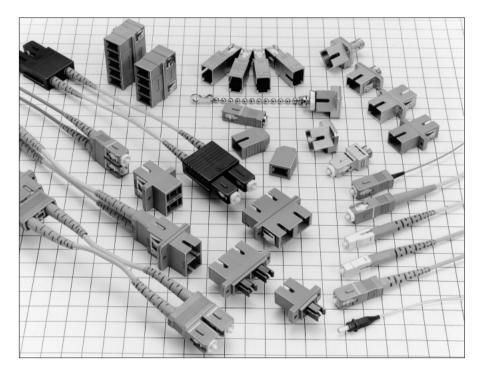
# SC Type Fiber Optic Connectors

**HSC** Series



# Features

1. JIS, IEC standards compliant and fully intermateable with NTT's SC products. JIS C 5973 (F04 type fiber optic connectors) IEC 61754-4

#### 2. Plugs with strain relief boot

Long strain relief boot assures that there are no performance losses when a pull force is applied in a vertical bend direction.

The color of the boot identify the type of polishing:

Blue: PC polishingLight purple: Advanced PC (AdPC) polishingGreen: Angled PC polishing (APC)Other colors are also possible.

## 3. Zirconia Split Sleeve Adapter Reduces the possibility of powdering caused by the repeated insertion and withdrawal of ferrule.

#### 4. Duplex SC Type: Rigid Type

Available in following types; H type – 8.5 mm spacing between the fibers, for high density applications. F type – 12.7 mm spacing between the fibers, low profile, for LAN applications. Refer to page 39 for further information.

#### **5. Duplex SC Type: Adjustable Type – Comply With ANSI Standards** Floating mechanism with Duplex SC plug. It is also fully compatible with the HSCF fixed type.

6. Simplified Plugs and Receptacles.

Small size (23.8mm plug length) simplified SC plug is designed for equipments inside connection. Refer to page 43 for further information.

# Applications

LAN, public communications lines, CableTV, computer transmission systems, test equipment, and other applications requiring reliable fiber optic connections.

SC

FC



# Product Specifications

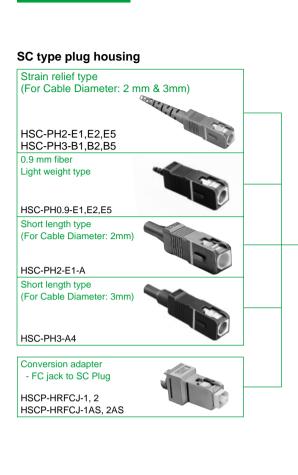
	Ratings	Ope	rating temperature range	-25°C to +70°C	Stora	ge temperature range	-25°C to +70°C
Item		Test Method (IEC 61300)			Specifications		
cs	Insertion Loss (SM) (GI)		Wavelength 1310nm (	LD)	(	0.5dB max. (PC, AdPC, A	APC)
al risti			Wavelength 1310nm (	LED)	(	0.3dB max. (PC)	
Optical Characteristics	Return Loss	(SM)	Wavelength 1310nm (	LD)		22dB min. (PC) 40dB min. (AdPC) 60dB min. (APC)	
		(GI)			2	22dB min. (PC)	
ics	Engagement and Se /force	paration	Measured with corresp	bonding connector.		Separatio Duplex plug Engagem	nt force: 19.6 N max. n force: 19.6 N max. ent force: 39 N max. n force: 39 N max.
acterist	Ferrule withdrawal force		Extract zirconia gauge 2.499 ±0.0005 mm dia from split sleeve.			Copper alloy split sleeve Zirconia split sleeve	2N to 5.9N 2N to 3.9N
Mechanical Characteristics	Cable retention (Straight pull)		89N tensile load for one minute.			<ol> <li>Insertion loss fluctuation after test: 0.2dB max.</li> <li>No visible damage, dislocation of clamp or cable.</li> </ol>	
chanica	Durability (cycles, mating/un-	mating)	1000 times				
Me	Vibration		Frequency: 10 to 55 Hz, 2 hours in each of the 3 a	single amplitude of 0.75 naxis.	mm,		
	Shock		Acceleration of 981 m/s <sup>2</sup> , sin half-wave waveform,	6 ms duration, 10 cycles in each of the 3 a	axis.	<ol> <li>Insertion loss fluctuation after test: 0.2dB ma</li> <li>No visible damage, cracks or part dislocation</li> </ol>	
s al	Humidity (Temperature/ humidity- cycles)		-10°C to 65°C, humidit 20 cycles	ty: 90% to 96%	2		
Environmental Characteristics	Change of temperature		-40°C to +75°C 42 cy (Complies with Telcore	rcles dia standard GR-326-CC	ORE)		
nvir	Dry heat		960 hours at 85°C				
ΰð	Cold		960 hours at -25°C				
	Salt mist		48 hours in a 5% conc	entration of salt mist	1	No significant corrosion.	

