

Electric Vehicle Charging Technology by Sam Woo Electronics



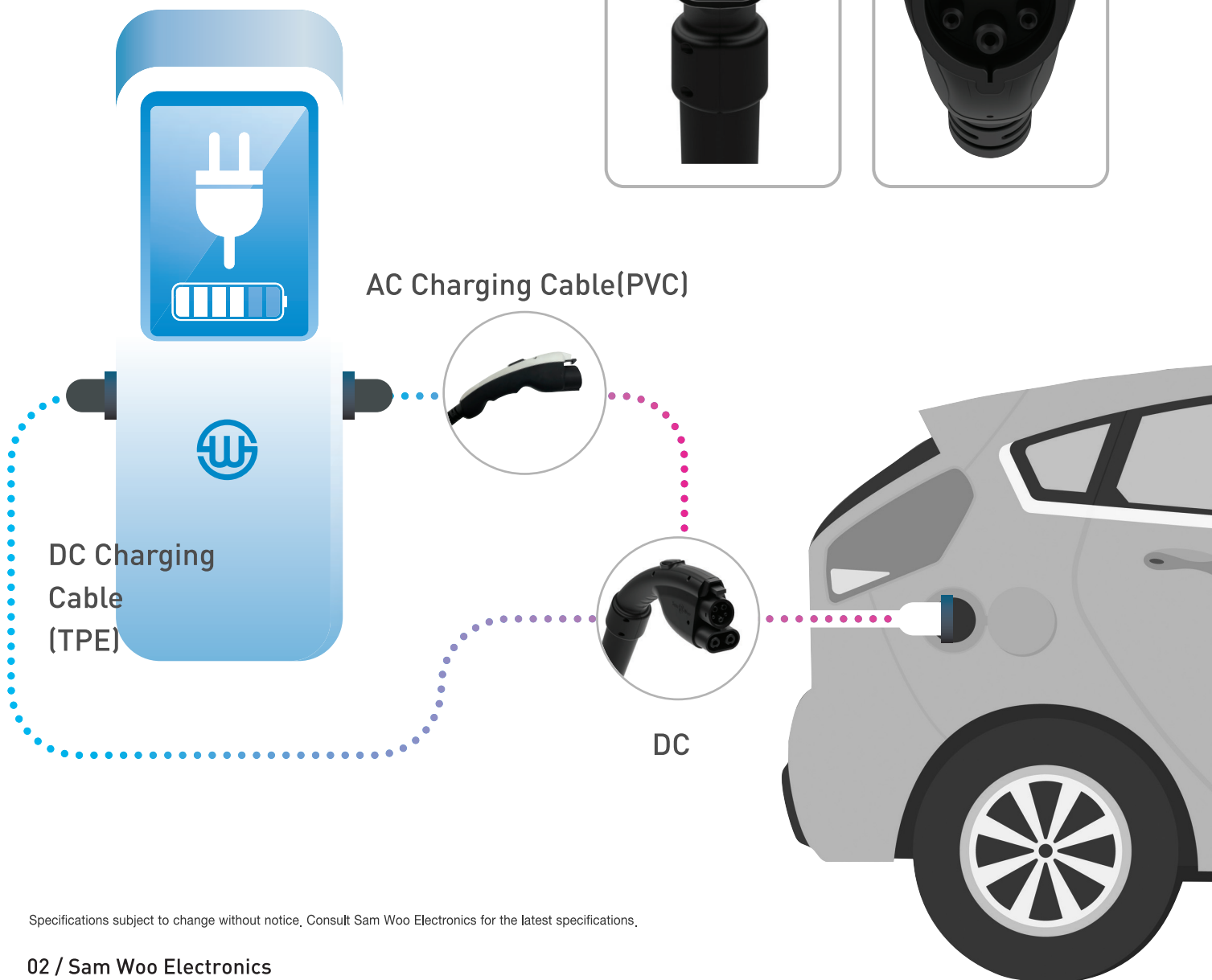
Sam Woo EV Charger

EV Charger for electrical vehicles is now available in DC (Fast Charging) and AC Connectors as well as Cable Assemblies. These products are produced with IEC Standards(IEC 62196-1, IEC 62196-2 and IEC 62196-3). We also provide customized solutions for customers.

