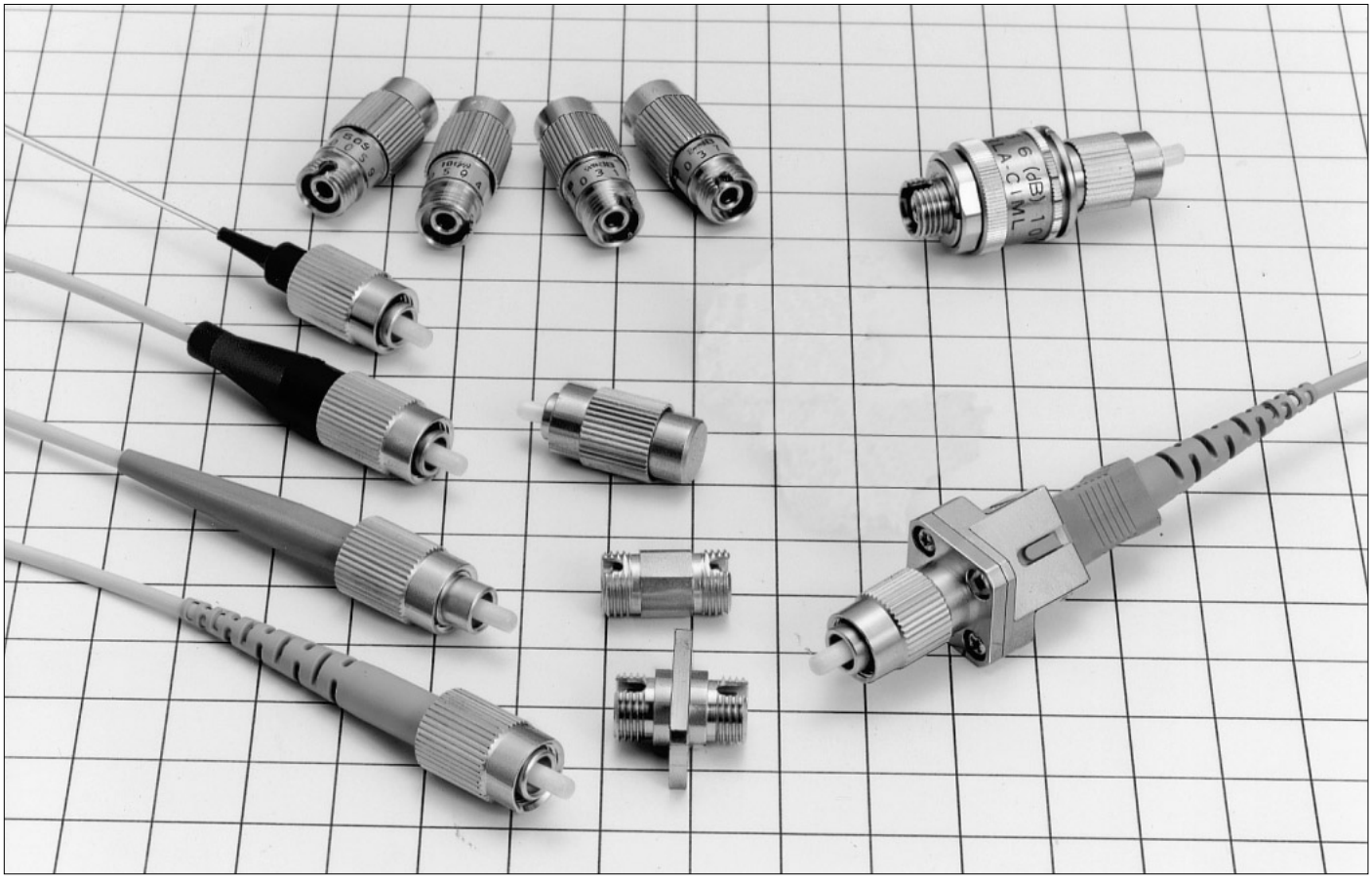
FC Type Fiber Optic Connectors

HRFC Series



■Features

1. JIS, IEC standards compliantand and fully intermateable with NTT's FC products.

JIC C 5970 (F01 type fiber optic connectors).
IEC 61754-13

2. Two types of plug frames

Conventional cutout key ring types and molded key ring types are available.

Important Notice

Plug key width : 2.1mm
Adapter key width : 2.2mm

■Applications

Public communications lines, CATV, Test equipment, etc.