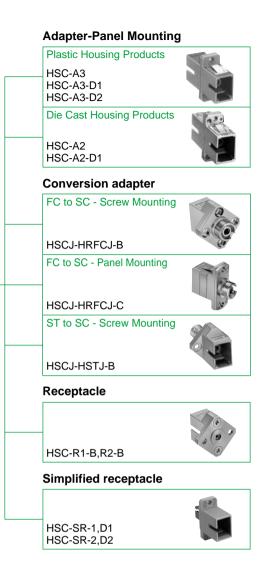
# Materials

Part	Material
Simplex plug housing	Synthetic resin
Spring	Stainless steel
Ferrule	Zirconia
Simplex adapter housing	Synthetic resin or Zinc alloy
4-position adapter housing	Synthetic resin
5-position adapter housing	Synthetic resin
Receptacle housing	Zinc alloy
Attenuator housing	Zinc alloy
Split sleeve	Zirconia or Copper alloy
Dust cap	Synthetic resin

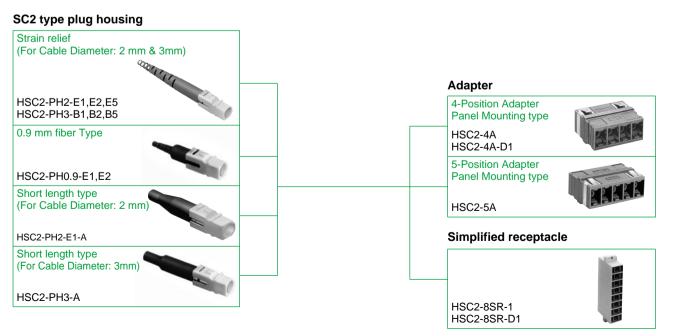
# Function diagram

## Simplex type



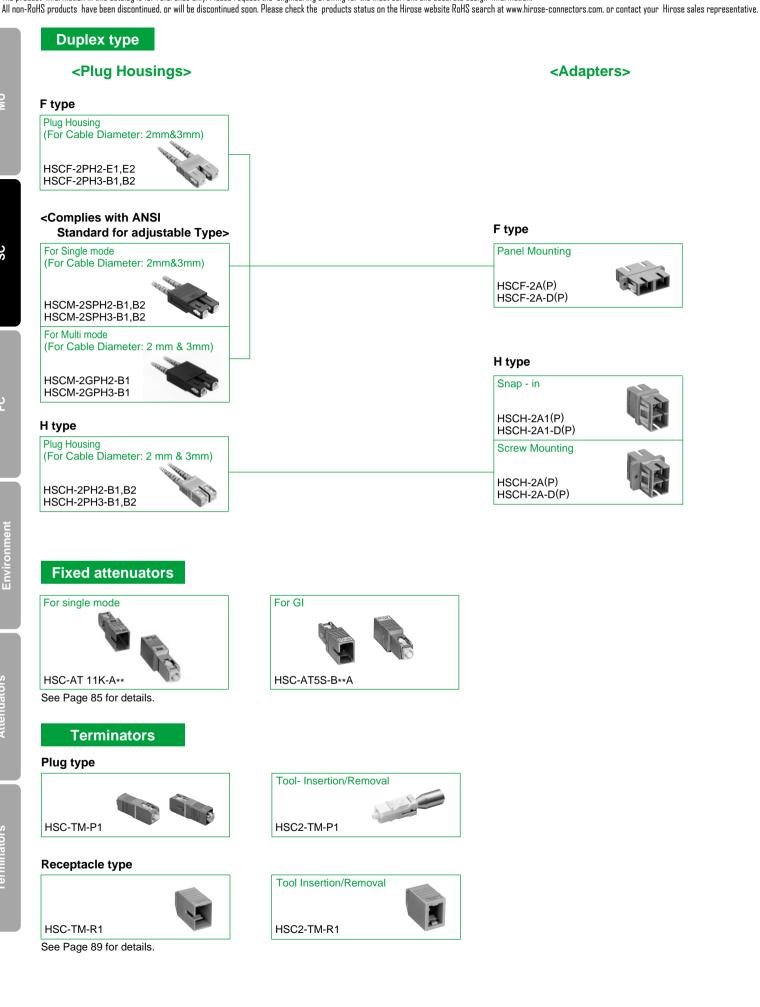


# <Tool Insertion/Extraction Connectors>



**HS** 27

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.



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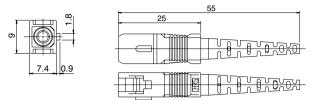
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# Simplex type

#### **•**Strain relief type

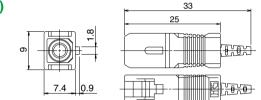




Part Number	CL No.	Fiber cable type	Boot color	Polishing type	Outer jacket fixing
HSC-PH2-E1(31)	704-0327-3-31		Blue	PC	
HSC-PH2-E2(31)	704-0328-6-31	¢2mm	Light purple	AdPC	Glue
HSC-PH2-E5(31)	704-3108-6-31		Green	APC	
HSC-PH3-B1(31)	704-0222-5-31		Blue	PC	
HSC-PH3-B2(31)	704-0223-8-31	¢3mm	Light purple	AdPC	Crimp
HSC-PH3-B5(31)	704-3020-7-31		Green	APC	

#### •Light weight type (For 0.9mm fiber)



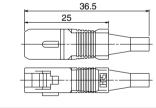


