BELDEN
SENDING ALL THE RIGHT SIGNALS®

# Belden® Optical Fiber Catalog

**Belden Fiber*Express*®**
**Systems, Cable and**
**Connectivity**

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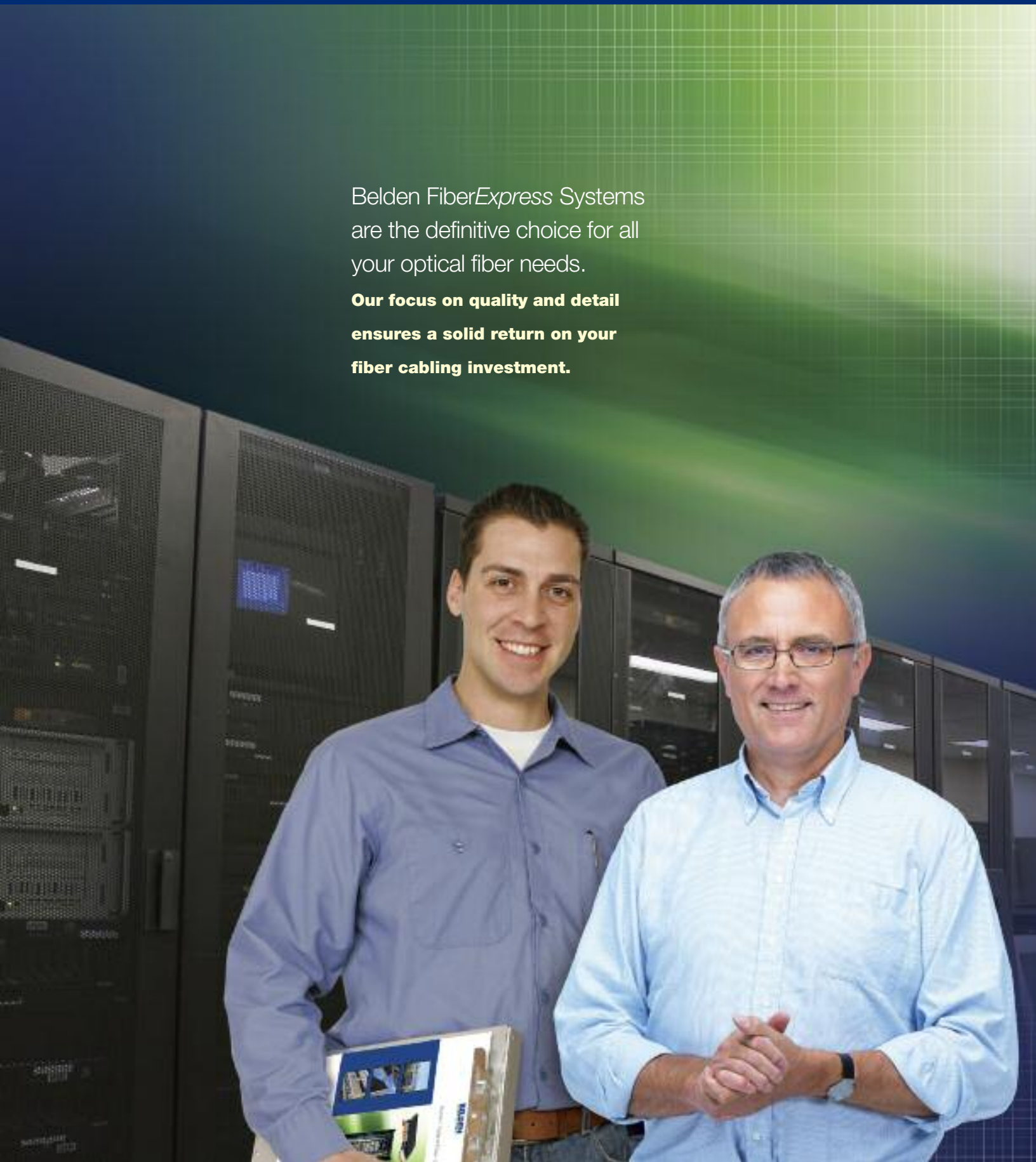
Belden Fiber*Express* Systems are the definitive choice for all your optical fiber needs.

**Our focus on quality and detail ensures a solid return on your fiber cabling investment.**



## Preparing for the Future with Belden Fiber*Express* Solutions

Belden has been involved in the development of optical fiber components since 1972 — evolving to its present status as an international supplier of high quality, cost-effective optical fiber cabling systems.

The Fiber*Express* Solution is the culmination of Belden's experience in the optical fiber arena, offering users a complete, high-performance, end-to-end cabling system that supports both centralized and fiber-to-the desk (FTTD) topologies, as well as in-building or campus backbone cabling configurations.

The Fiber*Express* Solution is, however, much more than an assemblage of top-performing products. It represents a complete approach to the methodology of fiber optic cabling, i.e., Fiber*Express* systems are unique in their ability to offer both superior performance and a more cost effective, speedier and less complex installation process than traditional fiber optic cabling systems.

Belden developed the Fiber*Express* Solution to assure the smooth operation of your network and to provide for efficient network management — while continually reducing your total cost of ownership and preparing your system for the future.

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## Offering Three Outstanding, Cost Effective Solutions

Fiber*Express* solutions are for fiber-to-the-desk or centralized cabling applications and the backbone infrastructure. Fiber*Express* Pre-Terminated systems are the ultimate solution for quick, easy, and reliable installations.

Fiber*Express* Solutions consist of a full range of multimode and single-mode cables, connectivity hardware, patch cords, cable assemblies, field connectors and a number of work area outlets. These solutions are characterized as fiber-to-the-desk systems, pre-terminated systems and in-building or campus backbone systems.

### Fiber*Express* Pre-terminated Systems

The ultimate in quick, easy and reliable optical networking is the Fiber*Express* Pre-term System. All components are factory connectorized and fully tested to ensure fast deployment and tremendous reliability. This flexible solution can be deployed for traditional LAN systems, as well as in specialized applications such as Data Centers and Storage Area Networks.

The Fiber*Express* Pre-term System is also well-suited for temporary situations, such as disaster recovery installations or convention center services.

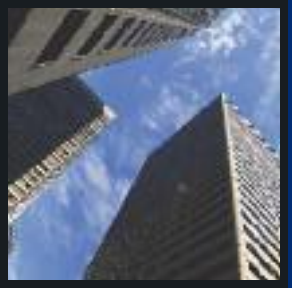
### Fiber*Express* Backbone Systems

In today's environment, cabling network backbones are typically designed using a combination of both multimode and single-mode fiber cables. Configuring the right fiber backbone for your unique premise or campus application is a complex process. An inadequate or improperly installed network backbone can severely limit overall network performance and, therefore, your business's productivity and efficiency. Fortunately, selecting the right fiber backbone cabling solution is comparatively easy when you specify Belden Fiber*Express* Systems.

Many factors will influence the design of your specific optical fiber backbone infrastructure and the appropriate mix of single-mode and multimode fiber products and technologies.

### Fiber*Express* Fiber-to-the-desk (FTTD) Systems

Whether for horizontal distribution or centralized cabling, Fiber*Express* solutions include a wide range of products such as work area outlets and large-capacity fiber management products designed to make FTTD applications a cost effective reality.



## Key Design Criteria

### Capacity and Topology Planning

**Deployed Belden Horizontal UTP Systems**
The role of the network backbone is to support the deployed or planned horizontal cabling system. Higher bandwidth horizontal systems, such as Belden's IBDN® System 10GX® or 4800, may indicate use of single-mode fiber in the backbone for superior overall network performance.

**Horizontal to Backbone Data Rate Ratio**
Traditional design guidelines use a 1:10 data rate ratio; indicating, for example, that when 1 Gb/s applications such as 1000BASE-T Ethernet are operating across the horizontal, the backbone should be capable of supporting throughputs of 10 Gb/s or more.

**Distances and Topologies**
The effective capacities of single-mode and multimode fiber channels have distance limitations. Generally speaking, single-mode fiber channels can operate at greater speeds over greater distances than multimode fiber channels. Distance considerations will be important criteria in campus or MAN backbone design, and must also be considered for in-building backbones and "centralized fiber network" topologies.

### Return on Investment

**Legacy Networks and Active Equipment**
We seldom have the luxury of designing and deploying networks with a "clean slate" and accommodating existing cabling infrastructures and active equipment must be factored into backbone design considerations and may affect the single-mode/multimode mix.

**Cost of Ownership**
At first glance, fiber channels are typically more expensive than UTP channels; while single-mode fiber channels are typically more expensive than multimode channels. But, cost must always be considered in the context of performance, features and benefits — and ultimately in terms of "value."

**Future-proofing**
Cabling infrastructure design must consider not just current requirements, but also future growth, capacity and new applications. The same is true with fiber backbone planning and design. A marginal increase in investment today can extend the operational lifespan of your backbone, thereby increasing the return on your backbone networking investment.

| Fiber Channel Topology | | | | | |
|---|---|---|---|---|---|
| **Belden Fiber*Express* System Matrix** | **Page No.** | **Fiber Backbone (Field Terminated Campus)** | **Fiber Backbone (Field Terminated In-Building)** | **Fiber Pre-Terminated Solutions** | **Fiber-To-The-Desk (FTTD) and Centralized Fiber** |
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MM = Multimode • SM = Single-mode
* Fiber*Express* Pre-terminated Solutions provide simple-to-install, high-performance fiber channels through custom length, high precision factory terminated cables and matching optical connectivity components.

For more design details, please refer to the IBDN Optical Fiber Design Guide.

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## Top-Quality, Field-proven Products Make the Difference

Every Belden Fiber*Express* product reflects our attention to quality and detail, and our commitment to you.

Belden Fiber*Express* components have over 20 years of field-proven telecommunications experience behind them. These products are designed with the same focus on quality and detail found in our complete Belden product line.

### Fiber*Express* Ultra Patch Panel System

The Fiber*Express* Ultra Patch Panel System is a highly innovative fiber patching solution that ensures the utmost reliability and ease of use during installation, operation and maintenance. The system also provides the highest density fiber patching available today, enabling the conservation of valuable IT real estate and the ability to save on installation and maintenance labor costs.

It is available in both 1U and 4U designs, using LC or other Small Form Factor (SFF) connectors. It has dual swing-out frames to ease front access to connectors; 1" pull-out of individual adapter modules for connector maintenance or replacement; full rear access for easy maintenance; and built-in cable management features that facilitate connector and patch cord identification and built-in protection, as well as providing for intuitive cable routing. Wall-mount and Splice Enclosures are also available.

### Fiber*Express* Manager

The Fiber*Express* Manager is a modular system that facilitates management of large numbers of high-density, in-building terminations. The Fiber*Express* Manager allows up to 1920 single-mode or multimode fiber terminations in a single rack.

The Fiber*Express* Manager's connector module supports LC, SC, SC Duplex, ST Type, FC and MT-RJ connectors. Its innovative release mechanism allows it to slide from the shelf like a PC card, greatly facilitating management of the patch cords.

### Fiber*Express* Patch Panel System

Fiber*Express* Patch Panels can be used with tight-buffered or loose-tube optical fiber cables. Since these panels are versatile, they can be tailored to suit your individual needs in terms of density or management.

Patch Panels are populated with Universal Adapter Strips which are pre-loaded with six (single density) or 12 (double density) adapter sleeves. The sleeves are offered in two different materials: Phosphor Bronze and Zirconia Ceramic and accommodate LC, SC, SC Duplex, ST Type, FC and MT-RJ connectors.

### Optimax Field-installable Connectors

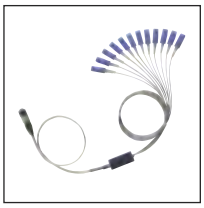
The Optimax Connector is a field-installable optical fiber connector that requires no epoxy and no polishing. The unique design of the patented mechanical splice body incorporates a factory-mounted fiber stub and a pre-polished ceramic ferrule. This technology provides a fast, secure and reliable LC, SC or ST Type optical fiber termination for either multimode or single-mode cable.

### Belden Fiber Cables

A variety of multimode and single-mode optical fiber cables are available for in-building and inter-building applications, including the following types: distribution, breakout, interconnect, loose tube and industrial armored.

### Fiber*Express* Cable Assemblies

Fiber*Express* MPO Cable Assemblies have multi-fiber cables using single MPO connectors (6, 8 and 12 fiber) that are used to interconnect pre-terminated Fiber*Express* Ultra Cassettes, Fiber*Express* Manager Connector Modules and Fiber*Express* Bars.



Multi-fiber Cable Assemblies are factory-terminated fiber cables of various constructions (distribution, breakout, loose tube or ribbon) using Simplex, Duplex or multi-fiber connectors.

The range of fan-out constructions, lengths and geometry suit virtually any application.

The Fiber*Express* Bar is an extremely compact, versatile and resilient linking panel. Resembling a power bar, it offers 6 or 12 fibers, pre-terminated with LC, SC, SC Duplex, ST Type, FC or MTRJ connectors and a cord terminated with a multi-fiber MPO connector. These factory-tested mini patch panels can adapt to all kinds of properties or developments, is easily re-deployable and can serve as a consolidation or linking point.

### Fiber*Express* Patch Cords

Fiber*Express* Patch Cord assemblies are of the highest quality available. They are assembled and 100% optically tested in the factory prior to shipment.

### Need an Even More Secure Infrastructure?

**The Fiber*Express* Secure/Keyed LC System is designed to bring a whole new level of security into your network infrastructure design by enabling the physical segregation of any network segments that you designate.**

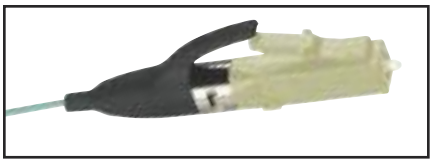
- **Connectors and adapters with 12 color-coded keying options**
- **A tamper-resistant key design (front and back to prevent intruder access) which cannot be reproduced inside a standard LC connector**

- **High-quality ceramic ferrules for low insertion loss and excellent durability**

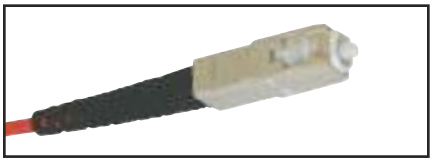
Start designing your own
**Fiber*Express* Solution**
by selecting from the
products featured in
the following pages.

# Fiber*Express* Connectors

## Optimax Field Installable Connectors and Installation Tool Kits



AX101982, Optimax LC Connector



AX100029 with AX101794 Optimax SC Connector

A0408835 with AX101793 Optimax ST Type Connector

AX103142, Optimax Enhanced Tool Kit

### Optimax Field Installable Connector

The Optimax Connectors are the connector of choice for high-speed optical networks such as 10-Gigabit Ethernet. It is also the industry's best solution to the challenges of field connectorization of optical fiber networks. Optimax Connectors do not require epoxy, curing or polishing. Their unique design incorporates a factory-mounted fiber stub and a premium quality, zirconia ceramic ferrule with a physical contact (PC) polish for multimode and a super physical contact (SPC) polish for single-mode. The quality of the ferrule construction ensures the connector's low loss, low reflectance characteristics and its suitability for high-bandwidth optical transmissions.

Connectors are available for 62.5 or 50/125 µm multimode fiber and single-mode fiber installations. Only simple tools are required for installation, making Optimax a cost effective field termination.

### Optimax Enhanced Installation Tool Kit

The Optimax Enhanced Installation Tool Kit is packaged in a small convenient carrying case and includes an Optimax LC, SC and ST Type installation and training video, installation instructions and all the tools required to terminate 900 µm buffered optical fiber and jacketed optical fiber.

Belden has simplified the Kit's Installation Tool components, added an Installation Tool table-top base and reduced the number of manuals with a "three-in-one" version for LC/SC/ST connectors types. Certain tool kit items can be purchased separately to accommodate installers already possessing basic optical fiber installation tools.

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Connectors** | |
| **Optimax Field Installable Connector** | |
| LC 62.5 µm, Multimode* | **AX101981** |
| LC 50 µm, Multimode* | **AX101982** |
| LC Single-mode* | **AX101983** |
| SC 62.5 µm, Multimode* | **AX100029** |
| SC 50 µm, Multimode* | **AX101077** |
| SC Single-mode* | **AX101792** |
| ST Type 62.5 µm, Multimode* | **A0408835** |
| ST Type 50 µm, Multimode* | **AX101075** |
| ST Type Single-mode* | **AX101791** |
| LC Accessory Kit for jacketed fiber (2 mm & 3 mm boots, crimp sleeves) | **AX101984** |
| SC Accessory Kit for jacketed fiber (3 mm boots, crimp sleeves, cord adapter) | **AX101794** |
| ST Accessory Kit for jacketed fiber (3 mm boots, crimp sleeves) | **AX101793** |

*For 900 µm buffered fiber only. For termination on jacketed fiber, please use the appropriate Accessory Kit.

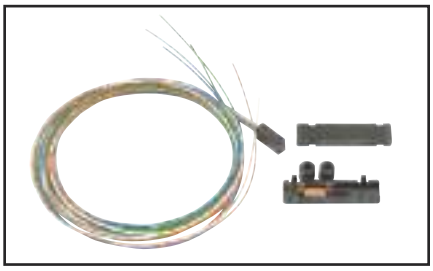
## Fiber*Express* Connectors

Optimax Field Installable Connectors and Installation Tool Kits (continued)

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Connectors** | |
| **Optimax Enhanced Tool Kit** | |
| LC/SC/ST Type (includes installation tools, fiber cleaver, crimping tool, instruction manual, microscope, tweezers, alcohol wipes, marker, scissors, waste bottle, universal fiber/cable stripper, and training video) | **AX103142** |
| Basic (excludes universal fiber/cable stripper & cleaver) | **AX103146** |
| Optimax Enhanced Tool Kit Upgrade (includes new installation tool and inserts, tool table-top base, instructions manual, foam for the case) | **AX103147** |
| **Optimax Individual Components** | |
| Fiber Cleaver | **A0408829** |
| Universal Installation Tool LC/SC/ST (includes inserts, tool, tool clamp) | **AX103152** |
| Installation Tool Table-top Base | **AX103153** |
| Microscope | **AX100910** |
| Refurbishing Materials (80 alcohol wipes and a black felt tip marker) | **AX100951** |
| Installation Instruction Manual (LC, SC, ST) | **AX103148** |
| Installation & Training Video, CD (see literature ordering form on the web) | **NOT0651** |
| Crimp Tool (complete with die) | **A0403641** |
| Cleaver's Ceramic Blade Replacement | **AX103149** |
| Cleaver's Leaf Spring Base plate replacement | **AX103150** |

### Optical Fiber Accessories

**The Field Breakout Kit** is designed to attach to one tube of a loose-tube cable. Each kit has either six or twelve 900 µm tubes that hold each of the coated fibers. For each end of the cable, one kit is needed for every tube. For example, a 12-fiber 62.5 µm cable contains two 6-fiber tubes. This cable would require four kits, two for each end.



AX101100, Field Breakout Kit

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Accessories** | |
| **Optical Fiber Field Breakout Kit** | |
| 6 fibers, 1/pack | **AX101100** |
| 12 fibers, 1/pack | **AX101101** |

# Fiber*Express* Connectors
## Epoxy Field Installable Connectors

A0390851, Optical Fiber Field Installable Epoxy Connector, ST Type

### Epoxy Field Installable Connectors

**Epoxy Field Installable Connectors** are available as Multimode and Single-mode ST Type, SC and LC field installable connectors. They require heat-cured epoxy and polishing.

All connectors have a ceramic ferrule. ST and SC connectors come complete with all the parts necessary for termination of tight buffered fibers as well as jacketed fibers. LC connectors can be terminated on 900 µm tight buffered fiber only. Parts include crimp sleeves, boots, cord adapter and dust cap.

| Description | Belden Part Number | |
|---|---|---|
| | Multimode | Single-mode |
| **Fiber*Express* Connectors** | | |
| **Epoxy Field Installable Connector** | | |
| ST Type | **A0390851** | **AX101412** |
| SC Simplex | **AX100919** | **AX101411** |
| SC Duplex | **AX100929** | |
| LC Simplex | **AC301184** | **AC300580** |

Note: If you require information on heat cured epoxy polishing kits, please contact Belden's Technical Support at ibdn.ts@belden.com.

