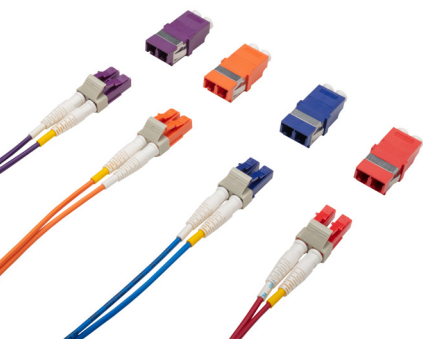


SECURE NETWORK SOLUTIONS GUIDE

ENSURING YOUR DATA INFRASTRUCTURE PERFORMS SECURELY AND FLAWLESSLY

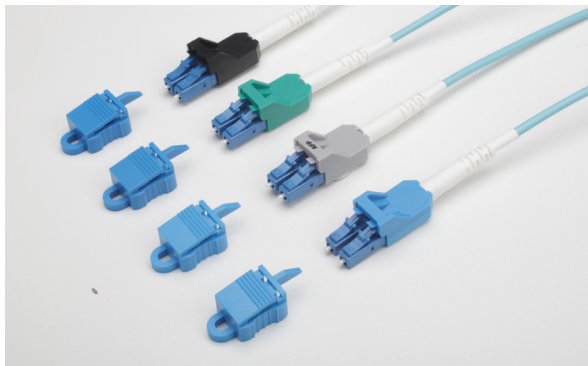


OCC KEYED LC CONNECTORS

OCC has a long history of providing extremely strong, lightweight, rugged, and survivable fiber optic cables to the market, as our first customer was the U.S. Military. OCC secure solutions offer top-of-the-line network security and as well as more efficiency, speed, and convenience in identifying networks. Our wide offering of keyed, non-keyed color-coded and secure products allow you to completely customize the installation of LC and MTP connectors and cables from the data center to the network. We offer pre-terminated customized assemblies, and trunks, and have a full connectivity offering – making us a **one-source provider for your network needs**.

APPLICATIONS

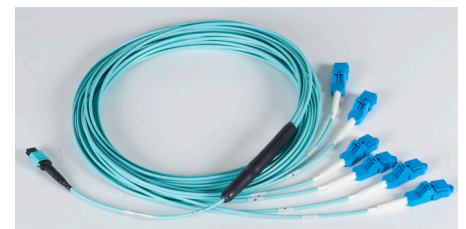
MILITARY IT NETWORKS | SECURE FEDERAL & GOVERNMENT IT NETWORKS
COMMERCIAL DATA CENTERS | PRIVATE NETWORKS | INDUSTRIAL PROCESS CONTROL | FIBER SENSOR APPLICATIONS | SCIFs | NIPR/SIPR NETWORKS



SECURE LC CONNECTORS

FEATURES & BENEFITS

- » Optical Cable Corporation (OCC's) Keyed & Secure LC connector's offers limited accessibility to fiber optic networks through a physically restrictive cross connect system.
- » By utilizing the OCC Secure solution, network administrators can easily segregate networks for security or confidentiality concerns.
- » The keyed adapters prevent any standard LC connector from being mated. The keyed adapters must be mated with the same color keyed connector.
- » For added security, our secure LC connectors offer a tamper-proof solution and require an extraction tool to remove the connector.
- » The solution is offered as single mode quality but can also be used for 50µm, 62.5µm, and 10 Gig applications.
- » Available in 12 color-coded options that limit unauthorized access to network ports.



SECURE LC-MTP CABLE ASSEMBLY

KEYED LC ASSEMBLIES

OCC's Keyed LC solution utilizes physical mechanical variations within the adapter to provide the ability to isolate networks for privacy and security concerns. Each network is easily identified visually through (XX) color-coded keyed adapters and connectors preventing improper connection between separate networks with shared access. **See table below for ordering information.*

BENEFITS

CAN BE USED IN ANY LC DUPLEX PRODUCT TO ADD A LAYER OF SECURITY

SECURE LC ASSEMBLIES

OCC's Secure LC Connectors prevent unauthorized and inadvertent changes in highly sensitive application where multiple physical layer classifications may exist. The compact Uni-body LC design plugs to any industry compliant LC adapter or active device port but cannot be disconnected without the use of a special extraction tool. Available with eight different key configurations and a lockable dust-cap feature as standard options. **See table below for ordering information.*