Part Number	CL No.	Boot color	Polishing type
HSC-PH0.9-E1(06)	704-0339-2-06	Blue	PC
HSC-PH0.9-E2(31)	704-0354-6-31	Light purple	AdPC
HSC-PH0.9-E5(31)	704-3104-5-31	Green	APC

## •Short length type (For 2mm Cable)



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Part Number	CL No.	Boot color	Polishing type	Outer jacket fixing
HSC-PH2-E1-A(31)	704-0464-4-31	Blue	PC	
HSC-PH2-E2-A(31)	704-0480-0-31	Light purple	AdPC	Glue
HSC-PH2-E5-A	704-3124-2	Green	APC	

#### •Short length type (For 3mm Cable)



	36.5		
or 7.4 0			
Part Number	CL No.	Boot color	Polishing type

Part Number	CL No.	Boot color	Polishing type	Outer jacket fixing
HSC-PH3-A4(31)	704-0245-0-31	Blue	PC	Crimp
HSC-PH3-A4(32)	704-0245-0-32	Light purple	AdPC	Crimp

# Tool Insertion/Extraction Plug Housings

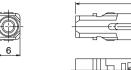
## Strain relief type

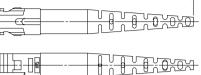
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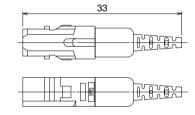
55

Part Number	CL No.	Fiber cable type	Boot color	Polishing type	Outer jacket fixing
HSC2-PH2-E1(31)	704-0329-9-31		Blue	PC	
HSC2-PH2-E2(31)	704-0330-8-31	¢2mm	Light purple	AdPC	Glue
HSC2-PH2-E5(31)	704-3109-9-31		Green	APC	
HSC2-PH3-B1(31)	704-0226-6-31		Blue	PC	
HSC2-PH3-B2(31)	704-0227-9-31	¢3mm	Light purple	AdPC	Crimp
HSC2-PH3-B5	704-3123-0		Green	APC	

