

# 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 polishing

Green: Angled PC polishing (APC)

Light purple: Advanced PC (AdPC) polishing

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.

## ■Product Specifications

| Ratings                       |                                          | Operating temperature range |                                                                                                                                                                                          | -25°C to +70°C | Storage temperature range |                                                                                                              | -25°C to +70°C                                                 |
|-------------------------------|------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Item                          |                                          |                             | Test Method (IEC 61300)                                                                                                                                                                  |                |                           | Specifications                                                                                               |                                                                |
| Optical Characteristics       | Insertion Loss                           | (SM)                        | Wavelength 1310nm (LD)                                                                                                                                                                   |                |                           | 0.5dB max. (PC, AdPC, APC)                                                                                   |                                                                |
|                               |                                          | (GI)                        | Wavelength 1310nm (LED)                                                                                                                                                                  |                |                           | 0.3dB max. (PC)                                                                                              |                                                                |
|                               | Return Loss                              | (SM)                        | Wavelength 1310nm (LD)                                                                                                                                                                   |                |                           | 22dB min. (PC)                                                                                               | 40dB min. (AdPC)                                               |
|                               |                                          | (GI)                        |                                                                                                                                                                                          |                |                           | 60dB min. (APC)                                                                                              | 22dB min. (PC)                                                 |
| Mechanical Characteristics    | Engagement and Separation /force         |                             | Measured with corresponding connector.                                                                                                                                                   |                |                           | Simplex plug                                                                                                 | Engagement force: 19.6 N max.<br>Separation force: 19.6 N max. |
|                               | Ferrule withdrawal force                 |                             |                                                                                                                                                                                          |                |                           | Duplex plug                                                                                                  | Engagement force: 39 N max.<br>Separation force: 39 N max.     |
|                               | Cable retention (Straight pull)          |                             | Extract zirconia gauge 2.499 ±0.0005 mm dia from split sleeve.                                                                                                                           |                |                           | Copper alloy split sleeve                                                                                    | 2N to 5.9N                                                     |
|                               | Durability (cycles, mating/un-mating)    |                             | 89N tensile load for one minute.                                                                                                                                                         |                |                           | Zirconia split sleeve                                                                                        | 2N to 3.9N                                                     |
|                               | Vibration                                |                             | 1000 times                                                                                                                                                                               |                |                           | 1) Insertion loss fluctuation after test: 0.2dB max.<br>2) No visible damage, dislocation of clamp or cable. |                                                                |
|                               | Shock                                    |                             | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 axis.<br>Acceleration of 981 m/s², 6 ms duration, sin half-wave waveform, 10 cycles in each of the 3 axis. |                |                           |                                                                                                              |                                                                |
| Environmental Characteristics | Humidity (Temperature/ humidity- cycles) |                             | -10°C to 65°C, humidity: 90% to 96%<br>20 cycles                                                                                                                                         |                |                           | 1) Insertion loss fluctuation after test: 0.2dB max.<br>2) No visible damage, cracks or part dislocation.    |                                                                |
|                               | Change of temperature                    |                             | -40°C to +75°C 42 cycles<br>(Complies with Telcordia standard GR-326-CORE)                                                                                                               |                |                           |                                                                                                              |                                                                |
|                               | Dry heat                                 |                             | 960 hours at 85°C                                                                                                                                                                        |                |                           |                                                                                                              |                                                                |
|                               | Cold                                     |                             | 960 hours at -25°C                                                                                                                                                                       |                |                           |                                                                                                              |                                                                |
|                               | Salt mist                                |                             | 48 hours in a 5% concentration of salt mist                                                                                                                                              |                |                           |                                                                                                              |                                                                |
|                               |                                          |                             |                                                                                                                                                                                          |                |                           | 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

#### SC type plug housing

Strain relief type

(For Cable Diameter: 2 mm & 3mm)



HSC-PH2-E1,E2,E5  
HSC-PH3-B1,B2,B5

0.9 mm fiber

Light weight type



HSC-PH0.9-E1,E2,E5

Short length type

(For Cable Diameter: 2mm)



HSC-PH2-E1-A

Short length type

(For Cable Diameter: 3mm)



HSC-PH3-A4

Conversion adapter

- FC jack to SC Plug



HSCP-HRFCJ-1, 2  
HSCP-HRFCJ-1AS, 2AS

#### Adapter-Panel Mounting

Plastic Housing Products

HSC-A3  
HSC-A3-D1  
HSC-A3-D2



Die Cast Housing Products

HSC-A2  
HSC-A2-D1



#### Conversion adapter

FC to SC - Screw Mounting

HSCJ-HRFCJ-B



FC to SC - Panel Mounting

HSCJ-HRFCJ-C



ST to SC - Screw Mounting

HSCJ-HSTJ-B



#### Receptacle

HSC-R1-B,R2-B



#### Simplified receptacle

HSC-SR-1,D1  
HSC-SR-2,D2



## <Tool Insertion/Extraction Connectors>

#### SC2 type plug housing

Long strain relief

(For Cable Diameter: 2 mm & 3mm)



HSC2-PH2-E1,E2,E5  
HSC2-PH3-B1,B2,B5

0.9 mm fiber Type



HSC2-PH0.9-E1,E2

Short length type

(For Cable Diameter: 2 mm)



HSC2-PH2-E1-A

Short length type

(For Cable Diameter: 3mm)



HSC2-PH3-A

#### Adapter

4-Position Adapter  
Panel Mounting type

HSC2-4A  
HSC2-4A-D1



5-Position Adapter  
Panel Mounting type

HSC2-5A



#### Simplified receptacle

HSC2-8SR-1  
HSC2-8SR-D1



## Duplex type

### <Plug Housings>

#### F type

Plug Housing  
(For Cable Diameter: 2mm&3mm)

HSCF-2PH2-E1,E2  
HSCF-2PH3-B1,B2



#### <Complies with ANSI Standard for adjustable Type>

For Single mode  
(For Cable Diameter: 2mm&3mm)

HSCM-2SPH2-B1,B2  
HSCM-2SPH3-B1,B2



For Multi mode  
(For Cable Diameter: 2 mm & 3mm)

HSCM-2GPH2-B1  
HSCM-2GPH3-B1



#### H type

Plug Housing  
(For Cable Diameter: 2 mm & 3mm)

HSCH-2PH2-B1,B2  
HSCH-2PH3-B1,B2



### <Adapters>

#### F type

Panel Mounting

HSCF-2A(P)  
HSCF-2A-D(P)



#### H type

Snap - in

HSCH-2A1(P)  
HSCH-2A1-D(P)



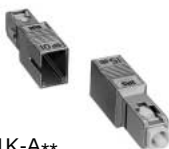
Screw Mounting

HSCH-2A(P)  
HSCH-2A-D(P)



## Fixed attenuators

For single mode



HSC-AT 11K-A\*\*

See Page 85 for details.