BENEFITS

UNIVERSAL PLUG THAT FITS INTO ANY STANDARD LC DUPLEX AND QUAD ADAPTERS AND TRANSCEIVER INTERFACES

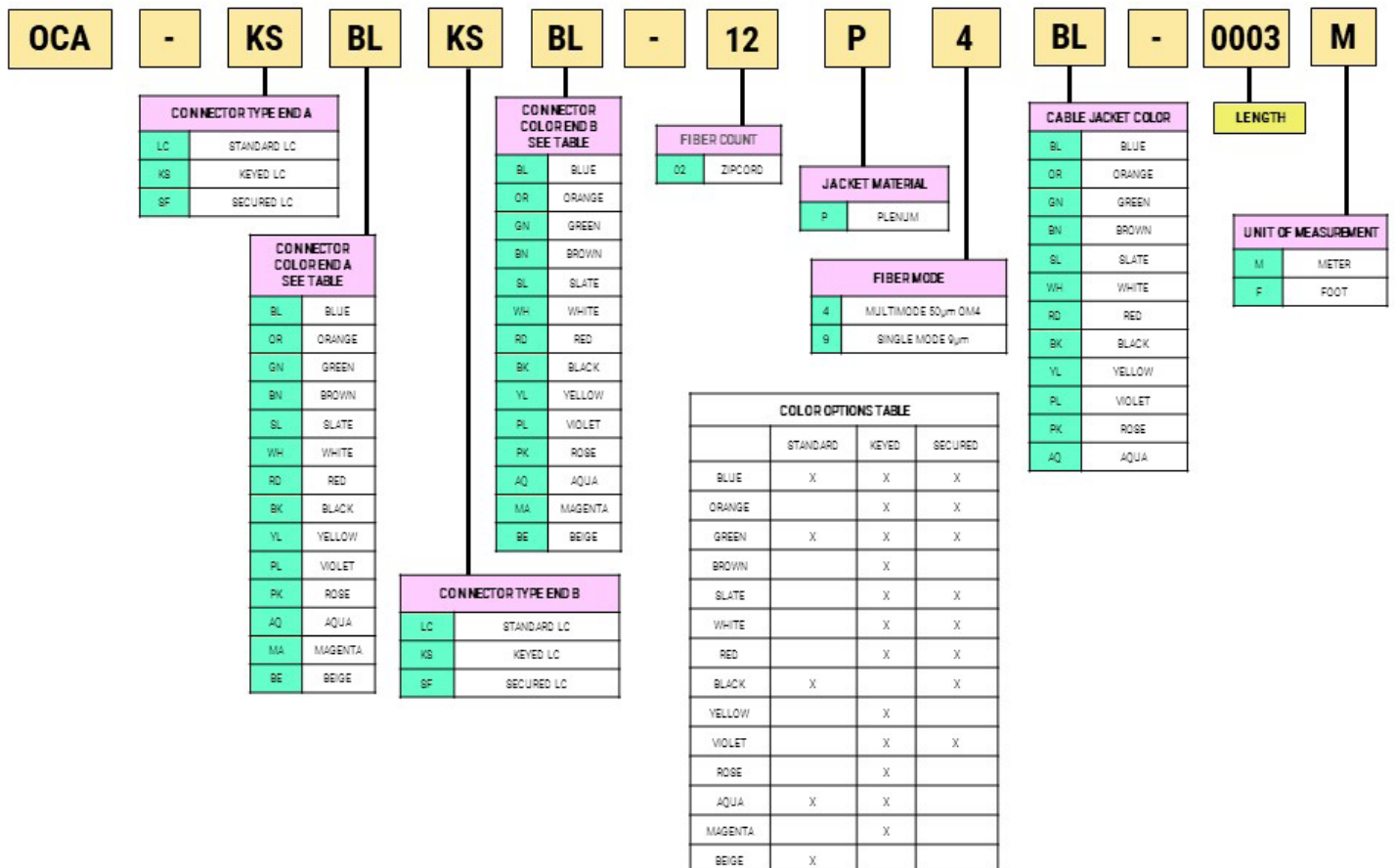
NON-KEYED COLORED LC ASSEMBLIES

BENEFITS

ALLOWS INSTALLER TO EASILY IDENTIFY NETWORKS QUICKLY

PART NUMBERING SCHEME

THIS CONFIGURATION DOCUMENT IS DESIGNED TO ALLOW FOR FASTER AND A MORE ACCURATE QUOTING REFERENCE.
Should you have any questions see configuration management



KEYED-TO-KEYED LC ADAPTERS

BENEFITS

INSTALLER CAN USE PRE-TERMINATED ASSEMBLIES AND PIGTAILS FOR A PLUG-N-PLAY SOLUTION

KEYED-TO-NON-KEYED LC ADAPTERS

OCC's Keyed-to-Non-Keyed Adapters provide a layer of mechanical security on the front end with an industry compliant LC adapter in the rear. Installer can use standard Fan-Out's, Pigtails, Mechanical and Splice Connectors as well as pre-terminated assemblies.

BENEFITS

PROVIDES A LAYER OF SECURITY FOR ORGANIZATIONS TO PREVENT IMPROPER CONNECTION OF SEPARATE NETWORKS WITH COMMON ACCESS POINTS FOR TECHNICIANS

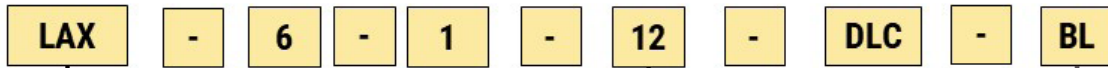
STANDARD COLORED LC ADAPTERS

BENEFITS

COLOR-CODED STANDARD ADAPTERS & CONNECTORS COMMONLY USED IN PRODUCTS TO IDENTIFY DIFFERENT NETWORKS/SYSTEMS

