



Belden® Optical Fiber Catalog



Our End-to-End Expertise
Your End-to-End Solution

Belden
FiberExpress®
Systems

Belden FiberExpress® Systems Reduce Complexity and Increase Flexibility

Involved in the development of optical fiber components for over 40 years, Belden is a leading supplier of high-quality, cost-effective optical fiber cabling systems. The FiberExpress (FX) Systems are the culmination of Belden's experience and expertise in a variety of applications, including data centers, premise and campus network backbone infrastructures, fiber-to-the-desk (FTTD) applications, and horizontal and centralized cabling systems. Guaranteed to meet or exceed all applicable TIA/EIA, ISO/IEC and IEEE standards, each end-to-end FX System is designed to reduce complexity, increase flexibility and speed up installation.

LEED Point documents are available on several products. See specific product pages for LEED document retrieval instructions.



| | |
|---|-------------------|
| Introduction | 2-3 |
| FiberExpress Field Termination | 4-10 |
| FX Fusion Splice-On Connectors | 4 |
| FX Fusion Splicer Installation Kits and Accessories | 5 |
| FX Brilliance Universal Connectors | 6 |
| FX Brilliance Universal Installation Kits and Accessories | 7 |
| FX Pigtails | 8-10 |
| FiberExpress Patch Panel Systems | 11-23 |
| FX UHD Housing and Shelves | 11 |
| FX UHD and FX Ultra Cassettes | 12-14 |
| FX UHD and FX Ultra Frames | 15 |
| FX UHD and FX Ultra Splitter Cassettes and TAP Cassettes | 16 |
| FX UHD and FX Ultra Adapters and Accessories | 17 |
| FX UHD and FX Ultra Wall Mount and Accessories | 18 |
| FX ECX Housing | 19 |
| FX ECX Frames | 20 |
| FX ECX Splice and Splitter Cassettes | 21 |
| FX ECX Kits and Accessories | 22 |
| FX Rack and Wall-Mount Patch Panels, Adapter Strips and Accessories | 23 |
| FiberExpress Pre-Terminated Assemblies | 24-35 |
| FX Patch Cords | 24-26 |
| FX Hydra Patch Cords | 27-28 |
| FX MPO Trunks | 29-33 |
| FX Multi-Fiber Trunks | 34-35 |
| FiberExpress Workstation Connectivity | 36-37 |
| FX Outlet Boxes | 36 |
| FX Outlet Boxes, Multimedia Modules and Adapters | 37 |
| FiberExpress Secure/Keyed LC System | 38 |
| FiberExpress Optic Cables | 39-67 |
| Jacket Color Chart | 39 |
| SmartPart Number Configurator | 40 |
| FX Breakout Cables | 41 |
| FX Distribution Cables | 42-45 |
| FX Armored Distribution Cables | 46-47 |
| FX Interconnect Cables | 48 |
| FX Composite Distribution Cables | 49 |
| FX Hybrid Copper-Fiber Cables | 50-51 |
| Digital Electricity™ Cables | 52-53 |
| FX µMini Distribution Cables | 54-55 |
| FX All Dielectric Loose Tube Cables | 56-57 |
| FX Central Tube Cables | 58 |
| FX Armored Loose Tube Cables | 59-61 |
| FX Heavy-Duty Loose Tube Cables | 62 |
| FX Drop Cables | 63 |
| FX Tactical Cables | 64 |
| FX Loose Tube Arctic Cables | 65 |
| TrayOptic® Industrial Heavy-Duty Armored Cables | 66-67 |
| Part Number Index | 68-74 |
| Customer Service and Other Belden Contacts | Back Cover |

A Complete Approach to Fiber Optic Cabling

Belden FX Systems are available in a variety of performance levels to provide value and meet the price point for a wide variety of applications. Each system is uniquely color-coded for easy identification in the field.

The following is a recap of the five Belden FX Systems that are offered today:

| Belden System | FX OM1 | FX OM2 | FX OM3 | FX OM4 | FX SM A1 |
|--|---|--|---|---|---|
| Standard | OM1 - 62.5 µm Multimode Non-Bend-Insensitive TIA-492AAAA ANSI/TIA-568-D.3 ISO/IEC 11801 | OM2 - 50 µm Multimode Bend-Insensitive TIA-492AAAB ANSI/TIA-568-D.3 ISO/IEC 11801 | OM3 - 50 µm Multimode Bend-Insensitive TIA-492AAAC ANSI/TIA-568-D.3 ISO/IEC 11801 | OM4 - 50 µm Multimode Bend-Insensitive TIA-492AAD ANSI/TIA-568-D.3 ISO/IEC 11801 | OS2 - 9 µm Singlemode Bend-Insensitive TIA-492CAAB ANSI/TIA-568-D.3 ISO/IEC 11801 ITU G.657.A1 |
| Ethernet Applications | Legacy 1G up to 275 m | Not Recommended for New Designs | 1G up to 550 m 10G up to 300 m 40G/100G up to 100 m | 10G up to 400 m 40G/100G up to 150 m | 10G up to 30/40 km 40G/100G up to 10/40 km |
| Fiber Channel Applications | Legacy 1G up to 300 m | Not Recommended for New Designs | 4G up to 380 m 8G up to 300 m 16G up to 100 m | 16G up to 125 m | 4/8/16G up to 10 km |
| Fiber Cable Assemblies Jacket Color | Orange | Orange | Aqua | Erika Violet Aqua (optional)* | Yellow |
| Connector and Adapter Color | Beige | Black | Aqua | Erika Violet Aqua (optional)* | Blue Green (APC) |
| Pre-Term Connector Loss | MPO-12 0.5 dB LC/SC/ST 0.25 dB | MPO-12 0.5 dB LC/SC/ST 0.25 dB | MPO-12 0.35 dB LC/SC/ST 0.25 dB | MPO-12 0.2 dB LC/SC/ST 0.15 dB | MPO-12 0.5 dB LC/SC/ST 0.35 dB |
| Fiber Cable Loss | Tight Buffer (900 µm) 3.5 dB @ 850 nm 1.25 dB @ 1300 nm Enterprise Loose Tube (250 µm) 3.25 dB @ 850 nm 1.0 dB @ 1300 nm | Tight Buffer (900 µm) 3.5 dB @ 850 nm 1.25 dB @ 1300 nm Enterprise Loose Tube (250 µm) 3.0 dB @ 850 nm 1.0 dB @ 1300 nm | Tight Buffer (900 µm) 3.0 dB @ 850 nm 1.0 dB @ 1300 nm Enterprise Loose Tube (250 µm) 3.0 dB @ 850 nm 1.0 dB @ 1300 nm | Tight Buffer (900 µm) 3.0 dB @ 850 nm 1.0 dB @ 1300 nm Enterprise Loose Tube (250 µm) 3.0 dB @ 850 nm 1.0 dB @ 1300 nm | Tight Buffer (900 µm) 0.5 dB @ 1310 nm 0.5 dB @ 1550 nm Enterprise Loose Tube (250 µm) 0.4 dB @ 1310 nm 0.3 dB @ 1550 nm |
| Min. EMB (MHz-km) | N/A | N/A | 2000 @ 850 nm | 4700 @ 850 nm | N/A |
| Min. OFL Bandwidth (MHz-km) | 200 @ 850 nm 500 @ 1300 nm | 500 @ 850 nm 500 @ 1300 nm | 1500 @ 850 nm 500 @ 1300 nm | 3500 @ 850 nm 500 @ 1300 nm | N/A |

* Belden Standard OM4 products use Erika Violet cable with Erika Violet connectors. Aqua OM4 cable and connectors are available as Tailored products by selecting OM4 fiber with the Aqua color code. Other combinations of fiber type and color will continue to use the default connector colors with the specified cable jacket color.

FiberExpress Field Termination FX Fusion Splice-On Connectors



FX Fusion Splice-On Connectors

Belden's FX Fusion Splice-On Connectors combine the benefits of fusion splicing with the versatility of a field-installable connector to provide superior performance and installation reliability.

FASTER

- Faster deployment with increased first pass termination yield

EASIER

- Easier termination technique with automated splicing tools
- Easier with existing termination tools and compatible splicers

BETTER

- Better insertion and return loss performance for futureproof networks
- Better versatility for both indoor and outdoor environments

Connector Performance

| Fiber Type | Maximum Insertion Loss | Minimum Reflectance |
|-------------------|------------------------|---------------------|
| Singlemode UPC | 0.3 dB | -55 dB |
| Singlemode APC | 0.3 dB | -65 dB |
| Multimode OM1 | 0.25 dB | -25 dB |
| Multimode OM3/OM4 | 0.2 dB | -25 dB |



FT3SC900FS01, FX Fusion OM3/OM4 SC Connector with 900/250 µm Boot, Aqua

FX Fusion Multimode Connectors

| Description | Belden Part Number | | |
|---------------------------------|------------------------|---------------------------|-------------------------------|
| | Multimode, OM1 - Beige | Multimode, OM3/OM4 - Aqua | Multimode, OM4 - Erika Violet |
| LC with 900/250 µm Boot, 1/Pack | FT1LC900FS01 | FT3LC900FS01 | FT4LC900FS01 |
| SC with 900/250 µm Boot, 1/Pack | FT1SC900FS01 | FT3SC900FS01 | FT4SC900FS01 |
| LC with 2 mm Boot, 1/Pack | FT1LC2MMFS01 | FT3LC2MMFS01 | FT4LC2MMFS01 |
| SC with 2 mm Boot, 1/Pack | FT1SC2MMFS01 | FT3SC2MMFS01 | FT4SC2MMFS01 |

FX Fusion connectors with 900/250 µm boot are not compatible for termination on breakout kits.

FX Fusion Singlemode Connectors

| Description | Belden Part Number | |
|---------------------------------|------------------------|-----------------------------|
| | Singlemode, OS2 - Blue | Singlemode, OS2/APC - Green |
| LC with 900/250 µm Boot, 1/Pack | FTSLC900FS01 | FTSLB900FS01 |
| SC with 900/250 µm Boot, 1/Pack | FTSSC900FS01 | FTSSB900FS01 |
| LC with 2 mm Boot, 1/Pack | FTSLC2MMFS01 | FTSLB2MMFS01 |
| SC with 2 mm Boot, 1/Pack | FTSSC2MMFS01 | FTSSB2MMFS01 |

FX Fusion connectors with 900/250 µm boot are not compatible for termination on breakout kits.



FTSLB2MMFS01, FX Fusion OS2/APC LC Connector with 2 mm Boot, Green

Faster.
Easier.
Better.

FiberExpress Field Termination (continued) FX Fusion Splicer Installation Kits and Accessories

Improve Installer Comfort, Repeatability and Performance

Belden's FX Fusion installation kits and active cladding alignment splicer delivers affordable, high-quality performance for consistent and reliable terminations.