■Product Specifications

Ratings	Operating temperature range	-25°C to +70°C	Storage temperature range	-25°C to +70°C

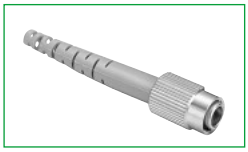
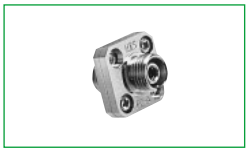
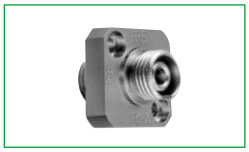
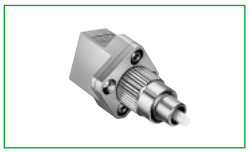
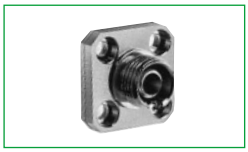
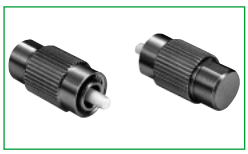
Item			Test Method (IEC 61300)	Specifications
Optical Characteristics	Insertion Loss	(SM)	Wavelength 1310nm (LD)	0.5dB max. (PC, AdPC, APC)
		(GI)	Wavelength 1310nm (LED)	0.3dB max. (PC)
	Return Loss	(SM)	Wavelength 1310nm (LD)	22dB min.(PC) 40dB min.(AdPC) 60dB min. (APC)
		(GI)		22dB min. (PC)
Mechanical Characteristics	Ferrule withdrawal		Extract Zirconia gauge 2.499 ±0.0005 mm dia from split sleeve.	Copper alloy split sleeve 2N to 5.9N Zirconia split sleeve 2N to 3.9N
	Cable retention (Straight pull)		98N tensile load for minute.	1) Insertion loss fluctuation after test: 0.2dB max. 2) No visible damage, dislocation of clamp or cable.
	Durability (cycles, mating/un-mating)		1000 times	1) Insertion loss fluctuation after test: 0.2dB max. 2) 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/s^2, 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% 20 cycles	
	Change of temperature		-40°C to +70°C 42 cycles (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
Plug housing	Brass, Stainless steel or Zinc alloy
Spring	Stainless steel
Ferrule	Zirconia
Adapter	Brass
Split sleeve	Copper alloy
Receptacle	Brass
Attenuator housing	Stainless steel

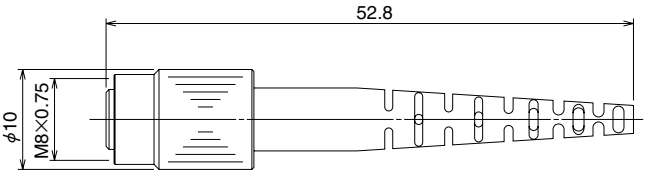
■FC products

HRFC-type Connector

- Plug Housing (Key width 2.1mm)
  - For 2 mm cable, Molded keying ring type — 
    - Cutout keying ring type — 
  - For 3 mm cable, Molded keying ring type — 
    - Cutout keying ring type — 
  - For 0.9 mm fiber, Molded keying ring type — 
    - Cutout keying ring type — 
- Ferrule
  - Single mode
  - Multi mode — 
- Adapter (Key width 2.2mm)
  - Standard type — 
    - Solid Body type — 
  - Round type — 
    - Flange type — 
- Conversion adapter — FC to SC — 
  - FC to SC — 
- Receptacle — 
- Dust cap — 
- Attenuator
  - **Fixed type**
    - Single mode
    - GI — 
  - **Variable type**
    - Single mode — 
- Terminator — 

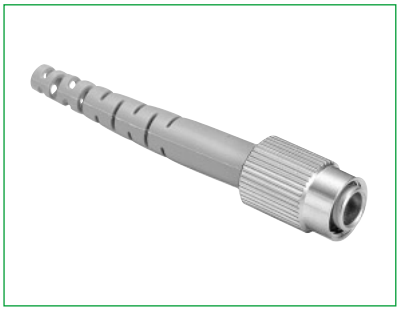
■Molded keying ring type (Key width 2.1mm)

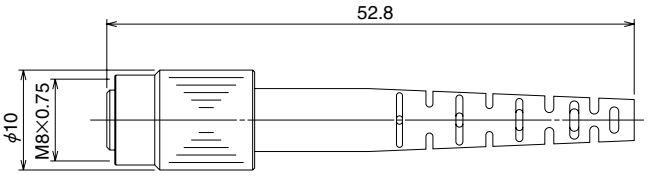
●For 2mm cable



Part Number	CL No.	Boot color	Polishing type
HRFC-P8-H2(21)	701-0075-3-21	Blue	PC
HRFC-P8-L2(21)	701-0077-9-21	Light purple	AdPC
HRFC-P8-G2(21)	701-2001-8-21	Green	APC