## Fiber*Express* Pre-Connectorized Assemblies

Fiber*Express* Patch Cords

### Fiber*Express* Patch Cords

**Fiber*Express* Patch Cord Assemblies** are of the highest quality available. They are assembled and 100% optically tested in our factory prior to shipment. All patch cords are built with high-quality connectors and cables which guarantees superior performance and excellent reliability.

AX200664, Patch Cord LC Duplex

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| **Fiber*Express* Pre-Connectorized Assemblies** | | | | |
| **Duplex Patch Cord** | | | | |
| ST-ST, 2 m (6 ft.) | **70102419** | **AX200341** | **AX200799** | **AX200090** |
| ST-ST, 3 m (10 ft.) | **70102420** | **AX200459** | **AX200795** | **AX200091** |
| ST-ST, 5 m (16 ft.) | **70102447** | **AX200413** | **AX200800** | **AX200092** |
| 568SC-568SC, 2 m (6 ft.) | **AX200056** | **AX200084** | **AX200603** | **AX200094** |
| 568SC-568SC, 3 m (10 ft.) | **AX200057** | **AX200082** | **AX200589** | **AX200095** |
| 568SC-568SC, 5 m (16 ft.) | **AX200058** | **AX200280** | **AX200624** | **AX200096** |
| LC Duplex-LC Duplex, 2 m (6 ft.) | **AX200517** | **AX200527** | **AX200664** | **AX200507** |
| LC Duplex-LC Duplex, 3 m (10 ft.) | **AX200518** | **AX200528** | **AX200665** | **AX200508** |
| LC Duplex-LC Duplex, 5 m (16 ft.) | **AX200519** | **AX200529** | **AX200666** | **AX200509** |
| MT-RJ-MT-RJ, 2 m (6 ft.) | **AX101122** | **AX101139** | **AX200801** | **AX101157** |
| MT-RJ-MT-RJ, 3 m (10 ft.) | **AX101123** | **AX101138** | **AX200802** | **AX101156** |
| MT-RJ-MT-RJ, 5 m (16 ft.) | **AX101125** | **AX101137** | **AX200803** | **AX101155** |
| **Hybrid Patch Cord** | | | | |
| 568SC-ST, 3 m (10 ft.) | **AX200060** | **AX200196** | **AX200900** | **AX200421** |
| LC Duplex-ST, 3 m (10 ft.) | **AX200699** | **AX200695** | **AX200809** | **AX200698** |
| LC Duplex-568SC, 3 m (10 ft.) | **AX200580** | **AX200581** | **AX200668** | **AX200667** |
| MT-RJ-ST, 3 m (10 ft.) | **AX101133** | **AX101151** | **AX200810** | **AX101166** |
| MT-RJ-568SC, 3 m (10 ft.) | **AX101128** | **AX101143** | **AX200797** | **AX101161** |
| **Single-ended (pigtails)** | | | | |
| ST-open, 2 m (6 ft.) | **70100390** | **AX200458** | **AX200811** | **AX200097** |
| SC-open, 2 m (6 ft.) | **70101714** | **AX200192** | **AX200653** | **AX200098** |
| LC-open, 2 m (6 ft.) | **AX200657** | **AX200658** | **AX200660** | **AX200659** |
| MT-RJ(m)-open, 3 m (10 ft.) | **AX101366** | **AX101367** | **AX200812** | **AX101368** |

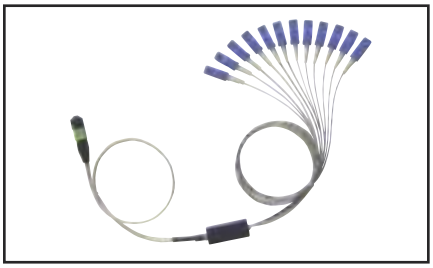
Also available as Simplex and Hybrid Patch Cords or as custom lengths and assemblies, please contact Customer Service for more details.

# Fiber*Express* Pre-Connectorized Assemblies

Cable Assemblies

AX250105, MPO Cable Assembly

Multi-fiber Cable Assembly



900 µm Fan-out Assembly

## MPO Cable Assemblies

**MPO Cable Assemblies** are multi-fiber cables using single MPO connectors (6, 8 and 12 fiber) that are used to interconnect pre-terminated devices such as Fiber*Express* Pre-terminated Modules and Fiber*Express* Bars. Depending on the application, MPO Cable Assemblies can use Ribbon cables or Loose Tube cables. MPO cables are available in lengths of up to 500 meters with a pulling-eye for ease of deployment.

## Multi-fiber Cable Assemblies

**Multi-fiber Cable Assemblies** are factory-terminated fiber cables of various constructions (distribution, breakout or ribbon) using Simplex, Duplex or Multi-fiber connectors. They are available in configurations from 2 fibers up to 144 fibers with various kinds of fan-out constructions, lengths and geometry to suit virtually any application.

| Description | Belden Part Number | |
|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm |
| **Fiber*Express* Pre-Connectorized Assemblies** | | |
| **MPO Cable Assembly, FOMC, MPO(f)-MPO(f)** | | |
| 1 pulling eye, OFNP, 12 fibers, 10 m (33 ft.) | AX250021 | AX250345 |
| 1 pulling eye, OFNP, 12 fibers, 20 m (66 ft.) | AX250105 | AX250376 |
| 1 pulling eye, OFNP, 12 fibers, 50 m (164 ft.) | AX250349 | AX250065 |
| 1 pulling eye, OFNP, 12 fibers, 75 m (246 ft.) | AX250060 | AX250066 |
| 1 pulling eye, OFNP, 12 fibers, 100 m (328 ft.) | AX250061 | AX250067 |
| | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| 1 pulling eye, OFNP, 12 fibers, 10 m (33 ft.) | AX250457 | AX250224 |
| 1 pulling eye, OFNP, 12 fibers, 20 m (66 ft.) | AX250412 | AX250106 |
| 1 pulling eye, OFNP, 12 fibers, 50 m (164 ft.) | AX250387 | AX250071 |
| 1 pulling eye, OFNP, 12 fibers, 75 m (246 ft.) | AX250413 | AX250072 |
| 1 pulling eye, OFNP, 12 fibers, 100 m (328 ft.) | AX250458 | AX250073 |

Also available in 6 or 8-fiber MPO Cable Assemblies, please contact Customer Service for more details.

## Fiber*Express* Pre-Connectorized Assemblies
Cable Assemblies (continued)

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Pre-Connectorized Assemblies** | |
| **Multi-fiber Cable Assembly, MPO(m)-SC** | |
| Multimode OM1, 62.5 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPML-PGPNNN-SCPFBN-N-01.5** |
| Multimode OM2, 50 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPNL-PGPNNN-SCPFBN-N-01.5** |
| Multimode OM3, 50 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPFL-PGPNNN-SCPFBN-N-01.5** |
| Single-mode Enhanced, OS2, 12 fibers, 1.5 m (5 ft.) | **NXC-RPSL-PGANNN-SCSFBN-N-01.5** |
| **Multi-fiber Cable Assembly, MPO(m)-LC** | |
| Multimode, OM1, 62.5 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPML-PGPNNN-LCPFBN-N-01.5** |
| Multimode OM2, 50 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPNL-PGPNNN-LCPFBN-N-01.5** |
| Multimode OM3, 50 µm, 12 fibers, 1.5 m (5 ft.) | **NXC-RPFL-PGPNNN-LCPFBN-N-01.5** |
| Single-mode Enhanced, OS2, 12 fibers, 1.5 m (5 ft.) | **NXC-RPSL-PGANNN-LCSFBN-N-01.5** |
| **Multi-duplex Cable Assembly, LCD-LCD** | |
| Multimode, OM3, 50 µm, OFNP, 12 fibers, 10 m (33 ft.) | **NXC-MPFL-LDPFEN-LDPFEN-0-0010** |
| Multimode, OM3, 50 µm, OFNP, 24 fibers, 10 m (33 ft.) | **NXC-MPFX-LDPFEN-LDPFEN-0-0010** |
| Multimode, OM3, 50 µm, OFNR, 12 fibers, 10 m (33 ft.) | **NXC-MRFL-LDPFEN-LDPFEN-0-0010** |
| Multimode, OM3, 50 µm, OFNR, 24 fibers, 10 m (33 ft.) | **NXC-MRFX-LDPFEN-LDPFEN-0-0010** |
| Single-mode Enhanced, OS2, OFNP, 12 fibers, 10 m (33 ft.) | **NXC-MPSL-LDUFEN-LDUFEN-0-0010** |
| Single-mode Enhanced, OS2, OFNP, 24 fibers, 10 m (33 ft.) | **NXC-MPSX-LDUFEN-LDUFEN-0-0010** |
| Single-mode Enhanced, OS2, OFNR, 12 fibers, 10 m (33 ft.) | **NXC-MRSL-LDUFEN-LDUFEN-0-0010** |
| Single-mode Enhanced, OS2, OFNR, 24 fibers, 10 m (33 ft.) | **NXC-MRSX-LDUFEN-LDUFEN-0-0010** |

Note: For front of panel connections.

| | |
|---|---|
| **Multi-duplex Cable Assembly, LC-LC** | |
| Multimode, OM3, 50 µm, OFNP, 12 fibers, 10 m (33 ft.) | **NXC-MPFL-LCPFBN-LCPFBN-0-0010** |
| Multimode, OM3, 50 µm, OFNP, 24 fibers, 10 m (33 ft.) | **NXC-MPFX-LCPFBN-LCPFBN-0-0010** |
| Multimode, OM3, 50 µm, OFNR, 12 fibers, 10 m (33 ft.) | **NXC-MRFL-LCPFBN-LCPFBN-0-0010** |
| Multimode, OM3, 50 µm, OFNR, 24 fibers, 10 m (33 ft.) | **NXC-MRFX-LCPFBN-LCPFBN-0-0010** |
| Single-mode Enhanced, OS2, OFNP, 12 fibers, 10 m (33 ft.) | **NXC-MPSL-LCUFBN-LCUFBN-0-0010** |
| Single-mode Enhanced, OS2, OFNP, 24 fibers, 10 m (33 ft.) | **NXC-MPSX-LCUFBN-LCUFBN-0-0010** |
| Single-mode Enhanced, OS2, OFNR, 12 fibers, 10 m (33 ft.) | **NXC-MRSL-LCUFBN-LCUFBN-0-0010** |
| Single-mode Enhanced, OS2, OFNR, 24 fibers, 10 m (33 ft.) | **NXC-MRSX-LCUFBN-LCUFBN-0-0010** |

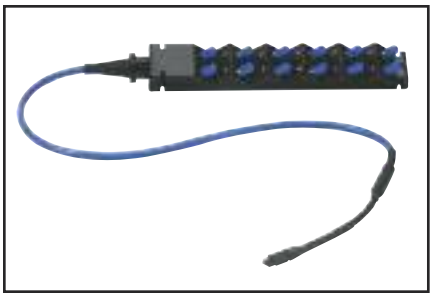
For back panel to back panel connections (Horizontal links).

Note: To order a similar construction but with a different length in meters (ft.), replace the digits at the end of the Belden part number.
Example: Multimode, OM3, 50 µm, OFNR, 12 fibers, 75 m (246 ft.) – NXC-MRFL-LDPFBN-LDPFBN-0-0075

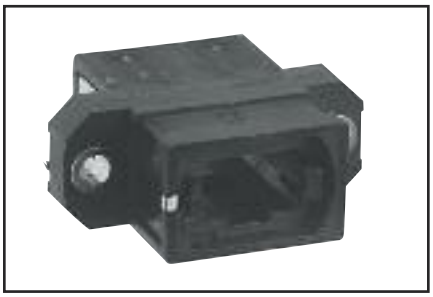
For any other assemblies, please contact Belden's Technical Support at 1-800-858-7954 or ibdn.ts@belden.com.

# Fiber*Express* Pre-Connectorized Assemblies

Fiber*Express* Bar



AX250001, Fiber*Express* Bar 12 ST Type



MX100154, Fiber*Express* MPO Adapter

## Fiber*Express* Bar

**The Fiber*Express* Bar** consists of a custom length fiber cable with, at one end, a factory pre-terminated rugged mini patch panel and, at the other end, a factory installed multi-fiber MPO connector. The very compact fiber patch panel contains 6 or 12 factory-terminated and tested connectors in a variety of styles. The ruggedness of the Fiber*Express* Bar makes it an ideal candidate for disaster recovery, industrial applications and other fiber deployments in harsh environments.

## Fiber*Express* Bar Accessories

**The MPO Adapter** is the sleeve that provides primary alignment and locking when connecting the two MPO connectors (male to female). It has a flange and a metal clip for panel mounting and it is included with each Fiber*Express* Bar (1 m with male connector).

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Pre-Connectorized Assemblies** | |
| **Fiber*Express* Bar Multimode, OM1, 62.5 µm** | |
| 12 ST Type, MPO (m), 1 m | **AX250001** |
| 6 SC Duplex, MPO (m), 12 fibers, 1 m | **AX250005** |
| 6 MT-RJ, MPO (m), 12 fibers, 1 m | **AX250178** |
| 12 LC, MPO (m), 1 m | **AX250539** |
| **Fiber*Express* Bar Multimode, OM2, 50 µm** | |
| 12 ST Type, MPO (m), 1 m | **AX250052** |
| 6 SC Duplex, MPO (m), 12 fibers, 1 m | **AX250054** |
| 6 MT-RJ, MPO (m), 12 fibers, 1 m | **AX250179** |
| 12 LC, MPO (m), 1 m | **AX250540** |
| **Fiber*Express* Bar Multimode, OM3, 50 µm** | |
| 12 ST Type, MPO (m), 1 m | **AX250459** |
| 6 SC Duplex , MPO (m), 12 fibers, 1 m | **AX250460** |
| 6 MT-RJ, MPO (m), 12 fibers, 1 m | **AX250461** |
| 12 LC, MPO (m), 1 m | **AX250541** |
| **Fiber*Express* Bar Single-mode Enhanced, OS2** | |
| 12 ST Type, MPO (m), 1 m | **AX250009** |
| 6 SC Duplex , MPO (m), 12 fibers, 1 m | **AX250011** |
| 6 MT-RJ, MPO (m), 12 fibers, 1 m | **AX250180** |
| 12 LC, MPO (m), 1 m | **AX250542** |
| Also available for 6 fibers, please contact Customer Service for more details. | |
| **Fiber*Express* Bar Accessories** | |
| MPO Adapter (6 or 12 fibers) included with each Fiber*Express* Bar (1 m - Male) | **MX100154** |

## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures

### The Fiber*Express* Ultra Patch Panel System

Belden's Fiber*Express* Ultra Patch Panel System is ultra-rich in user-friendly features that elevate fiber patching to a whole new level. Designed to meet the needs of IT managers and their technical teams, Belden built the system around three core concepts:

- Ultra high density
- Ultra-easy installation and maintenance
- Ultra flexibility, scalability and manageability

The result is a fiber patching system that is easy to deploy, operate and maintain, while ensuring maximum uptime, uninterrupted availability and superior performance – whether in the data center, LAN backbone or storage area network (SAN). The system's modular design provides optimal flexibility and scalability to "future proof" your investment and to provide a low total cost of ownership when compared with other fiber patching systems.

### Fiber*Express* Ultra Patch Panels

Fiber*Express* Ultra Patch Panels provide ultra high density connection while facilitating cable routing and patch cord management. Available in Rack-mount and Wall-mount versions, the Patch Panels are totally modular and scalable to accommodate future fiber build-out. Wall-mount version accommodates two (2) Frames or Cassettes for a maximum capacity of 48 fibers (LC or MT-RJ). Rack-mount version is available in two sizes: 1U and 4U. 1U unit accommodates four (4) Frames or Cassettes for a maximum of 96 fibers (LC or MT-RJ); 4U unit accommodates 12 Frames or Cassettes for a maximum of 288 fibers (LC or MT-RJ).

### Fiber*Express* Ultra Bezels and Frames

Fiber*Express* Ultra Frames – typically preloaded with Bezels – provide streamlined patch cord management and optimal design flexibility and single- or dual-connector options. A unique (patent pending) mechanism allows the Bezel to slide out 1-inch (2.5 cm) from the frame, providing easy connector access and patch cord management. Available in a wide variety of connector types, in both multimode and single-mode versions, and in the newly recognized TIA/EIA multimode colors. The Bezels and Frames can be easily inserted or removed from the panel for enhanced maintenance capabilities. Each Frame can accommodate a maximum of six (6) Bezels. Frames with pigtails come loaded with connector Bezels and 2-meter pigtails.

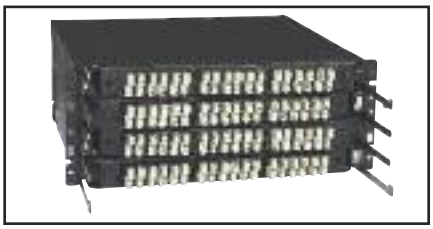
### Fiber*Express* Ultra Pre-terminated Cassettes

Fiber*Express* Ultra Cassettes comes fully loaded with connector Bezels and pre-terminated with MPO connection(s) at the rear of the Cassette. In combination with the Bezels and the 1-inch pull-out feature, the Cassette provides easy connection access. Cassettes can also be easily inserted or removed from the Patch Panels for enhanced maintenance capabilities. The Cassette's rear assembly and cover is available separately to provide additional installation capability.

### Fiber*Express* Ultra Splice Tray Kits and Enclosures

Fiber*Express* Ultra Splice Tray Kits offer splicing solutions that support, protect and organize optical fibers to make splicing faster, easier to perform, more secure and error-free. Available in three sizes: each Splice Tray Kit contains one (1) organizer tray, fiber support and connection tubes, cable ties and identification markers. The Kits feature rugged 20-gauge steel construction and a Lexan cover.

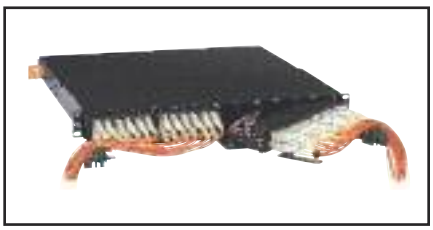
The Splice Enclosures provide a convenient area for bonding, grounding and termination of the cables, while maintaining the proper bend radius and intuitive cable routing. Available in Rack- and Wall-mount versions, they come equipped with all the hardware necessary to organize and protect cables and splices.