For GI



HSC-AT5S-B\*\*A

## Terminators

#### Plug type



HSC-TM-P1

Tool- Insertion/Removal



HSC2-TM-P1

#### Receptacle type



HSC-TM-R1

See Page 89 for details.

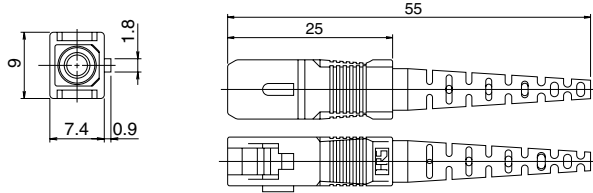
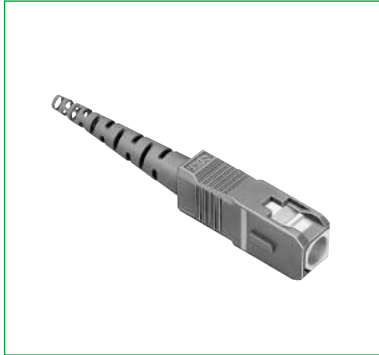
Tool Insertion/Removal



HSC2-TM-R1

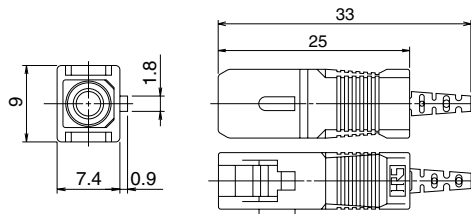
## Simplex type

### ●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 | φ2mm             | Blue         | PC             | Glue                |
| HSC-PH2-E2(31) | 704-0328-6-31 |                  | Light purple | AdPC           |                     |
| HSC-PH2-E5(31) | 704-3108-6-31 |                  | Green        | APC            |                     |
| HSC-PH3-B1(31) | 704-0222-5-31 | φ3mm             | Blue         | PC             | Crimp               |
| HSC-PH3-B2(31) | 704-0223-8-31 |                  | Light purple | AdPC           |                     |
| HSC-PH3-B5(31) | 704-3020-7-31 |                  | Green        | APC            |                     |

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



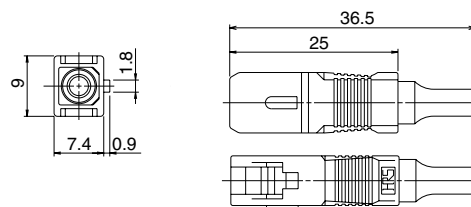
| Part Number      | CL No.        | Boot color   | Polishing type |
|------------------|---------------|--------------|----------------|
| HSC-PH0.9-E1(06) | 704-0339-2-06 | Blue         | PC             |
| HSC-PH0.9-E2(31) | 704-0354-6-31 | Light purple | AdPC           |
| HSC-PH0.9-E5(31) | 704-3104-5-31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

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



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

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



| 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           |                     |

## ■Tool Insertion/Extraction Plug Housings

### ●Strain relief type



| Part Number     | CL No.        | Fiber cable type | Boot color   | Polishing type | Outer jacket fixing |
|-----------------|---------------|------------------|--------------|----------------|---------------------|
| HSC2-PH2-E1(31) | 704-0329-9-31 | φ2mm             | Blue         | PC             | Glue                |
| HSC2-PH2-E2(31) | 704-0330-8-31 |                  | Light purple | AdPC           |                     |
| HSC2-PH2-E5(31) | 704-3109-9-31 |                  | Green        | APC            |                     |
| HSC2-PH3-B1(31) | 704-0226-6-31 | φ3mm             | Blue         | PC             | Crimp               |
| HSC2-PH3-B2(31) | 704-0227-9-31 |                  | Light purple | AdPC           |                     |
| 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         | UPC            |
| 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 | 704-0482-6-00 | Blue         | PC             | Glue                |
| HSC2-PH2-E2-A | 704-0481-3-00 | Light purple | AdPC           |                     |

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



| Part Number    | CL No.        | Boot color | Polishing type | Outer jacket attachment |
|----------------|---------------|------------|----------------|-------------------------|
| HSC2-PH3-A(31) | 704-0015-0-31 | Blue       | PC             | Crimp                   |

Note : Please contact HIROSE for other variations.

## ■Receptacles

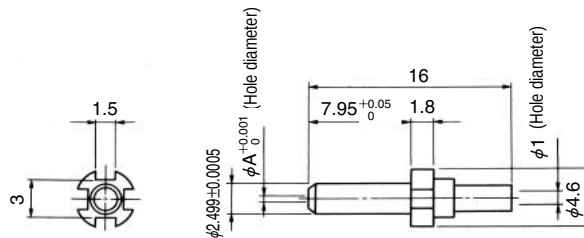


Note: Designed for power meter sensors

| 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

### ●For PC, AdPC and UPC



| Part Number        | CL No.        | A dimension | Applicable Fiber cable |
|--------------------|---------------|-------------|------------------------|
| HSC-F321-A125(10)  | 704-0070-9-10 | 0.125       | SM,MM                  |
| HSC-F321-A1255(10) | 704-0200-2-10 | 0.1255      |                        |
| 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       | SM                     |
| HSC-F391-A126 | 704-3102-0 | 0.126       |                        |
| HSC-F391-A127 | 704-3103-2 | 0.127       |                        |

(1)No gap design.

