Connectors

Chapter 5

Connectors

Contents

Copper 700A8

700A8 Plug

The **700A8 Modular Wire Plug** is a modular 4-pair plug that attaches to 0.511 mm diameter (24 AWG) solid wire to create a modular cord. This field mountable plug can be used to make an RJ45 interface plug with customised pinout.

The **700A8** can be used for voice and data applications running under 10 Mb/s.

UL Listed

Figure 115
700A8 Plug

Physical Specifications

Width: 2.5cm	
Length: 4.0cm	
Depth: 1.3cm	
Plastic: High-impact, flame retardant, UL-rated 94V-0 thermoplastic	

Product	Comcode	Packaging	Colour
700A8	103941472	1/Pkg	Beige

Fibre   LC Connectors

LC 900µm Buffered Fibre Connector

The **LC** is a revolutionary fibre optic connector. This small form factor connector is only half the size of ST or SC connectors yet it has superior optical performance and reduced installation time. It uses the familiar insertion release mechanism similar to an RJ45 plug and has a Pull-Proof design. Fast becoming the connector of choice, the physical and optical performance of the **LC** allows engineers to design optical fibre infrastructures suited to the low loss needs of the High Speed Data Networks. The **LC** offers a complete connection solution with a product range designed for Field Termination onto 900µm Buffered Fibre, 1.6mm Fibre Cordage, Multimode and Singlemode Fibre.

The high-performance **LC Connector** is the recommended connector for all SYSTIMAX® SCS installations. The superior insertion loss performance offered by the **LC** makes it the ideal connector for gigabit applications including all proposed 10 Gigabit Ethernet specifications for multimode and singlemode fibre.

900µm Fibre Connector

This connector is designed to allow for the simple and speedy termination of the connector onto 900µm Fibre. So whether terminating a cable into a patch panel, connection box, or outlet, the **LC** offers the best in class solution.

Figure 116
P1001A LC Connector, Duplex MM LC Patch Cord and C1001B-2 Adapter

Physical Specifications

Length: 3.2cm	
Tip Material: Ceramic	
Insertion Loss: Mean = 0.1dB	
Standard Deviation: 0.1dB	
Return Loss: -20dB	
Insertion Loss Change: <0.3dB Mating durability for 500 reconnect	
Cable Retention: <0.3dB Temperature stability -40 to 75ºC	

Optical Specifications

Multimode: Average Loss: 0.1 dB Standard deviation 0.1dB	
Singlemode: Average Loss: 0.2 dB Standard deviation 0.1dB	

Product	Comcode	O. D.	Mode	Packaging
P1001A-Z-125	700007008	900 µm	MM	1/Pkg
P1101A-Z-125	700011372	900 µm	SM	1/Pkg
P1001A-Z-125/100	700006299	900 µm	MM	100/Pkg

Fibre LC Connectors

LC 1.6 mm
Jumper Connector

The **LC Fibre Optic Simplex and Duplex Jumper Connectors** can be used to terminate simplex and duplex 1.6mm jumper cords. It is intended for use in Central Offices, Local Area Networks (LANs), and in patch cords for Premises Distribution Systems. The connector can also be used in computer backplane connections, computer peripheral interconnections, device terminations, and other applications where quality, small-size, high-density, low-loss, and a low-cost infrastructure are required.

Figure 117
LC 1.6mm Jumper Connector

Product	Comcode	O. D.	Fibre Type	Fibre Count	Packaging
P1000A-Z-125	700004260	1.6mm	MM	1	1/Pkg
P1002A-Z-125	700006992	1.6mm	MM	2	1/Pkg
P1002A-Z-125/100	700006307	1.6mm	MM	2	100/Pkg

Fibre   LC Connectors

LC Family

QwikCrimp™ LC Connector

The **LC QwikCrimp Connector** design is installed by "crimping" onto a stripped and cleaved multimode fibre. Field installation requires no epoxies or polishing. It is intended for "behind the wall" applications in protected building environments. It is designed for use on OptiSPEED™ and LazrSPEED™ These cables are designed to be mated to an LC (spring loaded) Patch Cord connector.

Applications

- Fibre optic communication network interfaces

- Building LAN and campus WAN applications

- Behind the Wall (BTW) installations

- 900μm O.D. Buffered OptiSPEED MM Fibre

- 62.5/125μm and LazrSPEED

Figure 118
QwikCrimp

Product	Comcode	Packaging
P1001C-Z-125	108635079	1/Pkg
P1001D-Z-125	108635087	1/Pkg

Fibre   LazrSPEED

LazrSPEED
Duplex Couplings

LazrSPEED Duplex Couplings are colour coded for easy fibre identification, and are available in LC (recommended) and SC versions.