FX Fusion Splicer

| Description | Belden Part Number |
|--|--------------------|
| FX Fusion Active Cladding Splicer Kit (includes splicer, splice holder, charger, spare electrodes, cooling tray, carrying case with strap, screwdriver, and fiber seath clamps)* | FXFSTOSPL |

*Belden's FX Fusion splicer is compatible with Splice Holder Family 2, part #FXFSSHFM2 (included), when terminating FX Fusion connectors

FX Fusion Installation Kits

| Description | Belden Part Number |
|---|--------------------|
| Standard Tool Kit (Standard Cleaver, Fiber Preparation Tools) | FXFSTOSTK |
| Precision Tool Kit (Precision Cleaver, Fiber Preparation Tools) | FXFSTOPTK |

FX Fusion Accessories

Installation Kit Accessories

| Description | Belden Part Number |
|----------------------------|--------------------|
| Precision Cleaver | FXFSTOPCL |
| Standard Cleaver | FXFSTOSCL |
| Slitter for Jacketed Fiber | FXFSTOSLT |
| Splice Holder Family 1 | FXFSSHFM1 |
| Splice Holder Family 2 | FXFSSHFM2 |
| Splice Holder Family 3 | FXFSSHFM3 |
| Splice Holder Family 4 | FXFSSHFM4 |

For a complete list of FX Fusion compatible splicers and holders, please visit www.belden.com/splice-on and refer to the installation tools reference guide.

Splicer Kit Accessories and Spare Parts

| Description | Belden Part Number |
|----------------------|--------------------|
| AC Adapter/Charger | FXFSTOSAC |
| Shoulder Strap | FXFSTOSSS |
| Cleaning Brushes | FXFSTOSCB |
| Fiber Holders/Clamps | FXFSTOSFC |
| Spare Electrode | FXFSTOSSE |
| Cooling Tray | FXFSTOSCT |
| Carrying Case | FXFSTOSCC |
| User Guide CD | FXFSTOSCD |
| Keys for Lock | FXFSTOSKY |
| Screwdriver | FXFSTOSSD |
| Yellow Tackle Box | FXFSTOSTB |



FXFSTOSPL, FX Fusion Active Cladding Splicer Kit



FXFSTOSCL, FX Fusion Standard Cleaver



FXFSSHFM2, Splice Holder Family 2

FX Fusion Connectors

FX Field Termination

1. Choose Fiber Type

2. Choose Connector for Patch Side

3. Choose Cable Type

4. Choose Product Family

5. Choose Packaging

FT **3** **LC** **900** **F** **S01**

| Fiber Type | Connector | Cable Type | Product Family | Packaging |
|------------|-------------------|------------------|----------------|-----------------|
| 1 OM1 | LC LC Simplex | 900 Tight Buffer | F Splice-On | S01 Single Pack |
| 3 OM3 | LB LC/APC Simplex | 2MM Jacketed | | |
| 4 OM4 | SC SC Simplex | | | |
| S OS2 | SB SC/APC Simplex | | | |

FiberExpress Field Termination FX Brilliance Universal Connectors



FX Brilliance Universal Connectors

Brilliant in design and universal in implementation, FX Brilliance Universal no-epoxy, no-polish, no-crimp field-installable connectors make fiber field termination faster, easier and better with our industry-leading design.

FASTER

- Faster fiber termination in as few as 5 seconds
- Faster installation proficiency through simple termination technique
- Faster 250 μm direct installation eliminating break-out kits

EASIER

- Easier with no epoxy or polishing
- Easier no-crimp design
- Easier with duplex clips to hold TX/RX pairs together

BETTER

- Better termination yield with integrated VFL feedback
- Better universal cable support for 250 μm , 900 μm , 2 mm Jacketed, 3 mm Jacketed
- Better universal fiber support for OM1, OM2, OM3, OM4 as well as OS2

Three Simple Steps



1 Insert Fiber



2 Activate Tab



3 Install Boot

| Connector Performance | Maximum Insertion Loss | Typical Insertion Loss | Return Loss |
|-----------------------|------------------------|------------------------|-------------|
| Multimode | 0.5 dB | 0.2 dB | 25 dB |
| Singlemode UPC | 0.5 dB | 0.3 dB | 50 dB |
| Singlemode APC | 0.5 dB | 0.3 dB | 60 dB |

| Description | Belden Part Number | | |
|--|--------------------|---------------------------|-------------------------------|
| | Multimode, OM1 | Multimode, OM3/OM4 - Aqua | Multimode, OM4 - Erika Violet |
| LC with 900 μm Boot, 25 per package | AX105200-B25 | AX105202-B25 | AX105252-B25 |
| SC with 900 μm Boot, 25 per package | AX105205-B25 | AX105207-B25 | AX105253-B25 |
| ST with 900 μm Boot, 25 per package | AX105210-B25 | AX105212-B25 | AX105254-B25 |

Replace -B25 with -S1 for sample 1 per package.

| Description | Belden Part Number | | | |
|--------------------------------|--------------------|----------------|---------------------|----------------|
| | Singlemode, OS2 | | Singlemode, OS2/APC | |
| | 1 per package | 25 per package | 1 per package | 25 per package |
| LC with 900 μm Boot | AX105203-S1 | AX105203-B25 | - | - |
| SC with 900 μm Boot | AX105208-S1 | AX105208-B25 | AX105209-S1 | AX105209-B25 |
| ST with 900 μm Boot | AX105213-S1 | AX105213-B25 | - | - |

FX Brilliance Universal includes a boot for 900 μm Tight Buffered fiber. Boots for 2 mm/3 mm Jacketed fiber are sold separately.

| Description | Belden Part Number |
|--|--------------------|
| 250 μm Boot, 25 per package | FXBUB0250B25N |
| 2 mm Jacketed Boot, 25 per package | AX105214-B25 |
| 3 mm Jacketed Boot, 25 per package | AX105215-B25 |

| Description | Belden Part Number |
|--|--------------------|
| LC Duplex Clip (Black), 25 per package | FXBUCLLDB25N |
| SC Duplex Clip (Black), 25 per package | FXBUCLSDB25N |

Faster.
Easier.
Better.

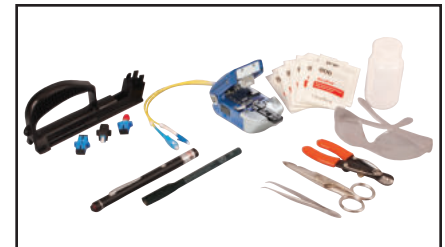
FiberExpress Field Termination (continued) FX Brilliance Universal Installation Kits and Accessories

Improve Installer Comfort, Repeatability and Performance

Although termination of the FX Brilliance Universal connector can be done with no specialized tools, installation kits are available with all the tools necessary to prepare the fiber, as well as to provide a stable work platform to achieve optimal installation results.

FX Brilliance Installation Kit

| Description | Belden Part Number |
|---|--------------------|
| Precision Installation Kit (Basic Kit, Fiber Preparation Tools, Precision Cleaver and Visual Fault Locator) | AX104271 |



AX104271, FX Brilliance Precision Installation Kit

FX Brilliance Accessories

| Description | Belden Part Number |
|---|--------------------|
| Precision Cleaver | AX104286 |
| Precision Cleaver Replacement Blade (for FC-7 cleaver) | AX104293 |
| Precision Cleaver Replacement Blade (for FC-7R and FC-8R cleavers) | AX104593 |
| Support Handle with Adapters | AX104276 |
| Support Handle LC Adapter | AX104289 |
| Support Handle SC Adapter | AX104290 |
| Support Handle ST Adapter | AX104291 |
| Visual Fault Locator (VFL-250) with Adapter Cords | AX104283 |
| Visual Fault Locator (VFL-125) LC-LC Adapter Cord | AX203567 |
| Visual Fault Locator (VFL-125/250) LC-SC Adapter Cord (valid for ST also) | AX203568 |
| Visual Fault Locator (VFL-250) SC-SC Adapter Cord (valid for ST also) | AX203569 |
| Visual Fault Locator (VFL-125) LC-SC/APC Adapter Cord & Support Handle SC/APC Adapter | AX203895 |
| Visual Fault Locator (VFL-250) SC-SC/APC Adapter Cord & Support Handle SC/APC Adapter | AX203930 |
| Fiber/Cable Stripper | AX103151 |
| Pen Marker | AX104279 |
| Refurbishing Materials (80 alcohol wipes and a black pen marker) | AX100951 |
| Safety Glasses | AX104282 |
| Scissors | AX104280 |
| Tweezers | AX104278 |
| Waste Bottle | AX104281 |



AX104286, FX Brilliance Precision Cleaver



AX104276, Support Handle with Adapters

Ensure Durable Rugged Installation on 250 µm Fiber

Field Breakout kits are available to provide a durable 900 µm coating for 250 µm fibers to ensure optimal retention, flex and twist support without sacrificing the outdoor performance of loose-tube cables or the small diameter of mini-distribution cables.

FX Breakout Kits

| Description | Belden Part Number |
|---|--------------------|
| Breakout Kit for 2.0 mm Subunits, 6-fiber, 1-Pack | AX101100 |
| Breakout Kit for 3.0 mm Subunits, 12-fiber, 1-Pack | AX101101 |
| Breakout kit for 5.2 mm Subunits (Central Tube), 6-fiber, 1-Pack | AX104695 |
| Breakout kit for 5.2 mm Subunits (Central Tube), 12-fiber, 1-Pack | AX104696 |

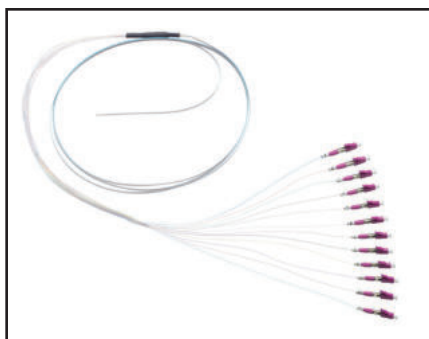


When used with the VFL, a light can be seen through the clear window on the connector body until a fiber has been properly terminated

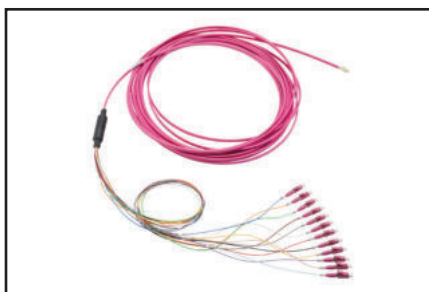
i You can use the FX UHD Splice Cassette (see page 12) with the 250 µm Boot to eliminate the need to install a Break-out kit.

FiberExpress Field Termination (continued)

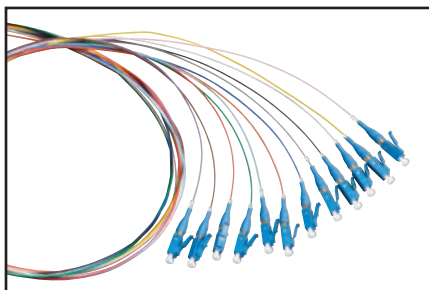
FX Pigtails



FT4LC250PR12, FX Mass-fusion Pigtail, OM4 Erika Violet, LC Simplex, 2 m



FT4LCRIBPS019ME, FX Mass-fusion Pigtail, OM4 Erika Violet, LC Simplex, 9 m



FTSLC900PR12, FX LC Color-coded Pigtail Kit, Singlemode

Established technology with a pedigree of resilience. Traditional fusion splice-on connectors with pigtails provide factory-polished performance with field-termination convenience within harsh environments.