PART NUMBERING SCHEME

THIS CONFIGURATION DOCUMENT IS DESIGNED TO ALLOW FOR FASTER AND A MORE ACCURATE QUOTING REFERENCE. Should you have any questions see configuration management.

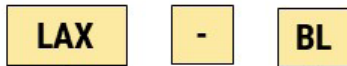


| ADAPTER TYPE | |
|--------------|---|
| LAN | NON-KEYED COLORED ADAPTER (CAN BE USED WITH SECURED LC) |
| LAX | KEYED COLORED ADAPTER |
| LAM | KEYED TO NON-KEYED COLORED ADAPTER |

| # PORTS | |
|---------|------------------------------|
| 06 | 6 PORTS (3 DUPLEX ADAPTERS) |
| 08 | 8 PORTS (4 DUPLEX ADAPTERS) |
| 12 | 12 PORTS (6 DUPLEX ADAPTERS) |

| COLOR SEE TABLE | |
|-----------------|---------|
| BL | BLUE |
| OR | ORANGE |
| GN | GREEN |
| BN | BROWN |
| SL | SLATE |
| WH | WHITE |
| RD | RED |
| BK | BLACK |
| YL | YELLOW |
| PL | VIOLET |
| PK | ROSE |
| AQ | AQUA |
| MA | MAGENTA |
| BE | BEIGE |

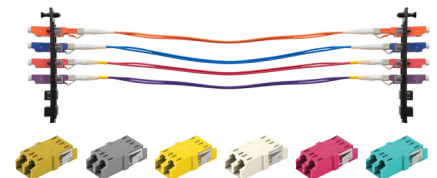
ADAPTER ONLY



| ADAPTER TYPE | |
|--------------|---|
| LAN | NON-KEYED COLORED ADAPTER (CAN BE USED WITH SECURED LC) |
| LAX | KEYED COLORED ADAPTER |
| LAM | KEYED TO NON-KEYED COLORED ADAPTER |