DC Charger



AC Charger

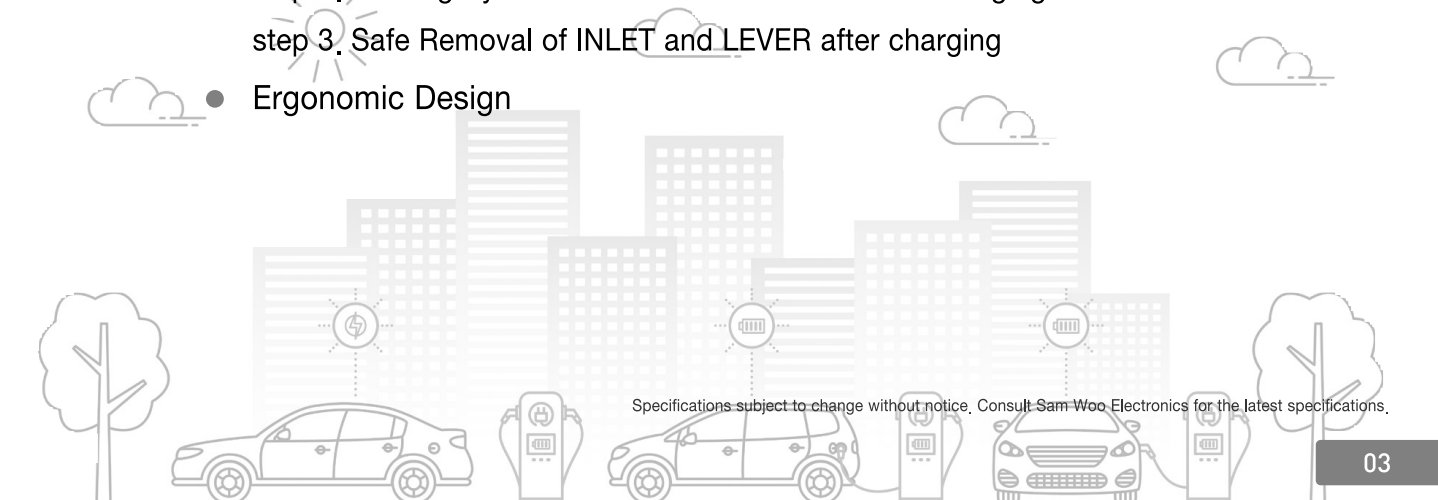


Specifications subject to change without notice. Consult Sam Woo Electronics for the latest specifications.



Sam Woo Electronics EV Charging Assembly is developed under the IEC Standard(IEC 62196-1, 62196-2 and IEC 62196-3).

- CCS1 (Combined Charging System Type 1)
- DC 150A / 600V DC Fast Charger
DC 200A / 1000V DC Fast Charger
- Three Step Safe Charging
 - step 1. Secure Lock on INLET and LEVER in vehicles
 - step 2. Locking System for INLET and LEVER while charging
 - step 3. Safe Removal of INLET and LEVER after charging
- Ergonomic Design



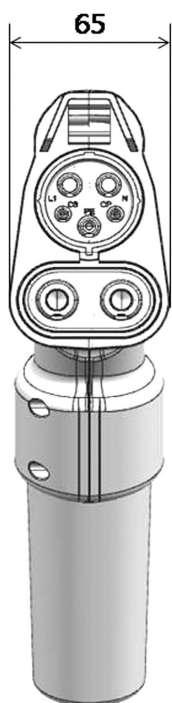
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COMBO 1 Technical Data