FASTER

- Faster connector identification with color-coded pigtail kits
- Faster delivery with standard LC, SC or ST 2 meter pigtail kits
- Faster installation with Mass-Fusion pigtail kits

EASIER

- Easier field-termination with factory pre-terminated connectors
- Easier ordering with intuitive *SmartPart* numbers

BETTER

- Better quality with precision factory-polished connectors
- Better insertion loss at 0.2 dB MPO-12 and 0.15 dB Max IL OM4

Standard Performance

| Description | FX OM1 | FX OM3 | FX OM4 | FX SM | FX SM/APC |
|-------------------------------------|---|----------|---------|-------|-----------|
| Cable Performance - LC/SC/ST | | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.5/1.2 | 3.25/1.2 | 3.0/1.2 | | – |
| IL Max. 1310 nm/1550 nm (dB/Km) | – | – | – | | 0.5/0.5 |
| Fire Rating | OFN (<= 3 m) OFNP for Interconnect Ribbon 12-fiber (> 3 m) OFNR for all other cables (> 3 m) | | | | |
| Cable Style | 900 µm Color-coded fiber kit (6 or 12 colors from TIA-598) 900 µm single fiber OM1-Gray, OM3/OM4-Aqua, OS2-White 250 µm Bare ribbon fiber Interconnect Simplex/Duplex, 2 mm/3 mm cords Interconnect Ribbon 12-fiber cable | | | | |
| Standard Length | 2 meters | | | | |

| Connector Performance - LC/SC/ST | | | | | |
|---|---------|---------|---------|----------|----------|
| IL Max. (dB) | 0.25 | 0.25 | 0.15 | 0.35 | 0.35 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | PC - 30 | UPC - 55 | APC - 65 |

| Description | FX OM1 | FX OM3 | FX OM4 | FX SM | FX SM/APC |
|---------------------------------|--|----------|---------|-------|-----------|
| Cable Performance - MPO | | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.5/1.2 | 3.25/1.0 | 3.0/1.0 | | – |
| IL Max. 1310 nm/1550 nm (dB/Km) | – | – | – | | 0.5/0.5 |
| Fire Rating | OFN (<= 3 m) OFNP (> 3 m) | | | | |
| Cable Style | 250 µm Bare ribbon fiber Interconnect Ribbon 12-fiber cable Interconnect Mini-Round 2 mm | | | | |
| Standard Length | 2 meters | | | | |

| Connector Performance - MPO | | | | | |
|------------------------------------|---------|---------|---------|---|----------|
| IL Max. (dB) | 0.5 | 0.35 | 0.2 | – | 0.75 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | PC - 30 | – | APC - 60 |

The default fan-out is 0.5 m when there is a transition in a pigtail kit: 900 µm Color-coded fiber kit or 250 µm Bare Ribbon fiber (R06 or R12).

Faster.
Easier.
Better.

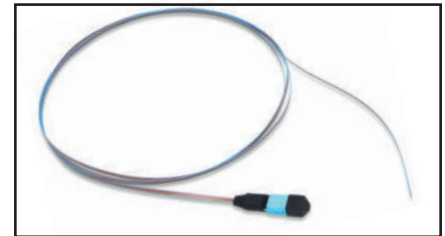
FiberExpress Field Termination (continued) FX Pigtails

Mass fusion splicing can fuse up to all 12 fibers in one ribbon at once. Mass fusion pigtails come with all 12 fibers terminated and a ribbonized open end. Splicers splice entire ribbons simultaneously.

Standard Mass-Fusion Pigtail Kits (Connector on 250 µm Ribbon)

| Description | Belden Part Number | | | | |
|-------------|--------------------|--------------|--------------|--------------|--------------|
| | OM1 | OM3 | OM4 | OS2 | OS2/APC |
| MPO-12 (m) | – | FT3MM250PS01 | FT4MM250PS01 | – | FTSMM250PS01 |
| LC | – | FT3LC250PR12 | FT4LC250PR12 | FTSLC250PR12 | FTSLB250PR12 |
| SC | FT1SC250PR12 | FT3SC250PR12 | – | FTSSC250PR12 | FTSSB250PR12 |

Standard Mass-Fusion Color-coded Pigtail Kits contain a 12-fiber ribbon with a 0.5 m 900 µm fanout with 12 connectors, 2 m in total length.

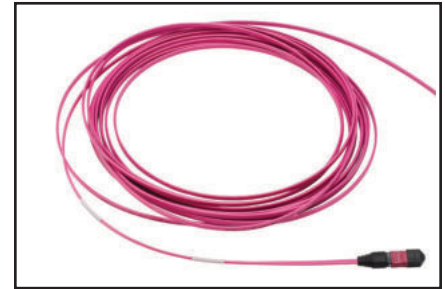


FT3MM250PS01, FX MPO Bare Ribbon Pigtail, OM3 Aqua, MPO(m), 2 m

Standard Pigtail Kits (Connector on 900 µm Fiber)

| Description | Belden Part Number | | | | |
|-------------|--------------------|--------------|--------------|--------------|--------------|
| | OM1 | OM3 | OM4 | OS2 | OS2/APC |
| LC | – | FT3LC900PR12 | FT4LC900PR12 | FTSLC900PR12 | FTSLB900PR12 |
| SC | FT1SC900PR12 | FT3SC900PR12 | FT4SC900PR12 | FTSSC900PR12 | FTSSB900PR12 |
| ST | FT1ST900PR12 | FT3ST900PR12 | – | FTSST900PR12 | – |

Standard Color-coded Pigtail Kits contain 12 color-coded 900 µm fibers, 2 m in length.

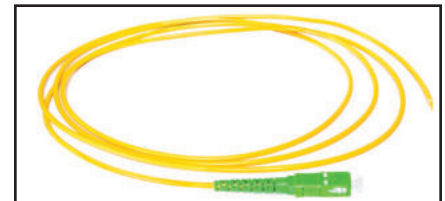


FT4MMRIBPS019ME, FX MPO Jacketed Ribbon Pigtail, OM4 Erika Violet, MPO(m), 9 m

Standard Single Pigtails (Connector on Tight Buffer Fiber)

| Description | Belden Part Number | | | | |
|-------------|--------------------|--------------|--------------|--------------|--------------|
| | OM1 | OM3 | OM4 | OS2 | OS2/APC |
| LC | – | FT3LC900PS01 | FT4LC900PS01 | FTSLC900PS01 | FTSLB900PS01 |
| SC | FT1SC900PS01 | FT3SC900PS01 | FT4SC900PS01 | FTSSC900PS01 | FTSSB900PS01 |
| ST | FT1ST900PS01 | FT3ST900PS01 | – | FTSST900PS01 | – |

Standard Single 900 µm Tight Buffer Pigtails contain 1 unit, 2 m in length.



FTSSB3MMPS01, FX Pigtail, Jacketed Simplex 3.0 mm Cord, OS2 Yellow, SC/APC Simplex

Standard Single Pigtails (Connector on Jacketed Fiber)

| Description | Belden Part Number | | | | |
|-------------|--------------------|--------------|--------------|--------------|--------------|
| | OM1 | OM3 | OM4 | OS2 | OS2/APC |
| MPO-12(m) | – | FT3MM3MMPS01 | FT4MM3MMPS01 | – | FTSMM3MMPS01 |
| LC | – | FT3LC2MMPS01 | FT4LC2MMPS01 | FTSLC2MMPS01 | FTSLB2MMPS01 |
| LC Duplex | – | FT3LD2MMPS01 | FT4LD2MMPS01 | FTSLD2MMPS01 | FTSLA2MMPS01 |
| SC | FT1SC3MMPS01 | FT3SC3MMPS01 | FT4SC3MMPS01 | FTSSC3MMPS01 | FTSSB3MMPS01 |
| SC Duplex | FT1SD3MMPS01 | FT3SD3MMPS01 | FT4SD3MMPS01 | FTSSD3MMPS01 | FTSSA3MMPS01 |
| ST Simplex | FT1ST3MMPS01 | FT3ST3MMPS01 | – | FTSST3MMPS01 | – |

Standard Single-Jacketed Pigtails contain 1 unit, 2 m in length.



FT4LD2MMPS01, FX Pigtail, Jacketed Duplex 2.0 mm Cord, OM4 Erika Violet, LC Duplex

Fusion Splice Heat Shrink Protector Sleeves

| Description | Belden Part Number |
|---|--------------------|
| Heat Shrink Splice Protector Sleeves, 900 µm to 900 µm, 2.5 mm round x 60 mm long, 25/package | FXFUHS900AB25 |
| Heat Shrink Splice Protector Sleeves, 900 µm to 250 µm, 2.0 mm round x 40 mm long, 25/package | FXFUHS9T2CB25 |
| Heat Shrink Splice Protector Sleeves, 250 µm to 250 µm, 1.5 mm round x 40 mm long, 25/package | FXFUHS250DB25 |
| Heat Shrink Splice Protector Sleeves, 250 µm 12-fiber Ribbon, oval x 40 mm long, 12/package | FXFUHSRIBEB12 |

See page 10, Tailored Pigtails - Building a SmartPart Number table, for more options.



Mass-fusion pigtails drastically reduce the amount of labor time spent on fiber terminations (up to 50%) and increase maximum of fiber terminations per day (around 3.5 times more than traditional single splicing).

