FP-00C-GS0 FP-00C-HS0 FP-00C-TS0 Crimpless Connector for Plastic Optical Fiber

Data Sheet

DESCRIPTION

The Firecomms crimpless connectors are for use with standard 1 mm core with 2.2 mm plastic optical fiber jacketing.

This series of connector was designed with ease of use in mind. The simple latching function securely fixes POF cable to the plug without the need for a crimp tool. This flexibility allows for a reduction in labor and associated cost.

This series of connectors are compatible with RedLink® or Versatile Link transmitters and receivers.

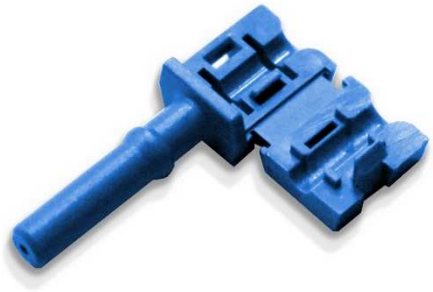

Figure 1. FP-00C-GS0

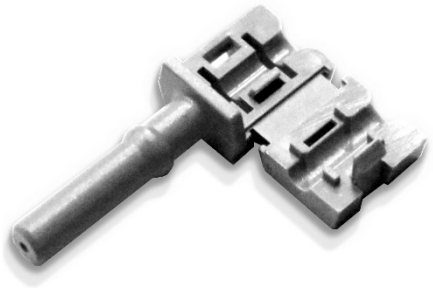

Figure 2. FP-00C-HS0

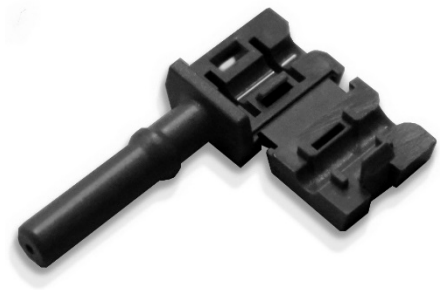

Figure 3. FP-00C-TS0

APPLICATIONS

- Control links within high voltage electrical control equipment
- Data communication where extreme immunity to EMI is required
- Links between equipment that requires electrical isolation to be maintained
- Rugged links in hostile environments
- Power electronics

AVAILABLE OPTIONS

Table 1
ORDERING INFORMATION / PART NUMBERS

RedLink Simplex Friction Plug, Crimpless, Blue	FP-00C-GS0
RedLink Simplex Friction Plug, Crimpless, Grey	FP-00C-HS0
RedLink Simplex Friction Plug, Crimpless, Black	FP-00C-TS0

FEATURES

- Cost-effective, rugged optical links
- Easy cable termination with no crimp tool
- Compatible with Versatile Link connectors and fiber optic transmitter and receivers
- Simplex / duplex termination
- Compatible with 2.2 mm POF
- Industrial temperature range

SPECIFICATIONS

Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Storage Temperature	T_{stg}	-40		+85	°C
Operating Temperature	T_{op}	-40		+85	°C
Installation Temperature	T_I	0		+70	°C
Retention Force, Connector to Transceiver (+25°C)	F_I	8			N
Retention Force, Connector to Transceiver (-40°C + 85°C)	F_I	6			N
Insertion Force, Connector to Transceiver (+25°C)	F_I			30	N
Press Force Termination (simplex)	F_P			50	N
Tensile Stress Connector/Cable	F_T	30			N
UL Flame Resistant Rating		V2			
Material	Makrolon 2405				