#### •Light weight type (For 0.9mm fiber)





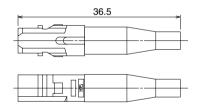


Part Number	CL No.	Boot color	Polishing type
HSC2-PH0.9-E1(31)	704-0421-1-31	Blue	PC
HSC2-PH0.9-E2(31)	704-0422-4-31	Light purple	AdPC

#### Short length type (For 2mm Cable)







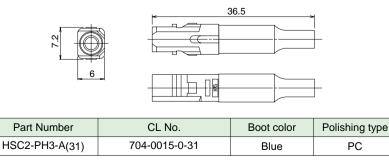
Part Number	CL No.	Boot color	Polishing type	Outer jacket fixing
HSC2-PH2-E1-A	704-0482-6	Blue	PC	Chuo
HSC2-PH2-E2-A	704-0481-3	Light purple	AdPC	Glue

Outer jacket attachment

Crimp

#### Short length type (For 3mm Cable)

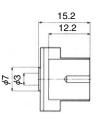


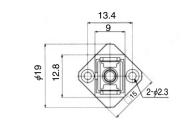


Note : Please contact HIROSE for other variations.

# Receptacles







Note: Designed for power meter sensors

Part Number	CL No.	Remarks
HSC-R1-B(05)	704-0022-6-05	For MM
HSC-R2-B(05)	704-0023-9-05	For SM

# **Ferrules**

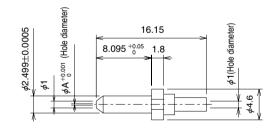
#### 

Part Number	CL No.	A dimension	Applicable Fiber cable	
HSC-F321-A125(10)	704-0070-9-10	0.125		
HSC-F321-A1255(10)	704-0200-2-10	0.1255	SM,MM	
HSC-F321-A126(10)	704-0071-1-10	0.126		

# •For APC



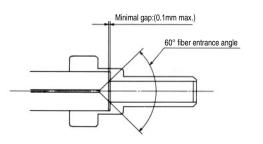




Part Number	CL No.	A dimension	Applicable Fiber cable
HSC-F391-A125	704-3101-7	0.125	
HSC-F391-A126	704-3102-0	0.126	SM
HSC-F391-A127	704-3103-2	0.127	

#### (1)No gap design.

(2)The entrance angle of the fiber has been set at  $60^{\circ}$  for easy fiber insertion.

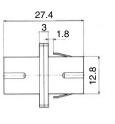


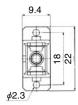
# Adapters - Panel Mounting

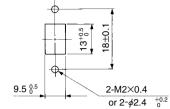
## •SC adapters

## SC/SC Plastic Housing









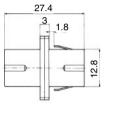
Panel cutout

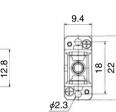
Panel thickness: 1.6mm

Part Number	CL No.	Split sleeve	Remarks
HSC-A3(51)	704-0092-1-51	Copper alloy	PC,AdPC(Blue)
HSC-A3-D1(02)	704-0217-5-02	Zirconia	
HSC-A3-D2(06)	704-3007-9-06	Zirconia	APC(Green)

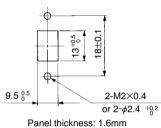
#### SC/SC Die Cast Metal Housing







# Panel cutout

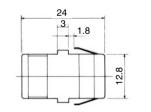


Part Number	CL No.	Split sleeve
HSC-A2(51)	704-0020-0-51	Copper alloy
HSC-A2-D1(01)	704-0258-2-01	Zirconia

# SC2 adapters

## SC/SC2 4-way adapter





# Panel cutout

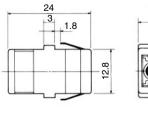


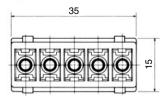
Panel thickness: 1.6mm

Part Number	CL No.	Split sleeve
HSC2-4A(51)	704-0024-1-51	Copper alloy
HSC2-4A-D1(01)	704-0290-5-01	Zirconia