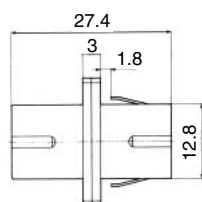
(2)The entrance angle of the fiber has been set at 60° for easy fiber insertion.



## Adapters - Panel Mounting

### SC adapters

#### SC/SC Plastic Housing

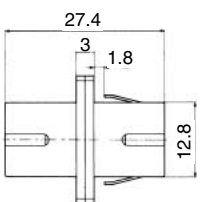


#### Panel cut-out



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

#### SC/SC Die Cast Metal Housing



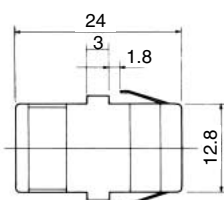
#### Panel cut-out



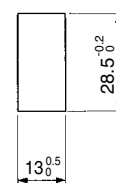
| Part Number   | CL No.        | Split sleeve |
|---------------|---------------|--------------|
| HSC-A2(51)    | 704-0020-0-51 | Copper alloy |
| HSC-A2-D1(01) | 704-0258-2-01 | Zirconia     |

### SC2 adapters

#### SC/SC2 4-way adapter



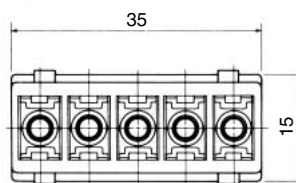
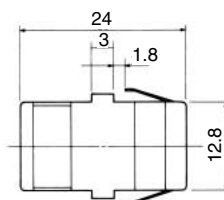
#### Panel cut-out



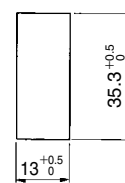
Panel thickness: 1.6mm

| 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)



#### Panel cut-out



Panel thickness: 1.6mm

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

■Conversion adapters

●FC / SC Screw Mounting



◆Panel cut-out

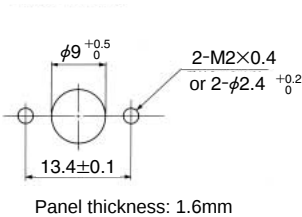


| Part Number      | CL No.        | Split sleeve |
|------------------|---------------|--------------|
| HSCJ-HRFCJ-B(51) | 704-0021-3-51 | Copper alloy |

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

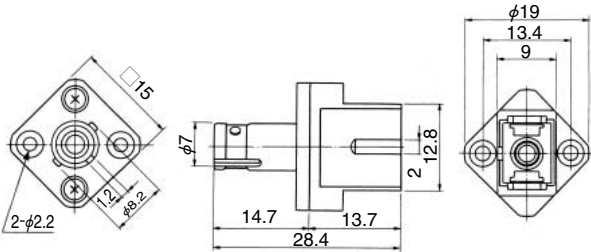


◆Panel cut-out

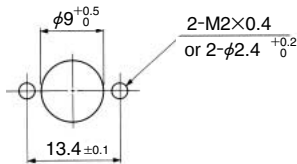


| Part Number      | CL No.        | Split sleeve |
|------------------|---------------|--------------|
| HSCJ-HRFCJ-C(51) | 704-0206-9-51 | Copper alloy |

●ST / SC Screw Mounting

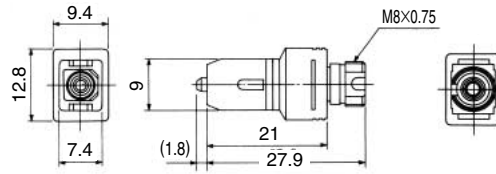
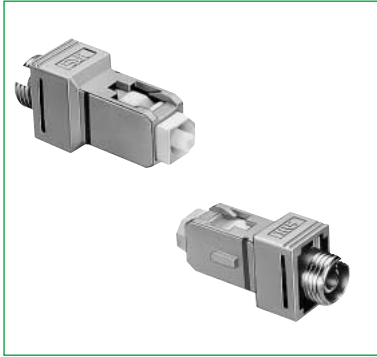


◆Panel cut-out



| Part Number     | CL No.        | Split sleeve |
|-----------------|---------------|--------------|
| HSCJ-HSTJ-B(51) | 704-0102-3-51 | Copper alloy |

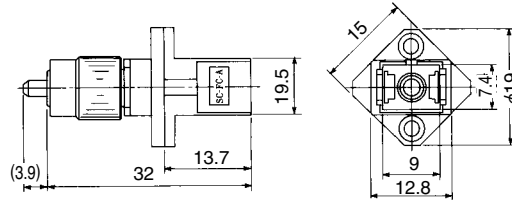
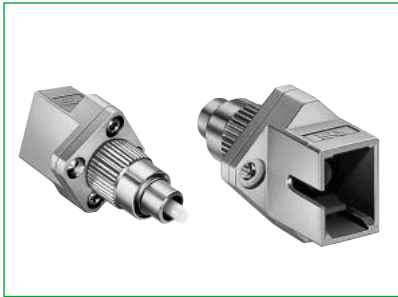
## ●FC / SC



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

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

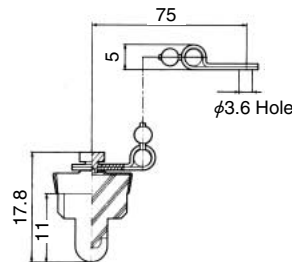
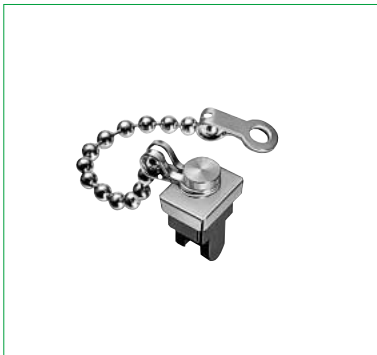
## ●FC / SC



