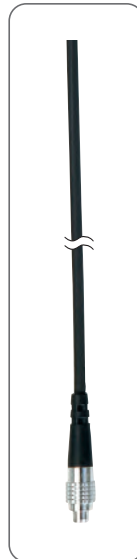
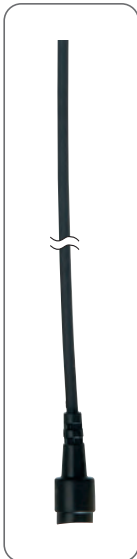
Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30℃ ~ + 70℃

## ■ SSMAP-450

- 1/4 Wavelength Whip Antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SSMA connector
- Cap(s) included

Electrical Performance	Specifications
Frequency Range	400MHz-900MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 2.0:1
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30℃ ~ + 70℃



## ■ SPU-450

- 1/4 Wavelength Whip Antenna
- Customizable band using cutting chart
- 400MHz~900MHz
- SPU connector(also available with SPU receptacle)
- Cap(s) included

Electrical Performance	Specifications
Frequency Range	400MHz-900MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni directional
Polarization	Vertical
V.S.W.R	Less than 2.0:1
Gain	0dB

Mechanical Performance	Specifications
Radiator	SuS
Base Material	PVC
Sleeve Material	Urethan
Cap Material	PVC
Antenna Length	~1780mm
Operating Temperature	-30℃ ~ + 70℃

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

## SMAP-434

- 1/4 Wavelength Monopole Antenna
- 180° Tilting Helical or Whip Type
- Available with other connectors

Electrical Performance	Specifications
Frequency Range	420~440MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	0dBi

Mechanical Performance	Specifications
Radiator	SWC / Cu
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~108mm
Operating Temperature	-30℃ ~ +70℃

## SMALP-434

- 1/4 Wavelength Monopole Antenna
- 90° Fixed Helical or Whip Type
- Available with other connectors

Electrical Performance	Specifications
Frequency Range	420~440MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	0dBi

Mechanical Performance	Specifications
Radiator	SWC / Cu
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~108mm
Operating Temperature	-30℃ ~ +70℃

## SMAP-447

- 1/2 Wavelength Spike Antenna
- Designed for Outdoor Use

Electrical Performance	Specifications
Frequency Range	400~500MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 1.5:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	BRASS / ACETAL
Connector	SMA MALE
Antenna Length	~330mm
Operating Temperature	-30℃ ~ +70℃

## SMAP-ANT-925S

- 1/2 Wavelength Helical Antenna
- High Gain
- 900Mhz Band

Electrical Performance	Specifications
Frequency Range	900MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Cu
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~86mm
Operating Temperature	-30℃ ~ +70℃

## SMAP-900-1

- 1/4 Wavelength Helical Antenna
- 900Mhz Band

Electrical Performance	Specifications
Frequency Range	824~960MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	0dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~34.5mm
Operating Temperature	-30℃ ~ +70℃

## SMAP-1800-1

- 1/4 Wavelength Helical Antenna
- 1800MHz Band

Electrical Performance	Specifications
Frequency Range	1710~1990MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	0dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~134.5mm
Operating Temperature	-30℃ ~ +70℃

Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

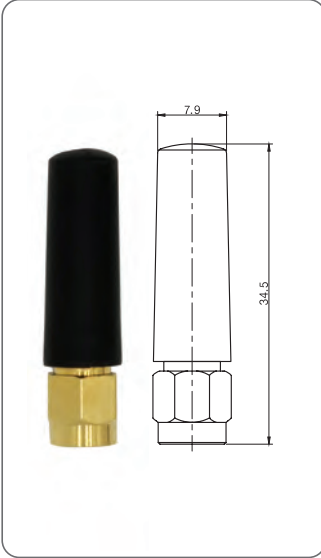
# Antenna

## SMAP-2400-1

- 1/4 Wavelength Helical Antenna
- 2400MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	0dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~34.5mm
Operating Temperature	-30°C ~ + 70°C