## SC/SC2 5-way adapter (for Multi-mode fiber)







28.2

# Panel cutout



Panel thickness: 1.6mm

Part Number	CL No.	Split sleeve
HSC2-5A(51)	704-0025-4-51	Copper alloy



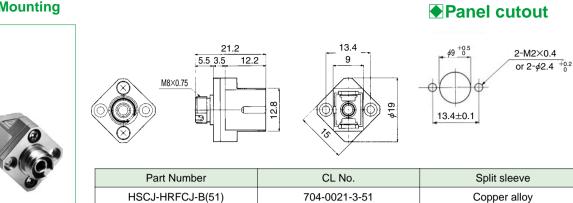
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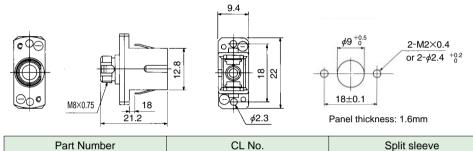
# Conversion adapters

# **●FC / SC Screw Mounting**



# ●FC / SC Snap-in and/or Screw Mounting

## **•ST / SC Screw Mounting**



Part Number	CL No.	Split sleeve
HSCJ-HRFCJ-C(51)	704-0206-9-51	Copper alloy

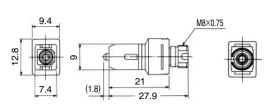
( 2			$ \begin{array}{c}  & \varphi 9^{+0.5} \\  & \overline{\text{or } 2 - M2 \times 0.4} \\  & \overline{\text{or } 2 - \phi 2.4}^{+0.2} \\  & 13.4 \pm 0.1 \end{array} $
	Part Number	CL No.	Split sleeve
	HSCJ-HSTJ-B(51)	704-0102-3-51	Copper alloy

# Panel cutout

Panel cutout

#### •FC/SC



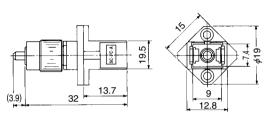


Part Number	CL No.	Split sleeve	Polishing type	Applicable Fiber cable	
HSCP-HRFCJ-1(51)	704-0203-0-51		PC	GI-50/125	
HSCP-HRFCJ-1AS(51)	704-0288-3-51			GI-50/125	
HSCP-HRFCJ-2(51)	704-0204-3-51	Copper alloy	PC	SM-9.5/125	
HSCP-HRFCJ-2AS(51)	704-0289-6-51		AdPC	3101-9.5/125	

•The positions of SC guide key and FC guide slot will not be always aligned.

#### **FC/SC**



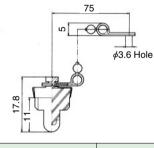


Part Number	CL No.	Split sleeve	Polishing type	Applicable Fiber cable	
HRFCP-HSCJ-1(51)	701-0065-0-51		PC	GI-50/125	
HRFCP-HSCJ-1AS(51)	701-0108-0-51	Coppor allow	AdPC	GI-50/125	
HRFCP-HSCJ-2(51)	701-0085-7-51	Copper alloy	PC	SM-9.5/125	
HRFCP-HSCJ-2AS(51)	701-0109-3-51		AdPC	3101-9.5/125	

•The positions of SC guide slot and FC guide key will not be always aligned.

# ■Cap





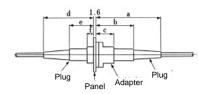
Part Number	CL No.	Applicable products
HSC-C2	704-0061-8	HSC-A2 , HSC-A3 , HSCJ-HRFCJ-B , CHSCJ-HSTJ-B , HSC-R1-B , HSC-R2-B

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# Mounting Dimensions



							Unit: mm
Combination		Dimensions					
Adapter	Housing	а	b	с	d	е	f
	HSC-PH2-E1					23.4	10.6
HSC-A2	HSC-PH2-E2	58	28	15.2	53.4		
HSC-A2-D1	HSC-PH3-B1		20	15.2	55.4	23.4	10.0
HSC-A2-D1	HSC-PH3-B2	]					
HSC-A3-D1	HSC-PH2-E1-A	39.5	28	15.2	34.9	23.4	10.6
H3C-A3-D1	HSC-PH3-A4	39.5	28	15.2	54.9	23.4	10.0
	HSC-PH0.9-E1	36	26	15.2	31.4	21.4	10.6
	HSC2-PH2-E1	58	_	13.5	53.4	_	8.9
HSC2-4A	HSC2-PH2-E2						
HSC2-4A HSC2-4A-D1	HSC2-PH3-B1						
HSC2-4A-DT HSC2-5A	HSC2-PH3-B2	]					
HSC2-5A HSC2-5A-D1	HSC2-PH3-A	39.5		13.5	34.9	_	8.9
11302-3A-01	HSC-PH2-E1-A	39.5	_	15.5			
	HSC2-PH0.9-E1	36	—	13.5	31.4	_	8.9
	HSC-PH2-E1						
HSC-R1-B	HSC-PH2-E1	57.5	27.5	147			
HSC-R2-B	HSC-PH3-B1	57.5	27.5	14.7	-		
	HSC-PH3-B2	1					