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

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

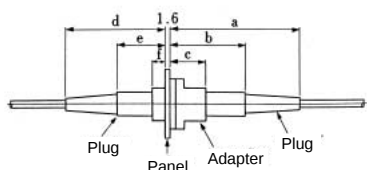
## ■Cap



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

## ◆ Mounting Dimensions

Unit: mm



| Combination                                    |               | Dimensions |      |      |      |      |      |
|------------------------------------------------|---------------|------------|------|------|------|------|------|
| Adapter                                        | Housing       | a          | b    | c    | d    | e    | f    |
| HSC-A2<br>HSC-A2-D1<br>HSC-A3<br>HSC-A3-D1     | HSC-PH2-E1    | 58         | 28   | 15.2 | 53.4 | 23.4 | 10.6 |
|                                                | HSC-PH2-E2    |            |      |      |      |      |      |
|                                                | HSC-PH3-B1    |            |      |      |      |      |      |
|                                                | HSC-PH3-B2    | 39.5       | 28   | 15.2 | 34.9 | 23.4 | 10.6 |
|                                                | HSC-PH2-E1-A  |            |      |      |      |      |      |
|                                                | HSC-PH3-A4    | 36         | 26   | 15.2 | 31.4 | 21.4 | 10.6 |
| HSC2-4A<br>HSC2-4A-D1<br>HSC2-5A<br>HSC2-5A-D1 | HSC2-PH2-E1   | 58         | —    | 13.5 | 53.4 | —    | 8.9  |
|                                                | HSC2-PH2-E2   |            |      |      |      |      |      |
|                                                | HSC2-PH3-B1   |            |      |      |      |      |      |
|                                                | HSC2-PH3-B2   | 39.5       | —    | 13.5 | 34.9 | —    | 8.9  |
|                                                | HSC2-PH3-A    |            |      |      |      |      |      |
|                                                | HSC2-PH2-E1-A | 36         | —    | 13.5 | 31.4 | —    | 8.9  |
| HSC-R1-B<br>HSC-R2-B                           | HSC2-PH0.9-E1 | 36         | —    | 13.5 | 31.4 | —    | 8.9  |
|                                                | HSC-PH2-E1    | 57.5       | 27.5 | 14.7 | —    | —    | —    |
|                                                | HSC-PH2-E1    |            |      |      |      |      |      |
|                                                | HSC-PH3-B1    |            |      |      |      |      |      |
|                                                | HSC-PH3-B2    |            |      |      |      |      |      |

Note: Panel thickness: 1.6mm

## ■ Cable assembly

### ● SC strain relief type.



| Part Number     | CL No.     | Fiber cable type | Polishing type | Cable Diameter |
|-----------------|------------|------------------|----------------|----------------|
| HSC-SPE2-F3Q-L  | 704-1073-2 | SM-9.5/125       | PC             | φ2mm           |
| HSC-SPC2-F3A-L  | 704-1089-2 |                  |                | φ3mm           |
| HSC-ASPE2-F3Q-L | 704-1071-7 |                  | AdPC           | φ2mm           |
| HSC-ASPC2-F3A-L | 704-1094-2 |                  |                | φ3mm           |
| HSC-CSPE2-F3Q-L | —          |                  | APC            | φ2mm           |
| HSC-CSPC2-F3A-L | —          |                  |                | φ3mm           |
| HSC-SPE2-F3P-L  | 704-1081-0 | GI-50/125        | PC             | φ2mm           |
| HSC-SPC2-F3B-L  | 704-1086-4 |                  |                | φ3mm           |

Note 1: The "L" within the Product Number indicates the length of the cable illustrated on the drawing. Please specify values in metric units.

Note 2: HSC2 cable assemblies are also available.

Note 3: APC polishing is performed at an angle of 8°. Mating with connectors polished PC or AdPC is not possible.

Note : Please contact HIROSE if you have any requests.

## ■Tools

### ●Crimp Tool



| Part Number | CL No.     | Applicable connector        |
|-------------|------------|-----------------------------|
| HSC-T3      | 704-0287-0 | SC plug for 2mm, 3mm cable. |

(This is used in crimping of Kevlar at time of the plug termination.)

#### <Locations>



- (1) 2mm Jacket crimping: Please select section A
- 3mm Jacket crimping: Please select section C
- (2) Kevlar™ crimping: Please select section B

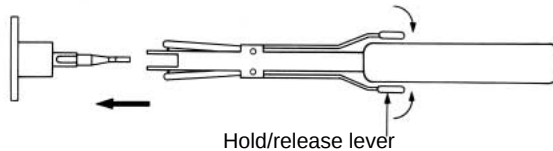
### ●HSC2 Insertion/Extraction Tool



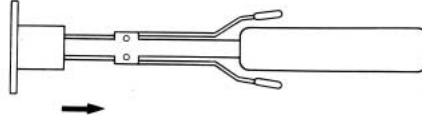
| Part Number | CL No.     | Applicable Products |
|-------------|------------|---------------------|
| HSC-T1-L    | 704-0286-8 | HSC2 series.        |

#### <How to operate>

1. Open the tip of tool by compressing levers as shown below.



2. Insert the tool (with opening the tips) into adapter.



3. Release the levers (then the tool catch HSC2 plug) and you can release the connector.

### ●Plug assemble Tool



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

## 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.

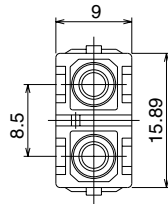
## ■ Plug Housing

### ● F Type



| Part Number         | CL No.        | Applicable Cable Diameter | Boot Color   | Polishing type |
|---------------------|---------------|---------------------------|--------------|----------------|
| HSCF-2PH2-E1(P)(31) | 704-2109-3-31 | φ2mm                      | Blue         | PC             |
| HSCF-2PH2-E2(P)(31) | 704-2120-6-31 |                           | Light purple | AdPC           |
| HSCF-2PH3-B1(P)(31) | 704-2032-0-31 | φ3mm                      | Blue         | PC             |
| HSCF-2PH3-B2(P)(31) | 704-2036-1-31 |                           | Light purple | AdPC           |