AX103267, Fiber*Express* Ultra 4U Rack Mount Patch Panel

AX103928, Fiber*Express* Ultra Stackable Wall-mount Patch Panel

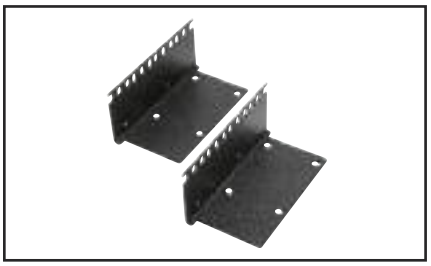
Fiber*Express* Ultra Wall-mount Patch Panel with Spacer



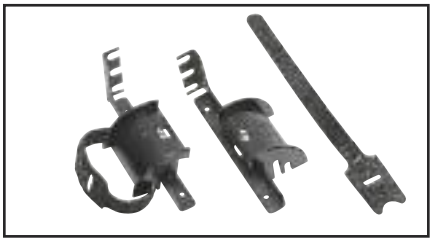
AX103143, Fiber*Express* Ultra 1U Patch Panel

## Fiber*Express* Ultra Patch Panels

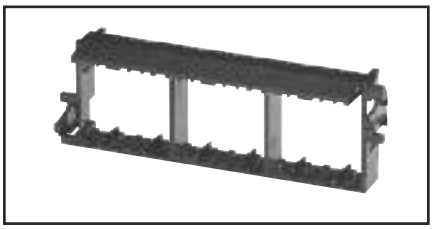
Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)



AX103910, Fiber*Express* Ultra 4U 23" Extension Mounting Brackets



AX103272, Fiber*Express* Ultra Patch Cord Management Brackets



AX103916, Fiber*Express* Ultra Empty Frame

Fiber*Express* Ultra Frame with Pigtails

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Ultra System** | |
| **Rack-mount Patch Panels/Components** | |
| 1U Patch Panel, 19", Black | AX103143 |
| 4U Patch Panel, 19", Black | AX103267 |
| 4U 23" Extension Brackets, Black | AX103910 |
| Patch Cord Management Brackets, Black | AX103272 |
| 1U Patch Cord Cover | AX103915 |
| **Wall-mount Patch Panels/Components** | |
| Stackable Patch Panel, Black | AX103928 |
| 2-inch Spacer, Black | AX103932 |
| Door Lock Kit | AX103934 |

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| **Fiber*Express* Ultra System** | | | | |
| **Frames - ST Type, SC Simplex, SC Duplex, LC Duplex, MT-RJ, FC** | | | | |
| ST Type, 6 fibers | AX103382 | – | – | AX103467 |
| ST Type, 12 fibers | AX103403 | – | – | AX103493 |
| SC Simplex, 6 fibers | AX103383 | AX103439 | AX103453 | AX103468 |
| SC Simplex w/shutter, 6 fibers | AX103384 | AX103440 | AX103454 | AX103469 |
| SC Simplex, 12 fibers | AX103404 | AX103445 | AX103459 | AX103494 |
| SC Duplex, 6 fibers | AX103385 | AX103441 | AX103455 | AX103470 |
| SC Duplex w/shutter, 6 fibers | AX103386 | AX103442 | AX103456 | AX103471 |
| SC Duplex, 12 fibers | AX103406 | AX103447 | AX103461 | AX103496 |
| LC Duplex, 6 fibers | AX103387 | AX103443 | AX103457 | AX103476 |
| LC Duplex w/shutter, 6 fibers | AX103388 | AX103444 | AX103458 | AX103477 |
| LC Duplex, 12 fibers | AX103408 | AX103449 | AX103463 | AX103502 |
| LC Duplex w/shutter, 12 fibers | AX103409 | AX103450 | AX103464 | AX103503 |
| LC Duplex, 24 fibers | AX103424 | AX103451 | AX103465 | AX103519 |
| MT-RJ, 6 fibers | AX103389 | – | – | AX103859 |
| MT-RJ, 12 fibers | AX103410 | – | – | AX103860 |
| MT-RJ, 24 fibers | AX103426 | – | – | AX103861 |
| FC, 6 fibers | AX103390 | – | – | AX103480 |
| FC, 12 fibers | AX103411 | – | – | AX103506 |
| Frame w/6 blanks | AX103862 | | | |
| Frame, empty | AX103916 | | | |
| Cassette Rear Assembly | AX103917 | | | |
| Universal Frame w/Cassette Rear Assembly | AX103918 | | | |

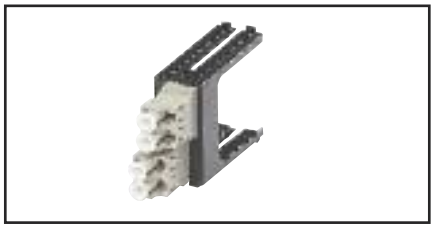
## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)

| Description | Belden Part Number Single-mode Enhanced, OS2 |
|---|---|
| **Fiber*Express* Ultra System** | |
| **Frames - SP APC Simplex, SC APC Duplex, LC APC** | |
| SC APSC APC Simplex, 6 fibers | **AX103472** |
| SC APC Simplex w/shutter, 6 fibers | **AX103473** |
| SC APC Simplex, 12 fibers | **AX103498** |
| SC APC Duplex, 6 fibers | **AX103474** |
| SC APC Duplex w/shutter, 6 fibers | **AX103475** |
| SC APC Duplex, 12 fibers | **AX103500** |
| LC APC Duplex, 6 fibers | **AX103478** |
| LC APC Duplex w/shutter, 6 fibers | **AX103479** |
| LC APC Duplex, 12 fibers | **AX103504** |
| LC APC Duplex w/shutter, 12 fibers | **AX103505** |
| LC APC Duplex, 24 fibers | **AX103521** |

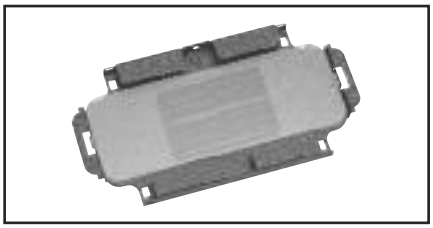
| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| **Fiber*Express* Ultra System** | | | | |
| **Frames w/pigtails - SC Simplex, SC Duplex, LC Duplex** | | | | |
| SC Simplex w/pigtails, 6 fibers | **AX103535** | **AX103549** | **AX103563** | **AX103591** |
| SC Simplex w/shutter & pigtails, 6 fibers | **AX103536** | **AX103550** | **AX103564** | **AX103592** |
| SC Simplex w/pigtails, 12 fibers | **AX103541** | **AX103555** | **AX103569** | **AX103603** |
| SC Duplex w/pigtails, 6 fibers | **AX103537** | **AX103551** | **AX103565** | **AX103593** |
| SC Duplex w/shutter & pigtails, 6 fibers | **AX103538** | **AX103552** | **AX103566** | **AX103594** |
| SC Duplex w/pigtails, 12 fibers | **AX103543** | **AX103557** | **AX103571** | **AX103605** |
| LC Duplex w/pigtails, 6 fibers | **AX103539** | **AX103553** | **AX103567** | **AX103599** |
| LC Duplex w/shutter & pigtails, 6 fibers | **AX103540** | **AX103554** | **AX103568** | **AX103600** |
| LC Duplex w/pigtails, 12 fibers | **AX103545** | **AX103559** | **AX103573** | **AX103611** |
| LC Duplex w/shutter & pigtails, 12 fibers | **AX103546** | **AX103560** | **AX103574** | **AX103612** |
| LC Duplex w/pigtails, 24 fibers | **AX103547** | **AX103561** | **AX103575** | **AX103615** |

AX103424, Fiber*Express* Ultra Loaded Frame



AX103283, Fiber*Express* Ultra Bezel

AX103683, Fiber*Express* Ultra Cassette



AX103912, Fiber*Express* Ultra 8" Splice Tray Kit

## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)

| Description | Belden Part Number Single-mode Enhanced, OS2 |
|---|---|
| **Fiber*Express* Ultra System** | |
| **Frames w/pigtails - SC APC Simplex, SC APC Duplex, LC APC Duplex** | |
| SC APC Simplex w/pigtails, 6 fibers | **AX103595** |
| SC APC Simplex w/shutter & pigtails, 6 fibers | **AX103596** |
| SC APC Simplex w/pigtails, 12 fibers | **AX103607** |
| SC APC Duplex w/pigtails, 6 fibers | **AX103597** |
| SC APC Duplex w/shutter & pigtails, 6 fibers | **AX103598** |
| SC APC Duplex w/pigtails, 12 fibers | **AX103609** |
| LC APC Duplex w/pigtails, 6 fibers | **AX103601** |
| LC APC Duplex w/shutter & pigtails, 6 fibers | **AX103602** |
| LC APC Duplex w/pigtails, 12 fibers | **AX103613** |
| LC APC Duplex w/shutter & pigtails, 12 fibers | **AX103614** |
| LC APC Duplex w/pigtails, 24 fibers | **AX103617** |

## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| **Fiber*Express* Ultra System** | | | | |
| **Bezels – ST Type, SC Simplex, SC Duplex, LC Duplex, MT-RJ, FC Simplex** | | | | |
| ST Type, 1-adapter | **AX103276** | – | – | **AX103332** |
| ST Type, 2-adapter | **AX103277** | – | – | **AX103333** |
| SC Simplex, 1-adapter | **AX103278** | **AX103316** | **AX103324** | **AX103334** |
| SC Simplex w/shutter, 1-adapter | **AX103279** | **AX103317** | **AX103325** | **AX103335** |
| SC Simplex, 2-adapter | **AX103853** | **AX103854** | **AX103855** | **AX103342** |
| SC Duplex, 1-adapter | **AX103280** | **AX103318** | **AX103326** | **AX103336** |
| LC Duplex, 1-adapter | **AX103282** | **AX103320** | **AX103328** | **AX103346** |
| LC Duplex, 2-adapter | **AX103283** | **AX103322** | **AX103330** | **AX103350** |
| LC Duplex w/shutter, 1-adapter | **AX103284** | **AX103321** | **AX103329** | **AX103347** |
| MT-RJ , 1 adapter | **AX103286** | – | – | **AX103354** |
| MT-RJ , 2 adapter | **AX103287** | – | – | **AX103355** |
| FC Simplex, 1-adapter | **AX103288** | – | – | **AX103356** |
| FC Simplex, 2-adapter | **AX103289** | – | – | **AX103357** |
| MPO, 1-adapter | **AX103290** | | | |
| Blank | **AX103291** | | | |

| Description | Belden Part Number Single-mode Enhanced, OS2 |
|---|---|
| **Fiber*Express* Ultra System** | |
| **Bezels - SC APC Simplex, SC APC Duplex, LC APC Duplex** | |
| SC APC Simplex, 1-adapter | **AX103338** |
| SC APC Simplex w/shutter, 1-adapter | **AX103339** |
| SC APC Simplex, 2-adapter | **AX103344** |
| SC APC Duplex, 1-adapter | **AX103340** |
| LC APC Duplex, 1-adapter | **AX103348** |
| LC APC Duplex w/shutter, 1-adapter | **AX103349** |
| LC APC Duplex, 2-adapter | **AX103352** |

## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)

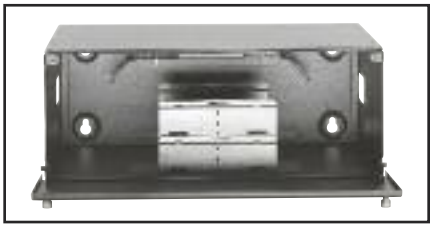
| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Multimode, OM1, 62.5 µm | Multimode, OM2, 50 µm | Multimode, OM3, 50 µm | Single-mode Enhanced, OS2 |
| **Fiber*Express* Ultra System** | | | | |
| **Cassettes** | | | | |
| ST-MPO, 6 fibers | **AX103619** | **AX103673** | **AX103691** | **AX103799** |
| ST-MPO, 12 fibers | **AX103638** | **AX103680** | **AX103710** | **AX103818** |
| SC Duplex-MPO, 6 fibers | **AX103620** | **AX103674** | **AX103692** | **AX103800** |
| SC Duplex w/shutter-MPO, 6 fibers | **AX103621** | **AX103675** | **AX103693** | **AX103801** |
| SC Duplex-MPO, 12 fibers | **AX103639** | **AX103681** | **AX103711** | **AX103819** |
| LC Duplex-MPO, 6 fibers | **AX103622** | **AX103676** | **AX103694** | **AX103802** |
| LC Duplex w/shutter-MPO, 6 fibers | **AX103623** | **AX103677** | **AX103695** | **AX103803** |
| LC Duplex-MPO, 12 fibers | **AX103641** | **AX103683** | **AX103713** | **AX103821** |
| LC Duplex w/shutter-MPO, 12 fibers | **AX103642** | **AX103684** | **AX103714** | **AX103822** |
| LC Duplex-MPO, 24 fibers | **AX103657** | **AX103687** | **AX103729** | **AX103837** |
| MT-RJ(M)-MPO, 6 fibers | **AX103625** | **AX103679** | **AX103697** | **AX103805** |
| MT-RJ(M)-MPO, 12 fibers | **AX103644** | **AX103686** | **AX103716** | **AX103824** |
| MT-RJ(M)-MPO, 24 fibers | **AX103660** | **AX103690** | **AX103732** | **AX103840** |

## Fiber*Express* Ultra Patch Panels

Wall- and Rack-Mount Patch Panels, Bezels, Frames, Cassettes, Splice Tray Kits and Enclosures (continued)

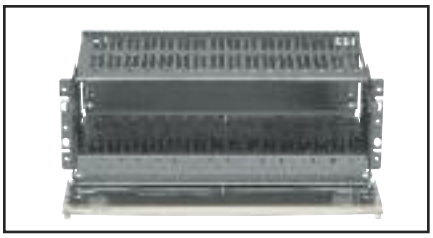
| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Ultra System** | |
| **Wall- and Rack-mount Splice Enclosures** | |
| Wall-mount Splice Enclosure, Black | **AX103930** |
| Rack-mount Splice Enclosure, 4U, Black | **AX103900** |
| **Splice Kits/Lock** | |
| 8" Splice Tray Kit | **AX103912** |
| 10" Splice Tray Kit | **AX103913** |
| 12" Splice Tray Kit | **AX103914** |
| Lock (for Wall-mount Splice Enclosure) | **AX103934** |
| Patch Panel and Splice Enclosure Flex Kit | **AX104002** |

AX103930, Fiber*Express* Ultra Wall-mount Splice Enclosure

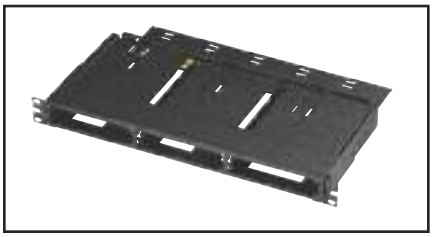


AX103900, Fiber*Express* Ultra Rack-mount Enclosure (with Splice Tray Caddy), 4U

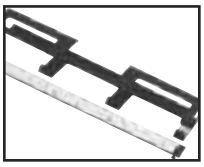
# Fiber*Express* Manager



AX100935, Fiber*Express* Manager Shelf

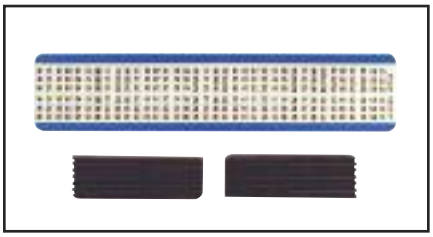


AX101943, Fiber*Express* Manager 1U Rack Mount Patch Panel



AX102032, Fiber*Express* Manager 1U Cable Management Accessory

AX100945, Flex Kit



AX101098, Splice Holder Kit

## Fiber*Express* Manager Shelf

**Fiber*Express* Modules** are rack-mounted using Fiber*Express* Manager Shelves. The shelves provide the total system with extra high connection density while facilitating cable routing and patch cord management. For 19- or 23-inch rack: 19 in. shelf holds up to 12 modules; 23 in. shelf holds up to 16 modules.

## Fiber*Express* Manager 1U

**The Fiber*Express* Manager 1U Rack Mount Patch Panel** is a low-cost, compact assembly designed for interconnection or splicing of optical fiber cables, using up to three Fiber*Express* Manager Modules. The low-profile design minimizes rack space to only 45 mm (1.75 in.). An optional Fiber*Express* Manager 1U Cable Management Accessory is also available.

## Fiber*Express* Manager Connector Module

**The Connector Module** is the basic building block of the Fiber*Express* Manager. It is designed with a unique release mechanism that allows it to slide from the shelf like a PC card, easing management of patch cords.

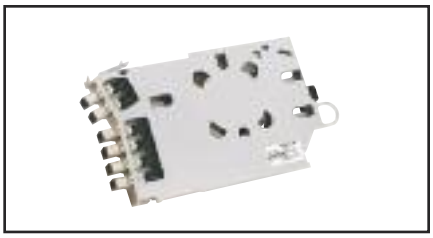
**The Flex Kit** contains tubes and manifolds designed to split cables into individual fiber strands, and is suitable for 6 fibers up to 12 fibers. It is necessary for use with loose tube cables or when the fiber cable count does not match the number of connections in the Fiber*Express* Manager Connector Module. The Flex Kit tubes help to maintain proper fiber bend radius. One kit is required per 12 modules (one 19 in. shelf).

A **Splice Holder Kit** can be used to hold fusion or mechanical splices. Each splice holder can handle up to 6 splices.

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Manager** | |
| Shelf, 23 in., 10.9 kg (24 lb) | **AX100935** |
| Shelf, 19 in., 8.2 kg (18 lb) | **AX101085** |
| 1U, Rack Mount Patch Panel, 19 in., 5 kg (11 lb) | **AX101943** |
| 1U, Cable Management Accessory, 19 in., 1 kg (2 lb) | **AX102032** |
| Flex Kit | **AX100945** |
| Splice Holder Kit | **AX101098** |

## Fiber*Express* Manager

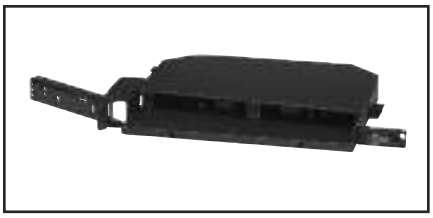
| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Manager** | |
| **Fiber*Express* Manager Connector Module** | |
| Metal Sleeve, Multimode, ST Type, 6 fibers | **AX101089** |
| Metal Sleeve, Multimode, SC Duplex, 6 fibers | **AX101092** |
| Zirconia Ceramic, Single-mode, ST Type, 6 fibers | **AX100936** |
| Zirconia Ceramic, Single-mode, SC Simplex, 6 fibers | **AX100943** |
| Zirconia Ceramic, Single-mode, SC Duplex, 6 fibers | **AX100944** |
| Metal Sleeve, Multimode, ST Type, 12 fibers | **AX101187** |
| Metal Sleeve, Multimode, SC Duplex, 12 fibers | **AX101714** |
| Metal Sleeve, Multimode, SC Duplex (ST in), 12 fibers | **AX101120** |
| Metal Sleeve, Multimode, LC, 12 fibers | **AX101528** |
| Zirconia Ceramic, Single-mode, ST Type, 12 fibers | **AX101186** |
| Zirconia Ceramic, Single-mode, SC Duplex, 12 fibers | **AX101713** |
| Zirconia Ceramic, Single-mode, SC Duplex (ST in),12 fibers | **AX101119** |
| Zirconia Ceramic, Single-mode, LC, 12 fibers | **AX101527** |
| Zirconia Ceramic, Single-mode, SC Duplex, 12 UPC pigtails | **AX101715** |
| Metal Sleeve, Multimode, LC, 24 fibers | **AX102306** |
| Zirconia Ceramic, Single-mode, LC, 24 fibers | **AX102305** |
| Zirconia Ceramic, Single-mode/Multimode, FC, 6 fibers | **AX100937** |
| Multimode 62.5 µm, MPO(m)-ST Type, 12 pre-terminated | **AX101189** |
| Multimode 62.5 µm, MPO(m)-SC Duplex, 12 pre-terminated | **AX101091** |
| Multimode 62.5 µm, MPO(m)-MT-RJ(m), 12 pre-terminated | **AX101525** |
| Multimode 62.5 µm, MPO(m)-LC, 12 pre-terminated | **AX101530** |
| Multimode 62.5 µm, MPO(m)-LC, 24 pre-terminated | **AX102309** |
| Multimode 50 µm, MPO(m)-ST Type, 12 pre-terminated | **AX101190** |
| Multimode 50 µm, MPO(m)-SC Duplex, 12 pre-terminated | **AX101114** |
| Multimode 50 µm, MPO(m)-MT-RJ(m), 12 pre-terminated | **AX101526** |
| Multimode 50 µm, MPO(m)-LC, 12 pre-terminated | **AX101531** |
| Multimode 50 µm, MPO(m)-LC, 24 pre-terminated | **AX102308** |
| Single-mode, MPO(m)-ST Type, 12 pre-terminated | **AX101188** |
| Single-mode, MPO(m)-SC Duplex, 12 pre-terminated | **AX101090** |
| Single-mode, MPO(m)-MT-RJ(m), 12 pre-terminated | **AX101524** |
| Single-mode, MPO(m)-LC, 12 pre-terminated | **AX101529** |
| Single-mode, MPO(m)-LC, 24 pre-terminated | **AX102307** |
| MT-RJ, Beige, Multimode, FC, 12 fibers | **AX101096** |
| MT-RJ, Blue, Single-mode, FC, 12 fibers | **AX101581** |



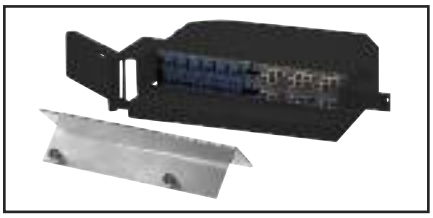
AX101525, Connector Module Pre-terminated MPO-MT-RJ

## Fiber*Express* Patch Panels

Rack-Mount Patch Panels



AX100041, Fiber*Express* 12/24 Port (1U) Rack-Mount Patch Panel



AX100068, Fiber*Express* 24/48 Port (2U) Rack-Mount Patch Panel

AX100077, Fiber*Express* (3U) Rack-Mount Patch Panel

AX100116, Fiber*Express* 48/96 Port (4U) Rack-Mount Patch Panel

**The Fiber*Express* 1U Rack-Mount Patch Panels** are equipped with a special hinge that allows easy access to the rear of the patch panel without disturbing the optical fiber cable. A specially designed front panel allows connector protection and easy routing of optical fiber patch cords. The Fiber*Express* Rack-Mount Patch Panels are also compatible with our 203 mm (8 in.) Splice Organizer Trays. This allows the optical fiber cable to be either terminated with fiber single-ended patch cords or field-installable connectors. The patch panels can be used with ST Type, SC, 568SC, FC, LC or MT-RJ adapters strips (ordered separately).