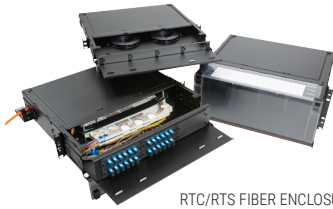
| COLOR SEE TABLE | |
|-----------------|---------|
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| WH | WHITE |
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| BK | BLACK |
| YL | YELLOW |
| PL | VIOLET |
| PK | ROSE |
| AQ | AQUA |
| MA | MAGENTA |
| BE | BEIGE |

| COLOR OPTIONS TABLE | | | |
|---------------------|-----------|-----------|--------------------|
| | NON-KEYED | KEYED | KEYED TO NON-KEYED |
| BLUE | X | X | X |
| ORANGE | | X | X |
| GREEN | X | X | X |
| BROWN | | X | X |
| SLATE | | X | X |
| WHITE | | X | X |
| RED | | X | X |
| BLACK | X | UNIVERSAL | |
| YELLOW | | X | X |
| VIOLET | | X | X |
| ROSE | | X | X |
| AQUA | X | X | X |
| MAGENTA | | X | X |
| BEIGE | X | | |



KEYED LC ADAPTERS

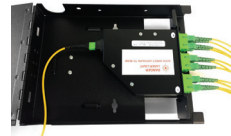
GET TO KNOW OCC



RTC/RTS FIBER ENCLOSURES



WALL MOUNT WTC ENCLOSURE



WALL MOUNT MINI CASSETTE ENCLOSURE (ZDMBC1AP)



DIN RAIL FIBER ENCLOSURE

**CUSTOM KEYPED/SECURE CONFIGURATIONS AVAILABLE UPON REQUEST*

OCC is leading manufacturer of a broad range of fiber optic and copper data communication cabling and connectivity designed for the enterprise market, harsh environments, and other specialty markets.

Federal and Government Agencies choose OCC because of our rugged products and our customer-centric approach to every project. We understand the need for mission-critical reliability and maintaining information at the highest security level, that's why the U.S military has a long history of working with OCC. You can count on OCC to provide solutions that offer flawless performance, exceptional integrity, and innovative technologies to meet the demands of today, as well as, for the future.

- » **USA Operations:** With three strategically located facilities across the U.S., we offer quick lead times, fast shipping, and engineering and customer services teams ready to answer all your questions.
- » **Small Business:** OCC is a certified small business by the U.S. Small Business Association (SBA), our team of experts are leaders in technical and customer support. As a small business we can easily pivot to meet customer demand and customized needs.
- » **One Source Provider:** OCC's robust offering of end-to-end structured cabling and connectivity products support any environment including secure data centers, secure communications, backbone cabling, harsh environments, and passive optical LAN (POL).
- » **Quality:** Our solutions are some of the most rugged, reliable, and innovative cabling and connectivity products your department demands.

- » **Innovation:** We are the only company to offer a QPL rated ground tactical fiber optic cable.
- » **Network Expertise:** Our history and growth have helped us attract and retain experts in manufacturing, engineering, and design-build applications that provide unprecedented service, support, and assistance.
- » **Repair & Restoration:** We understand breaks happen, that's why we offer repair services that are robust and convenient. Whether it's an OCC product, or one from somewhere else, we can fix it.
- » **ISO-9001: 2015** at all three locations.
- » **MIL-STD-790** certified in our Roanoke, VA and Dallas, TX locations.
- » **25-Year Guarantee:** Through our network of certified MDIS installers, we offer a 25-year installation warranty along with our standard warranty plans to provide long-lasting network installations.

OCC IS PROUD TO WORK WITH FED/GOV CUSTOMERS FROM



OCC ROANOKE, VA
 Corporate Headquarters and Fiber Optic Cable Manufacturing Facility
 5290 Concourse Drive
 Roanoke, VA 24019 USA
 540.265.0690 or 800.622.7711

OCC DALLAS, TX
 Harsh Environment and Specialty Connectivity Manufacturing Facility
 1700 Capital Avenue, Suite 150
 Plano, TX 75074 USA
 972.509.1500 or 877.509.1500

OCC ASHEVILLE, NC
 Enterprise Connectivity Manufacturing Facility
 33 Superior Way
 Swannanoa, NC 28778 USA
 828.298.2260 or 800.622.7711

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