### ● H Type



| Part Number         | CL No.        | Applicable Cable Diameter | Boot Color   | Polishing type |
|---------------------|---------------|---------------------------|--------------|----------------|
| HSCH-2PH2-B1(P)(31) | 704-2046-5-31 | φ2mm                      | Blue         | PC             |
| HSCH-2PH2-B2(P)(31) | 704-2058-4-31 |                           | Light purple | AdPC           |
| HSCH-2PH3-B1(P)(31) | 704-2054-3-31 | φ3mm                      | Blue         | PC             |
| HSCH-2PH3-B2(P)(31) | 704-2050-2-31 |                           | Light purple | AdPC           |

## Adapters

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



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

### H type Snap-in



| Part Number       | CL No.        | Split sleeve  | Color |
|-------------------|---------------|---------------|-------|
| HSCH-2A1(P)(51)   | 704-2066-2-51 | Copper sleeve | Blue  |
| HSCH-2A1-D(P)(02) | 704-2117-1-02 | Zirconia      |       |

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



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

## ◆SC Duplex connector assemblies.

| Part Number        | CL No.     | Fiber cable type | Polishing type | Cable Diameter |
|--------------------|------------|------------------|----------------|----------------|
| HSCF-SP2PP-F3Q-L   | 704-4031-9 | SM-9.5/125       | PC             | φ2mm           |
| HSCH-SP2PP-F3Q-L   | —          |                  |                | φ2mm Zip cord  |
| HSCF-SP2PP-F3QW-L  | —          |                  |                | φ3mm           |
| HSCH-SP2PP-F3QW-L  | —          |                  |                | φ3mm Zip cord  |
| HSCF-SP2PP-F3A-L   | —          |                  | AdPC           | φ2mm           |
| HSCH-SP2PP-F3A-L   | —          |                  |                | φ2mm Zip cord  |
| HSCF-SP2PP-F3AW-L  | 704-4013-7 |                  |                | φ3mm           |
| HSCH-SP2PP-F3AW-L  | —          |                  |                | φ3mm Zip cord  |
| HSCF-ASP2PP-F3Q-L  | —          |                  |                | φ2mm           |
| HSCH-ASP2PP-F3Q-L  | —          |                  |                | φ2mm Zip cord  |
| HSCF-ASP2PP-F3QW-L | —          |                  |                | φ3mm           |
| HSCH-ASP2PP-F3QW-L | —          |                  |                | φ3mm Zip cord  |
| HSCF-ASP2PP-F3A-L  | —          |                  | PC             | φ2mm           |
| HSCH-ASP2PP-F3A-L  | —          |                  |                | φ2mm Zip cord  |
| HSCF-ASP2PP-F3AW-L | —          |                  |                | φ3mm           |
| HSCH-ASP2PP-F3AW-L | —          |                  |                | φ3mm Zip cord  |
| HSCF-SP2PP-F3P-L   | 704-4038-8 | GI-50/125        | PC             | φ2mm           |
| HSCH-SP2PP-F3P-L   | —          |                  |                | φ2mm Zip cord  |
| HSCF-SP2PP-F3PW-L  | —          |                  |                | φ3mm           |
| HSCH-SP2PP-F3PW-L  | —          |                  |                | φ3mm Zip cord  |
| HSCF-SP2PP-F3B-L   | —          |                  | PC             | φ2mm           |
| HSCH-SP2PP-F3B-L   | —          |                  |                | φ2mm Zip cord  |
| HSCF-SP2PP-F3BW-L  | 704-4039-0 |                  |                | φ3mm           |
| HSCH-SP2PP-F3BW-L  | —          |                  |                | φ3mm Zip cord  |

Note 1: The "L" within the Product Number indicates the length of the cable. Please specify "L" in mm.

Note 2: Please contact us if you have any requests. HIROSE will offer excellent solutions to meet your requirements.

## ◆Mounting Dimensions



<F Type>

Unit: mm

| Combination                |                              | Dimensions |    |      |      |      |      |
|----------------------------|------------------------------|------------|----|------|------|------|------|
| Adapter                    | Housing                      | a          | b  | c    | d    | e    | f    |
| HSCF-2A(P)<br>HSCF-2A-D(P) | HSC-PH*-E#<br>HSCF-PH*-B#(P) | 58         | 28 | 15.2 | 53.4 | 23.4 | 10.6 |
|                            | 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                       | a          | b  | c    | d    | e    | f    |
| HSCH-2A(P)<br>HSCH-2A-D(P)<br>HSCH-2A1(P) | HSC-PH*-E#<br>HSCH-2PH*-B#(P) | 58         | 28 | 15.2 | 53.4 | 23.4 | 10.6 |
|                                           | 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= φ2mm diameter

3= φ3mm diameter

Note 2: # indicates polishing type:

1= PC polishing

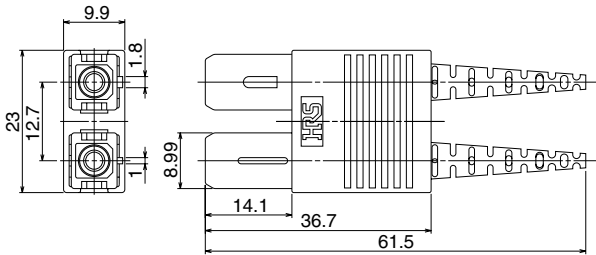
2= AdPC polishing

# Complies with ANSI Standard

## ANSI X3T9.3 Fibre Channel Physical and Signaling Interface

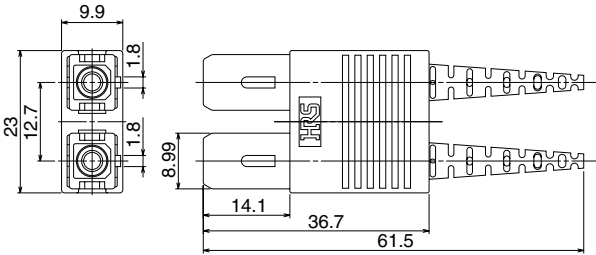
### ■ Plug Housings

#### ● 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 |              |                |
| 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 |              |                |

#### ● 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 |            |                |

### ■ Ferrules

Conventional SC ferrules.  
Refer to page 33 for details.