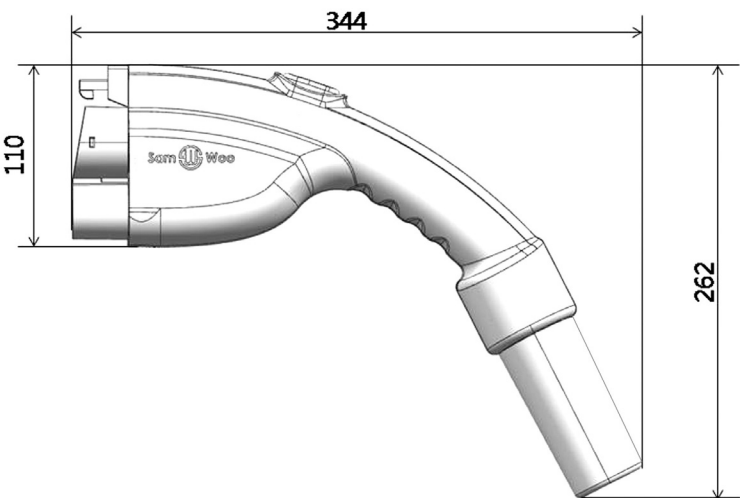
Product Attribute		Product value	
Standard Specification	Product	Connector	Assembly
	Product Name	SEV-COMBO1-150	SW-EVT151
		SEV-COMBO1-200	SW-EVT201
	Charging Standard	CCS1 (Combined Charging System Type1)	
Connector Specification	Standard	IEC 62196-1, IEC 62196-3	
	Connector Dimension	65mm x 227mm x 326mm	
	Operating Temperature	-30 °C to + 50 °C	
	Storage temperature	-40 °C to + 80 °C	
	Electric Power	90 KW	120 KW (200 KW)
	DC Contact	Power Contacts	Power Contacts
	DC Current(A)	150 A	200A
	DC Voltage(V)	600 V	600 V (1,000 V DC, is tested)
	AC Contact	Singal Contacts	Singal Contacts
	AC Current(A)	2 A	2 A
	AC Voltage(V)	30 V	30 V
	Number of Insertion	10,000 ↑	10,000 ↑
	Insertion Force	75 N ↓	75 N ↓
	Extraction Force	75 N ↓	75 N ↓
Cable Specification	Material	TPE (SW-EVT151)	TPE (SW-EVT201)
	Specification	DC 2X 2 AWG	DC 2X 50 mm ²
		PE 1X 6 AWG	PE 1X 35 mm ²
		CP & CS 2 X 18 AWG	CP & CS 2 X 16 AWG
		Temperature Sensor 2X 18 AWG	Temperature Sensor 2X 16 AWG
	Diameter	31 mm	36 mm
Temperature sensor Specification	Color	Black	Black
	Radius of curvature	465 mm ↑	525 mm ↑
	Sensor type	PT 1000	
	Standard	DIN EN 60751	
	Current(A)	1 mA (0 °C에 서 1 V)	
Test Results	Tolerance	±1K	
	Temperature range	-50 °C ~ 130 °C	
Test Results	STANDARD	DESCRIPTION	RESULT
	IEC 62196-1	Satisfied with IEC detail testing standard	PASS
	IEC 62196-3		

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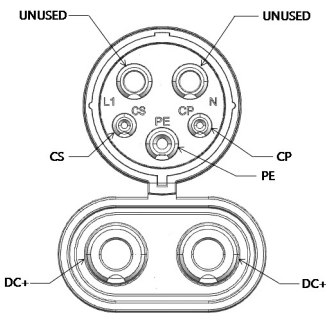
COMBO 1 Dimensions