Product	Comcode	Fibre Type	Connector Type	Packaging
C1001B-2-LS	108622887	MM	LC Coupling	1/Pkg
C6061A-4-LS	108622895	MM	SC Coupling	1/Pkg

Fibre   LC Couplings

Duplex Couplings

The **LC Duplex Coupling** accommodates 2 LC connectors while only occupying the space of a simplex SC coupling. It features a self-adjusting mechanism designed to accommodate panel thickness variations from 1.55 to 1.75 mm (0.06 to 0.067 inches). It is available in both singlemode and multimode.

Figure 119
P1001A LC Connector, Duplex MM LC Patch Cord and C1001B-2 Adapter

Product	Comcode	Fibre Type	Packaging	Colour
C1001B-2	700002355	MM	1/Pkg	Ivory
C1101A-2	700002215	SM	1/Pkg	Blue

Fibre SC Connectors

The **SC Multimode Fibre Optic Connector** is a field mountable, tuneable connector which utilises a domed zirconia ferrule for fibre alignment, and push-pull hardware that provides easier connections as well as high optical stability. The connector can be used in high-density applications while not being affected by axial cable loads. The cable is crimped to the outer hardware and therefore prevents momentary disconnect when axial load is placed on the cable. Available in multimode and singlemode versions.

The **P6000A-Z-125 & P6200A-Z-126** can mount on 3.0 mm cordage only while the **P6001A-Z-125 & P6201A-Z-126** mounts on the 0.9 mm buffered fibre.

SC Family

SC Connectors

Figure 120
P6200A SC Connector

Physical Specifications

Length: 5.0cm	
Loss Repeat (200 reconnects): < 0.3 dB	
Min. Axial Load: Cable: 13.6 kg; Buffer: 0.9 kg	
Temperature Stability (-40 to 75 (C): < 0.3 dB increase	

Optical Specifications

Average Loss MM: 0.3 dB	
Average Loss SM: 0.2 dB (Tuned)	
Average Loss SM: 0.3 dB (Untuned)	

Product	Comcode	O. D.	Fibre Type	Packaging
P6200A-Z-126	700007040	3.0 mm	MM	1/Pkg
P6201A-Z-126	700007024	900 μm	MM	1/Pkg
P6000A-Z-125	700006984	3.0 mm	SM	1/Pkg
P6001A-Z-125	700006976	900 μm	SM	1/Pkg

Fibre   SC Connector Clip

SC Connector Clip

The **2A1 Duplex Connector Clip** accepts two simplex **SC** connectors to form a single duplex connector. The **2A1** is made of black plastic.

Figure 121
2A1 Connector Holder

Product	Comcode	Packaging
2A1	700002165	10/Pkg

Fibre   SC Couplings

The **C6000A-4 Coupling** accommodates the multimode or singlemode simplex SC connector plugs and ensures the proper alignment of the fibres. This coupling is easily mounted by snapping them into the coupling panel. The coupling has a ceramic sleeve
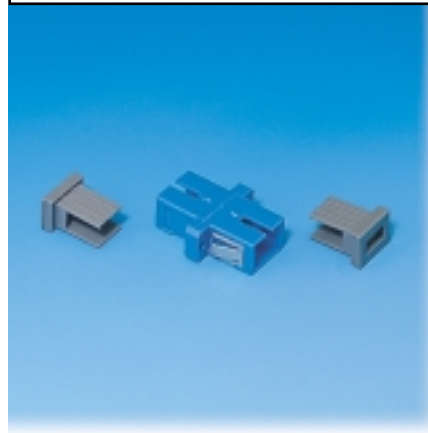
Figure 122
C6000A-4 SC Coupling

Product	Comcode	Fibre Type	Packaging
C6000A-4	700004807	SM/MM	1/Pkg

Fibre   SC Couplings

The **SC Coupling** accommodates the multimode or singlemode duplex **SC** connectors and ensures the proper alignment of the fibres. This coupling is easily mounted by snapping them into the coupling panel. The **C6061A-4** sleeve is metallic and the **C6060A-4** sleeve is ceramic.
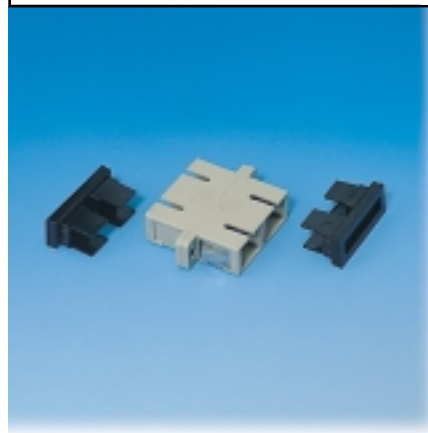
Figure 123
C6061A-4 SC Duplex Coupling