Note: Panel thickness: 1.6mm

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Crimp T	ool			
	- P	Part Number	CL No.	Applicable connector
		HSC-T3	704-0287-0	SC plug for 2mm, 3mm cable.
	<locations></locations>			
		(1)2mm Jacket o 3mm Jacket o (2)Kevlar™ crimţ	crimping: section A crimping: section C bing: section B	
HSC2 In:	sertion/Extraction T	ool		
	1 0°			
		Part Number	CL No.	Applicable Products
4		HSC-T1-L	704-0286-8	HSC2 series.
14				
4	<how operate="" to=""></how>		a ahawa halaw	
4	<hr/> How to operate> 1.Open the tip of tool by one of too		as shown below.	
4			as shown below.	
4	1.Open the tip of tool by o	compressing levers a	ase lever	
4		compressing levers a	ase lever	
4	1.Open the tip of tool by o	compressing levers a	ase lever	)



Part Number	CL No.
HSC2-PH2/CVMD	902-6029-1

36 **HS** 

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# SC Duplex

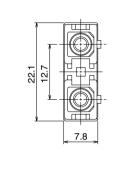
#### Notes

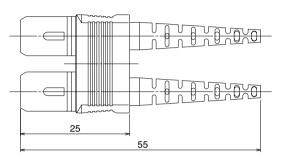
- SC duplex adapters can be also connected with Simplex SC plugs.
- SC type attenuators (HSC-AT11K-A\*-\*) can be connected only with F type adapters.

# ■Plug Housing

#### ●F Type



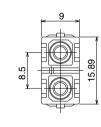


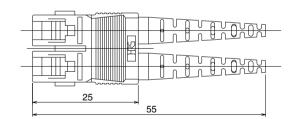


Part Number	CL No.	Applicable Cable Diameter	Boot Color	Polishing type
HSCF-2PH2-E1(P)(31)	704-2109-3-31	10	Blue	PC
HSCF-2PH2-E2(P)(31)	704-2120-6-31	φ2mm	Light purple	AdPC
HSCF-2PH3-B1(P)(31)	704-2032-0-31	10	Blue	PC
HSCF-2PH3-B2(P)(31)	704-2036-1-31	∳3mm	Light purple	AdPC

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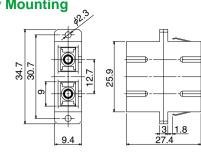


Part Number	CL No.	Applicable Cable Diameter	Boot Color	Polishing type
HSCH-2PH2-B1(P)(31)	704-2046-5-31	¢0	Blue	PC
HSCH-2PH2-B2(P)(31)	704-2058-4-31	<i>\$</i> 2mm	Light purple	AdPC
HSCH-2PH3-B1(P)(31)	704-2054-3-31	40	Blue	PC
HSCH-2PH3-B2(P)(31)	704-2050-2-31	<i>\$</i> 3mm	Light purple	AdPC

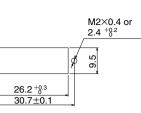
# Adapters

# ●F type Snap-in and/or Screw Mounting





# Panel cutout



Panel thickness: 1.6mm

Part Number	CL No.	Split sleeve	Color
HSCF-2A(P)(51)	704-2008-6-51	Copper alloy	Blue
HSCF-2A-D(P)(06)	704-2040-9-06	Zirconia	Diue
HSCF-2A-D2(P)(06)	704-2112-8-06	Zirconia	Green

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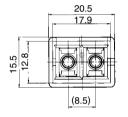
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27.4

