

FC Interface Coupler



AI Overview

An FC interface in fiber optic couplers uses a threaded ferrule connector designed for secure, low-loss connections, especially in high-vibration or precision applications.

Overview of FC Connectors The FC (Ferrule Connector) is a fiber optic connector with a threaded body, originally called a "Field Assembly Connector," designed for high-vibration environments such as industrial, railway, or aviation systems. The fiber end is embedded in a 2.5 mm ferrule made of zirconia ceramic or stainless steel, and the tip is polished to a physical contact (PC) or angled physical contact (APC) finish to minimize insertion loss and back-reflection. The connector is spring-loaded to control mating force, and a key prevents fiber rotation during connection.

FC in Fiber Couplers Fiber couplers and collimators often use FC interfaces to ensure precise alignment and secure connections. Couplers may be equipped with FC/PC or FC/APC connectors, and they can accommodate both wide key (2.14 mm) and narrow key (2.0 mm) FC connectors. Following the right-hand orientation rule, narrow key connectors can be reliably mated with wide key receptacles without difficulty, which is important for polarization-maintaining (PM) fibers. The free play between the ferrule and receptacle, typically a few microns, allows insertion without force while maintaining optical alignment.

Polish Types and Performance

- PC (Physical Contact):** Slightly curved end face, reduces air gaps, standard for most single-mode fibers.
- UPC (Ultra Physical Contact):** Tighter polish, lower back-reflection (~ -50 dB), suitable for digital and analog transmission.
- APC (Angled Physical Contact):** 8° angled ferrule, minimizes back-reflection (~ -60 dB), ideal for RF, CATV, and high-frequency applications.

Applications FC interfaces are commonly used in: Datacom and telecommunications for single-mode fiber connections. Measurement equipment and lasers, including polarization-maintaining fibers. High-vibration environments, where the threaded coupling ensures secure connections. Fiber optic couplers and collima...

Article Content

FC Series

The RADIALL FC connector has something more than the competitors: it can be tuned to 1 of 6 positions to optimise the insertion loss (the tuning technique consists of rotating the optical ferrule to reduce

FC Connectors

FC connectors are threaded and typically have a 2.5mm ceramic or stainless steel ferrule for insertion into the fiber.

Fiber Optic Couplers & Adapters

Our fiber couplers are designed to address a multitude of applications. We offer fiber optic couplers for simplex and duplex cable; made of plastic or metal; in single mode or multimode; with connector

Fiber connector options of fiber cables

Standard fiber cables are equipped with an FC Type connector (FC APC or FC PC). They can also be provided with fiber connectors of type AVIM (compatible with

Understanding Fiber Connector Types ST SC LC FC

Understanding fiber connector types—SC/APC, SC/PC, LC/UPC, LC/APC, ST/PC, FC/PC, and FC/APC—is essential for selecting the right interface for your

FC Connectors

We offer a variety of FC fiber optic connectors to accommodate both single-mode fibers and large-core multimode optical fibers. The FC is a keyed connector with a 2.5mm ferrule and utilizes a threaded

Optical Fiber Connectors: FC, SC, ST, LC, and DIN Explained

Explore different types of optical fiber connectors like FC, SC, ST, LC, and DIN, their functions in connecting fiber cables and devices.

FC connector

The FC connector consists of several parts, including a ferrule, a connector body, and a coupling nut. The ferrule is the part of the connector that

FC Connector | Precision Fiber Optic with ACA

The FC connector from DIAMOND SA is a robust and precision-engineered optical interface designed for secure, low-loss connectivity in demanding applications. It

FC/PC Fiber Connectors: Single Mode and Polarization

Threaded FC/PC connectors are designed for high-vibration environments. The "PC" stands for "physical contact" because these connectors allow the surfaces

Details of 6 types of fiber optic cable connectors, and

SFP optical module with duplex LC interface In addition to the duplex LC interface, there are also simplex LC couplers and 4-core LC couplers to

Fiber connector options of fiber cables

Fiber connectors of type FC assembled by Schäfter+Kirchhoff - as standard - have an alignment index (key) of 2.14 mm width (wide key, type "N", standard). All

QIANRENON FC to SC Singlemode Fibre Interface

□FC-SC Single Mode Fibre Optic Interface□FC Male to SC Female Hybrid Fibre Simplex adapter coupler.for adapting SM 9/125um FC and SC simplex fibre,

FC Connectors and Adapters

944 Series fiber optic FC connectors effectively terminate optical variety of network applications. The connectors are secured using a coupling nut, providing a significant increase in retention force.

FC Connector Adapter (FC-FC)

FC Adapters can be used with single and multi-mode fibers. SMA Adapters are for use with multi-mode fibers only. Fiber Connector Adapters are receptacle-type

FC Connector Standards

The FC/PC (Physical Contact) and FC/APC (Angled Physical Contact) fiber optic connectors are standardized under TIA EIA/TIA-604-4 and IEC 61754

Thorlabs · Fiber Optic Mating Sleeves and Bulkhead

Our mating sleeves connect any fiber cable terminated with industry-standard FC/PC, FC/APC, SMA, LC/PC, LC/APC, ST/PC, E-2000 ®* /PC, and SC/PC

FC Connectors and Adapters | OEM Optical Communication Solutions

Our FC-PC connector features a NOD spacer element for greater reliability and ease of assembly. We also provide an FC fiber coupling adapter family to support FC-PC interconnection. Corning's FC

FC Connector | Precision Fiber Optic with ACA

The FC connector delivers stable, low-loss fiber connections using threaded coupling and Diamond's Active Core Alignment - ideal for telecom, industrial, and

What are the interface and structure of the fiber optic

What is the difference between a fiber optic adapter and a fiber coupler? The design of the fiber optic adapter is very compact, and it is a bridge between two cables

FC Adapter | Precision Threaded Fiber Interface

The FC adapter by DIAMOND SA offers secure, vibration-resistant fiber coupling with a ceramic alignment sleeve. Supports SM, MM, PM, and PZ fibers and

How to Tell the Difference Between FC and ST Connectors

In the field of fiber optics, especially within FTTH (Fiber to the Home) applications, distinguishing between different types of connectors is crucial for

FC Connector Explained

The FC Connector offers a durable, threaded design for secure fiber optic connections. It is cost-effective and supports high-speed data transmission.

Optical fiber connector

Optical fiber connectors are used to join optical fibers where a connect/disconnect capability is required. Due to the polishing and tuning procedures that may be

FC Adapter | Precision Threaded Fiber Interface

The FC adapter enables precise and secure connections between FC connectors - ideal for high-performance fiber networks in telecom, industrial, and test

Contact Us

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