Keyed LC Connectivity Solutions

AFL’s Keyed LC Connectivity Solution offers multi-user optical network security at the physical layer.

Optical fibre circuits with differing levels of security or access control can be implemented and managed by using this range of colour coded keyed LCD (LC duplex) interfaces and keyed patching cables.

This connectivity solution is also ideally suited to optical networks requiring highly visual circuit differentiation or identification.

LCD Keyed Connectors and Adapters are colour coded and keyed to allow same colour patching only. Different coloured adapters and connectors cannot mate to allow circuit access.

**Features**

- Access controlled optical circuits for network privacy and/or security
- Suitable for individual fibre cables or duplex circuits within cables, offering better cable utilisation and design options
- Full range of AFL cable, enclosure and patchlead options to suit any application
- Choice of 12 colours suitable for the identification of multiple circuits
- High performance, low loss connectivity for LC link/channel loss management
- Available in both multimode and single-mode networks

**Applications**

- Any optical network requiring access and security control.
- Any optical network requiring visually different connectivity to define application, ownership etc. e.g. education, hospitals, prisons, defence sites etc.

**Options**

- LC Keyed Pre-terminated Cable Assemblies
- LC Keyed Pigtails
- LC Keyed Patch Leads
- LC Keyed HD and SD MTP Cabling System
Keyed LC Connectivity Solutions

Connectivity Solutions
The Keyed LC Connectivity Solution allows manageable and easily identifiable network segregation by use of a range of physically unique keyed connector and adapter combinations. Each colour features a unique keying pattern that only allows matched colour mating.

Networks can effectively be limited to certain groups, access levels or customers in a co-location environment. This provides an increased level of security and stability by protecting against incorrect patching of circuits.

The Keyed LC Solution comprises a range of network equipment to enable deployment of a high performance low loss network. Hybrid solutions allow for integration of the Keyed LC Solution into an existing network or on the interface side only.
Keyed LC Connectivity Solutions

Pre-terminated Cable Assemblies

AFL manufactures a broad range of factory terminated and tested multi-fibre cable assemblies. These assemblies are available in various fibre types and counts, cable constructions and connector options. Pre-terminated fibre optic cable assemblies are suitable for horizontal or vertical deployment in a range of applications.

Pre-terminated cables offer the advantage of reduced time and cost associated with on-site cable breakout and connector terminations. They are ideally suited where narrow installation timeframes are applicable or on-site terminations are hazardous or pose OH&S issues.

Cable styles include: loose tube, round mini 12F UG, tight buffered riser rated, 2/3 mm 12F round mini, round mini bundled.

Features

- High quality, machine polished connectors for consistent low loss performance
- Geometry-compliant connector endfaces offer low loss repeatability and intermateability
- Standards-based testing practices provide repeatable and traceable results
- Video-based inspection ensures connector endfaces are free of defects and contamination
- Large stocked range of multi-fibre cable constructions and connectors for fast turnaround times
- Individual packaging and labelling provides protection, test data and traceability
- Various construction options including glanding, labelling and polarity systems
- Reduced equipment cost, training and skill base required for installation
- Faster and less disruptive installations

See ‘Pre-terminated Multi Fibre Cable Assemblies’ Data Sheet for more information.
Keyed LC Connectivity Solutions

Pigtails
Fibre optic pigtails are utilised in terminating fibre optic cables via fusion or mechanical splicing. High-quality pigtails combined with correct fusion splicing practices offer the best performance possible for fibre optic cable terminations.

AFL manufactures and distributes a broad range of factory terminated and tested fibre optic pigtails assemblies. These assemblies are available in various fibre types, fibre/cable constructions and connector options.

Factory based assembly and machine connector polishing ensures excellence in performance, intermateability and durability.

All AFL pigtails are video inspected and loss tested using standards based testing procedures.

Cable and fibre styles include: 0.9 mm tight buffered, 3 mm round mini 12F UG, tight buffered riser rated, 2/3 mm 12F round mini, round mini bundled.

Features
• High-quality, machine polished connectors for consistent low loss performance
• Interferometer geometry compliant connectors offer repeatable and low loss intermateability
• Factory standards-based testing practices provide repeatable and traceable results
• Video-based inspection ensures connector endfaces are free of defects and contamination
• Flexible and easy to strip fibre buffering
• Identifiable fibre buffer colours under all lighting conditions
• Short buffer style connector boots for ease of fibre management in high density applications
• Connector cleaning instructions included in each bag of 900 μm pigtails
• Individual packaging and labelling provides protection, performance data and traceability
• 12 fibre 3 mm round mini (RM) cable pigtails available for high-density splicing applications
• Range of cable constructions to suit every environment
• Large stockholding of cable and connectors for a fast turnaround of custom assemblies

Applications
• Permanent termination of optical fibre via fusion splicing
• Permanent termination of optical fibre via mechanical splicing
• Temporary termination of optical fibre cable for acceptance testing

See ‘Fibre Optic Pigtails’ Data Sheet for more information.
Keyed LC Connectivity Solutions

Patch Leads
Fibre optic cable assemblies (also called patchleads, patchcords or jumpers) provide a user friendly interfacing medium for connecting optical communication equipment or networks.

AFL manufactures and distributes a broad range of factory terminated and tested fibre optic cable assemblies. These assemblies are available in various fibre types, cable constructions and connector options.

Factory based assembly and machine connector polishing ensures optimum quality, performance, intermateability and durability. All AFL cable assemblies are video inspected and loss tested using traceable standards based testing procedures.

Cable and fibre styles include: 2 mm duplex, choice of cable colours.

Features and Benefits
- High-quality, machine polished connectors for consistent low loss performance
- Interferometer tested geometry compliant connectors offer low loss repeatability and intermateability
- Standards-based testing practices provide repeatable and traceable results
- Video-based inspection ensures connector endfaces are free of defects and contamination
- Large stockholding of cable and connectors for fast turnaround of custom assemblies
- Individual packaging and labelling provides protection, test data and traceability

Applications
- Termination enclosure to equipment patching
- Equipment to equipment patching
- Cross-connect patching (for high density patching see also AFL’s MTP Low Loss Cabling System)

See ‘Fibre Optic Cable Assemblies’ Data Sheet for more information.
Keyed LC Connectivity Solutions

SD and HD MTP Cabling System

AFL’s SD (Standard Density) range of MTP enclosures and cassettes offer an ideal balance of density and accessibility. Ideally suited for environments requiring increased space for labelling and patching access.

- 1RU 48F/24LCDK and 1.5RU 96F/48LCDK – 2RU 96F/48LCDK – 3RU 192F/96LCDK
- SD MTP cassettes are available in 12 and 24F OM3/OM4/OS2 configurations

AFL’s HD (High Density) range of MTP enclosures and cassettes offer 96F (48LCD) capacity in 1RU. The 4 cassette design is ideal for Fabric A/Fabric B type networks. Ideally suited for environments requiring a balance between density, labelling and patching access.

- 1RU 96F/48LCDK - 3RU 288F/144LCDK
- HD MTP cassettes are supplied as standard in 24F OM3/OM4/SM configurations.

See ‘SD and HD MTP Range’ Data Sheets for more information.

Accessories

AFL offers a wide range of accessories to suit the installation, testing and patching of the Keyed LC Connectivity Solution.

These accessories include:

- Connector video inspection and equipment
- Connector cleaning products
- Test and measurement equipment

A range of custom test leads are available to suit the unique keyed interface of the system. Speciality adapters are required for inspection equipment, please contact AFL for details.