The Fiber*Express* 1U Rack-Mount Patch Panel is a low-cost, compact assembly designed for interconnection or splicing of optical fiber cables, from 12 up to 48 fibers if MT-RJ or LC double density adapter strips are used. The low-profile design minimizes rack space to only 45 mm (1.75 in.). An optional smoked Plexiglass front cover is also available.

**The Fiber*Express* 4U Rack-Mount Patch Panel** is an economical solution for the protection of optical fiber terminations and splices, up to 192 optical fibers if using MT-RJ or LC connectors. The connector panel, accepting the Universal Adapter Strips, is located inside the enclosure and swings out (left or right) to give easy access to the cable and splices.

The Fiber*Express* 4U Rack-Mount Patch Panel is a compact enclosure for the interconnection or splicing of optical fiber cables. The low-profile design minimizes required rack space to 178 mm (7 in.). It can be used with ST Type, SC, 568SC, MT-RJ, LC and FC adapter strips (ordered separately).

**The Fiber*Express* 2U Rack-Mount Patch Panel** offers a high fiber capacity, 96 fibers if using double density MT-RJ or LC adapter strips. The Fiber*Express* 2U comes equipped with a smoked Plexiglass front cover that protects fiber connections while allowing for quick visual inspection.

**The Fiber*Express* 3U Rack-Mount Patch Panel** can accommodate up to 96 optical fiber connections using MT-RJ or LC connectors. The connector panel is mounted on a sliding drawer for easy access to the back side (cable side) of the panel. The Fiber*Express* 3U Rack-Mount Patch Panel can be used with either optical fiber single-ended patch cords or field-installable connectors. If optical single-ended patch cords are to be used, organizer trays are easily accessible via the removable front access pull-out drawer. (Trays must be ordered separately.)

The Fiber*Express* 3U Rack Mount Patch Panel is a compact enclosure for the cross-connection, interconnection or splicing of optical fiber cables. The low-profile design minimizes required rack space to 127 mm (5 in.). It is compatible with ST Type, SC, 568SC, MT-RJ, LC and FC adapter strips (ordered separately).

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Patch Panels** | |
| **Rack Mount Panels** | |
| Rack-Mount Patch Panel 1U* | **AX100041** |
| Rack-Mount Patch Panel 2U* | **AX100068** |
| Rack-Mount Patch Panel 3U | **AX100077** |
| Rack-Mount Patch Panel 4U | **AX100116** |

If Single-ended patch cords are to be spliced to the fiber cable, don't forget to order Splice Organizer Trays or Kits. Both these and the Universal Adapter Strips can be ordered in the Fiber*Express* Accessories section.

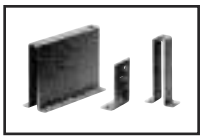
*IMPORTANT: The Fiber*Express* 1U accepts two (2) 203 mm (8 in.) splice trays. The 2U accepts four (4) 203 mm (8 in.) splice trays.

# Fiber*Express* Patch Panels

Rack-Mount Accessories and Wall-Mount Patch Panels

## Fiber*Express* Rack-Mount Patch Panels 1U and 2U Accessories

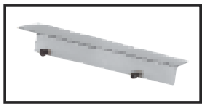
The accessories provide additional panel mounting flexibility for racks, cabinets and cable entry.



AX101799, 127 mm (5 in.) Universal Offset Bracket Kit, for 19 in. and 23 in. Racks 1U

AX100046, Right Side Cable Entry Bracket for 1U

AX101801, 23 in. Rack Universal Extension Bracket for 1U and 2U



AX100045, Front Cover for 1U

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Patch Panels** | |
| **Rack Mount Accessories** (1U and 2U) | |
| 127 mm (5 in.) Universal Offset Bracket Kit: | |
| for 19 in. and 23 in. racks (1U), Black | **AX101799** |
| for 19 in. and 23 in. racks (2U), Black | **AX101797** |
| 23 in. Universal extension bracket, Black | **AX101801** |
| Right side cable entry bracket (1U), Black | **AX100046** |
| Right side cable entry bracket (2U), Black | **AX100073** |
| Front Cover (1U), Smoked Plexiglass | **AX100045** |

## Fiber*Express* Wall-Mount Patch Panel

The Fiber*Express* Wall-Mount Patch Panel Series is an economical solution for the protection of optical fiber terminations and splices in hostile environments.

Using the Fiber*Express* Universal Adapter Strips (ordered separately), the Wall-Mount Patch Panels allow for flexible and customized patch panel design. They are compatible with most industry standard connections: ST Type, SC, 568SC, MT-RJ, LC and FC.

The Fiber*Express* Wall Mount Patch Panels have an ergonomic design, rugged construction and compact assemblies to effectively protect your optical fiber terminations and splices.

AX100495, Small Wall Mount

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Patch Panels** | |
| **Wall-Mount** | |
| Small, Black | **AX100495** |
| Medium, Black | **AX100540** |
| Large, Black | **AX100542** |

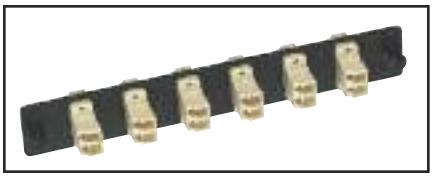
If optical Single-ended patch cords are to be spliced to the fiber cable, don't forget to order Splice Organizer Trays or Kits in Fiber*Express* Accessories section. Universal Adapter Strips can be ordered in Fiber*Express* Patch Panels section.

AX100540, Medium Wall Mount

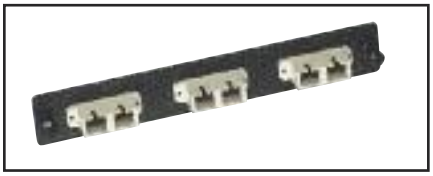
AX100542, Large Wall Mount

# Fiber*Express* Accessories for Fiber*Express* Patch Panels

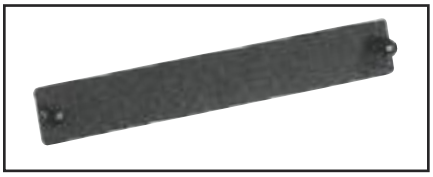
Universal Optical Fiber Adapter Strips and Accessories



AX101729, Adapters loaded with 6 LC Duplex



AX100094, Adapters loaded with 3 SC Duplex



AX100066, Blank Strip

## Optical Fiber Adapter Strips

**Universal Optical Fiber Adapter Strips** are pre-loaded with six (single density) or 12 (double density) adapter sleeves. Two types of adapter sleeves are available: Phosphor Bronze and Zirconia Ceramic. Adapter sleeves are used as the connecting interface between two optical fiber connectors.

A **Blank Adapter Strip** is also available and can be used with any Fiber*Express* Patch Panel to fill in unused adapter strip openings.

## Optical Fiber Accessories

**Optical Fiber Splice Organizer Kits** provide the accessories necessary for installing the Fiber*Express* Patch Panels, as well as other fiber terminals that accommodate the standard Belden organizer tray.

| Description | Belden Part Number | |
|---|---|---|
| | Phosphor Bronze, Multimode | Zirconia Ceramic, Single-mode |
| **Fiber*Express* Optical Fiber Adapter Strips** | | |
| **Single Density, Black** | | |
| Loaded with 6 ST Type Adapters | **AX100088** | **AX100534** |
| Loaded with 3 SC Duplex Adapters | **AX100094** | **AX101407** |
| Loaded with 6 SC Simplex Adapters | **AX100092** | **AX100538** |
| Loaded with 6 LC Duplex Adapters | **AX101729** | **AX101731** |
| Loaded with 6 FC Adapters, Multimode/Single-mode | **AX100536** | |
| MT-RJ, loaded with 6 MT-RJ, Multimode/Single-mode | **AX101115** | |
| **Double Density, Black** | | |
| Loaded with 12 ST Type Adapters | **AX100080** | **AX100528** |
| Loaded with 6 SC Duplex Adapters | **AX100098** | **AX101409** |
| Loaded with 12 SC Simplex Adapters | **AX100084** | **AX100532** |
| Loaded with 12 LC Duplex Adapters | **AX101741** | **AX101743** |
| Loaded with 12 FC Adapters, Multimode/Single-mode | **AX100530** | |
| MT-RJ, loaded with 12 MT-RJ, Multimode/Single-mode | **AX101117** | |
| **Blank Strip** | | |
| Black | **AX100066** | |

## Universal Optical Fiber Adapter Strips and Accessories (continued)

| Description | Belden Part Number |
|---|---|
| **Optical Fiber Splice Organizer Kit** | |
| Splice kit, tray, 203 mm (8 in.) | **A0649869** |
| Splice kit, tray, 305 mm (12 in.) | **A0318904** |
| **Optical Fiber Splice Tray** | |
| Fusion, 203 mm (8 in.) | **A0335015** |
| Fusion, 305 mm (12 in.) | **A0316446** |
| Universal (mechanical or fusion), 203 mm (8 in.) | **AX100079** |
| Universal (mechanical or fusion), 305 mm (12 in.) | **A0394328** |
| Tray Cover, 203 mm (8 in.) | **A0394331** |
| Tray Cover, 305 mm (12 in.) | **A0394330** |
| Fusion Splice Protection 250 µm to 250 µm, Yellow | **AX101169** |
| Fusion Splice Protection 900 µm to 250 µm, Blue | **AX101170** |
| Fusion Splice Protection 900 µm to 900 µm, Green | **AX101171** |

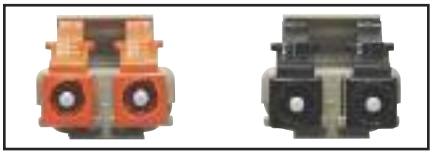
A0649869, Optical Fiber Splice Organizer Kits and Trays

# Fiber*Express* Secure/Keyed LC System

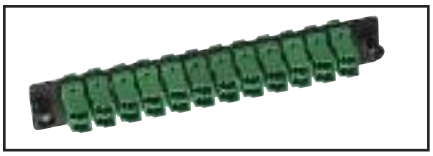
Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors

AX103034, Fiber*Express* Secure/Keyed LC Manager Module

AX102089, Fiber*Express* Secure/Keyed LC Adapter Module



Fiber*Express* Secure/Keyed LC System



AX102120, Fiber*Express* Secure/Keyed LC Adapter Strip

AX102197, Fiber*Express* Secure/Keyed LC Optimax Connector

## Fiber*Express* Secure/Keyed LC System

**The Fiber*Express* Secure/Keyed LC System** allows for physical segregation of networks segments in secure fiber cabling infrastructures. All Secure/ Keyed LC products are available with 12 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 reproduced inside a standard LC connector to violate the network security. All products comply with the FOCIS 10 standard and optical performance exceeds all industry standards for SFF connectors.

**The Secure/Keyed LC Adapter Modules and Adapter Strips** can be used in all mounting hardware for workstation area, Consolidation Point or Telecom Room applications.

The Secure/Keyed LC Patch Cords and Pigtails are offered in Multimode 62.5 µm (OM1), 50 µm (OM2) and laser-optimized 50 µm (OM3) for the most demanding network performance. The Secure/Keyed LC Fiber*Express* Manager Modules can be used in 19- and 23-inch Fiber*Express* Manager Shelves to provide a high-density management system of up to 1920 terminated fibers per rack. The Secure/Keyed LC Fiber*Express* Ultra Frames, Bezels and Cassettes can be used with the Fiber*Express* Ultra Rack- and Wall-mount Patch Panels to provide a high-density patching system that is easy to deploy, operate and maintain, while ensuring maximum uptime, uninterrupted availability and superior performance.

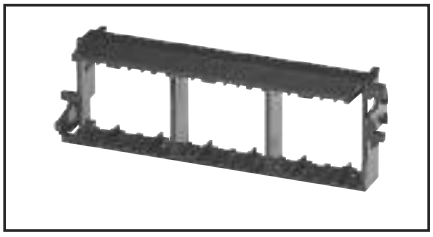
**The Secure/Keyed LC Optimax Field Installable Connectors** are available in Multimode 50 µm laser-optimized and 62.5 µm fiber versions. They are high-quality connectors that use a ceramic ferrule with a physical contact (PC) polish for Multimode connectors.

| Description | Belden Part Number |
|---|---|
| **Fiber*Express* Secure/Keyed LC System** | |
| **Duplex Adapter Modules, Keystone-style** | |
| LC Key1, Red | **AX102422** |
| LC Key2, Green | **AX102423** |
| LC Key3, Yellow | **AX102424** |
| LC Key4, Black | **AX102425** |
| LC Key5, Orange | **AX102426** |
| LC Key6, Blue | **AX102427** |
| LC Key7, Violet | **AX103154** |
| LC Key8, Rose | **AX103155** |
| LC Key9, Aqua | **AX103156** |
| LC KeyA, Brown | **AX103157** |
| LC KeyB, Slate | **AX103158** |
| LC KeyC, White | **AX103159** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Gray Holder | Almond Holder | White Holder | Black Holder |
| **Fiber*Express* Secure/Keyed LC System** | | | | |
| **Duplex Adapter Modules, MDVO-style** | | | | |
| LC Key1, Red | AX102089 | AX102095 | AX102101 | AX102107 |
| LC Key2, Green | AX102090 | AX102096 | AX102102 | AX102108 |
| LC Key3, Yellow | AX102091 | AX102097 | AX102103 | AX102109 |
| LC Key4, Black | AX102092 | AX102098 | AX102104 | AX102110 |
| LC Key5, Orange | AX102093 | AX102099 | AX102105 | AX102111 |
| LC Key6, Blue | AX102094 | AX102100 | AX102106 | AX102112 |
| LC Key7, Violet | AX103010 | AX103016 | AX103022 | AX103028 |
| LC Key8, Rose | AX103011 | AX103017 | AX103023 | AX103029 |
| LC Key9, Aqua | AX103012 | AX103018 | AX103024 | AX103030 |
| LC KeyA, Brown | AX103013 | AX103019 | AX103025 | AX103031 |
| LC KeyB, Slate | AX103014 | AX103020 | AX103026 | AX103032 |
| LC KeyC, White | AX103015 | AX103021 | AX103027 | AX103033 |



Secured/Keyed LC Fiber*Express* Ultra Frame

Secured/Keyed LC Fiber*Express* Ultra Bezel

| Description | Belden Part Number | |
|---|---|---|
| | 12 Fiber | 24 Fiber |
| **Fiber*Express* Secure/Keyed LC System** | | |
| **Adapter Strips** | | |
| LC Key1, Red | AX102119 | AX102125 |
| LC Key2, Green | AX102120 | AX102126 |
| LC Key3, Yellow | AX102121 | AX102127 |
| LC Key4, Black | AX102122 | AX102128 |
| LC Key5, Orange | AX102123 | AX102129 |
| LC Key6, Blue | AX102124 | AX102130 |
| LC Key7, Violet | AX103046 | AX103052 |
| LC Key8, Rose | AX103047 | AX103053 |
| LC Key9, Aqua | AX103048 | AX103054 |
| LC KeyA, Brown | AX103049 | AX103055 |
| LC KeyB, Slate | AX103050 | AX103056 |
| LC KeyC, White | AX103051 | AX103057 |

