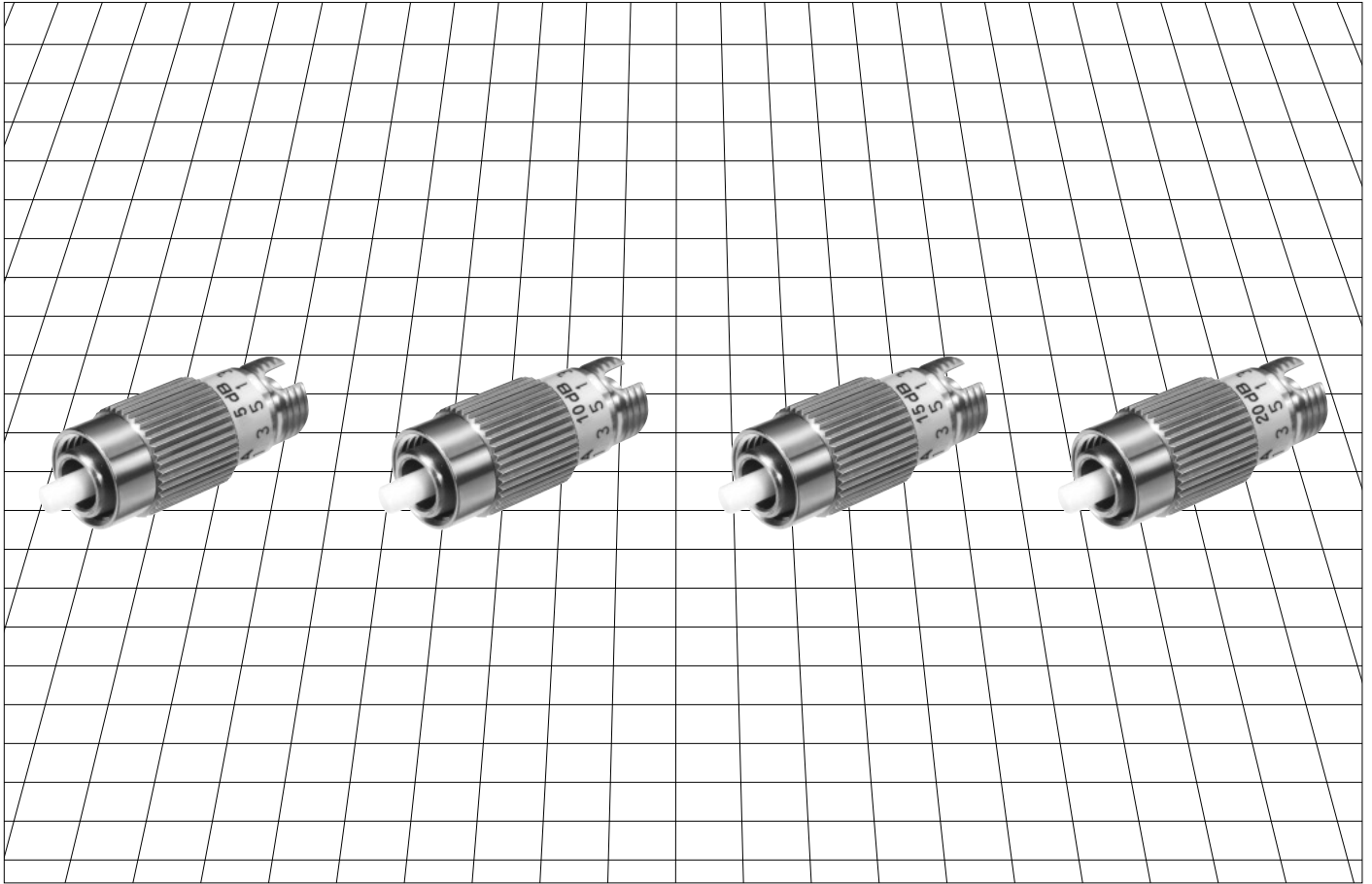


# FC Type Fixed Attenuators



## ■ Features

1. Excellent operational qualities
2. Maximum input power : 250mW
3. Please contact us if you have any requests. Hirose will offer excellent solutions to meet your requirements

### Important Notice

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

## ■ Applications

Power level adjustment of optical fiber communication networks.