Connector Front View



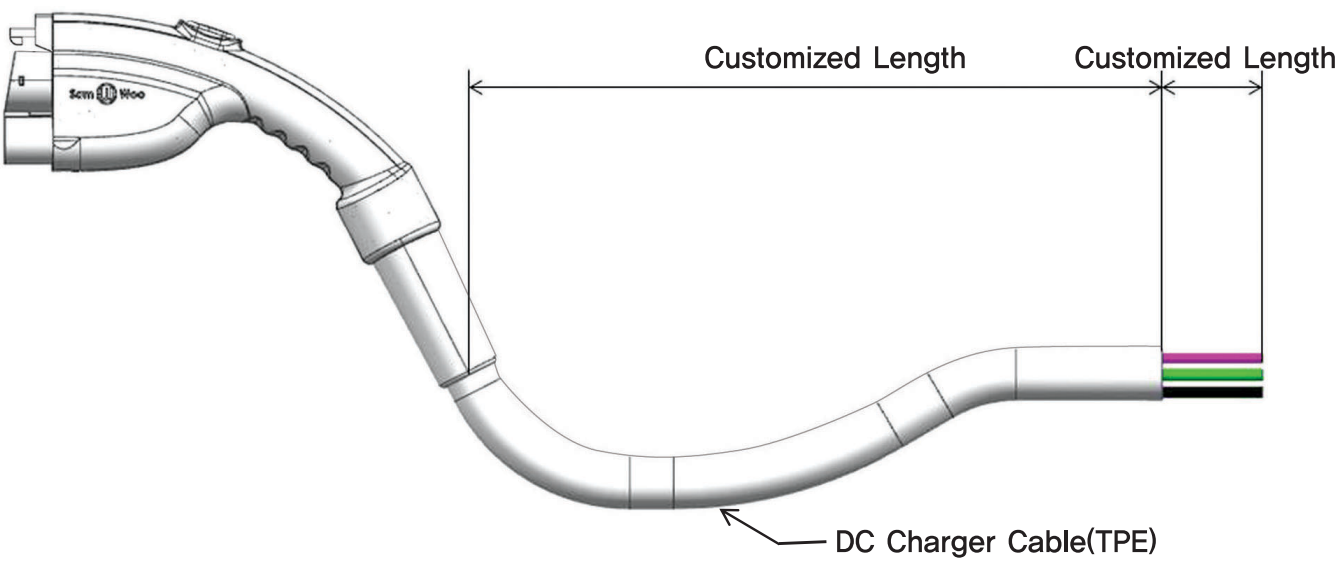
Connector Side View



Connector Front View

Cable Assembly

SAMWOO ELECTRONICS Co., Ltd. provide EV Charging Assembly as customer requests.



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AC Charger (Single Phase)

PLUG



INLET



**Sam Woo Connector(SEV-TC1) and Cable Assembly(SW-EV032)
developed according to IEC standard(IEC 62196-1 and IEC 62196-2).**

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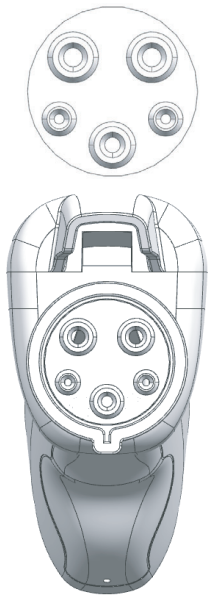


AC Charger Technical Data

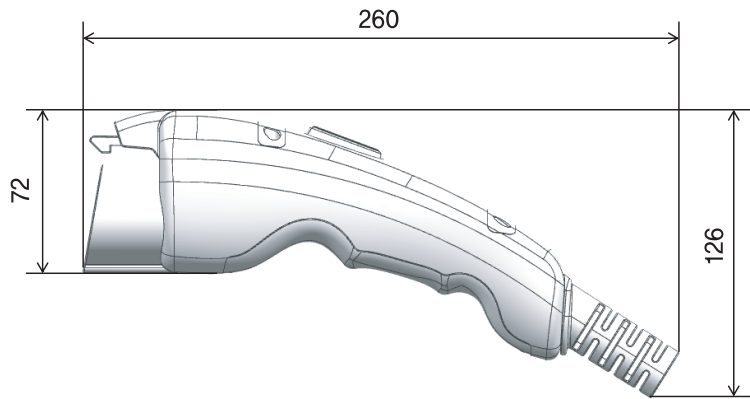
Product Attribute		Product value	
Standard Specification	Product	Connector	Assembly
	Product No.	SEV-TC1	SW-EV032
	Charger Type	TYPE 1 C AC	
	Standard	IEC 62196-1, IEC 62196-2	
Connector Specification	Connector Dimension	65mm x 227mm x 326mm	
	Operating Temperature	-30°C to +50°C	
	Storage Temperature	-40°C to +80°C	
	Electric Power	7,5 KW	
	AC Contact	2 poles (CP, CS)	
	AC Current(A)	32 A	
	AC Voltage(V)	250 V	
	Matint Cycle	10,000 times ↑	
	Insertion Force	75 N ↓	
	Extraction Force	75 N ↓	
Cable Specification	Material	PVC	
	Specification	3 x 10 AWG 2 x 18 AWG	
	Diameter	16mm	
	Color	Black	
Test Results	TEST STANDARD	DESCRIPTION	RESULT
	IEC 62196-1	IEC Test Standard	Pass
	IEC 62196-2		