Product	Comcode	Fibre Type	Packaging	Colour
C6061A-4	700004880	MM	1/Pkg	Beige
C6060A-4	700004815	SM/MM	1/Pkg	Blue

Fibre   ST Connectors

The **STII Connector Plug** is a keyed ceramic fibre optic connector plug that uses a bayonet-type "ramped-latching" mounting arrangement. The connector features a unique flexible split ferrule sleeve for accurate alignment of connector plugs. The ferrule is made of aluminium which provides for easy, accurate field polishing. **STII Connectors** will accept 125 micron outside diameter multimode fibre.

The design of the **STII** provides high optical performance and easy mounting in a rugged, compact connector plug.

The **STII** can mount on either 0.9 mm buffered fibre, 2.4 mm 2000 Series, or 3.0 mm 9000 Series cordage (or equivalent). The **STII** is available in both singlemode and multimode.

Figure 124
P2020C ST Connector

Physical Specifications

Length: 5.64cm	
Temperature Stability (-40 to 85ºC): < 0.1 dB increase	
Loss Repeat (500 Reconnectors): <0.2dB	
Min. Axial Load - Cable: 15.9kg	

Optical Specifications

Multimode Average Loss: 0.3 dB	
Singlemode Average Loss: 0.2 dB	

Product	Comcode	O.D.	Fibre Type	Tip	Packaging
P2020C-C-125	700004583	900 µm/2.4mm/3.0mm	MM	Ceramic/Alumina	1/Pkg
P2020C-C-125/100	700004336	900 µm/2.4mm/3.0mm	MM	Ceramic/Alumina	100/Pkg
P2020C-Z-125	700004328	900 µm/2.4mm/3.0mm	MM	Ceramic/Zirconia	1/Pkg
P2020C-Z-125/100	700004310	900 µm/2.4mm/3.0mm	MM	Ceramic/Zirconia	100/Pkg
P3020A-Z-125	700011067	900 µm/2.4mm/3.0mm	SM	Ceramic/Zirconia	1/Pkg

Fibre | ST Connectors

STII+ Connector

Figure 125
P2070C STII+ Connector

The **STII+ Connector Plug** is a keyed fibre optic connector plug that uses a bayonet-type "ramped-latching" mounting arrangement. The **STII+** has a patented enhanced hardware design which provides high performance and easy field mounting. It features a domed zirconia ferrule and utilises a PC polish to ensure fibre-to-fibre physical contact for low loss and low reflections. Its enhanced hardware and pull proof design provides high mechanical stability.

The **STII+** can mount on either 0.9 mm buffered fibre or on 3.0 mm 9000 Series cordage (or equivalent). When mounted on cordage, the cable is crimped to the outer hardware, preventing momentary disconnect when axial load is applied. The **STII+** is available in both multimode and singlemode.

Physical Specifications

Length: 5.64cm	
Loss Repeat (500 reconnects): < 0.3 dB	
Min. Axial Load: Cable: 15.9 kg; **Buffer:** 0.9 kg	
Temperature Stability (-40 to 85ºC): < 0.3 dB increase	

Optical Specifications

Average Loss: 0.3 dB	

Product	Comcode	O.D.	Fibre Type	Packaging
P2070A-Z-125	700002389	900 µm/3.0 mm	MM	1/Pkg
P2070A-Z-125	700005556	900 µm/3.0 mm	MM	100/Pkg
P3070A-Z-125	700002231	900 µm/3.0 mm	SM	1/Pkg

Fibre   ST Couplings

The **C2000A** and **C3000A Couplings** accommodate the **ST**, **STII**, and **STII+ Connector** plugs and ensure the proper alignment of the fibres. The coupling is based on a longitudinally split sleeve; the thickness of the sleeve's wall varies, causing its inside diameter to remain circular even when a cylindrical ferrule forces it open. The connector coupling is designed for use with all **ST** connector panels in LIU's, LGX's, 660A1, 600B2 and fibre outlets.

The **C2000A Coupling** is packaged with the coupling itself, lock washer and hex nut for mounting onto the coupling panels.

Figure 126
*C2000A2
ST Coupling*

Product	Comcode	Fibre Type	Packaging
C2000A-2	700004864	MM	1/Pkg
C2000A-2/100	700004906	MM	100/Pkg
C3000A-2	700011133	SM	1/Pkg