FiberExpress Field Termination (continued) FX Pigtails

Tailored FX Pigtails Building a SmartPart Number

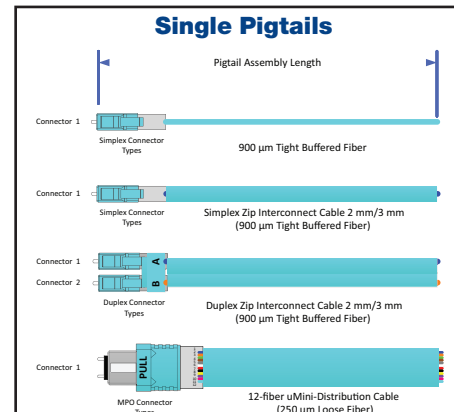
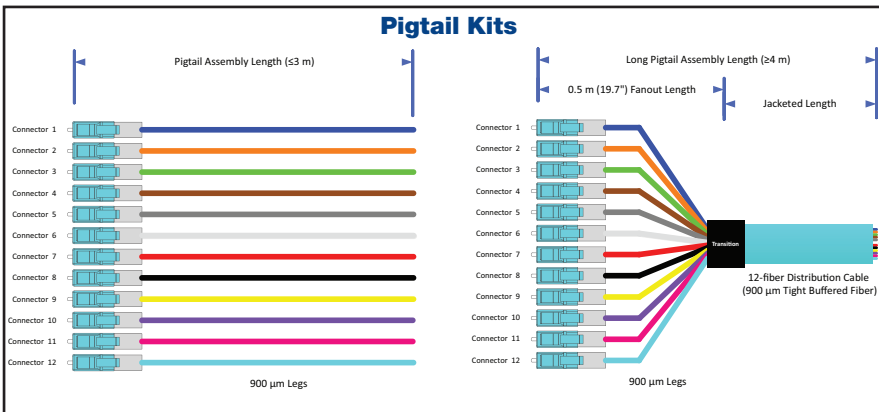
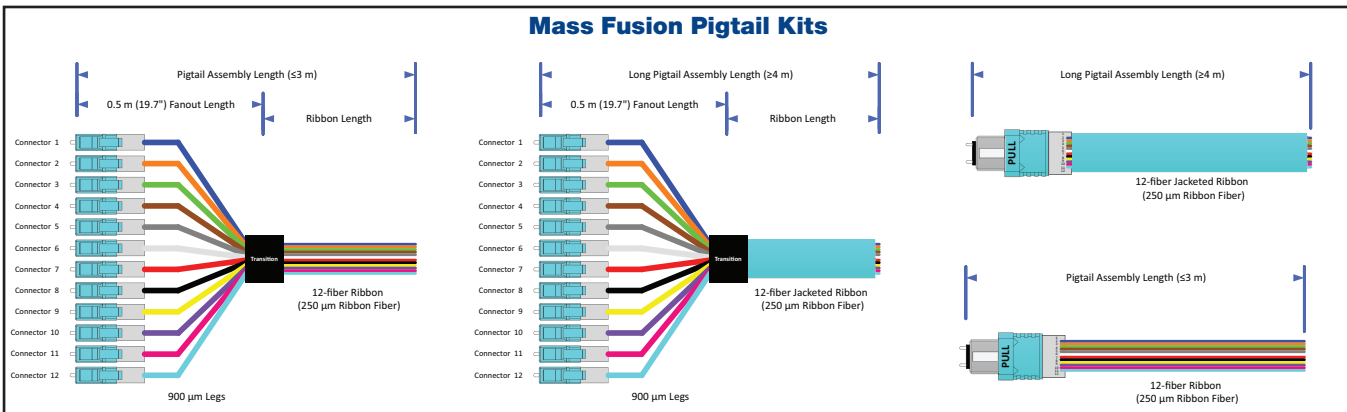
| FX Field Termination | 1. Choose Fiber Type | 2. Choose Connectors | 3. Choose Cable Type | 4. Choose Product Family | 5. Choose Packaging | 6. Choose Length | 7. Choose Jacket/ Buffer Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|----------------------|----------------------|--------------------------|---------------------|------------------|--------------------------------|---|-----|---|-----|--|------------|----|-----------|----|------------|----|---------------|----|----------------|----|-----------|----|------------|----|---------------|----|----------------|----|----|----|------------|----|------------|---|------------|-----|----------------------------------|-----|-----------------|-----|--------------------------|-----|---------------|-----|---------------|---|----------------|---|----------|--|-----------|-----|-------------|-----|--------------|-----|---------------|--|--------|----|----|----|----|----|----|----|----|---|--------------|---|--------|---|------|---|-------|---|--------|---|------|---|----------|---|---------------|
| FT | 3 | LC | 900 | P | R12 | 3M | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Fiber Type</th> <th>Connectors</th> </tr> </thead> <tbody> <tr><td>1</td><td>OM1</td></tr> <tr><td>3</td><td>OM3</td></tr> <tr><td>4</td><td>OM4</td></tr> <tr><td>S</td><td>OS2</td></tr> </tbody> </table> | Fiber Type | Connectors | 1 | OM1 | 3 | OM3 | 4 | OM4 | S | OS2 | <table border="1"> <thead> <tr> <th>Connectors</th> </tr> </thead> <tbody> <tr><td>LD</td><td>LC Duplex</td></tr> <tr><td>LC</td><td>LC Simplex</td></tr> <tr><td>LA</td><td>LC/APC Duplex</td></tr> <tr><td>LB</td><td>LC/APC Simplex</td></tr> <tr><td>SD</td><td>SC Duplex</td></tr> <tr><td>SC</td><td>SC Simplex</td></tr> <tr><td>SA</td><td>SC/APC Duplex</td></tr> <tr><td>SB</td><td>SC/APC Simplex</td></tr> <tr><td>ST</td><td>ST</td></tr> <tr><td>MM</td><td>MPO-12 (m)</td></tr> <tr><td>MF</td><td>MPO-12 (f)</td></tr> </tbody> </table> | Connectors | LD | LC Duplex | LC | LC Simplex | LA | LC/APC Duplex | LB | LC/APC Simplex | SD | SC Duplex | SC | SC Simplex | SA | SC/APC Duplex | SB | SC/APC Simplex | ST | ST | MM | MPO-12 (m) | MF | MPO-12 (f) | <table border="1"> <thead> <tr> <th>Cable Type</th> </tr> </thead> <tbody> <tr><td>250</td><td>Bare Ribbon 250 μm Fiber</td></tr> <tr><td>RIB</td><td>Jacketed Ribbon</td></tr> <tr><td>900</td><td>900 μm Tight Buffer</td></tr> <tr><td>2MM</td><td>2 mm Jacketed</td></tr> <tr><td>3MM</td><td>3 mm Jacketed</td></tr> </tbody> </table> | Cable Type | 250 | Bare Ribbon 250 μ m Fiber | RIB | Jacketed Ribbon | 900 | 900 μ m Tight Buffer | 2MM | 2 mm Jacketed | 3MM | 3 mm Jacketed | <table border="1"> <thead> <tr> <th>Product Family</th> </tr> </thead> <tbody> <tr><td>P</td><td>Pigtails</td></tr> </tbody> </table> | Product Family | P | Pigtails | <table border="1"> <thead> <tr> <th>Packaging</th> </tr> </thead> <tbody> <tr><td>S01</td><td>Single Pack</td></tr> <tr><td>R06</td><td>Rainbow 6 Pk</td></tr> <tr><td>R12</td><td>Rainbow 12 Pk</td></tr> </tbody> </table> | Packaging | S01 | Single Pack | R06 | Rainbow 6 Pk | R12 | Rainbow 12 Pk | <table border="1"> <thead> <tr> <th>Length</th> </tr> </thead> <tbody> <tr><td>2M</td></tr> <tr><td>3M</td></tr> <tr><td>4M</td></tr> <tr><td>5M</td></tr> <tr><td>6M</td></tr> <tr><td>7M</td></tr> <tr><td>8M</td></tr> <tr><td>9M</td></tr> </tbody> </table> | Length | 2M | 3M | 4M | 5M | 6M | 7M | 8M | 9M | <table border="1"> <thead> <tr> <th>Buffer Color</th> </tr> </thead> <tbody> <tr><td>O</td><td>Orange</td></tr> <tr><td>S</td><td>Gray</td></tr> <tr><td>W</td><td>White</td></tr> <tr><td>Y</td><td>Yellow</td></tr> <tr><td>A</td><td>Aqua</td></tr> <tr><td>E</td><td>Erika V.</td></tr> <tr><td>D</td><td>Default Color</td></tr> </tbody> </table> | Buffer Color | O | Orange | S | Gray | W | White | Y | Yellow | A | Aqua | E | Erika V. | D | Default Color |
| Fiber Type | Connectors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | OM1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | OM3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | OM4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | OS2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connectors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LD | LC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LC | LC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LA | LC/APC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LB | LC/APC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SD | SC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SC | SC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SA | SC/APC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB | SC/APC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ST | ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MM | MPO-12 (m) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF | MPO-12 (f) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250 | Bare Ribbon 250 μ m Fiber | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIB | Jacketed Ribbon | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 900 | 900 μ m Tight Buffer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2MM | 2 mm Jacketed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3MM | 3 mm Jacketed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product Family | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | Pigtails | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Packaging | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S01 | Single Pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R06 | Rainbow 6 Pk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R12 | Rainbow 12 Pk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buffer Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O | Orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | Gray | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W | White | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | Yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | Aqua | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | Erika V. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | Default Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Use of Tailored part numbers:

Color - Default color (D) is only used with cable type (250 μ m or 900 μ m) and Packaging (R06 or R12)

Examples:

FT3LC900PR123MD - FX Field-Termination Pigtail, OM3, LC Simplex, Tight Buffer 900 μ m, Color-Coded 12-Fiber, 3 m
FTSST900PR125MY - FX Field-Termination Pigtail, OS2, ST, Tight Buffer 900 μ m, Color-Coded 12-Fiber, 5 m, Yellow Jacket
FT3MMRIBPS014MA - FX Field-Termination Pigtail, OM3, MPO-12 (M), Jacketed Ribbon, Single-Ended, 4 m, Aqua Jacket



Please contact Belden for any help configuring/validating SmartPart Numbers or for any other custom Engineered solutions

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems FX UHD Housings and Shelves

Elegantly simple yet uncompromisingly flexible. Ultra high-density rack-mount fiber connectivity system, crafted for effortless installation and maintenance.

FASTER

- Faster field-termination with high-accessibility sliding and tilting drawers
- Faster pre-term installation with simple fixed shelves and cassettes

EASIER

- Easier installation with tool-less removable drawers and lightweight housings
- Easier port identification with clear visible labeling
- Easier to configure with flexible port count LC, SC, ST and MPO modules

BETTER

- Better fiber protection with covered patch cord tray
- Better high density offering with 18-port modules for up to 72 LC Duplex ports per 1U
- Better visibility with light colored Titanium finish

FX UHD Housings

Feature-rich housings are fully enclosed to provide protection for exposed 250 µm and 900 µm fibers coupled with sliding and tilting drawers to speed up and simplify installation and maintenance.

| Description | Number of Module Bays | Total LC Duplex/ MPO Ports using FX Ultra Frames and Cassettes | Total LC Duplex/ MPO Ports using FX UHD Frames and Cassettes | Belden Part Number | |
|--|-----------------------|---|---|--------------------|----------|
| | | | | Titanium | Black |
| 1U Housing with Front and Rear Cable Tray | 4 | 48 | 72 | AX104681 | AX105563 |
| 2U Housing with Front and Rear Cable Tray | 8 | 96 | 144 | AX104682 | AX105564 |
| 4U Housing with Front and Rear Cable Tray | 16 | 192 | 288 | AX104683 | AX105565 |
| 4U 23" Housing with Front and Rear Cable Tray | 20 | 240 | 360 | AX105379 | – |
| Optional 1U Splice Housing Kit, 144 splices (add up to 4 on the 4U Housing) ¹ | N/A | N/A | N/A | AX104684 | AX105678 |
| Optional Patch Cord Tray Cover, 19" ² | N/A | N/A | N/A | AX105162 | AX105672 |

1. Up to 4 splice housing kits can be added to 4U housings. Splice housing kits are only compatible with standard 19" rack mount housings.
2. Use with 1U or 4U housings to protect the contents of the topmost patch cord tray. Patch cord tray cover is included with 23" housings.