## Product Specifications

### High Power FC-Type Fixed Attenuator (Max. input power : 250mW)

| Ratings | Operating temperature range | -25°C to +70°C | Storage temperature range | -25°C to +85°C |
|---------|-----------------------------|----------------|---------------------------|----------------|
|         | Max. Input Power            | 250mW          | Fiber type                | SM             |

| Item                          |                                             | Test Method                                                                                                                | Specifications                                                                                 |
|-------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Optical Characteristics       | Return Loss                                 | Measurement at a point within the respective wavelength range of 1310 ± 30 nm and 1550 ± 30(DSF).                          | ≥40dB                                                                                          |
|                               | Attenuation                                 |                                                                                                                            | See the attenuation table on the next page.                                                    |
| Mechanical Characteristics    | Adapter gauge holding force                 | Zirconia gauge of 2.499 ±0.0005 mm diameter.                                                                               | 2.0N to 3.9N                                                                                   |
|                               | Durability (cycles, mating/unmating)        | 500 times                                                                                                                  |                                                                                                |
|                               | Vibration                                   | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, acceleration of 98.1m/s <sup>2</sup> , 3 hours in each of the 3 axis. |                                                                                                |
|                               | Shock                                       | Acceleration of 981 m/s <sup>2</sup> , 6 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis.             |                                                                                                |
| Environmental Characteristics | Composite temperature -Humidity cyclic test | Temperature : -10°C to 65°C, humidity : 90% to 96%<br>Time : 240 hours(10cycles)                                           | 1) Meets Attenuation/Return Loss requirements.<br>2) No visible dislocation of clamp or cable. |
|                               | Change of temperature                       | Temperature: -25°C → +70°C<br>Time: 60 → 60 → 60 → 60 (Minutes)<br>Cycles :100 cycles                                      |                                                                                                |
|                               | Dry heat                                    | 500 hours at 85°C                                                                                                          |                                                                                                |
|                               | Cold                                        | 500 hours at -25°C                                                                                                         |                                                                                                |
|                               | Salt Mist                                   | 48 hours in a 5% concentration of salt mist                                                                                | No significant corrosion.                                                                      |

## Materials

| Part         | Material        |
|--------------|-----------------|
| Coupling     | Copper alloy    |
| Body         | Stainless steel |
| Ferrule      | Zirconia        |
| Split sleeve | Zirconia        |

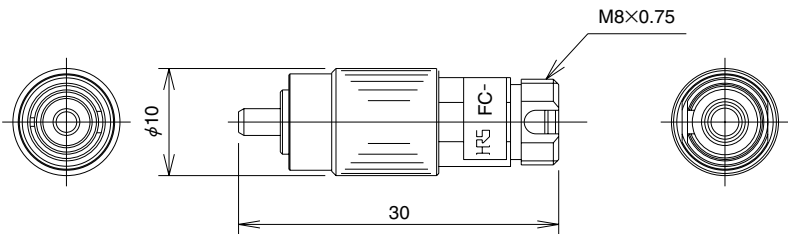
## Ordering Information

**HRFC - AT 11 K - A \*\***

①      ②      ③      ④      ⑤      ⑥

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| ① Series name : HRFC   | ④ Polishing code K: AdPC(≥40dB)                            |
| ② Attenuator           | ⑤ Optical fiber type A: Single Mode                        |
| ③ Specification series | ⑥ Attenuation : 01,02,03,04,05,06,<br>07,08,09,10,15,20,25 |