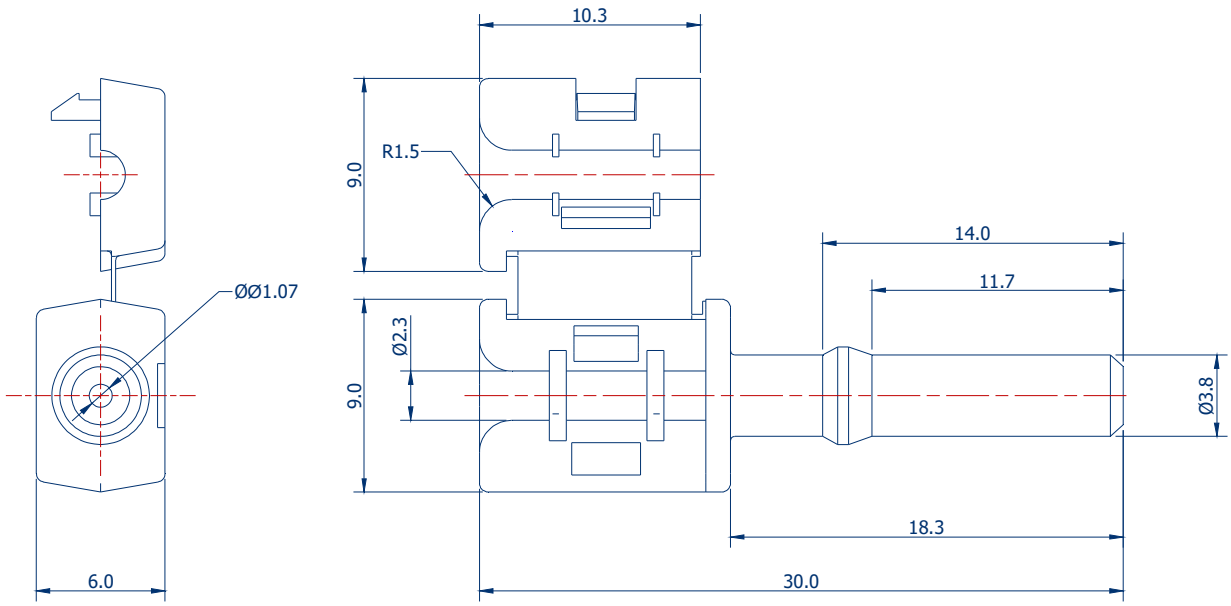

Figure 4. Mechanical Dimensions

CONNECTOR AND CABLE ASSEMBLY AND POLISHING

Cable Stripping

Strip off approximately 3 mm of the outer jacket from the 2.2 mm POF cable.

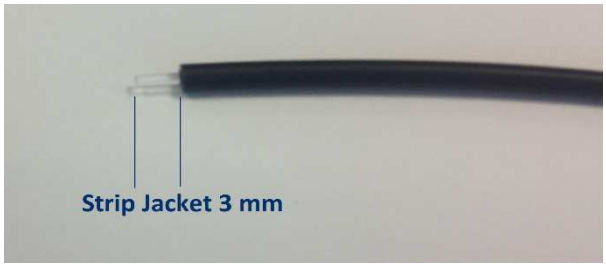

Figure 5. Jacket Strip Length

In order to strip the jacket from the POF, insert the cable into the hole at the bottom of the Firecomms POF cutter (PC-220F-410). After insertion, twist the cutter 360 degrees to cut the jacket and pull out the cable to reveal the exposed POF core.

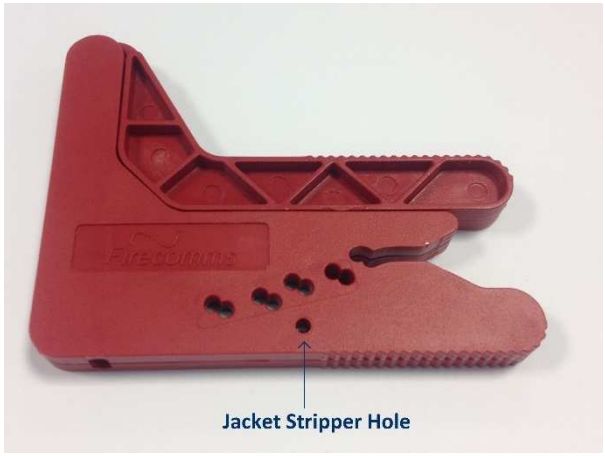

Figure 6. Jacket Stripper on POF cutter

POF Insertion

Insert the stripped POF cable into the backside of the connector until the mechanical stop is reached. Approximately 1.5 mm of the POF internal core should protrude from the top of the connector.

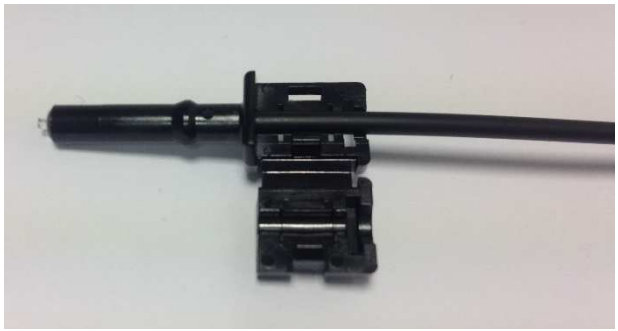

Figure 7. Cable and Connector Positioning

Securing Connector

Simplex

Hold the cable and connector tightly and fold over the top half to latch securely into the bottom half.

Figure 8. Secure Simplex Connector

Duplex

Two simplex connectors can be used to form a duplex connection. Align the top half of each connector over the lower half of the other. Press both connectors together in the centre to engage the centre latches. Then press the side latches together to fully secure the connectors together.

Figure 9. Secure Duplex Connector

Polishing

Insert the connector fully into a polishing disc. Press the disc on polishing paper (600 grit) and polish the fiber until it is flush with the connector. Rotate in a figure of 8 format which will erode the core material of the cable. Use a hard and plain support plate (e.g. glass plate).

After polishing, wipe the connector with a clean tissue removing foreign particles. Using 3µm grit, polish again for a smooth surface and wipe clean again. Best attenuation values are achieved applying wet polishing.

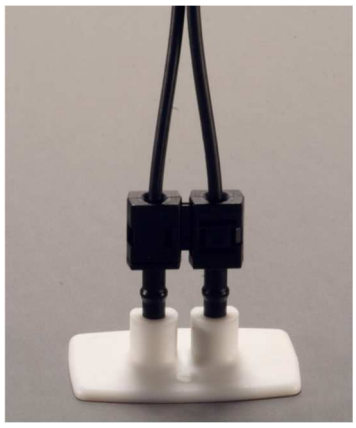

Figure 11. Polishing Disc