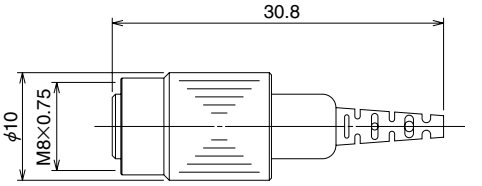
●For 3mm cable





Part Number	CL No.	Boot color	Polishing type
HRFC-P8-H3(21)	701-0074-0-21	Blue	PC
HRFC-P8-L3(21)	701-0078-1-21	Light purple	AdPC
HRFC-P8-G3(21)	701-2002-0-21	Green	APC

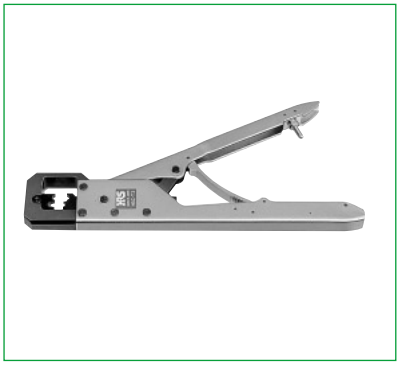
●For 0.9mm fiber



Part Number	CL No.	Boot color	Polishing type
HRFC-P15-H(21)	701-0114-3-21	Blue	PC
HRFC-P15-L(21)	701-0115-6-21	Light purple	AdPC
HRFC-P15-G(21)	701-2004-6-21	Green	APC

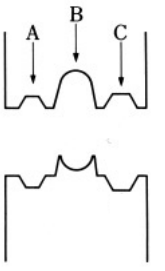
■Tool

●Crimp tool



Part Number	CL No.	Applicable connector
HSC-T3	704-0287-0	HRFC-P8-H2,L2,G2, HRFC-P8-H3,L3,G3,

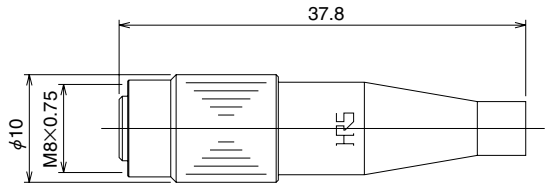
<Locations>



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

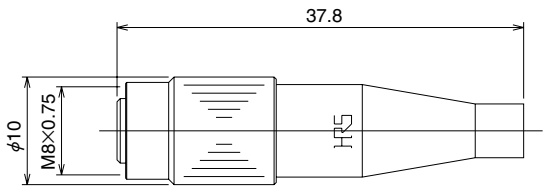
■Cutout keying ring type (Key width 2.1mm)

●For 2mm cable



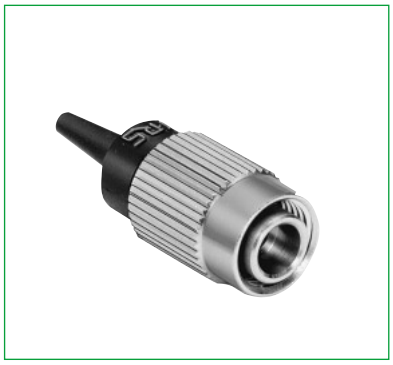
Part Number	CL No.
HRFC-P1-H(04)	701-0001-7-04

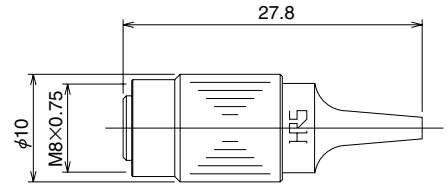
●For 3mm cable



Part Number	CLNo.
HRFC-P1-H	701-0001-7

●For 0.9mm fiber

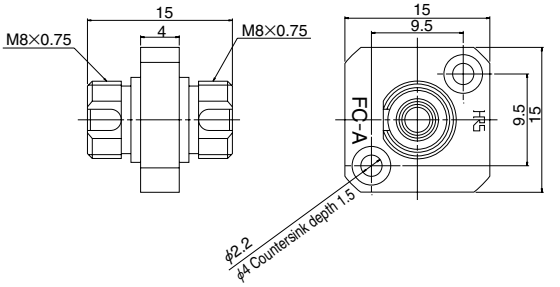




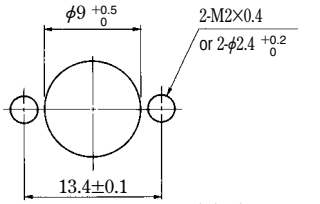
Part Number	CL No.
HRFC-P6-H	701-0041-1

■Adapters (Key width 2.2mm)

