

# Fibre Optic Cabling

## FC Connectors & Adaptors

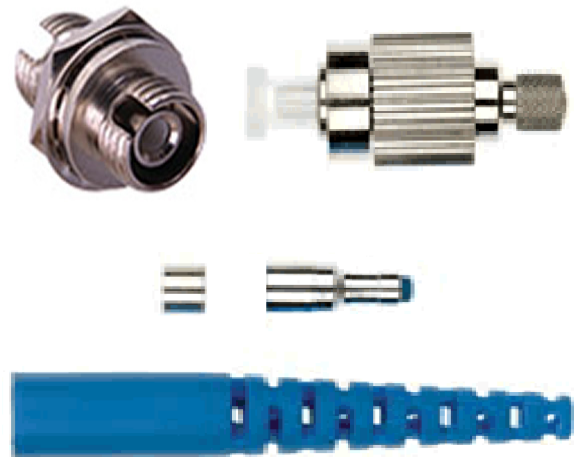
The FC Connector is used extensively in the telecommunications market, where long singlemode optical fibre cables can run upwards of 50 km. In these extreme situations the connector needs to have extremely low loss and accurate geometry.

The FC Optical Fibre Connector comprises of a nickel plated brass body and a ceramic ferrule/spring/crimp barrel assembly plus a crimp over sleeve and rubber boot. These connectors are suitable for 900  $\mu\text{m}$  and 2 and 3 mm cables. The connector is precision made and manufactured to demanding specifications. The combination of a ceramic ferrule and a precision nickel plated brass housing provides consistent long-term mechanical and optical performance.

Connectors are available in both multimode and singlemode options. One piece design features pre-radiused ceramic ferrules. Suitable for use with two part heat curing epoxies and cold cure anaerobic adhesives. Generally there are two types of alignment sleeve within an adaptor; phosphor bronze for multimode or zirconia (ceramic) for singlemode. The FC connector and adaptor set are mainly used for singlemode applications where precision is required. With its simple to use locking thread mechanism preventing accidental disconnection, this provides a very secure connection.

### Features & Benefits

- Low insertion loss and back reflection loss
- High precision alignment
- NTT-FC Compatibility
- Choice of housing shape and sleeve material
- Nickel plated brass body
- Telcordia, ANSI, TIA/EIA, NTT and JIS compliance



Ordering Information	
Product Description	Part Number
FC/APC SX Plug SM 900 $\mu\text{m}$ Green Boot	FFFC6
FC SX Plug SM 1.8 mm Red & Blue Boots	FFFC2
FC/PC SX Plug SM 3 mm Blue Boot	FFFC3BL
FC/APC SX Plug SM 3 mm Green Boot	FFFC5
FC SX SM Adaptor - Red Caps	FFFC1

Product Specifications	
FC Connector	
Versions Available	2 mm /3 mm Patch, 900 $\mu\text{m}$
Termination Procedures	Epoxy-crimp-polish
Standard packaging	00 pcs bulk packed
Boot Colours	Blue, black
Singlemode Insertion Loss	Max. 0.3 dB, typical 0.2 dB
Return Loss	UPC > 50 dB, typical 55 dB APC > 60 dB, typical 65 dB
Multimode Insertion Loss	Max. 0.3 dB, typical 0.12 dB (IEC 874-1 method)
Mechanical Capillary Diameter	SM 126 $\pm$ 0.5 $\mu\text{m}$ MM 127 $\pm$ 0.5 $\mu\text{m}$ ferrule diameter 2.5 mm $\pm$ .001 Pre-radiused end finish for PC ferrule to ferrule. R10 to 25 mm

Product Specifications	
Vibration (Mated Pair)	10-55 Hz, 1.5 mm P to P =0.3 dB change (IEC 61300-2-1)
Mating Durability	1000 mating cycles clean every 25 < 0.2 dB change (IEC 61300-2-2)
High Temperature	75°C for 96 hours =0.2 dB change (IEC 61300-2-18)
Damp Heat	60°C at 95% RH, 96 hours =0.2 dB change (IEC 61300-2-19)
Temperature Cycling	-40 to +75°C, 40 cycles =0.2 dB change (IEC 61300-2-48)
Operating Temperature	-40°C to +85°C
FC Adaptor	
Insertion Loss	<0.20 dB
Durability	<0.20 dB typical change 1000 matings
Operating Temperature	-40 to + 85°C