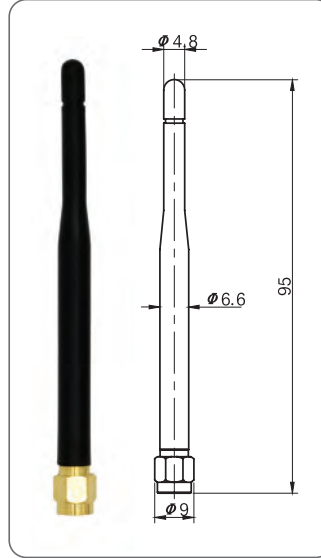


## SMAP-1800

- 1/2 Wavelength Dipole Antenna
- 1800MHz Band

Electrical Performance	Specifications
Frequency Range	1170~1990MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~95.0mm
Operating Temperature	-30°C ~ + 70°C

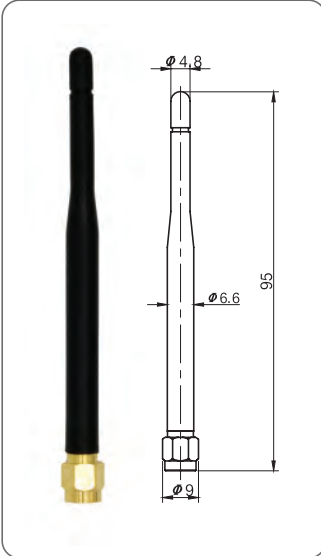


## SMAP-2400

- 1/2 Wavelength Dipole Antenna
- 2400MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~95.0mm
Operating Temperature	-30°C ~ + 70°C

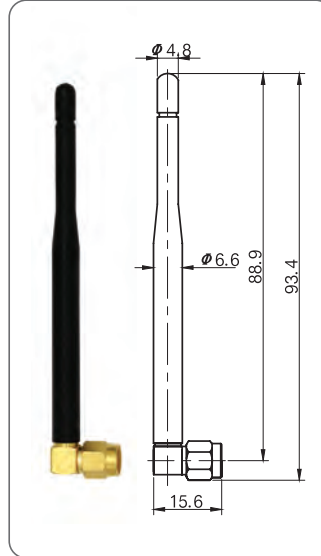


## SMALP-1800

- 1/2 Wavelength Dipole Antenna
- 90° Fixed 1800MHz Band

Electrical Performance	Specifications
Frequency Range	1170~1990MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~93.4mm
Operating Temperature	-30°C ~ + 70°C

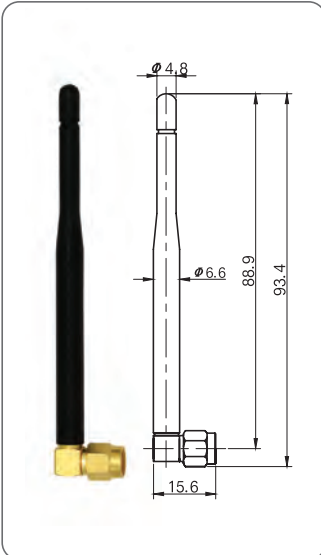


## SMALP-2400

- 1/2 Wavelength Dipole Antenna
- 90° Fixed 2400MHz Band

Electrical Performance	Specifications
Frequency Range	2400~2500MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	SMA MALE
Antenna Length	~93.4mm
Operating Temperature	-30°C ~ + 70°C