Secured/Keyed LC Fiber*Express* Ultra Cassette

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | 2 m (6 ft.) | 3 m (10 ft.) | 5 m (16 ft.) |
| **Secure/Keyed Fiber*Express* LC Duplex Patch Cords** (continued) | | | |
| **KeyX-KeyX Multimode, OM1, 62.5 µm** | | | |
| LC Key1-Key1, Red | **AX201365** | **AX201371** | **AX201377** |
| LC Key2-Key2, Green | **AX201366** | **AX201372** | **AX201378** |
| LC Key3-Key3, Yellow | **AX201367** | **AX201373** | **AX201379** |
| LC Key4-Key4, Black | **AX201368** | **AX201374** | **AX201380** |
| LC Key5-Key5, Orange | **AX201369** | **AX201375** | **AX201381** |
| LC Key6-Key6, Blue | **AX201370** | **AX201376** | **AX201382** |
| LC Key7-Key7, Violet | **AX202940** | **AX202946** | **AX202952** |
| LC Key8-Key8, Rose | **AX202941** | **AX202947** | **AX202953** |
| LC Key9-Key9, Aqua | **AX202942** | **AX202948** | **AX202954** |
| LC KeyA-KeyA, Brown | **AX202943** | **AX202949** | **AX202955** |
| LC KeyB-KeyB, Slate | **AX202944** | **AX202950** | **AX202956** |
| LC KeyC-KeyC, White | **AX202945** | **AX202951** | **AX202957** |
| **KeyX-KeyX Multimode, OM2, 50 µm** | | | |
| LC Key1-Key1, Red | **AX201383** | **AX201389** | **AX201395** |
| LC Key2-Key2, Green | **AX201384** | **AX201390** | **AX201396** |
| LC Key3-Key3, Yellow | **AX201385** | **AX201391** | **AX201397** |
| LC Key4-Key4, Black | **AX201386** | **AX201392** | **AX201398** |
| LC Key5-Key5, Orange | **AX201387** | **AX201393** | **AX201399** |
| LC Key6-Key6, Blue | **AX201388** | **AX201394** | **AX201400** |
| LC Key7-Key7, Violet | **AX202958** | **AX202964** | **AX202970** |
| LC Key8-Key8, Rose | **AX202959** | **AX202965** | **AX202971** |
| LC Key9-Key9, Aqua | **AX202960** | **AX202966** | **AX202972** |
| LC KeyA-KeyA, Brown | **AX202961** | **AX202967** | **AX202973** |
| LC KeyB-KeyB, Slate | **AX202962** | **AX202968** | **AX202974** |
| LC KeyC-KeyC, White | **AX202963** | **AX202969** | **AX202975** |
| **KeyX-KeyX Multimode, OM3, 50 µm** | | | |
| LC Key1-Key1, Red | **AX201401** | **AX201407** | **AX201413** |
| LC Key2-Key2, Green | **AX201402** | **AX201408** | **AX201414** |
| LC Key3-Key3, Yellow | **AX201403** | **AX201409** | **AX201415** |
| LC Key4-Key4, Black | **AX201404** | **AX201410** | **AX201416** |
| LC Key5-Key5, Orange | **AX201405** | **AX201411** | **AX201417** |
| LC Key6-Key6, Blue | **AX201406** | **AX201412** | **AX201418** |
| LC Key7-Key7, Violet | **AX202976** | **AX202982** | **AX202988** |
| LC Key8-Key8, Rose | **AX202977** | **AX202983** | **AX202989** |
| LC Key9-Key9, Aqua | **AX202978** | **AX202984** | **AX202990** |
| LC KeyA-KeyA, Brown | **AX202979** | **AX202985** | **AX202991** |
| LC KeyB-KeyB, Slate | **AX202980** | **AX202986** | **AX202992** |
| LC KeyC-KeyC, White | **AX202981** | **AX202987** | **AX202993** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | 2 m (6 ft.) | 3 m (10 ft.) | 5 m (16 ft.) |
| **Secure/Keyed Fiber*Express* LC Duplex Hybrid Patch Cords** (continued) | | | |
| **KeyX-LCD Multimode, OM1, 62.5 µm** | | | |
| LC Key1-LCD, Red | **AX201419** | **AX201425** | **AX201431** |
| LC Key2-LCD, Green | **AX201420** | **AX201426** | **AX201432** |
| LC Key3-LCD, Yellow | **AX201421** | **AX201427** | **AX201433** |
| LC Key4-LCD, Black | **AX201422** | **AX201428** | **AX201434** |
| LC Key5-LCD, Orange | **AX201423** | **AX201429** | **AX201435** |
| LC Key6-LCD, Blue | **AX201424** | **AX201430** | **AX201436** |
| LC Key7-LCD, Violet | **AX202994** | **AX203000** | **AX203006** |
| LC Key8-LCD, Rose | **AX202995** | **AX203001** | **AX203007** |
| LC Key9-LCD, Aqua | **AX202996** | **AX203002** | **AX203008** |
| LC KeyA-LCD, Brown | **AX202997** | **AX203003** | **AX203009** |
| LC KeyB-LCD, Slate | **AX202998** | **AX203004** | **AX203010** |
| LC KeyC-LCD, White | **AX202999** | **AX203005** | **AX203011** |
| **KeyX-LCD Multimode, OM2, 50 µm** | | | |
| LC Key1-LCD, Red | **AX201437** | **AX201443** | **AX201449** |
| LC Key2-LCD, Green | **AX201438** | **AX201444** | **AX201450** |
| LC Key3-LCD, Yellow | **AX201439** | **AX201445** | **AX201451** |
| LC Key4-LCD, Black | **AX201440** | **AX201446** | **AX201452** |
| LC Key5-LCD, Orange | **AX201441** | **AX201447** | **AX201453** |
| LC Key6-LCD, Blue | **AX201442** | **AX201448** | **AX201454** |
| LC Key7-LCD, Violet | **AX203012** | **AX203018** | **AX203024** |
| LC Key8-LCD, Rose | **AX203013** | **AX203019** | **AX203025** |
| LC Key9-LCD, Aqua | **AX203014** | **AX203020** | **AX203026** |
| LC KeyA-LCD, Brown | **AX203015** | **AX203021** | **AX203027** |
| LC KeyB-LCD, Slate | **AX203016** | **AX203022** | **AX203028** |
| LC KeyC-LCD, White | **AX203017** | **AX203023** | **AX203029** |
| **KeyX-LCD Multimode, OM3, 50 µm** | | | |
| LC Key1-LCD, Red | **AX201455** | **AX201461** | **AX201467** |
| LC Key2-LCD, Green | **AX201456** | **AX201462** | **AX201468** |
| LC Key3-LCD, Yellow | **AX201457** | **AX201463** | **AX201469** |
| LC Key4-LCD, Black | **AX201458** | **AX201464** | **AX201470** |
| LC Key5-LCD, Orange | **AX201459** | **AX201465** | **AX201471** |
| LC Key6-LCD, Blue | **AX201460** | **AX201466** | **AX201472** |
| LC Key7-LCD, Violet | **AX203030** | **AX203036** | **AX203042** |
| LC Key8-LCD, Rose | **AX203031** | **AX203037** | **AX203043** |
| LC Key9-LCD, Aqua | **AX203032** | **AX203038** | **AX203044** |
| LC KeyA-LCD, Brown | **AX203033** | **AX203039** | **AX203045** |
| LC KeyB-LCD, Slate | **AX203034** | **AX203040** | **AX203046** |
| LC KeyC-LCD, White | **AX203035** | **AX203041** | **AX203047** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | 2 m (6 ft.) | 3 m (10 ft.) | 5 m (16 ft.) |
| **Secure/Keyed Fiber*Express* LC Duplex Hybrid Patch Cords** (continued) | | | |
| **KeyX-SCD Multimode, OM1, 62.5 µm** | | | |
| LC Key1-SCD, Red | **AX201473** | **AX201479** | **AX201485** |
| LC Key2-SCD, Green | **AX201474** | **AX201480** | **AX201486** |
| LC Key3-SCD, Yellow | **AX201475** | **AX201481** | **AX201487** |
| LC Key4-SCD, Black | **AX201476** | **AX201482** | **AX201488** |
| LC Key5-SCD, Orange | **AX201477** | **AX201483** | **AX201489** |
| LC Key6-SCD, Blue | **AX201478** | **AX201484** | **AX201490** |
| LC Key7-SCD, Violet | **AX203048** | **AX203054** | **AX203060** |
| LC Key8-SCD, Rose | **AX203049** | **AX203055** | **AX203061** |
| LC Key9-SCD, Aqua | **AX203050** | **AX203056** | **AX203062** |
| LC KeyA-SCD, Brown | **AX203051** | **AX203057** | **AX203063** |
| LC KeyB-SCD, Slate | **AX203052** | **AX203058** | **AX203064** |
| LC KeyC-SCD, White | **AX203053** | **AX203059** | **AX203065** |
| **KeyX-SCD Multimode, OM2, 50 µm** | | | |
| LC Key1-SCD, Red | **AX201491** | **AX201497** | **AX201503** |
| LC Key2-SCD, Green | **AX201492** | **AX201498** | **AX201504** |
| LC Key3-SCD, Yellow | **AX201493** | **AX201499** | **AX201505** |
| LC Key4-SCD, Black | **AX201494** | **AX201500** | **AX201506** |
| LC Key5-SCD, Orange | **AX201495** | **AX201501** | **AX201507** |
| LC Key6-SCD, Blue | **AX201496** | **AX201502** | **AX201508** |
| LC Key7-SCD, Violet | **AX203066** | **AX203072** | **AX203078** |
| LC Key8-SCD, Rose | **AX203067** | **AX203073** | **AX203079** |
| LC Key9-SCD, Aqua | **AX203068** | **AX203074** | **AX203080** |
| LC KeyA-SCD, Brown | **AX203069** | **AX203075** | **AX203081** |
| LC KeyB-SCD, Slate | **AX203070** | **AX203076** | **AX203082** |
| LC KeyC-SCD, White | **AX203071** | **AX203077** | **AX203083** |
| **KeyX-SCD Multimode, OM3, 50 µm** | | | |
| LC Key1-SCD, Red | **AX201509** | **AX201515** | **AX201521** |
| LC Key2-SCD, Green | **AX201510** | **AX201516** | **AX201522** |
| LC Key3-SCD, Yellow | **AX201511** | **AX201517** | **AX201523** |
| LC Key4-SCD, Black | **AX201512** | **AX201518** | **AX201524** |
| LC Key5-SCD, Orange | **AX201513** | **AX201519** | **AX201525** |
| LC Key6-SCD, Blue | **AX201514** | **AX201520** | **AX201526** |
| LC Key7-SCD, Violet | **AX203084** | **AX203090** | **AX203096** |
| LC Key8-SCD, Rose | **AX203085** | **AX203091** | **AX203097** |
| LC Key9-SCD, Aqua | **AX203086** | **AX203092** | **AX203098** |
| LC KeyA-SCD, Brown | **AX203087** | **AX203093** | **AX203099** |
| LC KeyB-SCD, Slate | **AX203088** | **AX203094** | **AX203100** |
| LC KeyC-SCD, White | **AX203089** | **AX203095** | **AX203101** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | Multimode, OM1, 62.5 µm 2 m (6 ft.) | Multimode, OM2, 50 µm 2 m (6 ft.) | Multimode, OM3, 50 µm 2 m (6 ft.) |
| **Secure/Keyed Fiber*Express* LC Pigtails** | | | |
| **KeyX-Open Multimode** | | | |
| LC Key1-Open, Red | **AX201527** | **AX201533** | **AX201539** |
| LC Key2-Open, Green | **AX201528** | **AX201534** | **AX201540** |
| LC Key3-Open, Yellow | **AX201529** | **AX201535** | **AX201541** |
| LC Key4-Open, Black | **AX201530** | **AX201536** | **AX201542** |
| LC Key5-Open, Orange | **AX201531** | **AX201537** | **AX201543** |
| LC Key6-Open, Blue | **AX201532** | **AX201538** | **AX201544** |
| LC Key7-Open, Violet | **AX203102** | **AX203108** | **AX203114** |
| LC Key8-Open, Rose | **AX203103** | **AX203109** | **AX203115** |
| LC Key9-Open, Aqua | **AX203104** | **AX203110** | **AX203116** |
| LC KeyA-Open, Brown | **AX203105** | **AX203111** | **AX203117** |
| LC KeyB-Open, Slate | **AX203106** | **AX203112** | **AX203118** |
| LC KeyC-Open, White | **AX203107** | **AX203113** | **AX203119** |

| Description | Belden Part Number | |
|---|---|---|
| | 12 Fiber | 24 Fiber |
| **Secure/Keyed LC Fiber*Express* Manager Modules** | | |
| **Modules** | | |
| LC Key1, Red | **AX102113** | **AX102310** |
| LC Key2, Green | **AX102114** | **AX102311** |
| LC Key3, Yellow | **AX102115** | **AX102312** |
| LC Key4, Black | **AX102116** | **AX102313** |
| LC Key5, Orange | **AX102117** | **AX102314** |
| LC Key6, Blue | **AX102118** | **AX102315** |
| LC Key7, Violet | **AX103034** | **AX103040** |
| LC Key8, Rose | **AX103035** | **AX103041** |
| LC Key9, Aqua | **AX103036** | **AX103042** |
| LC KeyA, Brown | **AX103037** | **AX103043** |
| LC KeyB, Slate | **AX103038** | **AX103044** |
| LC KeyC, White | **AX103039** | **AX103045** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | 6 Fiber | 12 Fiber | 24 Fiber |
| **Fiber*Express* Ultra System** | | | |
| **Secure/Keyed LC Frames, Multimode** | | | |
| LC Key1, Red | AX103391 | AX103412 | AX103427 |
| LC Key2, Green | AX103392 | AX103413 | AX103428 |
| LC Key3, Yellow | AX103393 | AX103414 | AX103429 |
| LC Key4, Black | AX103394 | AX103415 | AX103430 |
| LC Key5, Orange | AX103395 | AX103416 | AX103431 |
| LC Key6, Blue | AX103396 | AX103417 | AX103432 |
| LC Key7, Violet | AX103397 | AX103418 | AX103433 |
| LC Key8, Rose | AX103398 | AX103419 | AX103434 |
| LC Key9, Aqua | AX103399 | AX103420 | AX103435 |
| LC KeyA, Brown | AX103400 | AX103421 | AX103436 |
| LC KeyB, Slate | AX103401 | AX103422 | AX103437 |
| LC KeyC, White | AX103402 | AX103423 | AX103438 |

| Description | Belden Part Number | |
|---|---|---|
| | 1-Adapter Bezel | 2-Adapter Bezel |
| **Fiber*Express* Ultra System** | | |
| **Secure/Keyed LC Bezels, Multimode** | | |
| LC Key1, Red | AX103292 | AX103304 |
| LC Key2, Green | AX103293 | AX103305 |
| LC Key3, Yellow | AX103294 | AX103306 |
| LC Key4, Black | AX103295 | AX103307 |
| LC Key5, Orange | AX103296 | AX103308 |
| LC Key6, Blue | AX103297 | AX103309 |
| LC Key7, Violet | AX103298 | AX103310 |
| LC Key8, Rose | AX103299 | AX103311 |
| LC Key9, Aqua | AX103300 | AX103312 |
| LC KeyA, Brown | AX103301 | AX103313 |
| LC KeyB, Slate | AX103302 | AX103314 |
| LC KeyC, White | AX103303 | AX103315 |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | |
|---|---|---|---|
| | 6 Fiber | 12 Fiber | 24 Fiber |
| **Fiber*Express* Ultra System** | | | |
| **Secure/Keyed LC Cassettes, Multimode** | | | |
| MPO-0M1, K1 Red | **AX103626** | **AX103645** | **AX103661** |
| MPO-0M1, K2 Green | **AX103627** | **AX103646** | **AX103662** |
| MPO-0M1, K3 Yellow | **AX103628** | **AX103647** | **AX103663** |
| MPO-0M1, K4 Black | **AX103629** | **AX103648** | **AX103664** |
| MPO-0M1, K5 Orange | **AX103630** | **AX103649** | **AX103665** |
| MPO-0M1, K6 Blue | **AX103631** | **AX103650** | **AX103666** |
| MPO-0M1, K7 Violet | **AX103632** | **AX103651** | **AX103667** |
| MPO-0M1, K8 Rose | **AX103633** | **AX103652** | **AX103668** |
| MPO-0M1, K9 Aqua | **AX103634** | **AX103653** | **AX103669** |
| MPO-0M1, KA Brown | **AX103635** | **AX103654** | **AX103670** |
| MPO-0M1, KB Slate | **AX103636** | **AX103655** | **AX103671** |
| MPO-0M1, KC White | **AX103637** | **AX103656** | **AX103672** |
| MPO-0M3, K1 Red | **AX103698** | **AX103717** | **AX103733** |
| MPO-0M3, K2 Green | **AX103699** | **AX103718** | **AX103734** |
| MPO-0M3, K3 Yellow | **AX103700** | **AX103719** | **AX103735** |
| MPO-0M3, K4 Black | **AX103701** | **AX103720** | **AX103736** |
| MPO-0M3, K5 Orange | **AX103702** | **AX103721** | **AX103737** |
| MPO-0M3, K6 Blue | **AX103703** | **AX103722** | **AX103738** |
| MPO-0M3, K7 Violet | **AX103704** | **AX103723** | **AX103739** |
| MPO-0M3, K8 Rose | **AX103705** | **AX103724** | **AX103740** |
| MPO-0M3, K9 Aqua | **AX103706** | **AX103725** | **AX103741** |
| MPO-0M3, KA Brown | **AX103707** | **AX103726** | **AX103742** |
| MPO-0M3, KB Slate | **AX103708** | **AX103727** | **AX103743** |
| MPO-0M3, KC White | **AX103709** | **AX103728** | **AX103744** |

## Fiber*Express* Secure/Keyed LC System

Adapter Modules, Adapter Strips, Patch Cords, Pigtails, Fiber*Express* Manager Modules and Optimax Field-Installable Connectors (continued)

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | 12 Fiber, Multimode, OM1, 62.5 µm | 12 Fiber, Multimode, OM3, 50 µm | 24 Fiber, Multimode, OM1, 62.5 µm | 24 Fiber, Multimode, OM3, 50 µm |
| **Fiber*Express* Secure/Keyed LC Series Manager** | | | | |
| **Pre-terminated Modules, MPO-keyed LC** | | | | |
| LC Key1, Red | AX102362 | AX102368 | AX102374 | AX102380 |
| LC Key2, Green | AX102363 | AX102369 | AX102375 | AX102381 |
| LC Key3, Yellow | AX102364 | AX102370 | AX102376 | AX102382 |
| LC Key4, Black | AX102365 | AX102371 | AX102377 | AX102383 |
| LC Key5, Orange | AX102366 | AX102372 | AX102378 | AX102384 |
| LC Key6, Blue | AX102367 | AX102373 | AX102379 | AX102385 |
| LC Key7, Violet | AX103180 | AX103186 | AX103192 | AX103198 |
| LC Key8, Rose | AX103181 | AX103187 | AX103193 | AX103199 |
| LC Key9, Aqua | AX103182 | AX103188 | AX103194 | AX103200 |
| LC KeyA, Brown | AX103183 | AX103189 | AX103195 | AX103201 |
| LC KeyB, Slate | AX103184 | AX103190 | AX103196 | AX103202 |
| LC KeyC, White | AX103185 | AX103191 | AX103197 | AX103203 |

| Description | Belden Part Number | |
|---|---|---|
| | Multimode 50 µm for 900 µm Buffered Fiber Only | Multimode 62.5 µm for 900 µm Buffered Fiber Only |
| **Fiber*Express* Secure/Keyed LC Series Connectors** | | |
| **Optimax Connectors** | | |
| LC Key1, Red | AX102197 | AX102203 |
| LC Key2, Green | AX102198 | AX102204 |
| LC Key3, Yellow | AX102199 | AX102205 |
| LC Key4, Black | AX102200 | AX102206 |
| LC Key5, Orange | AX102201 | AX102207 |
| LC Key6, Blue | AX102202 | AX102208 |
| LC Key7, Violet | AX103174 | AX103168 |
| LC Key8, Rose | AX103175 | AX103169 |
| LC Key9, Aqua | AX103176 | AX103170 |
| LC KeyA, Brown | AX103177 | AX103171 |
| LC KeyB, Slate | AX103178 | AX103172 |
| LC KeyC, White | AX103179 | AX103173 |
| **LC Fiber*Express* Optimax Accessory Kit for Jacketed Fiber** | | |
| Kit contains 2 mm & 3 mm boots and crimp sleeves | AX101984 | |

## Fiber*Express* Outlets
MediaFlex® Plates and Inserts

**MediaFlex Plates** are one part of the comprehensive line of plates and inserts that snap together to create a full line of modular workstation outlets.

MediaFlex Plates can be mounted over standard NEMA type outlet boxes and rings to provide support for a variety of MediaFlex Adapters and Inserts. The fully modular construction combined with the front access design provides extensive configuration flexibility for current and future network needs. MediaFlex Plates are available in Single Gang and Double Gang configurations.

The Double Gang faceplate comes with a stand-off ring included in the package. This ring allows for easy mounting with virtually any industry electrical box or mud/adapter rings, therefore providing added installation flexibility.

Each plate has the capacity of up to 6 ports per Single Gang and 12 ports per Double Gang.

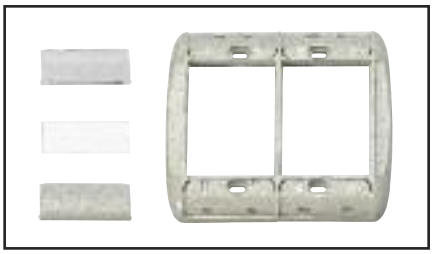
**MediaFlex Surface Adapter Boxes** are one part of the comprehensive line of plates and inserts that snap together to create a full line of modular workstation outlets.

MediaFlex Surface Adapter Boxes can be mounted over standard NEMA type outlet boxes and rings to provide support for the MediaFlex plates. The MediaFlex Surface Adapter Boxes are available as a Double Gang configuration. The Double Gang box allows more room for cable management and bend radius control.

**MediaFlex MDVO-style Inserts** are available in a 2-port configuration in both Flush and Angled versions. They are compatible with all GigaFlex and MDVO Modules (EZ-MDVO and Multimedia). The inserts are two units high for the flush version and three units high for the angled version. Therefore three flush inserts or two angled inserts are required to fully populate a Single Gang MediaFlex Plate.

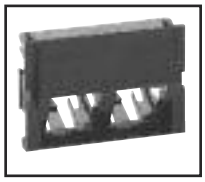
**MediaFlex Multimedia Inserts** provide optimum flexibility in configuring multimedia workstation outlets that respond to any present or future network needs. MediaFlex Multimedia Inserts along with other MediaFlex Inserts allow for easy configuration of outlets. All inserts are front loaded and easily snapped in and out of the MediaFlex Plates for easy installation and maintenance.

MediaFlex Multimedia Inserts are available in Angled versions only in order to allow for proper management of cable bend radius. The inserts are three units high, therefore two inserts are required to fully populate a Single Gang faceplate and four inserts will fully populate a Double Gang faceplate.