FX UHD Shelves, Single Cassette Holder

Entry-level cost effective solutions for pre-terminated systems.

| Description | Number of Module Bays | Total LC Duplex/ MPO Ports using FX Ultra Frames and Cassettes | Total LC Duplex/ MPO Ports using FX UHD Frames and Cassettes | Belden Part Number | |
|-------------------------|-----------------------|---|---|--------------------|----------|
| | | | | Titanium | Black |
| 1U FX UHD Bezel | 4 | 48 | 72 | AX105813 | AX105812 |
| 1U Standard Fixed Shelf | 4 | 48 | 72 | AX105164 | AX105673 |
| 1U Recessed Fixed Shelf | 4 | 48 | 72 | AX105165 | AX105674 |
| 4U Standard Fixed Shelf | 10 | 120 | 180 | AX105166 | AX105675 |
| 4U Recessed Fixed Shelf | 10 | 120 | 180 | AX105167 | AX105676 |

| FX UHD Single & Double Cassette Holders | | | | Magnetic | Non-Magnetic |
|---|---|----|----|-----------|--------------|
| Single Cassette Holder (Black Finish) | 1 | 18 | 12 | FXFUBRSHM | FXFUBRSHS |
| Double Cassette Holder (Black Finish) | 2 | 36 | 24 | FXFUBRDHM | FXFUBRDHS |

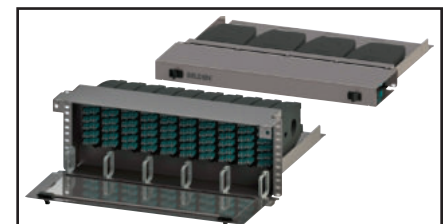
See the FX UHD System Product Bulletin (PB500) for further options



Top: AX104681, FX Ultra HD 1U Patch Panel Housing
Bottom: AX104683, FX UHD 4U Patch Panel Housing (shown loaded)



AX104681, FX UHD Patch Panel 1U with Mounted Splice Housing Kit (AX104684)



Top: AX105164, FX UHD 1U Patch Panel Standard Shelf
Bottom: AX105167, FX UHD 4U Patch Panel Recessed Shelf (shown loaded)



AX105813 FX UHD 1U Bezel



Top: FXFUBRSHM, FX UHD Single Cassette Holder with Magnetic Attachment
Bottom: FXFUBRDHM FX UHD Double Cassette Holder with Magnetic Attachment

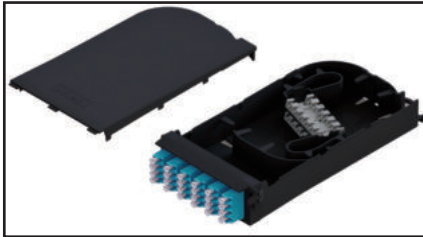
FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Cassettes



FC3H18LDMF, FX UHD Cassette, OS2, 18 Ports, MPO-12 (female), LC Duplex, Type-A, Blue Adapters



FC3U12LDMF1A, FX Ultra Cassette, OM3, 12 Ports, MPO-12 (female), LC Duplex, Type-A ALT, Aqua Adapters



FC3H12LDFS, FX UHD Splice Cassette, OM3, 12 Ports, LC duplex, Aqua Adapters



FCZ00BBFS, FX UHD Empty Splice Cassette

FX UHD and FX Ultra Cassettes

Featuring the highest density at 72 LC Duplex or MPO ports per 19" rack unit FX UHD family is the ideal choice for high-port count applications such as in the data center.

Unique 1" pull-out feature of the FX Ultra family provides a medium density solution with a superior ease of use for day-to-day MAC (moves, adds and changes) within the Enterprise or cross-connect within the data center.

Standard Type-A Cassettes (Base12)

| Description | | | Belden Part Number | | | | |
|---|-------------|----------|--------------------|-------------------|---------------------------|-------------------|------------------------|
| Patch Ports (fibers) | Trunk Ports | Family | OM1 Beige Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters | OS2/APC Green Adapters |
| LC Duplex to MPO-12(12f) Female | | | | | | | |
| 18 (36) | 3 | FX UHD* | – | FC3H18LDMF | FC4H18LDMF | FCSH18LDMF | FCSH18LAMF |
| 12 (24) | 2 | FX Ultra | FC1U12LDMF | FC3U12LDMF | FC4U12LDMF | FCSU12LDMF | FCSU12LAMF |
| SC Duplex to MPO-12(12f) Female | | | | | | | |
| 6 (12) | 1 | FX Ultra | FC1U06SDMF | FC3U06SDMF | FC4U06SDMF | FCSU06SDMF | FCSU06SAMF |
| SC Simplex to MPO-12(12f) Female | | | | | | | |
| 12 (12) | 1 | FX Ultra | – | – | – | FCSU12SCMF | FCSU12SBMF |

*Optional HD Patch cord release tool AX104685

Standard Type-A-Alternate Cassettes (Base12)

| Description | | | Belden Part Number | | | | |
|---|-------------|----------|--------------------|-------------------|---------------------------|-------------------|------------------------|
| Patch Ports (fibers) | Trunk Ports | Family | OM1 Beige Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters | OS2/APC Green Adapters |
| LC Duplex to MPO-12(12f) Female | | | | | | | |
| 18 (36) | 3 | FX UHD | – | FC3H18LDMF1A | FC4H18LDMF1E | FCSH18LDMF1B | FCSH18LAMF1G |
| 12 (24) | 2 | FX Ultra | FC1U12LDMF1T | FC3U12LDMF1A | FC4U12LDMF1E | FCSU12LDMF1B | FCSU12LAMF1G |
| SC Duplex to MPO-12(12f) Female | | | | | | | |
| 6 (12) | 1 | FX Ultra | FC1U06SDMF1T | FC3U06SDMF1A | FC4U06SDMF1E | FCSU06SDMF1B | FCSU06SAMF1G |
| SC Simplex to MPO-12(12f) Female | | | | | | | |
| 12 (12) | 1 | FX Ultra | – | – | – | FCSU12SCMF1B | FCSU12SBMF1G |

Standard Splice Cassettes

| Description | Belden Part Number | | | | |
|-------------------------------------|--------------------|-------------------|---------------------------|------------------|------------------------|
| Patch Ports (fibers) | OM1 Beige Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | SM Blue Adapters | OS2/APC Green Adapters |
| MPO Type-A (Key-Up/Key-Down) | | | | | |
| 12 (144) | FC1H12MPFS | FC3H12MPFS | FC4H12MPFS | – | FCSH12MPFS |
| LC Duplex | | | | | |
| 12 (24) | FC1H12LDFS | FC3H12LDFS | FC4H12LDFS | FCSH12LDFS | FCSH12LAFS |
| SC Duplex | | | | | |
| 6 (12) | FC1H06SDFS | FC3H06SDFS | FC4H06SDFS | FCSH06SDFS | – |
| SC Simplex | | | | | |
| 12 (12) | – | – | – | – | FCSH12SBFS |
| ST (Metal Adapters) | | | | | |
| 12 (12) | FCSH12STFS | | | | |
| Splice Only (No Adapters) | | | | | |
| N/A (144) | FCZ00BBFS | | | | |

FX Brilliance Universal (page 4) or FX Pigtailed (page 6) and Heat Shrink Splice Protector Sleeves (page 7) sold separately.

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Cassettes

Standard FX UHD Angled Cassettes (Base12)

| Description | Left | | | Right | | |
|--|-------------------|---------------------------|------------------|-------------------|---------------------------|-------------------|
| Patch Ports (fibers) | OM3 Aqua Adapters | OM4 Erika Violet Adapters | SM Blue Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters |
| LC Duplex to MPO-12(12f) Female Type-A | | | | | | |
| 12(24) | FC3L12LDMF | FC4L12LDMF | FCSL12LDMF | FC3R12LDMF | FC4R12LDMF | FCSR12LDMF |
| LC Duplex to MPO-12 (12f) Female Type-A Alternate | | | | | | |
| 12(24) | FC3L12LDMF1A | FC4L12LDMF1E | FCSL12LDMF1B | FC3R12LDMF1A | FC4R12LDMF1E | FCSR12LDMF1B |
| SC Duplex to MPO-12(12f) Female Type-A | | | | | | |
| 6 (12) | FC3L06SDMF | FC4L06SDMF | FCSL06SDMF | FC3R06SDMF | FC4R06SDMF | FCSR06SDMF |
| SC Duplex to MPO-12(12f) Female Type-A Alternate | | | | | | |
| 6 (12) | FC3L06SDMF1A | FC4L06SDMF1E | FCSL06SDMF1B | FC3R06SDMF1A | FC4R06SDMF1E | FCSR06SDMF1B |



FX UHD Angled Cassettes, 12 Ports, LC Duplex and 6 Ports, SC Duplex. See Tailored SmartPart numbers for Details.



FX UHD Angled Cassettes (shown installed in FX UHD 1U Housing with Belden Angleflex Copper Patch Patch)

Tailored FX UHD and FX Ultra Cassettes (Base12)

Building a SmartPart Number

Fiber Cassette
FC

1. Choose Fiber Type
3

2. Choose Product Family
U

3. Choose Port Count (Patch Side)
03

4. Choose Connector (Patch Side)
LD

5. Choose Connector (Trunk Side)
MF

6. Choose Polarity (Trunk)
1

7. Choose Adapter Color
A

| Fiber Type | |
|------------|-----|
| 1 | OM1 |
| 3 | OM3 |
| 4 | OM4 |
| S | OS2 |

| Product Family | |
|----------------|--------------------|
| H | FX UHD |
| U | FX Ultra (1" Pull) |
| L | FX U Angled Left |
| R | FX U Angled Right |

| Port Count (Patch Side) | |
|-------------------------|--|
| 03 | |
| 06 | |
| 12 | |
| 18 | |

| Connector (Patch Side) | |
|------------------------|----------------|
| LD | LC Duplex |
| LA | LC/APC Duplex |
| SD | SC Duplex |
| SC | SC Simplex |
| SA | SC/APC Duplex |
| SB | SC/APC Simplex |
| ST | ST |

| Connector (Trunk Side) | |
|------------------------|------------|
| MM | MPO-12 (m) |
| MF | MPO-12 (f) |

| Polarity (Trunk) | |
|------------------|-------------|
| A | Type-A |
| 1 | Type-A-ALT. |

| Adapter Color | |
|---------------|----------|
| T | Beige |
| N | Black |
| A | Aqua |
| E | Erika V. |
| B | Blue |
| G | Green |

For further options contact Belden for custom Engineered solutions. Highest density available with FX UHD style. Maximum density with SC or ST Connectors is 12-fiber.

FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Cassettes



FC3U034MMF, FX UHD Optimizer Cassette, OM3, Aqua Adapters



FCSU12LD4F, FX Ultra Cassette, OM3, 12 Ports, MPO-12 (female), LC Duplex, Type SR4 (Base8), Aqua Adapters

Belden FX UHD Base8 Cassettes

Optimized for SR4 and PSM4 based architectures like 40G and 100G Ethernet as well as Compute, Switch and Storage equipment with groupings of 4, 8 and 12 ports. Belden Base8 Cassettes optimize costs when used with Base8 MPO Trunks and Patch cords by eliminating dark fiber associated with SR4 & PSM4 architectures.