●Solid Body type



◆Panel Cutout

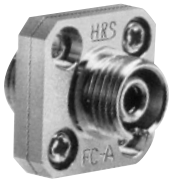


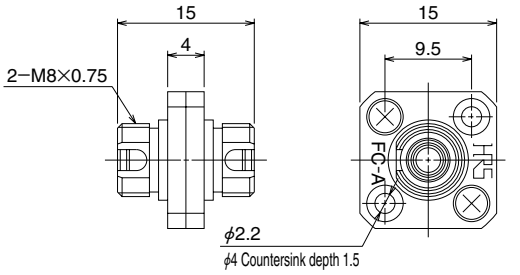
Board thiekness : 16mm

Part Number	CL No.	Split sleeve	Remarks
HRFC-PA11-G1	701-0071-2	Copper alloy	
HRFC-PA11-D1	701-0106-5	Zirconia	(Note)

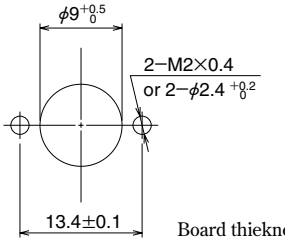
Note:Please take utmost care when inserting FC plug into a FC adapter. When applying excessive force to the FC plug or inserting in an odd angle, the zirconia sleeve within the adapter might be dameged.

●Standard Body type





◆Panel Cutout

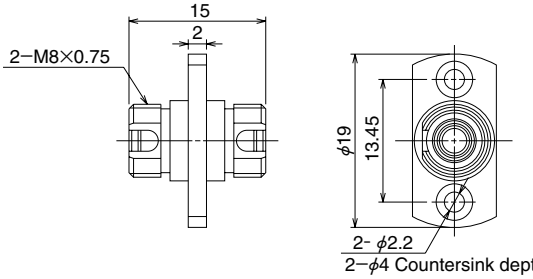


Board thiekness : 16mm

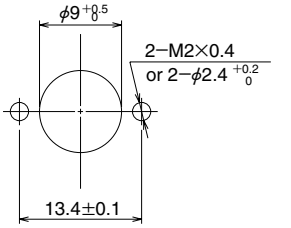
Part Number	CL No	Mark	Split sleeve	Remarks
HRFC-PA1-G1(02)	701-0014-9-02	FC-AP	Copper alloy	
HRFC-PA1-D1	701-0089-8	FC-A	Zirconia	(Note)

Note:Please take utmost care when inserting FC plug into a FC adapter. When applying excessive force to the FC plug or inserting in an odd angle, the zirconia sleeve within the adapter might be dameged.

●Flange type



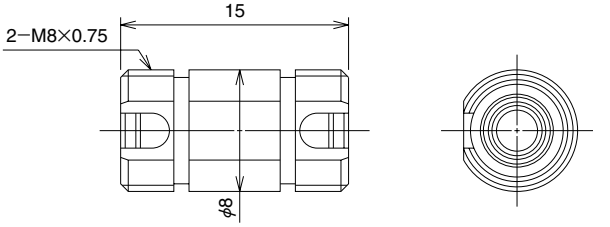
◆Panel Cutout



Part Number	CL No.	Split sleeve	Remarks
HRFC-PA4-G1	701-0068-8	Copper alloy	
HRFC-PA4-D1	701-0112-8	Zirconia	(Note)

Note:Please take utmost care when inserting FC plug into a FC adapter. When applying excessive force to the FC plug or inserting in an odd angle, the zirconia sleeve within the adapter might be dameged.

●Round type



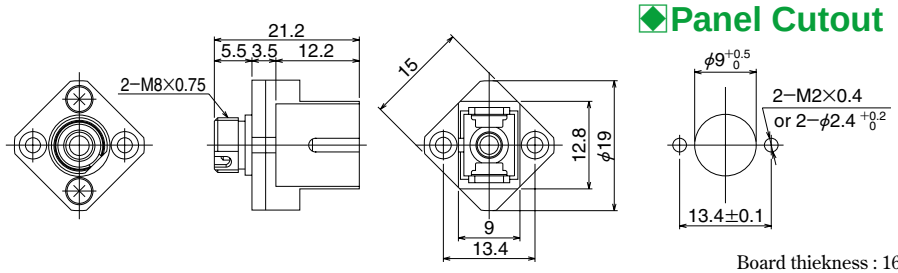
Part Number	CL No.	Split sleeve	Remarks
HRFC-A2-SF(01)	701-0039-0-01	Copper alloy	
HRFC-A2-SF-D1	—	Zirconia	(Note)

Note:Please take utmost care when inserting FC plug into a FC adapter. When applying excessive force to the FC plug or inserting in an odd angle, the zirconia sleeve within the adapter might be dameged.