### ■ Adapters

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

# Simplified Receptacles & Plugs

## ■Features

1.Space saving: Only 23.8mm plug length.

| Types of SC plug         | Length(mm) |
|--------------------------|------------|
| Simplified plug          | 23.8       |
| SC plug for 0.9mm fiber  | 33         |
| SC2 plug for 0.9mm fiber | 33         |

## Installation image



## ■Product Specifications

| Ratings                       |                                                     |      | Operating temperature range                                                                        |  | -25°C to +70°C |  | Storage temperature range                                                                           |  | -25°C to +70°C |  |
|-------------------------------|-----------------------------------------------------|------|----------------------------------------------------------------------------------------------------|--|----------------|--|-----------------------------------------------------------------------------------------------------|--|----------------|--|
| Item                          |                                                     |      | Test Method (IEC 61300)                                                                            |  |                |  | Specifications                                                                                      |  |                |  |
| Optical Characteristics       | Insertion Loss                                      | (SM) | Wavelength 1310nm (LD)                                                                             |  |                |  | 0.5dB max. (PC, AdPC)                                                                               |  |                |  |
|                               |                                                     | (GI) | Wavelength 1310nm (LED)                                                                            |  |                |  | 0.3dB max. (PC)                                                                                     |  |                |  |
|                               | Return Loss                                         | (SM) | Wavelength 1310nm (LD)                                                                             |  |                |  | 22dB min. (PC) 40dB min. (AdPC)                                                                     |  |                |  |
|                               |                                                     | (GI) |                                                                                                    |  |                |  | 22dB min. (PC)                                                                                      |  |                |  |
| Mechanical Characteristics    | Ferrule withdrawal                                  |      | Extract zirconia gauge 2.499 ±0.0005 mm dia from split sleeve.                                     |  |                |  | Copper alloy split sleeve                                                                           |  | 2N to 5.9N     |  |
|                               | Durability (cycles, mating/un-mating)               |      | 1000 times                                                                                         |  |                |  | Insertion loss fluctuation after test: 0.2dB max.<br>No visible damage, cracks or part dislocation. |  |                |  |
|                               | Vibration                                           |      | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 axis.                |  |                |  |                                                                                                     |  |                |  |
|                               | Shock                                               |      | Acceleration of 981 m/s², 6 ms duration, sine half-wave waveform, 10 cycles in each of the 3 axis. |  |                |  |                                                                                                     |  |                |  |
| Environmental Characteristics | Humidity resistance (Temperature/ humidity- cycles) |      | Temperature: -10°C to 65°C, humidity: 90% to 96% 20 cycles                                         |  |                |  |                                                                                                     |  |                |  |
|                               | Change of temperature                               |      | Temperature: -40°C → +75°C 42cycles (Complies with Telcordia standard GR-326-CORE)                 |  |                |  |                                                                                                     |  |                |  |
|                               | Dry Heat                                            |      | 960 hours at 85°C                                                                                  |  |                |  |                                                                                                     |  |                |  |
|                               | Cold                                                |      | 960 hours at -25°C                                                                                 |  |                |  |                                                                                                     |  |                |  |

## ■Materials

### ●Simplified receptacle

| Part         | Material                 |
|--------------|--------------------------|
| Housing      | Synthetic resin          |
| Sleeve       | Synthetic resin          |
| Split sleeve | Zirconia or Copper alloy |
| Plate        | Stainless steel          |
| Dust cap     | Synthetic resin          |

### ●Simplified plug

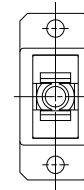
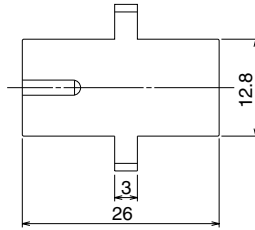
| Part        | Material                     |
|-------------|------------------------------|
| Ferrule     | Zirconia and Synthetic resin |
| Boot        | Synthetic resin              |
| Ferrule cap | Synthetic resin              |

### ●Simplified plug extraction tool

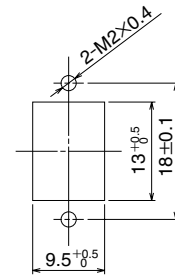
| Part            | Material        |
|-----------------|-----------------|
| Extraction tool | Synthetic resin |

## ■Simplified receptacle to SC

### ●Simplex / Shrouded

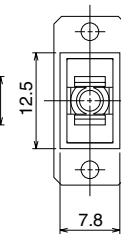
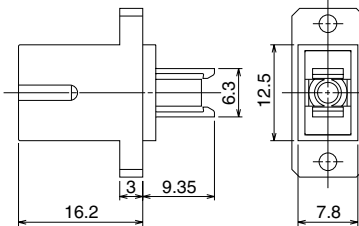
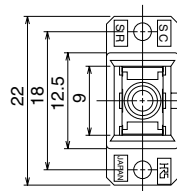
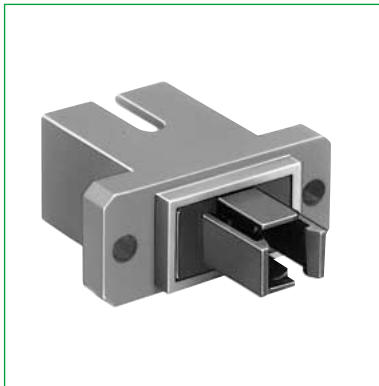


### ◆Panel cut-out

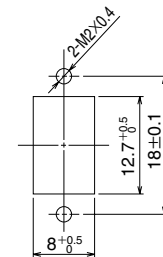


| Part Number   | CL No.        | Split sleeve | Color |
|---------------|---------------|--------------|-------|
| HSC-SR-1(51)  | 704-0320-4-51 | Copper alloy | Blue  |
| HSC-SR-D1(02) | 704-0321-7-02 | Zirconia     |       |
| HSC-SR-1(03)  | 704-0320-4-03 | None         |       |