Standard SR4 Optimizer Cassettes (Base8)

| Description | | | Belden Part Number | | |
|--|------------------|----------|--------------------|---------------------------|------------------------|
| Patch Ports (fibers) | Trunk Ports | Family | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2/APC Green Adapters |
| MPO-12(8f) Male to MPO-12(12f) Female | | | | | |
| 6 x MPO-12 (8f) | 4 x MPO-12 (12f) | FX Ultra | FC3U064MMF | FC4U064MMF | FCSU064MMF |
| 3 x MPO-12 (8f) | 2 x MPO-12 (12f) | FX Ultra | FC3U034MMF | FC4U034MMF | FCSU034MMF |

Standard SR4 Cassettes (Base8)

| Description | | | Belden Part Number | | |
|---------------------------------------|-------------|----------|--------------------|---------------------------|-------------------|
| Patch Ports (fibers) | Trunk Ports | Family | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters |
| LC Duplex to MPO-12(8f) Female | | | | | |
| 16 (32) | 4 | FX UHD | FC3H16LD4F | FC4H16LD4F | FCSH16LD4F |
| 12 (24) | 3 | FX Ultra | FC3U12LD4F | FC4U12LD4F | FCSU12LD4F |
| 8 (16) | 2 | FX Ultra | FC3U08LD4F | FC4U08LD4F | FCSU08LD4F |
| 4 (8) | 1 | FX Ultra | FC3U04LD4F | FC4U04LD4F | FCSU04LD4F |

Standard SR4 Angled Cassettes (Base8)

| Description | Left | | | Right | | |
|---------------------------------------|-------------------|---------------------------|-------------------|-------------------|---------------------------|-------------------|
| | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | OS2 Blue Adapters |
| LC Duplex to MPO-12(8f) Female | | | | | | |
| 12 (24) | FC3L12LD4F | FC4L12LD4F | FCSL12LD4F | FC3L12LD4F | FC4L12LD4F | FCSL12LD4F |

Tailored FX UHD and FX Ultra Cassettes (Base8)

Building a SmartPart Number

| Fiber Cassette FC | 1. Choose Fiber Type 3 | 2. Choose Product Family U | 3. Choose Port Count (Patch Side) 04 | 4. Choose Connector (Patch Side) LD | 5. Choose Connector (Trunk Side) 4M | 6. Choose Polarity (Trunk) 4 | 7. Choose Adapter Color A | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--------------------------------------|--|---|---|---|-------------------------------------|----------|------------|--------------------|---------------------|---|-------------------------|------------|------------|-------------|-------------|---|------------------------|--------------|--|------------------------|---------------------|-----------------------|--|------------------|---------------|--|---------------|--------|------------|--------|
| | <table border="1"> <tr><th>Fiber Type</th></tr> <tr><td>3 OM3</td></tr> <tr><td>4 OM4</td></tr> <tr><td>S OS2</td></tr> </table> | Fiber Type | 3 OM3 | 4 OM4 | S OS2 | <table border="1"> <tr><th>Product Family</th></tr> <tr><td>H FX UHD</td></tr> <tr><td>U FX Ultra</td></tr> <tr><td>L FX U Angled Left</td></tr> <tr><td>R FX U Angled Right</td></tr> </table> | Product Family | H FX UHD | U FX Ultra | L FX U Angled Left | R FX U Angled Right | <table border="1"> <tr><th>Port Count (Patch Side)</th></tr> <tr><td>04 4 Ports</td></tr> <tr><td>08 8 Ports</td></tr> <tr><td>12 12 Ports</td></tr> <tr><td>16 16 Ports</td></tr> </table> | Port Count (Patch Side) | 04 4 Ports | 08 8 Ports | 12 12 Ports | 16 16 Ports | <table border="1"> <tr><th>Connector (Patch Side)</th></tr> <tr><td>LD LC Duplex</td></tr> </table> | Connector (Patch Side) | LD LC Duplex | <table border="1"> <tr><th>Connector (Trunk Side)</th></tr> <tr><td>4M MPO-12 (8f) Male</td></tr> <tr><td>4F MPO-12 (8f) Female</td></tr> </table> | Connector (Trunk Side) | 4M MPO-12 (8f) Male | 4F MPO-12 (8f) Female | <table border="1"> <tr><th>Polarity (Trunk)</th></tr> <tr><td>4 SR4 (Base8)</td></tr> </table> | Polarity (Trunk) | 4 SR4 (Base8) | <table border="1"> <tr><th>Adapter Color</th></tr> <tr><td>A Aqua</td></tr> <tr><td>E Erika V.</td></tr> <tr><td>B Blue</td></tr> </table> | Adapter Color | A Aqua | E Erika V. | B Blue |
| Fiber Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 OM3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 OM4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S OS2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product Family | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H FX UHD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U FX Ultra | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L FX U Angled Left | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R FX U Angled Right | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Port Count (Patch Side) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 04 4 Ports | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 08 8 Ports | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 12 Ports | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 16 Ports | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connector (Patch Side) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LD LC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connector (Trunk Side) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4M MPO-12 (8f) Male | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4F MPO-12 (8f) Female | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polarity (Trunk) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 SR4 (Base8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adapter Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A Aqua | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E Erika V. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B Blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

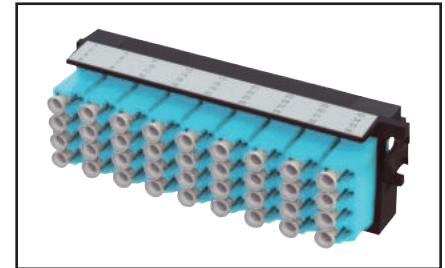
For further options, contact Belden for custom engineered solutions.

Faster.
Easier.
Better.

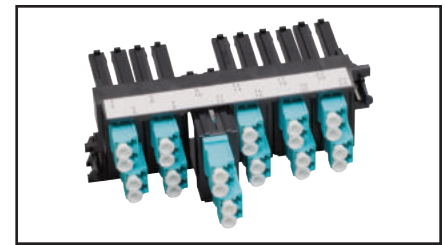
FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Frames

Standard FX UHD and FX Ultra Frames

| Description | | Belden Part Number | | | | |
|-------------------------------------|----------|--------------------|-------------------|---------------------------|------------------|-----------------------|
| Patch Ports (fibers) | Family | OM1 Beige Adapters | OM3 Aqua Adapters | OM4 Erika Violet Adapters | SM Blue Adapters | SM/APC Green Adapters |
| MPO Type-A (Key-Up/Key-Down) | | | | | | |
| 18 | FX UHD | – | FF3H18MP | FF4H18MP | – | FFSH18MP |
| 12 | FX Ultra | – | FF3U12MP | FF4U12MP | – | FFSU12MP |
| LC Duplex | | | | | | |
| 18 (36) | FX UHD | – | FF3H18LD | FF4H18LD | FFSH18LD | FFSH18LA |
| 12 (24) | FX Ultra | FF1U12LD | FF3U12LD | FF4U12LD | FFSU12LD | FFSU12LA |
| SC Duplex | | | | | | |
| 6 (12) | FX Ultra | FF1U06SD | FF3U06SD | FF4U06SD | FFSU06SD | FFSU06SA |
| SC Simplex | | | | | | |
| 12 (12) | FX Ultra | – | – | – | FFSU12SC | FFSU12SB |
| ST | | | | | | |
| 12 (12), Metal | FX Ultra | ← FFSU12ST → | | | | – |



FF3H18LD, FX UHD Frame, OM3, 18 Ports, LC Duplex, Aqua Adapters



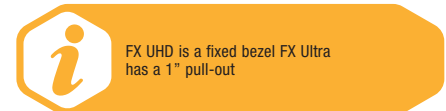
FF3U12LD, FX Ultra Frame, OM3, 12 Ports, LC Duplex, Aqua Adapters

Tailored FX UHD and FX Ultra Frames

Building a SmartPart Number

| Fixed Letter Series | 1. Choose Fiber Type | 2. Choose Product Family | 3. Choose Port Count | 4. Choose Connector for Patch Side | 5. Choose Adapter Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--------------------------|----------------------|------------------------------------|-------------------------|-------|----------------------|-------|--|-------|--|---|-------------------------|----|----|----|----|---|------------------------|--------------|------------------|-------------------------|--------------|---------------|------------------|-------------------|--------------------------|---------------------------|-------|----------------|--------------|--|---------------|---------|---------|--------|------------|--------|---------|
| FF | 3 | H | 18 | LD | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Fiber Type</th> <th>Product Family</th> </tr> </thead> <tbody> <tr> <td>1 OM1</td> <td>H FX UHD</td> </tr> <tr> <td>3 OM3</td> <td>U FX Ultra (1" Pull)</td> </tr> <tr> <td>4 OM4</td> <td></td> </tr> <tr> <td>S OS2</td> <td></td> </tr> </tbody> </table> | Fiber Type | Product Family | 1 OM1 | H FX UHD | 3 OM3 | U FX Ultra (1" Pull) | 4 OM4 | | S OS2 | | <table border="1"> <thead> <tr> <th>Port Count (Patch Side)</th> </tr> </thead> <tbody> <tr> <td>03</td> </tr> <tr> <td>06</td> </tr> <tr> <td>12</td> </tr> <tr> <td>18</td> </tr> </tbody> </table> | Port Count (Patch Side) | 03 | 06 | 12 | 18 | <table border="1"> <thead> <tr> <th>Connector (Patch Side)</th> </tr> </thead> <tbody> <tr> <td>LD LC Duplex</td> </tr> <tr> <td>LA LC/APC Duplex</td> </tr> <tr> <td>LS LC Duplex w/Shutters</td> </tr> <tr> <td>SD SC Duplex</td> </tr> <tr> <td>SC SC Simplex</td> </tr> <tr> <td>SA SC/APC Duplex</td> </tr> <tr> <td>SB SC/APC Simplex</td> </tr> <tr> <td>SS SC Duplex w/ Shutters</td> </tr> <tr> <td>SR SC Simplex w/ Shutters</td> </tr> <tr> <td>ST ST</td> </tr> <tr> <td>MP MPO Up/Down</td> </tr> <tr> <td>MR MPO Up/Up</td> </tr> </tbody> </table> | Connector (Patch Side) | LD LC Duplex | LA LC/APC Duplex | LS LC Duplex w/Shutters | SD SC Duplex | SC SC Simplex | SA SC/APC Duplex | SB SC/APC Simplex | SS SC Duplex w/ Shutters | SR SC Simplex w/ Shutters | ST ST | MP MPO Up/Down | MR MPO Up/Up | <table border="1"> <thead> <tr> <th>Adapter Color</th> </tr> </thead> <tbody> <tr> <td>T Beige</td> </tr> <tr> <td>N Black</td> </tr> <tr> <td>A Aqua</td> </tr> <tr> <td>E Erika V.</td> </tr> <tr> <td>B Blue</td> </tr> <tr> <td>G Green</td> </tr> </tbody> </table> | Adapter Color | T Beige | N Black | A Aqua | E Erika V. | B Blue | G Green |
| Fiber Type | Product Family | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 OM1 | H FX UHD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 OM3 | U FX Ultra (1" Pull) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 OM4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S OS2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Port Count (Patch Side) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connector (Patch Side) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LD LC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LA LC/APC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LS LC Duplex w/Shutters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SD SC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SC SC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SA SC/APC Duplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB SC/APC Simplex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS SC Duplex w/ Shutters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SR SC Simplex w/ Shutters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ST ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MP MPO Up/Down | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MR MPO Up/Up | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adapter Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T Beige | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N Black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A Aqua | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E Erika V. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B Blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G Green | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Highest density available with FX UHD style. Maximum density with SC or ST Connectors is 12-fiber.



FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Splitter Cassettes and TAP Cassettes



AX104681, FX UHD Housing (shown loaded from left to right with, FCSH12SBFS, FX UHD Splice Cassette, SCSH2116SLF, FX UHD Splitter Cassette, 2 x FCSH12LAFS, FX UHD Splice Cassettes)



SCSH2116SLF, FX UHD Splitter Cassette, OS2, Dual 1x16 Splitter, SC/APC Upstream Ports, LC/APC Downstream Ports



SCSU1208SLF, FX Ultra Splitter Cassette, OS2, Single 2x8 Splitter, SC/APC Upstream Ports, LC/APC Downstream Ports



TC4H044F4F4M, OM4 TAP Cassette, 4 Live A MPO (8f) Ports, 4 MPO (8f) TAP Ports

Splitter Cassette

| Description (Upstream/Downstream) | Splitter | Belden Part Number |
|-----------------------------------|-------------|--------------------|
| SC/APC to LC/APC | Single 2x8 | SCSU1208SLF |
| SC/APC to LC/APC | Single 2x16 | SCSU1216SLF |
| SC/APC to LC/APC | Dual 2x8 | SCSU2208SLF |
| MPO/APC to LC/APC | Quad 2x8 | SCSH4208MLF |
| LC/APC to LC/APC | Quad 1x8 | SCSH4108LLF |
| LC/APC to LC/APC | Dual 2x16 | SCSH2216LLF |
| SC/APC to LC/APC | Dual 1x16 | SCSH2116SLF |
| SC/APC to LC/APC | Single 2x32 | SCSH1232SLF |

FX UHD and FX Ultra Traffic Analysis Port (TAP)

Belden's TAP cassettes allow for monitoring of communication over fiber cables to ensure quality of service and provide security/troubleshooting capabilities.

TAP Cassette

| Belden Part Number | | | Number of Live A-Ports | TAP Ratio | Live A-Port | Live B-Port | TAP Port |
|--------------------|----------------|--------------|------------------------|-----------|-----------------|------------------|----------------|
| OM4 | OM4 (Aqua) | OM3 | | | | | |
| TC4H06LDMFLD | TC4H06LDMFLD7A | TC3H06LDMFLD | 6 | 70/30 | LC Duplex | MPO Female (12f) | LC Duplex |
| TC4H02LDLDDL | TC4H02LDLDDL7A | TC3H02LDLDDL | 2 | 70/30 | LC Duplex | LC Duplex | LC Duplex |
| TC4H06LDMFMM | TC4H06LDMFMM7A | TC3H06LDMFMM | 6 | 70/30 | LC Duplex | MPO Female (12f) | MPO Male (12f) |
| TC4H044F4F4M | TC4H044F4F4M7A | TC3H044F4F4M | 4 | 70/30 | MPO Female (8f) | MPO Female (8f) | MPO Male (8f) |

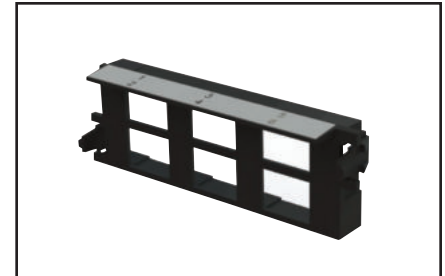
i Splitters beginning with the prefix "SCSU" represent Belden's FX Ultra cassette family. These cassettes feature our unique "1" pull-out feature that delivers superior ease of use for day-to-day MACs (moves, adds and changes).

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Adapters and Accessories

Standard FX Ultra KeyConnect Frames

| Patch Ports | Description | Belden Part Number |
|-------------|----------------------------------|--------------------|
| 6 | FX Ultra KeyConnect Frame 6-Port | FFZH06KC |
| 8 | FX Ultra KeyConnect Frame 8-Port | FFZH08KC |



FFZH06KC, FX Ultra KeyConnect Frame, 6-Port

KeyConnect Fiber Modules

| Description | Belden Part Number | | |
|--|--------------------|-------------|-------------|
| | Almond | Elec. White | Black |
| LC Duplex - OM3 (Aqua Adapter) | AX104937 | AX104938 | AX104939 |
| LC Duplex - OM4 (Erika Violet Adapter) | AX105641-AL | AX105641-EW | AX105641-BK |
| SC Simplex OM1 (Beige Adapter) | AX102683 | AX102684 | AX102685 |
| SC Simplex - OM3 (Aqua Adapter) | AX105643-AL | AX105643-EW | AX105643-BK |
| ST- Metal | AX102242 | AX102243 | AX102244 |

Standard Copper KeyConnect Adapters

| Description | Belden Part Number | | |
|-------------------------|--------------------|----------|----------|
| | Black | Blue | White |
| 10GX RJ45 Coupler | AX104024 | AX104019 | AX104023 |
| 10GX RJ45 Modular Jack | AX102283 | AX102288 | AX102282 |
| CAT6+ RJ45 Coupler | AX104215 | AX104210 | AX104214 |
| CAT6+ RJ45 Modular Jack | AX101321 | AX101326 | AX101320 |

Above adapters are for Black Bezels. Contact your local Belden representative for a complete listing of KeyConnect adapters in other colors.



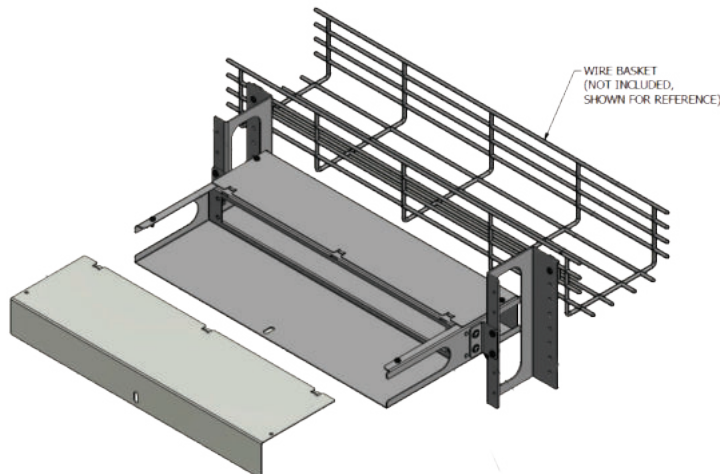
AX104572, FX Color-coded Icon Kit, (shown on frame)

Standard FX UHD Accessories

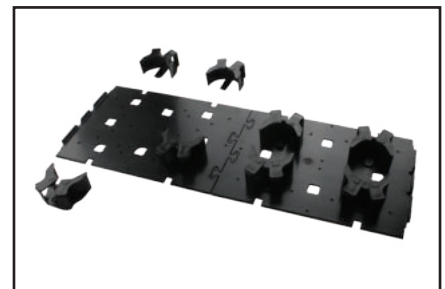
| Description | Belden Part Number |
|--|--------------------|
| FX UHD Blank Plate | FFZH00BB |
| FX UHD Patch Cord Release Tool | AX104685 |
| FX Ultra LC Duplex Color-coded Icon Kit | AX104572 |
| FX UHD Fiber Management Spool kit, includes base plates and eight spool segments | AX105700 |
| 1U Rackmount Enclosure for Cable Tray Mounting | XPE-S0003 |
| 1U 19" to 23" Extender Bracket | 9810-0100 |
| 2U 19" to 23" Extender Bracket | 9811-0200 |
| 4U 19" to 23" Extender Bracket | 9813-0400 |



AX104024, 10GX RJ45 Coupler



XPE-S0003, FX UHD Basket Hanger for 1U FX UHD Patch Panel Housings and Shelves.



AX105700, FX UHD Fiber Management Spool Kit

FiberExpress Patch Panel Systems (continued) FX UHD and FX Ultra Wall Mount and Accessories



AX106818, FX UHD Stackable Wall Mount Patch Panel

Clean, simple, lightweight wall-mount unit that accepts all cassettes and frames from the FX UHD ecosystem. The FX UHD wall mount is a modular platform; A vertically stacked configuration creates an interconnect, while the patching spaces can be combined in a horizontal configuration to make a proper cross-connect. There are two separate compartments, one for the main service area (lockable) and one for the patching space. Ideal for MDUs and passive optical LAN applications.

FX UHD Wall Mount

| Description | Belden Part Number |
|--------------------------------------|--------------------|
| FX UHD Wall Mount Patch Panel, Black | AX106817 |
| FX UHD Wall Mount Patch Panel, Gray | AX106818 |

4 cassettes; 4 frames; 48 fibers (SC, SCD, ST, LCD); 4 FXU Fusion Trays, 8-inch (AX103912)



AX103928, FX Ultra Stackable Wall Mount Patch Panel

FX Ultra Wall Mount and Accessories

Resolute protection while maintaining the utmost adaptability. Complete selection of fiber enclosures provides effortless security and protection while leveraging both the flexibility and density of the FX UHD frames and cassettes.

FASTER

- Faster installation with easy access and lightweight housing
- Faster installation with pre-terminated cassettes

EASIER

- Easier configuration with FX UHD and FX Ultra modules in LC, SC and ST
- Easier security with optical door lock
- Easier expansion with stackable design

BETTER

- Better with support for Pre-Term and Field-Term including splicing
- Better management with independent doors for trunk and patching sides
- Better density with up to 36 LC Duplex ports



AX103930, FX Ultra Wall Mount Splice Enclosure

FX Ultra Wall Mount

| Description | Number of Module Bays | Splice Trays | Belden Part Number |
|---|-----------------------|-----------------------------|--------------------|
| Stackable Wall Mount Patch Panel, Black | 2 | 2 x 8" (Up to 48-Splices) | AX103928 |
| Stackable Wall Mount Splice Enclosure | 0 | 4 x 10" (Up to 144-Splices) | AX103930 |

Splice trays sold separately



AX103928 and AX103932, FX Ultra Wall Mount Patch Panel with Spacer

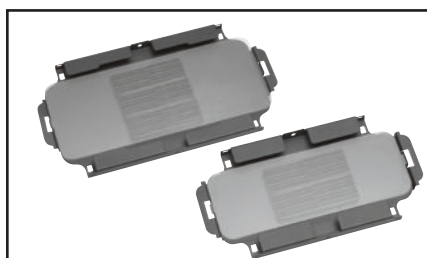
FX Ultra Splice Trays

| Description | Splices per Tray | Belden Part Number |
|-----------------|------------------|--------------------|
| 8" Splice Tray | 24 | AX103912 |
| 10" Splice Tray | 36 | AX103913 |

All splice trays accommodate 2.5 mm OD single fiber splice protectors up to 80 mm in length or part number FXFUHS900AB25

FX Ultra Wall Mount Accessories

| Description | Belden Part Number |
|----------------------|--------------------|
| 2-inch Spacer, Black | AX103932 |
| Door Lock Kit | AX103934 |



FX Ultra Splice Trays

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems (continued) FX ECX Housings

Belden's FX Enterprise Closet X (ECX) Patch Panel system is an elegant, intuitive and flexible solution that has been designed to maximize installer flexibility when compared to industry-leading solutions. FX ECX has been optimized for LAN environments, and provides an easy-to-deploy, efficient solution for installers.