■Conversion adapters

●FC / SC

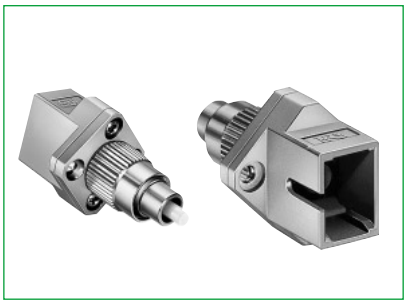
◆Panel Cutout

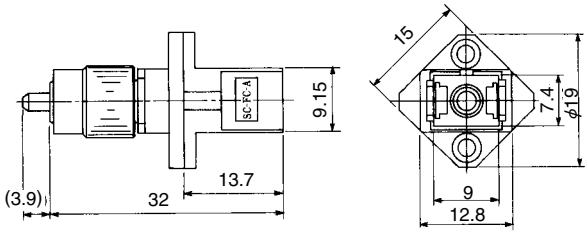


Board thiekness : 16mm

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

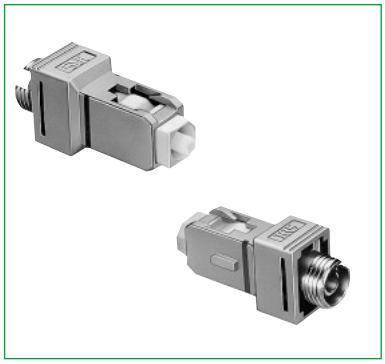
●FC / SC

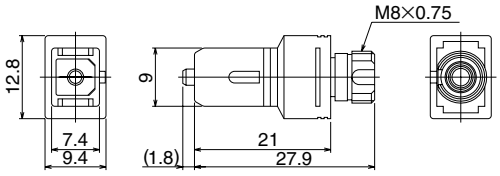




Part Number	CL No.	Split sleeve	Polishing type	Fiber type
HRFCP-HSCJ-1(51)	701-0065-0-51	Copper alloy	PC	GI-50/125
HRFCP-HSCJ-1AS(51)	701-0108-0-51		AdPC	
HRFCP-HSCJ-2(51)	701-0085-7-51		PC	SM-9.5/125
HRFCP-HSCJ-2AS(51)	701-0109-3-51		AdPC	

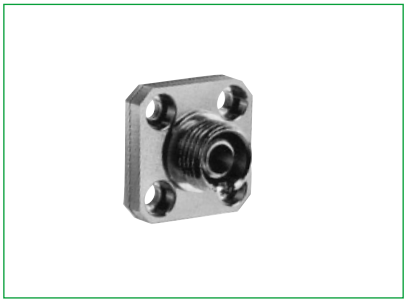
●FC / SC



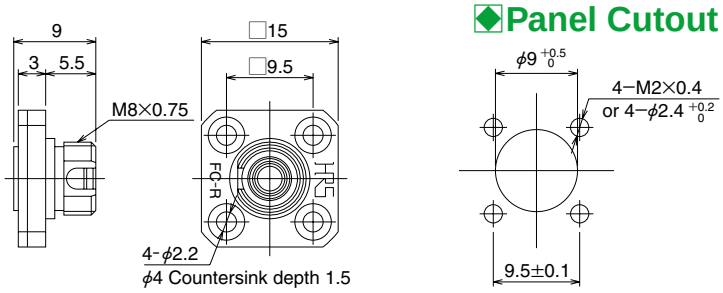


Part Number	CL No.	Split sleeve	Polishing type	Fiber type
HSCP-HRFCJ-1(51)	704-0203-0-51	Copper alloy	PC	GI-50/125
HSCP-HRFCJ-1AS(51)	704-0288-3-51		AdPC	
HSCP-HRFCJ-2(51)	704-0204-3-51		PC	SM-9.5/125
HSCP-HRFCJ-2AS(51)	704-0289-6-51		AdPC	

■Receptacle



◆Panel Cutout



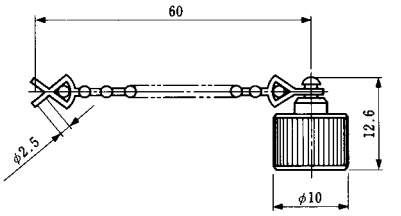
Part Number	HRS No.	Remarks
HRFC-R1	701-0016-4	MM
HRFC-R2	701-0023-0	SM

■Ferrule

Same as SC ferrules

Refer to page 33 for details.

■Dust Cap



Part Number	CL No.
HRFC-C1	701-0019-2