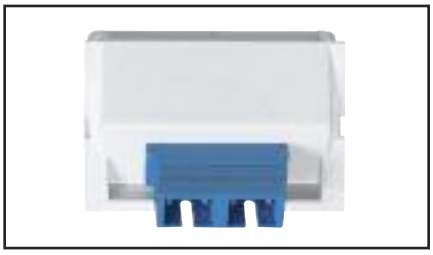


AX101869, MediaFlex Plate, Double Gang

AX101874, MediaFlex Adapter Box, Double Gang



AX101756, MediaFlex MDVO (style) Insert, 2-port, Angled



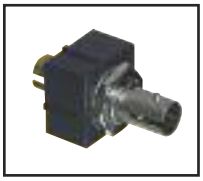
AX101937, MediaFlex SC Duplex Insert, Angled

| Description | Belden Part Number | | | | | |
|---|---|---|---|---|---|---|
| | Gray | Almond | Elec. White | Black | White | Ivory |
| **Fiber*Express* Outlets** | | | | | | |
| **MediaFlex Plate** | | | | | | |
| Single Gang | AX101745 | AX101746 | AX101747 | AX101748 | AX102608 | AX102569 |
| Double Gang | AX101869 | AX101870 | AX101871 | AX101872 | AX102609 | AX102570 |
| **MediaFlex Adapter Box** | | | | | | |
| Single Gang | AX102480 | AX102481 | AX102482 | AX102483 | AX102484 | AX102485 |
| Double Gang | AX101873 | AX101874 | AX101875 | AX101876 | AX102610 | AX102571 |
| **MediaFlex MDVO (style) Insert** | | | | | | |
| 2-port, Flush, bag of 10 units | AX101749 | AX101750 | AX101751 | AX101752 | AX102612 | AX102572 |
| 2-port, Angled, bag of 10 units | AX101753 | AX101754 | AX101755 | AX101756 | AX102613 | AX102573 |
| **MediaFlex SC Duplex** | | | | | | |
| SC Duplex Single-mode | AX101935 | AX101936 | AX101937 | AX101938 | AX102619 | AX102649 |
| SC Duplex Multimode | AX101939 | AX101940 | AX101941 | AX101942 | AX102620 | AX102650 |

# Fiber*Express* Outlets

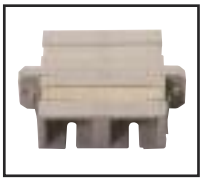
## MDVO Multimedia Outlet Boxes and Modules and Multi-User Outlet Boxes

A0643205, MDVO Multimedia Outlet Box, shown here as terminated



A0407010, MDVO ST Type Fiber Module

AX101467, MT-RJ Adapter



A0649254, SC Duplex Adapter

AX100222, Multi-User Outlet Box, shown here with modules

### MDVO Multimedia Outlet Box

**The MDVO Multimedia Outlet Box** brings unique versatility for multimedia work area installations. The box design provides cable management and helps maintain cable bend radius. The low profile design and side-entry of the outlet box offers better protection for patch cords. The outlet box can accept up to six EZ-MDVO, GigaFlex or MDVO Multimedia Modules or three SC Duplex adapters.

The MDVO Multimedia Outlet Box can be mounted directly on the wall or attached to standard electrical boxes. Included with the MDVO Multimedia box are three SC Duplex Mounting bezels and three MDVO Adapters.

### MDVO Multimedia Modules

**MDVO Multimedia Modules** address audio/video and fiber applications. Fiber modules are available for LC Duplex, SC Simplex, ST Type multimode and MT-RJ multimode and single-mode connections. The SC Duplex Adapter is a fiber adapter sleeve with flanges that mounts into the SC Duplex mounting bezel (included in the MDVO Multimedia Outlet box). Audio/video modules are available for SVHS, RCA, BNC and Video F connections.

### Multi-User Outlet Box

**The Multi-User Outlet Box** is a versatile box that can be used in many different applications. The outlet box can accommodate up to 24 connections of any type: UTP, fiber or coax. The outlet box is ideal for use as a multi-user telecommunications assembly, or simply as a high-density multimedia telecommunications outlet. The Multi-User Outlet Box can also be used as a wall mounted patch panel in confined areas, such as shallow rooms and cabinets.

| Description | Belden Part Number | | | |
|---|---|---|---|---|
| | Gray | Almond | White | Black |
| **Fiber*Express* Outlets** | | | | |
| **MDVO Multimedia Outlet Box** | | | | |
| 6-port | A0643205 | A0643206 | A0643207 | A0643208 |
| Please note that SC Duplex adapters must be ordered separately (A0649254). | | | | |
| **MDVO Multimedia Module** | | | | |
| LC Duplex Multimode | AX102209 | AX102210 | AX102211 | AX102212 |
| LC Duplex Single-mode | AX102213 | AX102214 | AX102215 | AX102216 |
| SC Simplex, Multimode, Blue insert | A0407003 | A0407004 | A0407005 | A0407006 |
| SC Duplex Adapter, Multimode | A0649254 | | | |
| ST Type, Multimode | A0407007 | A0407008 | A0407009 | A0407010 |
| MT-RJ, Multimode | AX101467 | | | |
| MT-RJ, Single-mode, Blue | AX101466 | | | |
| Custom multimedia connectors are also available. Please contact Customer Service for more details. | | | | |
| **Multi-User Outlet Box** | | | | |
| 24-port | AX100219 | AX100220 | AX100221 | AX100222 |
| Note: A complete offering of Keystone-style connectors is available. Please contact Customer Service for more information. | | | | |

## Cable Selection Guide
Introduction

The Belden line of Optical Fiber Cables represents a selection of the best optical fiber cable products offered by the consolidated resources of the Belden organization. The unmatched resources of Belden have now generated a complete line of indoor and outdoor cable products in tight buffered and loose tube constructions. This offering now expands the applications available for Belden optical fiber cable.

### Customer Service

Most of our optical fiber cables are available from stock. Many of these are available off-the-shelf from distributors. If you have a new or unusual application, or you cannot find a optical fiber cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1 for additional information.

## Cable Selection Guide

### Optical Fiber

#### Fiber Selection Chart

| Type | Fiber Size (µ) | Standards Compliance | Link Length (m) | Data Rate (Gb) |
|---|---|---|---|---|
| **Multimode** | 50/125 | TIA/EIA-568-C.3<br>ISO 11801 OM3 | 300 | 10 |
| | 50/125 | TIA/EIA-568-C.3 | 600 | 1 |
| | 62.5/125 | TIA/EIA-568-C.3 | 300 | 1 |
| **Single-mode** | — | ITU G.652.c/d† | — | — |

† Zero or Low water peak fiber with advantages for CWDM applications

### Color Code Charts

#### Jacket Color Chart

| Cable Type | Jacket Color |
|---|---|
| **Loose Tube & Outside Plant Cables** | Black |
| **Industrial Tray Cables** | Orange |
| **Tight Buffered Cables** | |
| Multimode OM1, OM2 | Orange |
| Multimode OM3 | Aqua |
| **Single-mode Enhanced** | Yellow |

Nonstandard jacket colors are available on request.

#### Fiber Sub-unit Color Code Chart*

| Fiber/Tube No. | Color |
|---|---|
| 1 | Blue |
| 2 | Orange |
| 3 | Green |
| 4 | Brown |
| 5 | Slate |
| 6 | White |

| Fiber/Tube No. | Color |
|---|---|
| 7 | Red |
| 8 | Black |
| 9 | Yellow |
| 10 | Violet |
| 11 | Rose |
| 12 | Aqua |

*Per TIA/EIA 598-B

### Optical Specifications

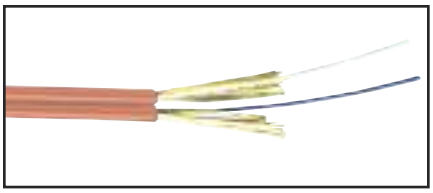
| Glass Type | Multimode, OM1, 62.5 µm Std./1 Gb | Multimode, OM2, 50 µm Std./1 Gb | Multimode, OM3, 50 µm 10 Gb - 300 m | Single-mode Enhanced, OS2[5] |
|---|---|---|---|---|
| Operating Wavelength (nm) | 850/1300 | 850/1300 | 850/1300 | 1300/1550 |
| Min. OFL[1] Bandwidth (MHz-km) | 200/600 | 500/800 | 1500/500 | — |
| Max. Attenuation Loose Tube (dB/km) | 3.5/1.2 | 3.5/1.2 | 3.5/1.2 | 0.40/0.30 |
| Max. Attenuation Tight Buffered[2] (dB/km) | 3.50/1.20 | 3.50/1.5 | 3.0/1.2 | 0.50/0.50 |
| 1 Gb Ethernet Min. Link Length (meters S/L[3]) | 300/550 | 600/600 | 900[4]/550 | —/5000 |
| 10 Gb Ethernet Min. Link Length (meters S/L[3]) | 32/— | 82/— | 300/— | —/10,000 |

[1] OFL = Overfilled Launch
[2] Max. Attenuation for Tight Buffered, Ribbon, Micro-Loose Tube and Loose Tube Plenum Cables
[3] S/L = Short wavelength (850 nm) / Long wavelength (1310 nm)
[4] >2000 meters for engineered links
[5] Low water peak Single-mode suitable for CWDm use complies with ITU G.652.c/d

Other performance levels are available on request. Contact Customer Service for more information.

# Interconnect Cable — Simplex and Duplex

Tight Buffer — Riser & Plenum Rated



Duplex Optical Fiber Interconnect Cable

## Applications

- Patch panels
- Workstation equipment connections
- Horizontal distribution in open office environments

## Product Description

Interconnect Cables are designed for low fiber-count premises environments. They are small and very flexible, making them ideal for confined spaces. Their aesthetic appearance makes these cables suitable for use in open office environments. Available in 1 or 2 fibers. One sub-unit is marked to permit easy identification of transmit and receive fibers. Length markings to facilitate installation.

| | |
|---|---|
| Jacket Material | Thermoplastic |
| Tight Buffer | Thermoplastic |
| Strength Member | Aramid Yarn |
| Color Code (Tight Buffer) | Per TIA/EIA 598-B, see page 39 |
| Jacket Color | |
| Single-mode | Yellow |
| 62.5/125 µm | Orange |
| 50/125 µm / 1 Gb | Orange |
| 50/125 µm / 10 Gb | Aqua |

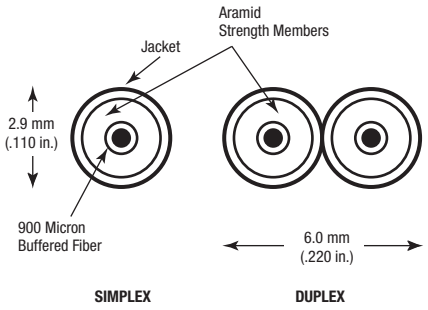
## Ratings

| | |
|---|---|
| Riser | OFNR |
| Plenum | OFNP |

## Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +75°C |
| Operating/Installation | 0 to +70°C |
| Min. Bend Radius | |
| Installation | 18 x OD |
| Long Term | 11 x OD |
| Optical Specifications | see page 39 |

## Fiber Bundle Detail




| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Interconnect Cable Series** | | | | | | | | | | |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 1 | B97112 | B9A001 | B9C001 | B9W001 | 0.110 | 2.9 | 6 | 9 | 119 | 530 |
| 2 | B96915 | B9A002 | B9C002 | B9W002 | 0.11 x 0.22 | 2.9 x 6.0 | 10 | 15 | 239 | 1063 |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) | | | | | | | | | | |
| 1 | B98086 | B9A003 | B9C003 | B9W003 | 0.110 | 2.9 | 6 | 9 | 119 | 530 |
| 2 | B96919 | B9A004 | B9C004 | B9W004 | 0.11 x 0.22 | 2.9 x 6.0 | 12 | 18 | 239 | 1063 |

## Distribution Cable

Tight Buffer — Indoor and Indoor/Outdoor Riser, Plenum & LSZH Rated

### Applications

- Low to high fiber count requirements
- In-building backbone
- Fiber-to-the-desk applications
- Computer room

### Product Description

Flexible thermoplastic jacket provides excellent handling characteristics. Fibers and cable sub-units are color coded for easy identification. Length markings in meters for easy determination of cable length. Full dielectric construction, no grounding required. For Riser offering, MSHA approved cables are available.

| | |
|---|---|
| Jacket Material | Thermoplastic |
| Tight Buffer | Thermoplastic |
| Strength Member | Aramid Yarn |
| Color Code (Tight Buffer) | Per TIA/EIA 598-B, see page 39 |
| Jacket Color | |
| Single-mode | Yellow |
| 62.5/125 µm | Orange |
| 50/125 µm / 1 Gb | Orange |
| 50/125 µm / 10 Gb | Aqua |

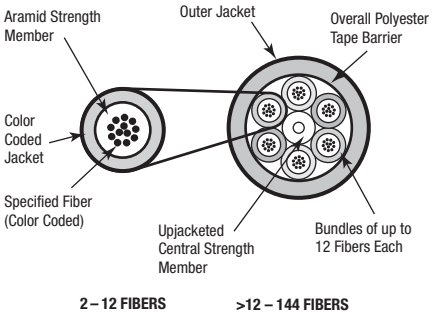
### Ratings

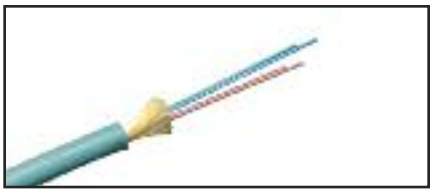
| | |
|---|---|
| Riser | |
| UL Type | OFNR |
| cUL Type | OFN FT.4 |
| Flame Resistance | UL 1666 |
| Plenum | |
| UL Type | OFNP |
| cUL Type | OFN FT.6 |
| Flame Resistance | NFPA 262 |
| Low Smoke Zero Halogen | |
| UL Type | OFNR |
| cUL Type | OFN FT.4 |
| Flame Resistance | UL 1666 |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +75°C |
| Operating/Installation | 0 to +70°C |
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail



Optical Fiber Distribution Cable

## Distribution Cable

Tight Buffer — Riser, Plenum & LSZH Rated

| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Distribution Cable Series** | | | | | | | | | | |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 2 | B9B037 | B9A037 | B9C037 | B9W037 | 0.190 | 4.83 | 13 | 19 | 180 | 801 |
| 4 | B9B038 | B9A038 | B9C038 | B9W038 | 0.190 | 4.83 | 17 | 25 | 195 | 867 |
| 6 | B9B039 | B9A039 | B9C039 | B9W039 | 0.170 | 4.40 | 12 | 17 | 286 | 1272 |
| 8 | B9B040 | B9A040 | B9C040 | B9W040 | 0.190 | 4.80 | 13 | 19 | 239 | 1063 |
| 12 | B9B042 | B9A042 | B9C042 | B9W042 | 0.220 | 5.59 | 17 | 25 | 239 | 1063 |
| 24 | B9B601* | B9A601* | B9C601* | B9W601* | 0.550 | 13.97 | 121 | 180 | 390 | 1735 |
| 24 | B9B602 | B9A602 | B9C602 | B9W602 | 0.496 | 12.60 | 83 | 124 | 960 | 4270 |
| 36 | B9B604 | B9A604 | B9C604 | B9W604 | 0.620 | 15.60 | 147 | 220 | 1074 | 4779 |
| 48 | B9B606 | B9A606 | B9C606 | B9W606 | 0.610 | 15.40 | 120 | 180 | 956 | 4254 |
| 72 | B9B609 | B9A609 | B9C609 | B9W609 | 0.760 | 19.30 | 184 | 275 | 1434 | 6381 |
| 96 | B9B622 | B9A622 | B9C622 | B9W622 | 0.900 | 22.80 | 281 | 420 | 1912 | 8508 |
| 144 | B9B619 | B9A619 | B9C619 | B9W619 | 1.000 | 25.40 | 288 | 430 | 2868 | 12,762 |
| **Riser** (NEC/CEC OFNR/OFN FT.4) Indoor Outdoor | | | | | | | | | | |
| 2 | B9B037T | B9A037T | B9C037T | B9W037T | 0.19 | 4.8 | 14 | 21 | 303 | 1350 |
| 4 | B9B038T | B9A038T | B9C038T | B9W038T | 0.19 | 4.8 | 15 | 23 | 303 | 1350 |
| 6 | B9B039T | B9A039T | B9C039T | B9W039T | 0.21 | 5.3 | 19 | 28 | 303 | 1350 |
| 8 | B9B040T | B9A040T | B9C040T | B9W040T | 0.22 | 5.6 | 23 | 33 | 303 | 1350 |
| 12 | B9B042T | B9A042T | B9C042T | B9W042T | 0.24 | 6.0 | 26 | 38 | 303 | 1350 |
| 24 | B9B601T | B9A601T | B9C601T | B9W601T | 0.67 | 16.9 | 169 | 252 | 1078 | 4800 |
| 24 | B9B602T* | B9A602T* | B9C602T* | B9W602T* | 0.33 | 0.3 | 46 | 69 | 600 | 2670 |
| 36 | B9B604T | B9A604T | B9C604T | B9W604T | 0.67 | 16.9 | 178 | 265 | 1348 | 6000 |
| 48 | B9B606T | B9A606T | B9C606T | B9W606T | 0.67 | 16.9 | 187 | 278 | 1618 | 7200 |
| 72 | B9B609T | B9A609T | B9C609T | B9W609T | 0.81 | 20.7 | 233 | 346 | 2360 | 10,500 |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) | | | | | | | | | | |
| 2 | B9B043 | B9A043 | B9C043 | B9W043 | 0.190 | 4.83 | 13 | 19 | 180 | 801 |
| 4 | B9B044 | B9A044 | B9C044 | B9W044 | 0.190 | 4.83 | 17 | 25 | 195 | 867 |
| 6 | B9B045 | B9A045 | B9C045 | B9W045 | 0.170 | 4.40 | 12 | 17 | 286 | 1272 |
| 8 | B9B046 | B9A046 | B9C046 | B9W046 | 0.190 | 4.80 | 13 | 19 | 239 | 1063 |
| 12 | B9B048 | B9A048 | B9C048 | B9W048 | 0.220 | 5.59 | 17 | 25 | 239 | 1063 |
| 24 | B9B611* | B9A611* | B9C611* | B9W611* | 0.550 | 13.97 | 121 | 180 | 390 | 1735 |
| 24 | B9B612 | B9A612 | B9C612 | B9W612 | 0.496 | 12.60 | 83 | 124 | 960 | 4270 |
| 36 | B9B614 | B9A614 | B9C614 | B9W614 | 0.620 | 15.60 | 147 | 220 | 1074 | 4779 |
| 48 | B9B616 | B9A616 | B9C616 | B9W616 | 0.610 | 15.40 | 120 | 180 | 956 | 4254 |
| 72 | B9B620 | B9A620 | B9C620 | B9W620 | 0.760 | 19.30 | 184 | 275 | 1434 | 6381 |
| 96 | B9B623 | B9A623 | B9C623 | B9W623 | 0.900 | 22.80 | 281 | 420 | 1912 | 8508 |
| 144 | B9B621 | B9A621 | B9C621 | B9W621 | 1.000 | 25.40 | 288 | 430 | 2868 | 12,762 |

Construction for LSZH cables differs from the drawing. Alternative fiber counts are available.

*Single jacket design.

For product details on the Indoor/Outdoor fiber cables, contact **1.800.BELDEN.1** or **www.belden.com**.