●High Power SC-Type Fixed Attenuator (Max. input power : 250mW)



| Part Number    | CL No.     | Attenuation | Attenuation Tolerance | Return Loss | Wavelength       | Split sleeve | Fiber type |
|----------------|------------|-------------|-----------------------|-------------|------------------|--------------|------------|
| HRFC-AT11K-A01 | 820-8001-7 | 1dB         | ±0.5dB                | ≥40dB       | 1310nm<br>1550nm | Zirconia     | SM         |
| HRFC-AT11K-A02 | 820-8002-0 | 2dB         |                       |             |                  |              |            |
| HRFC-AT11K-A03 | 820-8003-2 | 3dB         | ±0.6dB                |             |                  |              |            |
| HRFC-AT11K-A04 | 820-8004-5 | 4dB         |                       |             |                  |              |            |
| HRFC-AT11K-A05 | 820-8005-8 | 5dB         |                       |             |                  |              |            |
| HRFC-AT11K-A06 | 820-8006-0 | 6dB         |                       |             |                  |              |            |
| HRFC-AT11K-A07 | 820-8007-3 | 7dB         | ±0.7dB                |             |                  |              |            |
| HRFC-AT11K-A08 | 820-8008-6 | 8dB         | ±0.8dB                |             |                  |              |            |
| HRFC-AT11K-A09 | 820-8009-9 | 9dB         | ±0.9dB                |             |                  |              |            |
| HRFC-AT11K-A10 | 820-8010-8 | 10dB        | ±1.0dB                |             |                  |              |            |
| HRFC-AT11K-A15 | 820-8011-0 | 15dB        | ±1.5dB                |             |                  |              |            |
| HRFC-AT11K-A20 | 820-8012-3 | 20dB        |                       |             |                  |              |            |
| HRFC-AT11K-A25 | 820-8013-6 | 25dB        |                       |             |                  |              |            |

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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Hirose Electric:

|                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <a href="#">HRFC-AT11K-A01(40)</a> | <a href="#">HRFC-AT11K-A01(41)</a> | <a href="#">HRFC-AT11K-A01(42)</a> | <a href="#">HRFC-AT11K-A02(40)</a> | <a href="#">HRFC-AT11K-A02(41)</a> |
| <a href="#">HRFC-AT11K-A02(42)</a> | <a href="#">HRFC-AT11K-A03(40)</a> | <a href="#">HRFC-AT11K-A03(41)</a> | <a href="#">HRFC-AT11K-A03(42)</a> | <a href="#">HRFC-AT11K-A04(40)</a> |
| <a href="#">HRFC-AT11K-A04(41)</a> | <a href="#">HRFC-AT11K-A04(42)</a> | <a href="#">HRFC-AT11K-A05(40)</a> | <a href="#">HRFC-AT11K-A05(41)</a> | <a href="#">HRFC-AT11K-A05(42)</a> |
| <a href="#">HRFC-AT11K-A06(40)</a> | <a href="#">HRFC-AT11K-A06(41)</a> | <a href="#">HRFC-AT11K-A06(42)</a> | <a href="#">HRFC-AT11K-A07(40)</a> | <a href="#">HRFC-AT11K-A07(41)</a> |
| <a href="#">HRFC-AT11K-A07(42)</a> | <a href="#">HRFC-AT11K-A08(40)</a> | <a href="#">HRFC-AT11K-A08(41)</a> | <a href="#">HRFC-AT11K-A08(42)</a> | <a href="#">HRFC-AT11K-A09(40)</a> |
| <a href="#">HRFC-AT11K-A09(41)</a> | <a href="#">HRFC-AT11K-A09(42)</a> | <a href="#">HRFC-AT11K-A10(40)</a> | <a href="#">HRFC-AT11K-A10(41)</a> | <a href="#">HRFC-AT11K-A10(42)</a> |
| <a href="#">HRFC-AT11K-A15(40)</a> | <a href="#">HRFC-AT11K-A15(41)</a> | <a href="#">HRFC-AT11K-A20(40)</a> | <a href="#">HRFC-AT11K-A20(41)</a> | <a href="#">HRFC-AT11K-A25(40)</a> |
| <a href="#">HRFC-AT11K-A25(41)</a> |                                    |                                    |                                    |                                    |