- TYPE 1 C AC
- AC 32A / 250V AC Charger
- Three Step Safe Charging :
 - Step 1. Secure Lock on INLET and LEVER in vehicles
 - Step 2. Locking System for INLET and LEVER while charging
 - Step 3. Safe Removal of INLET and LEVER after charging
- Ergonomic Design
- Available in Connector and Cable Assembly Solutions

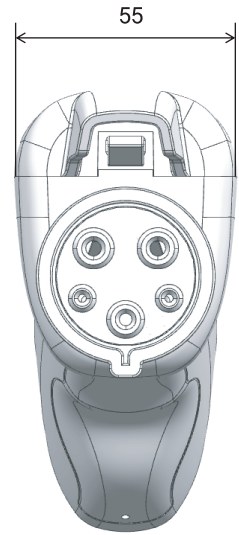
AC Charger Dimensions



Connector Front View



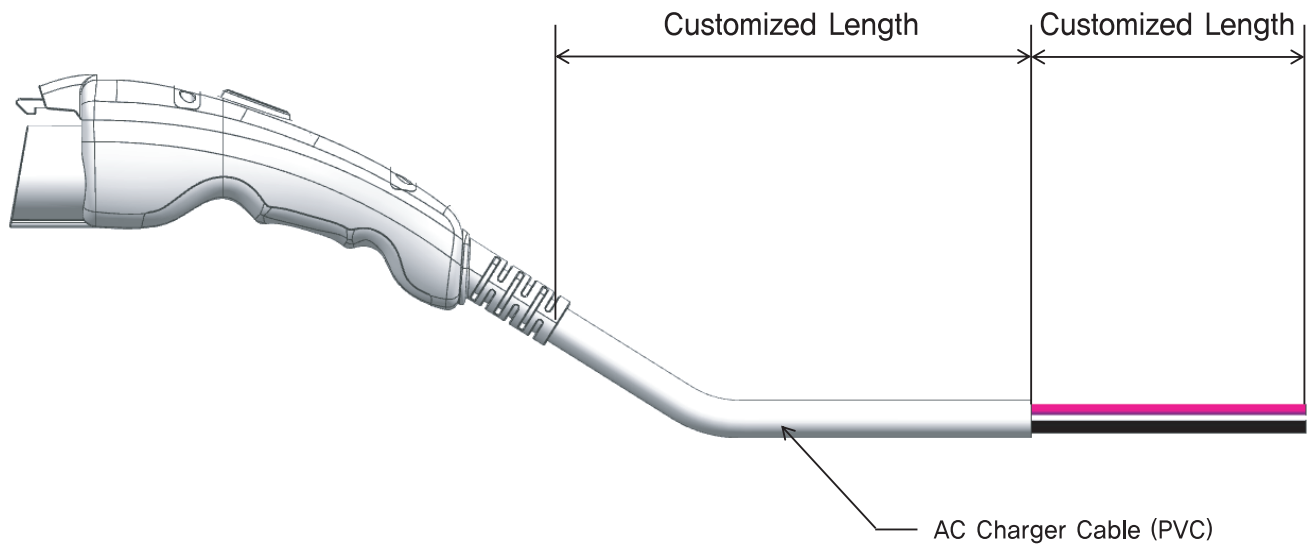
Connector Side View



Connector Front View

Cable Assembly

EV Charging Assembly can be customized according to customer request.



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Connector Overview

SCC Series



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

SCK / SCN Series



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

SH Series



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

SM Series



Size / No. of Contacts

Size - 9
Contacts - 8

Material / Finish

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

SN Series



Push-Pull

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

SP Series



Push-Pull

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

SPP Series



Push-Pull

Size / No. of Contacts

Size - 1
Contacts - multiple

Material / Finish

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

SR IP67 Series



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

Connector Overview

Bayonet



SRC Series

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



ST Series

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



ST IP67 Series

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



SU IP67 Series

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



SU2 / SU3 IP67 Series

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



SW Series

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



SW IP67 Series

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



SXR Series

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

Cable Assembly Overview



SCC Series Cable Assembly



SCN / SCK Series Cable Assembly



SP Series Cable Assembly



SPP Series Cable Assembly



SN Series Cable Assembly



SU2 / SU3 Series Cable Assembly



SH Series Cable Assembly

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