### ●Simplex / Unshrouded

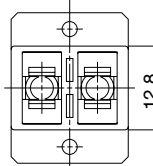
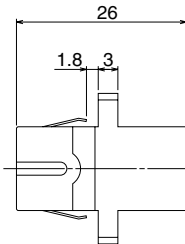
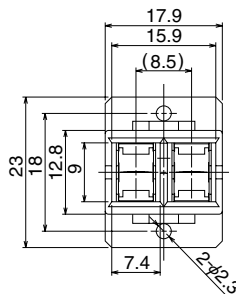


### ◆Panel cut-out

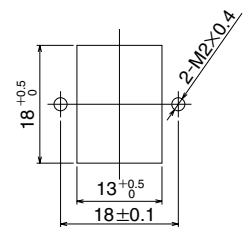


| Part Number   | CL No.        | Split sleeve | Color |
|---------------|---------------|--------------|-------|
| HSC-SR-2(51)  | 704-0291-8-51 | Copper alloy | Blue  |
| HSC-SR-D2(06) | 704-0292-0-06 | Zirconia     |       |
| HSC-SR-2(03)  | 704-0291-8-03 | None         |       |

### ●Duplex H type / Shrouded



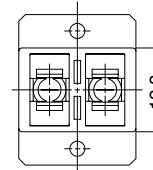
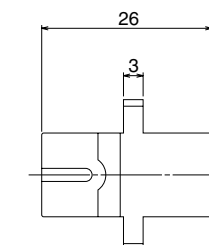
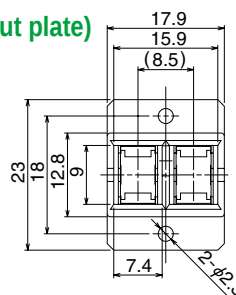
### ◆Panel cut-out



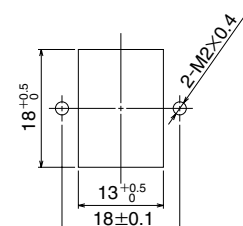
Panel thickness: 1.6mm

| Part Number        | CL No.        | Split sleeve | Color |
|--------------------|---------------|--------------|-------|
| HSCH-2SR-1(R)(51)  | 704-0293-3-51 | Copper alloy | Blue  |
| HSCH-2SR-D1(R)(01) | 704-0294-6-01 | Zirconia     |       |
| HSCH-2SR-1(R)(03)  | 704-0293-3-03 | None         |       |

### ●Duplex H type / Shrouded (Without plate)

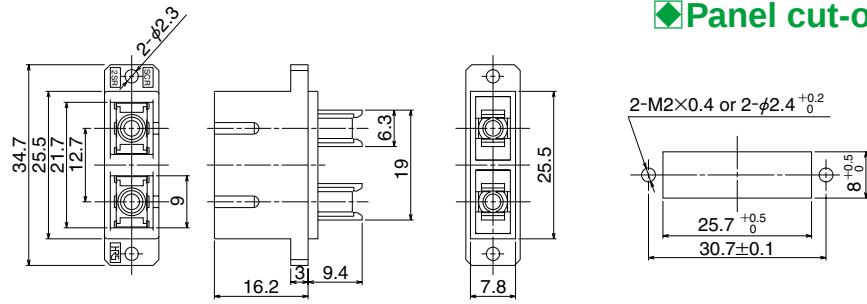
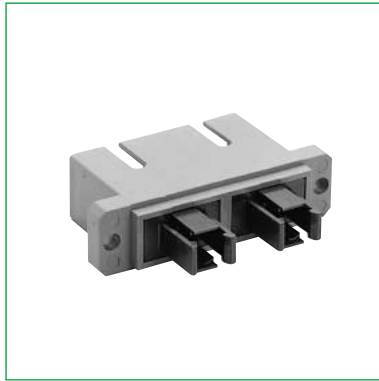


### ◆Panel cut-out



| Part Number        | CL No.        | Split sleeve | Color |
|--------------------|---------------|--------------|-------|
| HSCH-2SR-3(R)(51)  | 704-0300-7-51 | Copper alloy | Blue  |
| HSCH-2SR-D3(R)(01) | 704-0301-0-01 | Zirconia     |       |
| HSCH-2SR-3(R)(03)  | 704-0300-7-03 | None         |       |

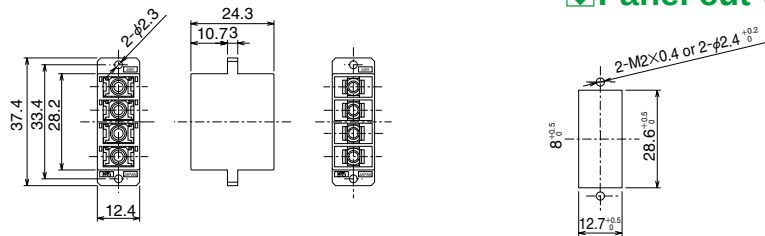
## ●Duplex F Type / Unshrouded



| Part Number        | CL No.        | Split sleeve | Color |
|--------------------|---------------|--------------|-------|
| HSCF-2SR-2(P)(51)  | 704-0295-9-51 | Copper alloy | Blue  |
| HSCF-2SR-D2(P)(02) | 704-0296-1-02 | Zirconia     |       |
| HSCF-2SR-2(P)(03)  | 704-0295-9-03 | None         |       |

