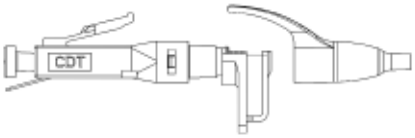
BELDEN
SENDING ALL THE RIGHT SIGNALS

DATASheet



AX102197 Secure/Keyed LC Optimax



Secure/Keyed LC Optimax – components

Secure/Keyed LC Optimax

The Secure/Keyed LC Optimax field installable connectors, are part of the Belden IBDN FiberExpress Secure/Keyed LC System.

The FiberExpress Secure/Keyed LC System allows for physical segregation of networks segments in secure fiber cabling infrastructure. The various components offered in this system allow network managers to design and build very efficiently a secure network with restricted access to sensitive information to specific users only.

The Secure/Keyed LC Optimax are available with 6 different keying options each carrying a different color to facilitate network administration. The keying detail inside the connector is totally tamper-resistant and cannot be re-produced inside a standard LC connector to violate the network security. All other physical requirements comply with the FOCIS 10 standard and optical performance exceeds all industry standards for SFF connectors.

The connectors are available in multimode 50 µm laser-optimized and 62.5 µm fiber versions.

About the Optimax: the Optimax Connectors are reliable field installable optical fiber connectors that are easy to install. They do not require epoxy, curing or polishing. Their unique design incorporates a factory polished fiber stub in a splice mechanism which provides a fast, secure, and reliable termination on optical fiber cables. All critical steps are performed in the factory, ensuring a superior-quality connection every time. Only simple tools are required for installation, making Optimax a cost effective field termination.

The Optimax Optical Fiber Field Installable Connectors are high-quality connectors that use a ceramic ferrule with a physical contact (PC) polish for Multimode connectors.

Features & Benefits

- 6 physically discreet, color-coded keying options — provide design flexibility and facilitate network administration
- Tamper-resistant key design — prevents intruder access
- Uses the same inexpensive tool kit as for regular Optimax LC installation — facilitating logistics and material ordering
- All Optimax Multimode 50 µm connectors contain a Laser-Optimized fiber stub (FX2000 fiber) and are also backward compatible with the FX600 series 50 µm fiber types
- No polishing required — saves installation time and the cost of polishing paper
- No epoxy required — saves installation time, no oven required, safe to use, no power required, saves cost of epoxy
- Pre-radiused PC ceramic ferrule — ensures contact with optical fibers, improves durability, provides high performance
- Unlimited shelf life — unlike epoxy products which have a tendency to dry out if left on the shelf too long
- Easy connection to learn — Optimax training video on CD offers efficient and consistent training for field services personnel.

Secure/Keyed LC Optimax

Applications

- Secure networks in government agencies and military facilities
- Data Centers treating sensitive and classified information
- Indoor termination of fiber cables
- Patch panels/Distribution frames
- Communication outlets, Fiber-to-the-desk
- Direct termination to equipment
- Fiber cable repair
- Campus
- Customer premise/Access network.

Cable Color Code

Connector Types	Color of connector
LC Key1 (0°)	Red
LC Key2 (240°)	Green
LC Key3 (120°)	Yellow
LC Key4 (300°)	Black
LC Key5 (60°)	Orange
LC Key6 (180°)	Blue

Technical Specifications

- Field Assembly Time: 1 minute for 900 µm, 3 minutes for jacketed fiber
- Insertion Loss (Multimode): 0.3 dB (typical)
- Durability:

  Multimode: Less than 0.2 dB change, 500 cycles.
- Nominal Fiber O.D.: 125 µm
- Storage Temperature: -40° to 65°C (-40° to 149°F)
- Operating Temperature: 0° to 60°C (32° to 140°F)
- Tensile Load:

  On jacketed fiber: 50 N (5.1 Kg/11.2 lbs)

  On 900 micron tight buffered fiber: 6.7 N (0.68 Kg/1.5 lbs).
- Ferrule: Ceramic
- Reflectance:

  Multimode: -30 dB (typical).

Note: All related performance specifications meet or exceed TIA/EIA-568-B.3 requirements.

Installation Tips

- Cleaving the fiber:

  Optimax works like a mechanical splice and is sensitive to the quality of the fiber cleave

  A light touch is all you need to score the fiber and consequently cleave it

  Always inspect the cleave with the microscope: stripping and cleaving should be redone if the fiber end is chipped, crushed or at an angle

  Make sure that the length of the bare fiber is between 7.0 and 7.5 mm (0.27 and 0.3 in.). Verify your measurement using the installation card.
- Pen mark: Always make a pen mark on the fiber buffer before cleaving
- Crimping the fiber: This step is necessary to provide the mechanical strength between the fiber and the connector
- Installation on jacketed fiber: If the termination of a breakout cable or dual zip cord is contained in an enclosure, follow instructions for terminating on 900 µm, it is sufficient, easier and quicker than installation on jacketed fiber
- Safety tips:

  Always wear safety glasses

  Dispose waste fiber properly in the waste bottle.
- Testing procedure: Use the proper test method such as the one recommended by ANSI/TIA/EIA-568-B, TIA TSB-140 or Belden IBDN acceptance testing notes.

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Packaging

- Individually packaged in a clear plastic bag
- Standard shipping packaging is a bag of 25 units.
- Accessory Kit:

  The LC Accessory Kit contains one 2 mm boot and a crimp sleeve.

For More Information

For any other product information call: 1-800-BELDEN-1 or visit us at www.Belden.com

All information is subject to change without notice, since Belden reserves the right to change its products as progress in engineering and manufacturing methods or other circumstances may warrant.

Ordering Information

Secure/Keyed LC Optimax "Patent Pending"

DETAIL	INSTALLATION	UPC	ORDERING NUMBER
Multimode, 50 µm			
K1, Red	for 900 µm buffered fiber only		AX102197
K2, Green	for 900 µm buffered fiber only		AX102198
K3, Yellow	for 900 µm buffered fiber only		AX102199
K4, Black	for 900 µm buffered fiber only		AX102200
K5, Orange	for 900 µm buffered fiber only		AX102201
K6, Blue	for 900 µm buffered fiber only		AX102202
Multimode, 62.5 µm			
K1, Red	for 900 µm buffered fiber only		AX102203
K2, Green	for 900 µm buffered fiber only		AX102204
K3, Yellow	for 900 µm buffered fiber only		AX102205
K4, Black	for 900 µm buffered fiber only		AX102206
K5, Orange	for 900 µm buffered fiber only		AX102207
K6, Blue	for 900 µm buffered fiber only		AX102208
LC Accessory Kit for jacketed fiber			
contains a 2 mm boot and a crimp sleeve		628575118045	AX101984