## Distribution Cable

Tight Buffer — Riser, Plenum & LSZH Rated (continued)

| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Distribution Cable Series** | | | | | | | | | | |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) Indoor Outdoor | | | | | | | | | | |
| 2 | **B9B043T** | **B9A043T** | **B9C043T** | **B9W043T** | 0.19 | 4.8 | 18 | 27 | 243 | 1082 |
| 4 | **B9B044T** | **B9A044T** | **B9C044T** | **B9W044T** | 0.19 | 4.8 | 18 | 27 | 243 | 1082 |
| 6 | **B9B045T** | **B9A045T** | **B9C045T** | **B9W045T** | 0.22 | 5.5 | 22 | 33 | 243 | 1082 |
| 8 | **B9B046T** | **B9A046T** | **B9C046T** | **B9W046T** | 0.24 | 6.0 | 26 | 38 | 388 | 1726 |
| 12 | **B9B048T** | **B9A048T** | **B9C048T** | **B9W048T** | 0.26 | 7.0 | 34 | 50 | 388 | 1726 |
| 24 | **B9B611T*** | **B9A611T*** | **B9C611T*** | **B9W611T*** | 0.33 | 8.5 | 54 | 80 | 398 | 1744 |
| **LSZH** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 2 | **B9B100** | **B9A100** | **B9C100** | **B9W100** | 0.184 | 4.70 | 15 | 22 | 180 | 800 |
| 4 | **B9B101** | **B9A101** | **B9C101** | **B9W101** | 0.200 | 5.10 | 17 | 25 | 195 | 867 |
| 6 | **B9B102** | **B9A102** | **B9C102** | **B9W102** | 0.220 | 5.60 | 21 | 31 | 270 | 1201 |
| 8 | **B9B103** | **B9A103** | **B9C103** | **B9W103** | 0.235 | 6.00 | 24 | 36 | 270 | 1201 |
| 12 | **B9B104** | **B9A104** | **B9C104** | **B9W104** | 0.255 | 6.50 | 29 | 43 | 300 | 1334 |
| 16 | **B9B105** | **B9A105** | **B9C105** | **B9W105** | 0.347 | 8.80 | 43 | 63 | 315 | 1400 |
| 24 | **B9B107** | **B9A107** | **B9C107** | **B9W107** | 0.386 | 9.80 | 54 | 79 | 450 | 2000 |
| 36 | **B9B111** | **B9A111** | **B9C111** | **B9W111** | 0.798 | 20.00 | 214 | 313 | 1619 | 7200 |
| 48 | **B9B112** | **B9A112** | **B9C112** | **B9W112** | 0.835 | 21.20 | 237 | 347 | 1619 | 7200 |
| 72 | **B9B114** | **B9A114** | **B9C114** | **B9W114** | 0.883 | 22.40 | 270 | 395 | 1619 | 7200 |
| 96 | **B9B116** | **B9A116** | **B9C116** | **B9W116** | 0.973 | 24.70 | 364 | 532 | 1619 | 7200 |
| 144 | **B9B120** | **B9A120** | **B9C120** | **B9W120** | 1.087 | 27.60 | 384 | 561 | 1619 | 7200 |

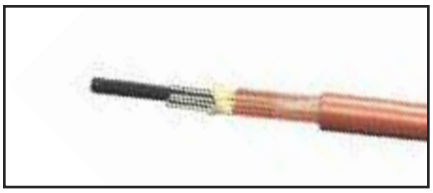
Construction for LSZH cables differs from the drawing. Alternative fiber counts are available.

*Single jacket design.

For product details on the Indoor/Outdoor fiber cables, contact **1.800.BELDEN.1** or **www.belden.com**.

## Breakout Style Cable

Tight Buffer — Indoor Riser, Plenum & LSZH Rated



Optical Fiber Breakout Cable

### Applications

- Low to medium fiber count requirements
- In-building backbone or horizontal deployment
- Office wiring
- Factory floor automation and harsh environment installations

### Product Description

Full dielectric construction, no grounding required. Available with 2 to 36 fibers. Fiber subunits are color coded for easy identification. Length markings in meters for easy determination of cable length. For Riser offering, MSHA approved cables are available.

| | |
|---|---|
| Outer Jacket Material | Thermoplastic |
| Sub-unit Jacket Material | Thermoplastic |
| Tight Buffer | Thermoplastic |
| Strength Member | Aramid Yarn |
| Color Code (Tight Buffer) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | |
| Single-mode | Yellow |
| 62.5/125 µm | Orange |
| 50/125 µm / 1 Gb | Orange |
| 50/125 µm / 10 Gb | Aqua |

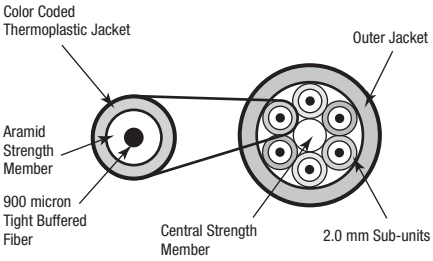
### Ratings

| | |
|---|---|
| Riser | OFNR |
| Plenum | OFNP |
| Low Smoke Zero Halogen | OFNR |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +75°C |
| Operating/Installation | 0 to +70°C |
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail




| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Breakout Cable Series** | | | | | | | | | | |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 2 | B9B005 | B9A005 | B9C005 | B9W005 | 0.335 | 8.50 | 44 | 65 | 448 | 2000 |
| 4 | B9B006 | B9A006 | B9C006 | B9W006 | 0.330 | 8.50 | 44 | 65 | 448 | 2000 |
| 6 | B9B007 | B9A007 | B9C007 | B9W007 | 0.400 | 10.10 | 64 | 95 | 674 | 3000 |
| 8 | B9B008 | B9A008 | B9C008 | B9W008 | 0.460 | 11.60 | 84 | 125 | 899 | 4000 |
| 10 | B9B009 | B9A009 | B9C009 | B9W009 | 0.580 | 14.70 | 138 | 205 | 1398 | 6000 |
| 12 | B9B010 | B9A010 | B9C010 | B9W010 | 0.580 | 14.70 | 138 | 205 | 1398 | 6000 |
| 18 | B9B011 | B9A011 | B9C011 | B9W011 | 0.587 | 14.90 | 138 | 205 | 1398 | 6000 |
| 24 | B9B012 | B9A012 | B9C012 | B9W012 | 0.650 | 16.60 | 118 | 175 | 600 | 2670 |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) | | | | | | | | | | |
| 2 | B9B013 | B9A013 | B9C013 | B9W013 | 0.354 | 6.57 | 57 | 85 | 448 | 2000 |
| 4 | B9B014 | B9A014 | B9C014 | B9W014 | 0.360 | 6.68 | 57 | 45 | 448 | 2000 |
| 6 | B9B015 | B9A015 | B9C015 | B9W015 | 0.420 | 7.85 | 79 | 61 | 674 | 3000 |
| 8 | B9B016 | B9A016 | B9C016 | B9W016 | 0.480 | 8.53 | 105 | 82 | 899 | 4000 |
| 10 | B9B017 | B9A017 | B9C017 | B9W017 | 0.610 | 9.93 | 169 | 97 | 1398 | 6000 |
| 12 | B9B018 | B9A018 | B9C018 | B9W018 | 0.610 | 9.93 | 169 | 97 | 1398 | 6000 |
| 18 | B9B019 | B9A019 | B9C019 | B9W019 | 0.587 | 14.90 | 138 | 205 | 1398 | 6000 |
| 24 | B9B020 | B9A020 | B9C020 | B9W020 | 0.650 | 16.60 | 118 | 175 | 600 | 2670 |

## Breakout Style Cable

Tight Buffer — Indoor Riser, Plenum & LSZH Rated (continued)

| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **LSZH** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 2 | **B9B130** | **B9A130** | **B9C130** | **B9W130** | 0.290 | 7.37 | 39 | 57 | 270 | 1200 |
| 4 | **B9B131** | **B9A131** | **B9C131** | **B9W131** | 0.351 | 8.92 | 38 | 55 | 285 | 1268 |
| 6 | **B9B132** | **B9A132** | **B9C132** | **B9W132** | 0.358 | 9.09 | 52 | 76 | 543 | 2415 |
| 8 | **B9B133** | **B9A133** | **B9C133** | **B9W133** | 0.405 | 10.29 | 67 | 98 | 600 | 2700 |
| 10 | **B9B134** | **B9A134** | **B9C134** | **B9W134** | 0.455 | 11.56 | 110 | 162 | 600 | 2700 |
| 12 | **B9B135** | **B9A135** | **B9C135** | **B9W135** | 0.514 | 13.06 | 110 | 161 | 600 | 2700 |
| 18 | **B9B136** | **B9A136** | **B9C136** | **B9W136** | 0.520 | 13.21 | 103 | 151 | 600 | 2700 |
| 24 | **B9B137** | **B9A137** | **B9C137** | **B9W137** | 0.590 | 14.99 | 138 | 202 | 600 | 2700 |
| 36 | **B9B138** | **B9A138** | **B9C138** | **B9W138** | 0.680 | 17.27 | 171 | 250 | 600 | 2700 |

2.5 mm Breakout Cables are also available.

# Interlocked Armor Distribution Cable

Tight Buffer — Plenum Rated

## Applications

- Industrial environments
- Rugged installations
- Manufacturing plants
- Mining operations
- Telecommunications and data trunk
- Inter- and intra-building installations

## Product Description

Heavy duty construction with interlocking aluminum armor (steel available on request) provides excellent mechanical protection from cutting or crushing and eliminates need for innerduct. Rodent resistant. Also available for outside plant. Loose tube design available on request.

| | |
|---|---|
| Jacket Material | |
| Plenum | Thermoplastic |
| Buffer Tube | Thermoplastic |
| Strength Member | Aramid Yarn |
| Central Strength Member | E-Glass |
| Armor | Aluminum |
| Color Code (Buffer) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | |
| Single-mode | Yellow |
| 62.5/125 µm | Orange |
| 50/125 µm / 1 Gb | Orange |
| 50/125 µm / 10 Gb | Aqua |

## Ratings

| | |
|---|---|
| Plenum | OFCP |

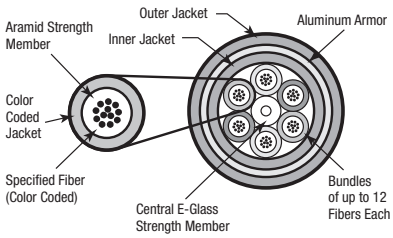
## Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +70°C |
| Operating | -20 to +70°C |
| Crush Resistance (EIA-455-41) | 2000 N/cm |
| Impact Resistance (EIA-455-25) | 2000 Impacts @ 3.0 N-m |

Armored Optical Fiber Distribution Cable

| | |
|---|---|
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| Optical Specifications | See page 39 |

## Fiber Bundle Detail




| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Industrial Armored Series** | | | | | | | | | | |
| **Riser** (NEC/CEC OFCR/OFC FT.4) | | | | | | | | | | |
| 6 | **B9B230** | **B9A230** | **B9C230** | **B9W230** | 0.570 | 14.48 | 23.24 | 35 | 286 | 1272 |
| 12 | **B9B231** | **B9A231** | **B9C231** | **B9W231** | 0.570 | 14.48 | 28.24 | 42 | 239 | 1063 |
| 24 | **B9B232*** | **B9A232*** | **B9C232*** | **B9W232*** | 0.670 | 17.02 | 54.72 | 81 | 641 | 2852 |
| 24 | **B9B233** | **B9A233** | **B9C233** | **B9W233** | 0.920 | 23.27 | 140.93 | 210 | 641 | 2852 |
| 36 | **B9B234** | **B9A234** | **B9C234** | **B9W234** | 0.970 | 24.64 | 144.67 | 215 | 717 | 3190 |
| 48 | **B9B235** | **B9A235** | **B9C235** | **B9W235** | 0.970 | 24.64 | 144.67 | 215 | 985 | 4254 |
| 72 | **B9B236** | **B9A236** | **B9C236** | **B9W236** | 1.120 | 28.45 | 213.06 | 317 | 1434 | 5381 |
| 96 | **B9B237** | **B9A237** | **B9C237** | **B9W237** | 1.270 | 32.26 | 314.45 | 468 | 1912 | 8608 |
| 144 | **B9B238** | **B9A238** | **B9C238** | **B9W238** | 1.320 | 33.53 | 322.91 | 481 | 2868 | 12762 |
| **Plenum** (NEC/CEC OFCP/OFC FT.6) | | | | | | | | | | |
| 6 | **B9B240** | **B9A240** | **B9C240** | **B9W240** | 0.57 | 14.48 | 24.24 | 36 | 286 | 1272 |
| 12 | **B9B241** | **B9A241** | **B9C241** | **B9W241** | 0.57 | 14.48 | 31.24 | 46 | 239 | 1063 |
| 24 | **B9B242*** | **B9A242*** | **B9C242*** | **B9W242*** | 0.67 | 17.02 | 59.72 | 89 | 641 | 2852 |
| 24 | **B9B243** | **B9A243** | **B9C243** | **B9W243** | 0.92 | 23.37 | 153.93 | 229 | 641 | 2852 |
| 36 | **B9B244** | **B9A244** | **B9C244** | **B9W244** | 0.97 | 24.64 | 158.67 | 236 | 717 | 3190 |
| 48 | **B9B245** | **B9A245** | **B9C245** | **B9W245** | 0.97 | 24.64 | 158.67 | 236 | 986 | 4254 |
| 72 | **B9B246** | **B9A246** | **B9C246** | **B9W246** | 1.12 | 28.45 | 240.06 | 357 | 1434 | 6381 |
| 96 | **B9B247** | **B9A247** | **B9C247** | **B9W247** | 1.27 | 32.26 | 328.45 | 489 | 1912 | 8508 |
| 144 | **B9B248** | **B9A248** | **B9C248** | **B9W248** | 1.32 | 33.53 | 336.91 | 501 | 2868 | 12,762 |

Additional optical fiber cable constructions are available upon request.
*Single jacket design.

## Ribbon Cable

Riser and Plenum Rated

### Applications

- Inter-equipment connections
- NEBS applications
- Direct interface to computers with the use of "backbone" style fiber connectors
- High density interconnection to wall outlets or patch panels with ribbon connector interfaces
- "Micro-diameter" fan-out cables utilizing standard industry fiber connectors (ST, SC, FC, LC, MT-RJ)
- VSR OC-192/OC-768 interface based on parallel fiber optics

### Product Description

Small size is ideal for connections in tight spaces. Color coded fibers. Suitable for use with standard ribbon connectors. Flexible, with half-inch minimum bend radius. Tight center-to-center tolerances. Optional identification printing available.

| | |
|---|---|
| Jacket Material | PVC |
| Strength Member | Aramid Yarn |
| Color Code (Jacket & Fibers) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | |
| Single-mode | Yellow |
| 62.5/125µm | Orange |
| 50/125 µm / 1 Gb | Orange |
| 50/125 µm / 10 Gb | Aqua |

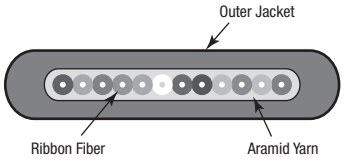
### Ratings

| | |
|---|---|
| Riser | |
| UL Type | OFNR |
| cUL Type | OFN FT.4 |
| Flame Resistance | UL 1666 |
| Plenum | |
| UL Type | OFNP |
| cUL Type | OFN FT.6 |
| Flame Resistance | NFPA 262 |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +75°C |
| Operating/Installation | 0° to +70°C |
| Crush Resistance (EIA-455-41) | 2000 Ncm |
| Impact Resistance (EIA-455-25) | 2000 Impacts @ 1.6 N-m |
| Cyclic Flexing (EIA-455-104) | 2000 cycles, min. |
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail




| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb– 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Ribbon Series** | | | | | | | | | | |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 2 | B9B630 | B9A630 | B9C630 | B9W630 | 0.11 | 2.9 | 5 | 7 | 100 | 444 |
| 4 | B9B631 | B9A631 | B9C631 | B9W631 | 0.08 x 0.158 | 2.1 x 4.0 | 4 | 6 | 100 | 444 |
| 6 | B9B632 | B9A632 | B9C632 | B9W632 | 0.08 x 0.158 | 2.1 x 4.0 | 6 | 9 | 100 | 444 |
| 8 | B9B633 | B9A633 | B9C633 | B9W633 | 0.08 x 0.158 | 2.1 x 4.0 | 6 | 9 | 100 | 444 |
| 12 | B9B634 | B9A634 | B9C634 | B9W634 | 0.08 x 0.180 | 2.1 x 4.6 | 7 | 10 | 100 | 444 |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) | | | | | | | | | | |
| 2 | B9B640 | B9A640 | B9C640 | B9W640 | 0.11 | 2.9 | 5 | 7 | 100 | 444 |
| 4 | B9B641 | B9A641 | B9C641 | B9W641 | 0.08 x 0.158 | 2.1 x 4.0 | 4 | 6 | 100 | 444 |
| 6 | B9B642 | B9A642 | B9C642 | B9W642 | 0.08 x 0.158 | 2.1 x 4.0 | 6 | 9 | 100 | 444 |
| 8 | B9B643 | B9A643 | B9C643 | B9W643 | 0.08 x 0.158 | 2.1 x 4.0 | 6 | 9 | 100 | 444 |
| 12 | B9B644 | B9A644 | B9C644 | B9W644 | 0.08 x 0.180 | 2.1 x 4.6 | 7 | 10 | 100 | 444 |

Fiber Ribbon Cable is to be sold as bulk cable and has not been qualified for field connectorization.

# Single Jacket, All Dielectric Cable

Loose Tube — Outdoor, and Indoor/Outdoor Riser Rated

Single Jacket, All Dielectric Optical Fiber Cable

## Applications

- Medium to high fiber count requirements
- Inter-building duct installations
- Lashed aerial
- Indoor/outdoor
- Industrial outside plant

## Product Description

Gel-filled buffer tube prevents water migration. All-dielectric strength member. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Full dielectric construction, no grounding required. Available with up to 216 fibers. Length markings in meters for easy determination of cable length.

| | |
|---|---|
| **Jacket Material** | |
| Outdoor | PE |
| Riser | Thermoplastic |
| **Buffer Tube** | PBT |
| **Strength Member** | Aramid Yarn |
| **Central Strength Member** | E-Glass |
| **Color Code** (Buffer) | Per TIA/EIA 598-B, See page 39 |
| **Jacket Color** | Black |

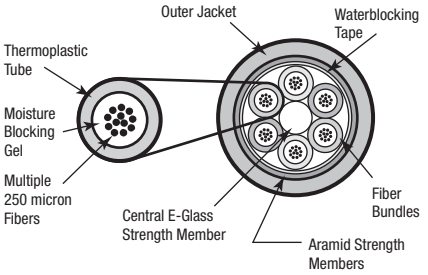
## Ratings

| | |
|---|---|
| **Riser** | |
| UL Type | OFNR |
| cUL Type | OFN FT.4 |
| Flame Resistance | UL 1666 |

## Specifications

| | |
|---|---|
| **Temperature Range** (Outdoor Series) | |
| Storage | -40 to +75°C |
| Operating | -40 to +70°C |
| **Temperature Range** (Riser Series) | |
| Storage | -40 to +75°C |
| Operating | -40 to +70°C |
| **Min. Bend Radius** | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| **Optical Specifications** | See page 39 |

## Fiber Bundle Detail



## Single Jacket, All Dielectric Cable

Loose Tube — Outdoor, and Indoor/Outdoor Riser Rated (continued)

| No. of Fibers | Fibers Per Tube | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Loose Tube Series** | | | | | | | | | | | |
| **Outdoor** | | | | | | | | | | | |
| 6 | 6 | **B9B510T** | **B9A510T** | **B9C510T** | **B9W510T** | 0.41 | 10.5 | 57 | 85 | 600 | 2700 |
| 12 | 12 | **B9B511T** | **B9A511T** | **B9C511T** | **B9W511T** | 0.41 | 10.5 | 57 | 85 | 600 | 2700 |
| 24 | 12 | **B9B500T** | **B9A500T** | **B9C500T** | **B9W500T** | 0.41 | 10.5 | 60 | 90 | 600 | 2700 |
| 36 | 12 | **B9B502T** | **B9A502T** | **B9C502T** | **B9W502T** | 0.41 | 10.5 | 60 | 90 | 600 | 2700 |
| 48 | 12 | **B9B505T** | **B9A505T** | **B9C505T** | **B9W505T** | 0.41 | 10.5 | 60 | 90 | 600 | 2700 |
| 72 | 12 | **B9B507T** | **B9A507T** | **B9C507T** | **B9W507T** | 0.45 | 11.5 | 71 | 105 | 600 | 2700 |
| 96 | 12 | **B9B513T** | **B9A513T** | **B9C513T** | **B9W513T** | 0.52 | 13.2 | 84 | 125 | 600 | 2700 |
| 144 | 12 | **B9B509T** | **B9A509T** | **B9C509T** | **B9W509T** | 0.67 | 17.0 | 148 | 220 | 600 | 2700 |
| 216 | 12 | **B9B520T** | **B9A520T** | **B9C520T** | **B9W520T** | 0.69 | 17.4 | 150 | 223 | 600 | 2700 |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | | |
| 6 | 6 | **B9B810** | **B9A810** | **B9C810** | **B9W810** | 0.51 | 12.9 | 110 | 164 | 600 | 2700 |
| 12 | 12 | **B9B811** | **B9A811** | **B9C811** | **B9W811** | 0.51 | 12.9 | 110 | 164 | 600 | 2700 |
| 24 | 12 | **B9B812** | **B9A812** | **B9C812** | **B9W812** | 0.51 | 12.9 | 110 | 164 | 600 | 2700 |
| 36 | 12 | **B9B813** | **B9A813** | **B9C813** | **B9W813** | 0.51 | 12.9 | 110 | 164 | 600 | 2700 |
| 48 | 12 | **B9B814** | **B9A814** | **B9C814** | **B9W814** | 0.51 | 12.9 | 110 | 164 | 600 | 2700 |
| 72 | 12 | **B9B815** | **B9A815** | **B9C815** | **B9W815** | 0.54 | 13.7 | 128 | 190 | 600 | 2700 |
| 96 | 12 | **B9B816** | **B9A816** | **B9C816** | **B9W816** | 0.61 | 15.5 | 148 | 220 | 600 | 2700 |
| 144 | 12 | **B9B817** | **B9A817** | **B9C817** | **B9W817** | 0.76 | 19.3 | 196 | 291 | 600 | 2700 |