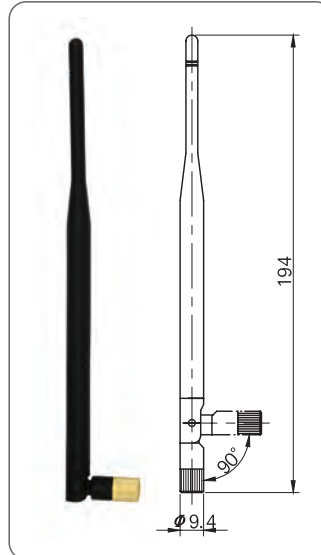


## SMAP-2400T

- 90° Tilting 2400MHz Bank
- High Gain

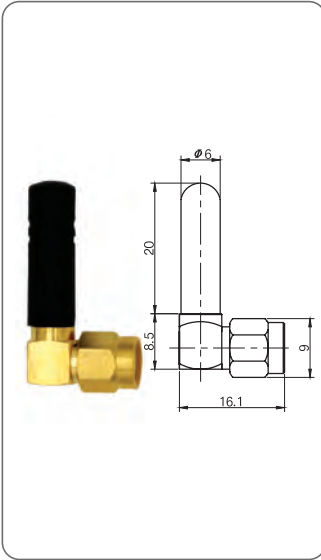
Electrical Performance	Specifications
Frequency Range	2350~2480MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	4dBi

Mechanical Performance	Specifications
Radiator	Phosphor Bronze
Base Material	KEYFLEX / LUMIDE
Connector	SMA MALE
Antenna Length	~194mm
Operating Temperature	-30°C ~ + 70°C



Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.

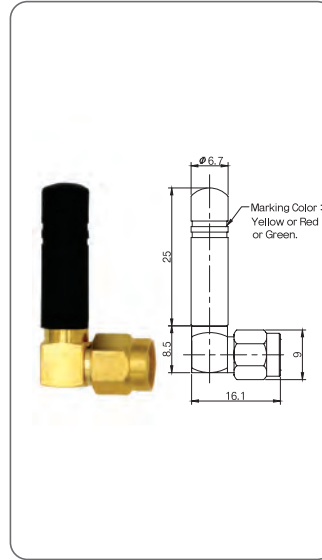
## ■ RSMALP-2450S



Electrical Performance	Specifications
Frequency Range	2350~2600MHz
Center Frequency	2.45GHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	1.6dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	RP-SMA
Antenna Length	~93.4mm
Operating Temperature	-30℃ ~ + 70℃

## ■ RSMALP-2450S-1

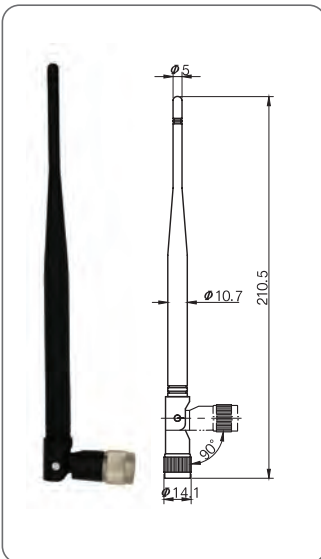


Electrical Performance	Specifications
Frequency Range	2350~2600MHz
Center Frequency	2.45GHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	1.6dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX
Connector	RP-SMA
Antenna Length	~33.5mm
Operating Temperature	-30℃ ~ + 70℃

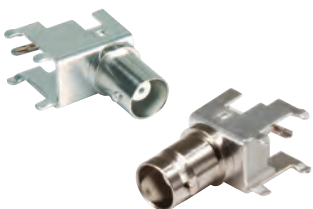
## ■ TNCP-800

- 1/2 Wavelength Dipole Antenna
- 90° Tilting 800MHz Band



Electrical Performance	Specifications
Frequency Range	824~894MHz
Nominal Impedance	50 Ω Normal ± 10
Radiation Pattern	Omni-directional
Polarization	Linear Vertical
V.S.W.R	Less Than 2.0:1
Gain(dBi)	2dBi

Mechanical Performance	Specifications
Radiator	SWC / Ni
Base Material	KEYFLEX / LUMIDE
Connector	TNC MALE
Antenna Length	~210.5mm
Operating Temperature	-30℃ ~ + 70℃



[www.isamwoo.com](http://www.isamwoo.com)



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