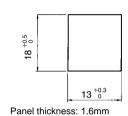
1.8

## •H type Snap-in





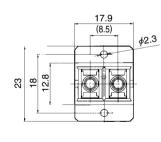
# Panel cutout



Part Number	CL No.	Split sleeve	Color
HSCH-2A1(P)(51)	704-2066-2-51	Copper alloy	Dhuo
HSCH-2A1-D(P)(02)	704-2117-1-02	Zirconia	Blue
HSCH-2A1-D2(P)	704-2137-9	Zirconia	Green

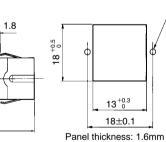
## ●H type Snap-in and/or Screw Mounting





# Panel cutout

M2×0.4 or ¢2.4 <sup>+0.2</sup>

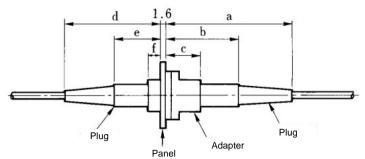


Part Number	CL No.	Split sleeve	Color
HSCH-2A(P)(51)	704-2020-1-51	Copper alloy	Dive
HSCH-2A-D(P)(02)	704-2062-1-02	Ziroonio	Blue
HSCH-2A-D2(P)(03)	704-2108-0-03	Zirconia	Green

R

sc

# Mounting Dimensions



#### <F Type>

<f type=""></f>							Unit: mm	
C	Combination		Dimensions					
Adapter	Housing	а	b	С	d	е	f	
HSCF-2A(P) HSCF-2A-D(P)	HSC-PH*-E# HSCF-PH*-B#(P)	58	28	15.2	53.4	23.4	10.6	
H3CF-2A-D(P)	HSC-PH*-A4	39.5	28	15.2	34.9	23.4	10.6	
	HSC-PH0.9-E#	36	26	15.2	31.4	21.4	10.6	

#### <H Type>

Combination		Dimensions					
Adapter	Housing	а	b	С	d	е	f
HSCH-2A(P) HSCH-2A-D(P)	HSC-PH*-E# HSCH-2PH*-B#(P)	58	28	15.2	53.4	23.4	10.6
HSCH-2A1(P)	HSC-PH*-A4	39.5	28	15.2	34.9	23.4	10.6
	HSC-PH0.9-E#	36	26	15.2	31.4	21.4	10.6

Note 1: \* indicates cable diameter:

 $2 = \phi 2$ mm diameter

Note 2: # indicates polishing type:

 $3 = \phi 3$ mm diameter 1 = PC polishing 2 = AdPC polishing

Harsh Environment

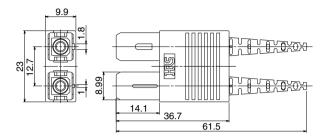
# **Complies with ANSI Standard**

# ANSI X3T9.3 Fibre Channel Physical and Signaling Interface

# Plug Housings

## •For Single Mode

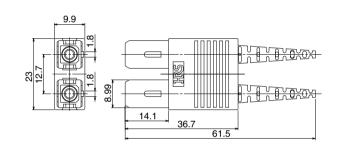




Part Number	CL No.	Applicable cable	Boot color	Polishing type
HSCM-2SPH2-B1	704-2100-9	Simplex-2mm dia. cable or dual fiber zip cable	Blue	PC
HSCM-2SPH3-B1	704-2102-4	Simplex-3mm dia. cable or dual fiber zip cable	Diue	PC
HSCM-2SPH2-B2	704-2133-8	Simplex-2mm dia. cable or dual fiber zip cable	light purple	AdPC
HSCM-2SPH3-B2	—	Simplex-3mm dia. cable or dual fiber zip cable	Light purple	AUPC

# •For Multi-mode





Part Number	CL No.	Applicable cable	Boot color	Polishing type
HSCM-2GPH2-B1	704-2104-0	Simplex-2mm dia. cable or dual fiber zip cable	Blue	PC
HSCM-2GPH3-B1	704-2106-5	Simplex-3mm dia. cable or dual fiber zip cable		FC

# Ferrules

Convertional SC ferrules. Refer to page 33 for details.

# Adapters

F type SC adapters. Refer to page 40 for details.

Attenuators

MU

Environm