Alternative fiber counts are available.

| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Loose Tube Indoor/Outdoor Fiber Optic Cable** | | | | | | | | | | |
| **LSZH** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | | |
| 6 | **B9B830** | **B9A830** | **B9C830** | **B9W830** | 0.38 | 9.65 | 71 | 105 | 600 | 2700 |
| 12 | **B9B831** | **B9A831** | **B9C831** | **B9W831** | 0.38 | 9.65 | 71 | 105 | 600 | 2700 |
| 24 | **B9B832** | **B9A832** | **B9C832** | **B9W832** | 0.38 | 9.65 | 71 | 105 | 600 | 2700 |
| 48 | **B9B834** | **B9A834** | **B9C834** | **B9W834** | 0.48 | 12.18 | 101 | 151 | 600 | 2700 |

BELDEN
SENDING ALL THE RIGHT SIGNALS

## Single Jacket, All Dielectric Cable

Loose Tube — Indoor/Outdoor Plenum Rated

Single Jacket, All Dielectric Optical Fiber Cable

### Applications

- Medium to high fiber count requirements
- Inter-building duct installations
- Lashed aerial
- Indoor/outdoor
- Campus backbones
- Data Centers
- High Density Cable Trays

### Product Description

Dry waterblocking technology used within tubes and under jacket. Available as Plenum rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Small diameter and bend radius facilitate installation in tight spaces. Full dielectric construction, no grounding required. Available with up to 144 fibers. Fibers grouped into sets of 12 for maximum density. Length markings in meters for easy determination of cable length.

| | |
|---|---|
| Jacket Material | |
| Non-unitized | Thermoplastic |
| Unitized | Thermoplastic |
| Buffer Tube | Thermoplastic |
| Strength Member | E-Glass and Aramid Yarn |
| Central Strength Member | Upjacketed |
| Color Code (Buffer) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | Black |

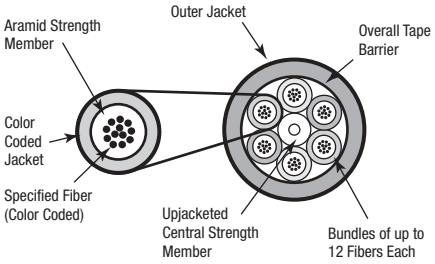
### Ratings

| | |
|---|---|
| Plenum | |
| UL Type | OFNP |
| cUL Type | OFN FT.6 |
| Flame Resistance | NFPA 262 |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +80°C |
| Operating | -40 to +70°C |
| Installation | 0 to +60°C |
| Cyclic Flexing (EIA-455-104) | 2000 cycles, min. |
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail




| No. of Fibers | Fibers Per Tube | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Loose Tube Series** | | | | | | | | | | | |
| **Plenum** (NEC/CEC OFNP/OFN FT.6) | | | | | | | | | | | |
| 6 | 6 | **B9B202** | **B9A202** | **B9C202** | **B9W202** | 0.265 | 6.70 | 33 | 49 | 320 | 1423 |
| 12 | 12 | **B9B204** | **B9A204** | **B9C204** | **B9W204** | 0.265 | 6.70 | 33 | 49 | 320 | 1423 |
| 24 | 12 | **B9B205** | **B9A205** | **B9C205** | **B9W205** | 0.359 | 9.12 | 47 | 70 | 405 | 1801 |
| 36 | 12 | **B9B206** | **B9A206** | **B9C206** | **B9W206** | 0.359 | 9.12 | 47 | 70 | 405 | 1801 |
| 48 | 12 | **B9B207** | **B9A207** | **B9C207** | **B9W207** | 0.359 | 9.12 | 48 | 71 | 405 | 1801 |
| 72 | 12 | **B9B209** | **B9A209** | **B9C209** | **B9W209** | 0.429 | 10.90 | 71 | 106 | 585 | 2602 |
| 96 | 12 | **B9B211** | **B9A211** | **B9C211** | **B9W211** | 0.501 | 12.73 | 105 | 156 | 903 | 4017 |
| 144 | 12 | **B9B215** | **B9A215** | **B9C215** | **B9W215** | 0.665 | 16.89 | 189 | 281 | 1263 | 5618 |

Alternative fiber counts and hybrid constructions are available.

## Double Jacket, Armored Cable

Loose Tube – Outdoor, and Indoor/Outdoor Riser Rated

### Applications

- Direct burial
- Low to high fiber count requirements
- Inter-building duct installations
- Indoor/outdoor
- Industrial outside plant

### Product Description

Gel-filled buffer tube prevents water migration. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Rodent resistant. Available in sizes up to 216 fibers. Length markings in meters for easy determination of cable length.

| | |
|---|---|
| **Jacket Material** | |
| Outdoor | PE |
| Riser | PVC |
| **Buffer Tube** | Thermoplastic |
| **Strength Member** | Aramid Yarn |
| **Central Strength Member** | E-Glass |
| **Armor** | Corrugated Steel Tape |
| **Color Code** (Buffer) | Per TIA/EIA 598-B, See page 39 |
| **Jacket Color** | Black |

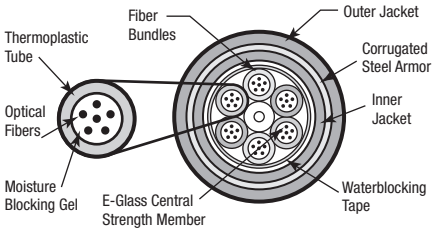
### Ratings

| | |
|---|---|
| **Riser** | OFCR |

### Specifications

| | |
|---|---|
| **Temperature Range** (Outdoor) | |
| Storage | -40 to +75°C |
| Operating | -40 to +70°C |
| **Temperature Range** (Riser) | |
| Storage | -40 to +80°C |
| Operating | -40 to +70°C |
| **Min. Bend Radius** | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| **Optical Specifications** | See page 39 |

### Fiber Bundle Detail



## Double Jacket, Armored Cable

Loose Tube – Outdoor, and Indoor/Outdoor Riser Rated (continued)

| No. of Fibers | Fibers Per Tube | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Loose Tube Series — Armored** | | | | | | | | | | | |
| **Outdoor** | | | | | | | | | | | |
| 6 | 6 | B9B381T | B9A381T | B9C381T | B9W381T | 0.62 | 15.5 | 134 | 200 | 600 | 2670 |
| 12 | 12 | B9B382T | B9A382T | B9C382T | B9W382T | 0.62 | 15.5 | 134 | 200 | 600 | 2670 |
| 24 | 12 | B9B384T | B9A384T | B9C384T | B9W384T | 0.62 | 15.5 | 134 | 200 | 600 | 2670 |
| 36 | 12 | B9B386T | B9A386T | B9C386T | B9W386T | 0.62 | 15.5 | 134 | 200 | 600 | 2670 |
| 48 | 12 | B9B389T | B9A389T | B9C389T | B9W389T | 0.62 | 15.5 | 134 | 200 | 600 | 2670 |
| 72 | 12 | B9B391T | B9A391T | B9C391T | B9W391T | 0.62 | 16.4 | 138 | 206 | 600 | 2670 |
| 96 | 12 | B9B398T | B9A398T | B9C398T | B9W398T | 0.72 | 18.2 | 170 | 254 | 600 | 2670 |
| 144 | 12 | B9B393T | B9A393T | B9C393T | B9W393T | 0.90 | 22.9 | 259 | 385 | 600 | 2670 |
| **Riser** (NEC/CEC OFCR/OFC FT.4) | | | | | | | | | | | |
| 6 | 6 | B9B890 | B9A890 | B9C890 | B9W890 | 0.62 | 15.5 | 138 | 205 | 600 | 2700 |
| 12 | 12 | B9B891 | B9A891 | B9C891 | B9W891 | 0.62 | 15.5 | 138 | 205 | 600 | 2700 |
| 24 | 12 | B9B892 | B9A892 | B9C892 | B9W892 | 0.62 | 15.5 | 138 | 205 | 600 | 2700 |
| 36 | 12 | B9B893 | B9A893 | B9C893 | B9W893 | 0.62 | 15.5 | 138 | 205 | 600 | 2700 |
| 48 | 12 | B9B894 | B9A894 | B9C894 | B9W894 | 0.62 | 15.5 | 176 | 262 | 600 | 2700 |
| 72 | 12 | B9B895 | B9A895 | B9C895 | B9W895 | 0.65 | 16.4 | 172 | 256 | 600 | 2700 |
| 96 | 12 | B9B896 | B9A896 | B9C896 | B9W896 | 0.72 | 18.2 | 206 | 307 | 600 | 2700 |
| 144 | 12 | B9B897 | B9A897 | B9C897 | B9W897 | 0.90 | 22.9 | 302 | 449 | 600 | 2700 |

## Double Jacket, Heavy-Duty Cable

Loose Tube — Outdoor

### Applications

- Direct burial
- Harsh environments
- Applications requiring good ozone-, moisture- and weather-resistance

### Product Description

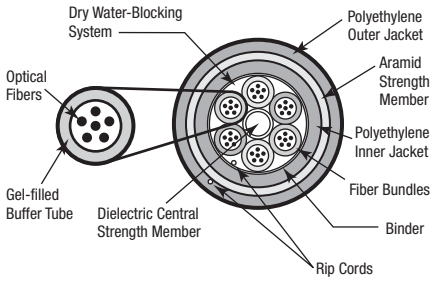
Gel-filled buffer tube prevents water migration. Available with up to 216 fibers.

| | |
|---|---|
| Jacket Material | |
| Outer Jacket: | PE |
| Inner Jacket: | PE |
| Buffer Tube | PBT |
| Strength Member | Aramid Yarn |
| Central Strength Member | E-Glass |
| Core Wrap | Water Swellable Tape |
| Color Code (Buffer) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | Black |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +75°C |
| Operating | -40 to +70°C |
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail




| No. of Fibers | Fibers Per Tube | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Loose Tube Series — Heavy Duty** | | | | | | | | | | | |
| **Outdoor** | | | | | | | | | | | |
| 2 | 2 | **B9B840** | **B9A840** | **B9C840** | **B9W840** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 4 | 4 | **B9B841** | **B9A841** | **B9C841** | **B9W841** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 6 | 6 | **B9B842** | **B9A842** | **B9C842** | **B9W842** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 8 | 8 | **B9B843** | **B9A843** | **B9C843** | **B9W843** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 12 | 12 | **B9B844** | **B9A844** | **B9C844** | **B9W844** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 18 | 12 | **B9B845** | **B9A845** | **B9C845** | **B9W845** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 24 | 12 | **B9B846** | **B9A846** | **B9C846** | **B9W846** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 36 | 12 | **B9B847** | **B9A847** | **B9C847** | **B9W847** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 48 | 12 | **B9B848** | **B9A848** | **B9C848** | **B9W848** | 0.49 | 12.5 | 84 | 125 | 600 | 2700 |
| 72 | 12 | **B9B849** | **B9A849** | **B9C849** | **B9W849** | 0.53 | 13.4 | 97 | 144 | 600 | 2700 |
| 96 | 12 | **B9B820** | **B9A820** | **B9C820** | **B9W820** | 0.60 | 15.2 | 121 | 180 | 600 | 2700 |
| 144 | 12 | **B9B821** | **B9A821** | **B9C821** | **B9W821** | 0.75 | 19.0 | 184 | 274 | 600 | 2700 |
| 216 | 12 | **B9B822** | **B9A822** | **B9C822** | **B9W822** | 0.76 | 19.3 | 187 | 278 | 600 | 2700 |

# Central Tube Cable

Loose Tube—Outdoor, and Outdoor Armored

## Applications

- Campus OSP backbones
- Drop cable
- Telecommunications and data trunk
- Direct burial (armored only)
- Lashed aerial

## Product Description

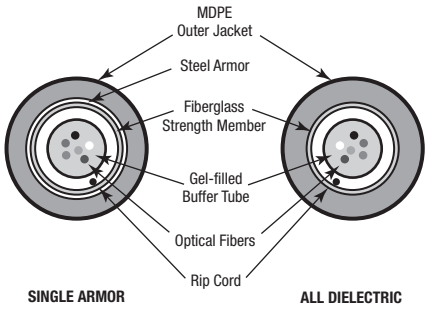
Economical option for low fiber counts. Quick and easy end preparation. Fully waterblocked with gel-filled buffer tube. No rods – easy handling. Crush, impact and abrasion resistant.

| | |
|---|---|
| Jacket Material | PE |
| Buffer Tube | PBT |
| Core Wrap | Water Swellable Tape |
| Strength Member | Fiberglass |
| Armor | Corrugated Steel |
| Color Codes (Jacket and Fibers) | Per TIA/EIA 598-B, See page 39 |
| Jacket Color | Black |

## Specifications

| | |
|---|---|
| **Temperature Range** | |
| Storage | -40 to +75°C |
| Operating | -40 to +70°C |
| **Min. Bend Radius** | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| Optical Specifications | See page 39 |

## Fiber Bundle Detail




| No. of Fibers | Belden Part Number | | | | Outside Diameter | | Weight | | Max. Install Load | |
|---|---|---|---|---|---|---|---|---|---|---|
| | OM1 62.5 / 125 µm Std. / 1 Gb | OM2 50 / 125 µm Std. / 1 Gb | OM3 50 / 125 µm 10 Gb – 300 m | OS2 Single-mode Enhanced | Inch | mm | lb/1000 ft. | kg/km | lb | N |
| **Central Tube Series** | | | | | | | | | | |
| **Outdoor** | | | | | | | | | | |
| 2 | B9B150 | B9A150 | B9C150 | B9W150 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| 4 | B9B151 | B9A151 | B9C151 | B9W151 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| 6 | B9B152 | B9A152 | B9C152 | B9W152 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| 8 | B9B153 | B9A153 | B9C153 | B9W153 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| 10 | B9B154 | B9A154 | B9C154 | B9W154 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| 12 | B9B155 | B9A155 | B9C155 | B9W155 | 0.325 | 8.26 | 50 | 75 | 600 | 2700 |
| **Outdoor Armored** | | | | | | | | | | |
| 2 | B9B170 | B9A170 | B9C170 | M9W170 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |
| 4 | B9B171 | B9A171 | B9C171 | B9W171 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |
| 6 | B9B172 | B9A172 | B9C172 | B9W172 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |
| 8 | B9B173 | B9A173 | B9C173 | B9W173 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |
| 10 | B9B174 | B9A174 | B9C174 | B9W174 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |
| 12 | B9B175 | B9A175 | B9C175 | B9W175 | 0.310 | 7.80 | 34 | 50 | 600 | 2700 |

## TrayOptic® Heavy-Duty, All Dielectric Cable

Loose Tube — Indoor/Outdoor Riser Rated

### Applications

- Industrial and other harsh environment applications
- Factory automation
- Direct burial

### Product Description

Laser Optimized Fiber to handle Gigabit Ethernet light sources and expanded bandwidth requirements. Passes IEEE 383-2003 flame test. Waterblocking agent for moisture protection. CPE outer jacket option provides extra chemical or abrasion resistance.

| | |
|---|---|
| Fiber Type | 62.5/125µ |
| Jacket Material | PVC or CPE |
| Strength Member | Aramid Yarn |
| Jacket Color | Orange |

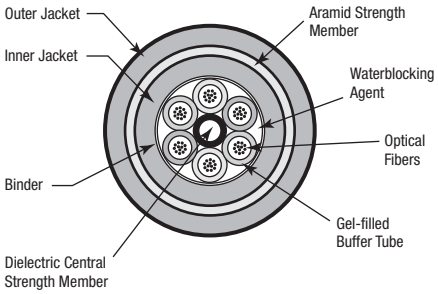
### Ratings

| | |
|---|---|
| Riser | |
| UL Type | OFNR |
| cUL Type | OFN FT.4 |
| Flame Resistance | IEEE 383-2003 |

### Specifications

| | |
|---|---|
| Temperature Range | |
| Storage | -40 to +70°C |
| Operating | -40 to +70°C |
| Crush Resistance (EIA-455-41) | 2000 N/cm |
| Impact Resistance (EIA-455-25) | 2000 impacts@ 1.6N-m |
| Cyclic Flexing (EIA-455-104) | 25 cycles, 12 lbs., 20 x OD radius min. |
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |
| Maximum Installation Load | 600 lbs. (2700 N) |
| Optical Specifications | See page 39 |

### Fiber Bundle Detail




| No. of Fibers | Fibers Per Tube | PVC Jacket | | | CPE Jacket | | | Outside Diameter | |
|---|---|---|---|---|---|---|---|---|---|
| | | Belden Part No. | Weight lb/1000 ft. | Weight kg/km | Belden Part No. | Weight lb/1000 ft. | Weight kg/km | Inches | mm |
| **TrayOptic Series** | | | | | | | | | |
| **Riser** (NEC/CEC OFNR/OFN FT.4) | | | | | | | | | |
| 2 | 2 | **I100255** | 88 | 131 | **I100266** | 83 | 124 | 0.440 | 11.18 |
| 4 | 4 | **I100455** | 88 | 131 | **I100466** | 83 | 124 | 0.440 | 11.18 |
| 6 | 6 | **I100655** | 88 | 131 | **I100666** | 83 | 124 | 0.440 | 11.18 |
| 8 | 4 | **I400855** | 88 | 131 | **I400866** | 83 | 124 | 0.440 | 11.18 |
| 12 | 6 | **I601255** | 88 | 131 | **I601266** | 83 | 124 | 0.440 | 11.18 |
| 18 | 6 | **I601855** | 88 | 131 | **I601866** | 83 | 124 | 0.440 | 11.18 |
| 24 | 6 | **I602455** | 88 | 131 | **I602466** | 83 | 124 | 0.440 | 11.18 |
| 36 | 6 | **I603655** | 88 | 131 | **I603666** | 83 | 124 | 0.440 | 11.18 |
| 48 | 12 | **I604855** | 136 | 202 | **I604866** | 129 | 192 | 0.540 | 13.72 |
| 60 | 12 | **I606055** | 136 | 202 | **I606066** | 129 | 192 | 0.540 | 13.72 |
| 72 | 12 | **I607255** | 136 | 202 | **I607266** | 129 | 192 | 0.540 | 13.72 |

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The Fiber*Express* product line is indicative of our Total Enterprise Networks™ promise – or, our commitment to deliver high-performance, reliable signal transmission solutions that simplify your operations and offer peace of mind. Having the best products and systems in the industry goes a long way toward actualizing this promise, but the strong service orientation and system expertise that resides with Belden professionals, and with our partners, ensures our total quality commitment.

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For more information about our components and systems, or our warranties, please call: **1.800.BELDEN.1** (U.S.A. and Canada) or 1.514.822.7593 (International).

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LifeElectronics
Живое партнерство

**ООО «ЛайфЭлектроникс»** **“LifeElectronics” LLC**

*ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703*

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