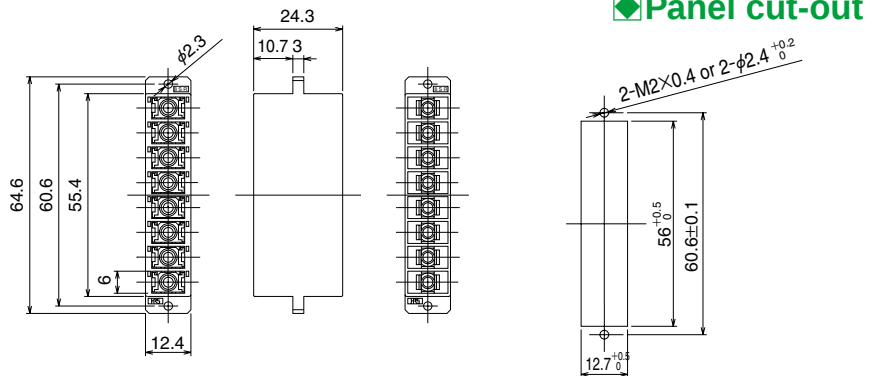
## ■Simplified Receptacles to SC2

### ●4-position / Shrouded



| Part Number     | CL No.        | Split sleeve | Color |
|-----------------|---------------|--------------|-------|
| HSC2-4SR-1(51)  | 704-0311-3-51 | Copper alloy | Blue  |
| HSC2-4SR-D1(01) | 704-0312-6-01 | Zirconia     |       |
| HSC2-4SR-1(03)  | 704-0311-3-03 | None         |       |

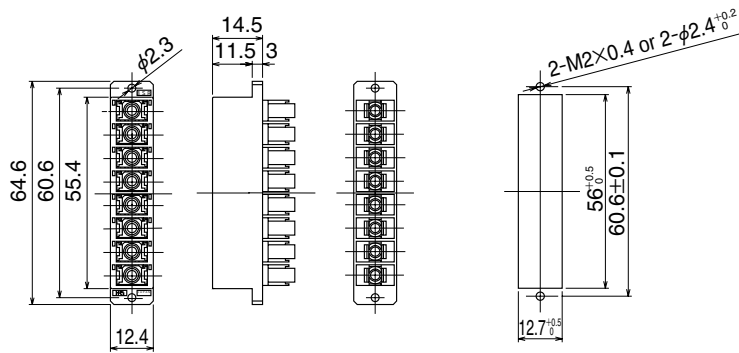
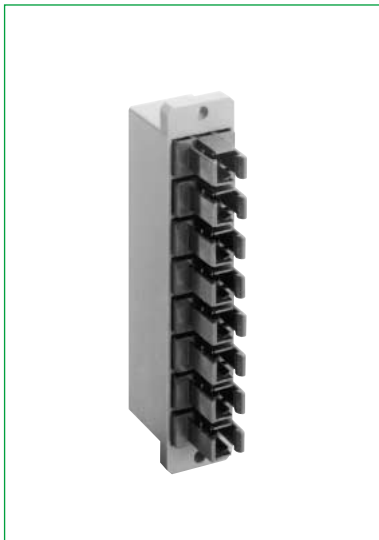
### ●8-Position / Shrouded



| Part Number     | CL No.        | Split sleeve | Color |
|-----------------|---------------|--------------|-------|
| HSC2-8SR-1(51)  | 704-0266-0-51 | Copper alloy | Blue  |
| HSC2-8SR-D1(01) | 704-0270-8-01 | Zirconia     |       |
| HSC2-8SR-1(03)  | 704-0266-0-03 | None         |       |

## ●8-Position / Unshrouded

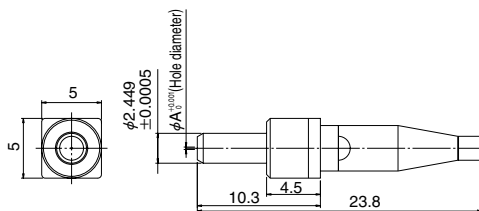
## ◆Panel cut-out



| Part Number     | CL No.        | Split sleeve | Color |
|-----------------|---------------|--------------|-------|
| HSC2-8SR-2(51)  | 704-0318-2-51 | Copper alloy | Blue  |
| HSC2-8SR-D2(01) | 704-0403-0-01 | Zirconia     |       |
| HSC2-8SR-2(03)  | 704-0318-2-03 | None         |       |

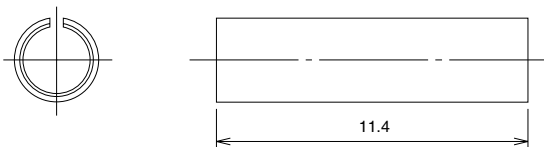
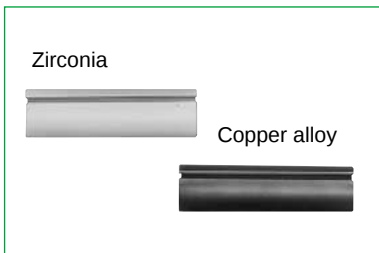
## ■Simplified plug

●for 0.9mm fiber



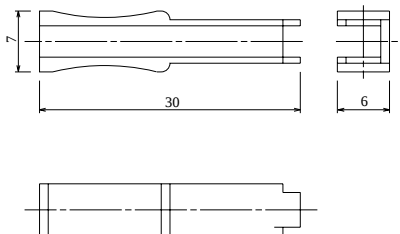
| Part Number       | CL No.        | A dimension | Boot color |
|-------------------|---------------|-------------|------------|
| HSC2-FK-A125(31)  | 704-0267-3-31 | 0.125       | Black      |
| HSC2-FK-A126(31)  | 704-0268-6-31 | 0.126       |            |
| HSC2-FK-A1255(31) | 704-0269-9-31 | 0.1255      |            |

## ■Split sleeve

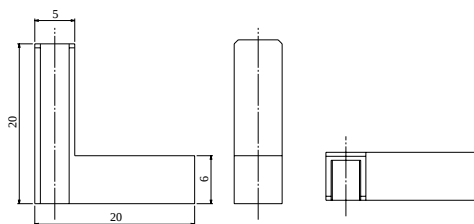


| Part Number         | CL No.        | Split sleeve |
|---------------------|---------------|--------------|
| HSC-SLIT-SLEEVE(51) | 704-0275-1-51 | Copper alloy |
| HSC-D               | 704-0264-5    | Zirconia     |

## ■Extraction tool for Simplified plug



| Part Number | CL No.     |
|-------------|------------|
| HSC-T10     | 704-0350-5 |



| Part Number | CL No.     |
|-------------|------------|
| HSC-T12     | 704-0448-8 |