FASTER

- Faster installation with fewer detachable components
- Faster field termination with removable clear top covers (all panels) and removable front and rear housing (4U)

EASIER

- Easier frequent MAC work with front and rear removable cassettes (patent pending)
- Easier to configure with flexible port count LC, SC, ST and MPO couplers as well as KeyConnect compatibility (copper and multimedia modules)
- Easier port identification with retractable label holder and compatibility with LabelFlex labels (optional)

BETTER

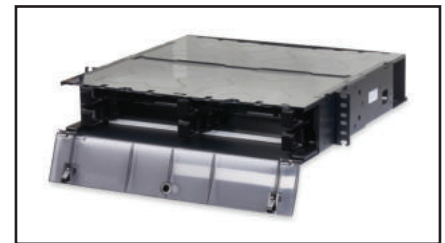
- Better fiber routing with slack management integrated into the splice cassette lid (eliminates pinch points)
- Better management with multiple built-in options for cable and patch cords strain relief
- Better flexibility to support all modern field-termination techniques (Splice trays, Splice cassettes, Splice-on connectors, Mechanical splice connectors)

FX ECX Housings

| Description | Number of Module Bays | Total LC Duplex using ECX Frames | Total LC Duplex using ECX Cassettes | Belden Part Number |
|-------------|------------------------|----------------------------------|-------------------------------------|--------------------|
| 1U Housing | 2 Cassettes or Frames | 32 | 24 | ECX-01U |
| 2U Housing | 4 Cassettes or Frames | 64 | 48 | ECX-02U |
| 4U Housing | 12 Cassettes or Frames | 192 | 144 | ECX-04U |



ECX-01U, FX ECX 1U Housing

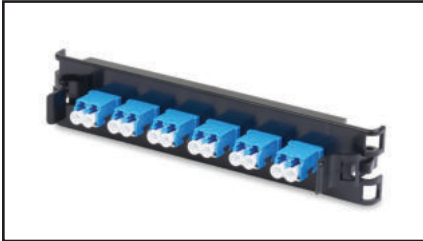


ECX-02U, FX ECX 2U Housing



ECX-04U, FX ECX 4U Housing

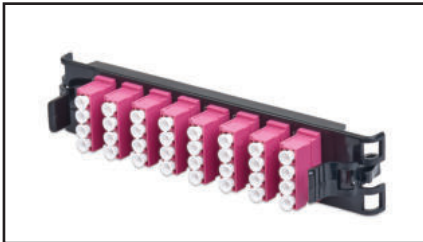
FiberExpress Patch Panel Systems (continued) FX ECX Frames



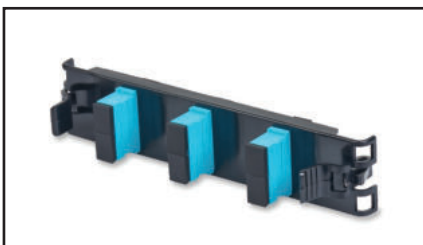
FFSX06LD, LC Duplex Frame, OS2 Blue Adapters



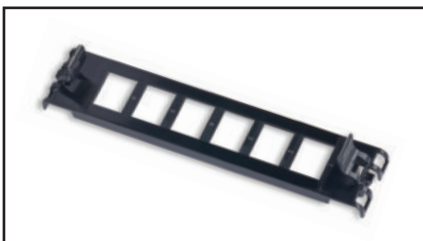
FF1X12LD, LC Duplex Frame, OM1 Beige Adapters



FF4X16LD, LC Duplex Frame, OM4 Ericka Violet Adapters



FF3X03SD, SC Duplex Frame, OM3 Aqua Adapters



FFZX06KC, KeyConnect Frame

Standard FX ECX Frames

| Description - Patch Ports (fibers) | OM1 (Beige Adapters) | OM3 (Aqua Adapters) | OM4 (Erika Violet Adapters) | OS2 (Blue Adapters) | OS2 APC (Green Adapters) |
|------------------------------------|----------------------|---------------------|-----------------------------|---------------------|--------------------------|
| LC Duplex | | | | | |
| 6 (12) | FF1X06LD | FF3X06LD | FF4X06LD | FFSX06LD | FFSX06LA |
| 12 (24) | FF1X12LD | FF3X12LD | FF4X12LD | FFSX12LD | FFSX12LA |
| 16 (32) | FF1X16LD | FF3X16LD | FF4X16LD | FFSX16LD | FFSX16LA |
| SC Duplex | | | | | |
| 3 (6) | FF1X03SD | FF3X03SD | FF4X03SD | FFSX03SD | FFSX03SA |
| 6 (12) | FF1X06SD | FF3X06SD | FF4X06SD | FFSX06SD | FFSX06SA |
| KeyConnect Frames | | | | | |
| 4 Ports | ← | | FFZX04KC | → | |
| 6 Ports | ← | | FFZX06KC | → | |
| Blank Frame | ← | | FFZX00BB | → | |

Tailored FX ECX Frames

Building a SmartPart Number

Fixed Letter Series: **FF**

1. Choose Fiber Type: **S**

2. Choose Product Family: **X**

3. Choose Port Count: **06**

4. Choose Connector for Patch Side: **SC**

| Fiber Type | Product Family | Port Count (Patch Side) | Connector (Patch Side) |
|------------|----------------|-------------------------|------------------------|
| 1 OM1 | X ECX | 03 | LD LC Duplex |
| 3 OM3 | | 06 | LA LC/APC Duplex |
| 4 OM4 | | 08 | SD SC Duplex |
| S OS2 | | 12 | SC SC Simplex |
| | | 16 | SA SC/APC Duplex |
| | | | SB SC/APC Simplex |
| | | | ST ST |
| | | | MP MPO Up/Down |

Maximum density with SC Connectors is 16-fibers.

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems (continued) FX ECX Splice and Splitter Cassettes

Standard FX ECX Splice Cassettes

| Description - Patch Ports (fibers) | OM1 (Beige Adapters) | OM3 (Aqua Adapters) | OM4 (Erika Violet Adapters) | OS2 (Blue Adapters) | OS2 APC (Green Adapters) |
|------------------------------------|----------------------|---------------------|-----------------------------|---------------------|--------------------------|
| LC Duplex | | | | | |
| 6 (12) | FC1X06LDFS | FC3X06LDFS | FC4X06LDFS | FCSX06LDFS | FCSX06LAFS |
| 12 (24) | FC1X12LDFS | FC3X12LDFS | FC4X12LDFS | FCSX12LDFS | FCSX12LAFS |
| SC Duplex | | | | | |
| 3 (6) | FC1X03SDFS | FC3X03SDFS | FC4X03SDFS | FCSX03SDFS | FCSX03SAFS |
| 6 (12) | FC1X06SDFS | FC3X06SDFS | FC4X06SDFS | FCSX06SDFS | FCSX06SAFS |



FCSX06LAFS, LC Duplex Splice Cassette, OS2 APC Green Adapters

Tailored FX ECX Splice Cassettes

Building a SmartPart Number

Fixed Letter Series

FC

1. Choose Fiber Type

S

2. Choose Product Family

X

3. Choose Port Count

06

4. Choose Connector for Patch Side

SC

5. Choose Connector for Patch Side

FS

| Fiber Type | |
|------------|-----|
| 1 | OM1 |
| 3 | OM3 |
| 4 | OM4 |
| S | OS2 |

| Product Family | |
|----------------|-----|
| X | ECX |

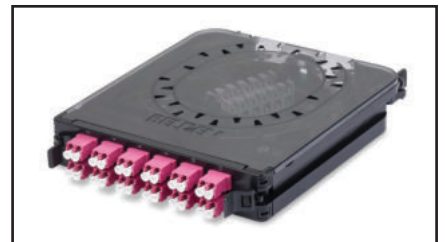
| Port Count (Patch Side) | |
|-------------------------|--|
| 03 | |
| 06 | |
| 08 | |
| 12 | |

| Connector (Patch Side) | |
|------------------------|----------------|
| LD | LC Duplex |
| LA | LC/APC Duplex |
| SD | SC Duplex |
| SC | SC Simplex |
| SA | SC/APC Duplex |
| SB | SC/APC Simplex |
| ST | ST |
| MP | MPO Up/Down |

| Connector (Trunk Side) | |
|------------------------|-----------------|
| FS | Splice Cassette |



FC1X12SCFS, SC Simplex Splice Cassette, OM1 Beige Adapters



FC4X12LDFS, LC Duplex Splice Cassette, OM4 Erika Violet Adapters

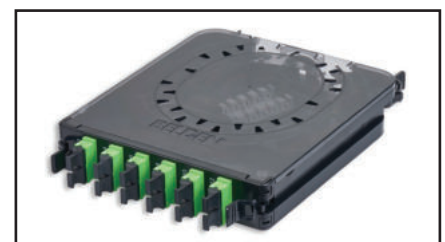
Maximum density with SC Connectors is 12-fibers.

Standard FX ECX Splitter Cassettes

| Description (Upstream/Downstream) | Splitter | Belden Item Number |
|-----------------------------------|-------------|--------------------|
| SC/APC to LC/APC | Single 1x2 | SCSX1102SLF |
| SC/APC to LC/APC | Single 1x4 | SCSX1104SLF |
| SC/APC to LC/APC | Single 1x8 | SCSX1108SLF |
| SC/APC to LC/APC | Single 1x16 | SCSX1116SLF |
| SC/APC to LC/APC | Single 1x32 | SCSX1132SLF |
| SC/APC to LC/APC | Single 2x4 | SCSX1204SLF |
| SC/APC to LC/APC | Single 2x8 | SCSX1208SLF |
| SC/APC to LC/APC | Single 2x16 | SCSX1216SLF |
| SC/APC to LC/APC | Single 2x32 | SCSX1232SLF |
| SC/APC to LC/APC | Dual 1x16 | SCSX2116SLF |
| SC/APC to LC/APC | Dual 2x8 | SCSX2208SLF |
| LC/APC to LC/APC | Dual 2x16 | SCSX2216LLF |
| LC/APC to LC/APC | Quad 1x8 | SCSX4108LLF |
| MPO/APC to LC/APC | Quad 2x8 | SCSX4208MLF |



FCSX06SDFS, SC Duplex Splice Cassette, OS2 Blue Adapters



FCSX12MPFS, MPO Key Up/Down Splice Cassette, OS2 APC Green Adapters



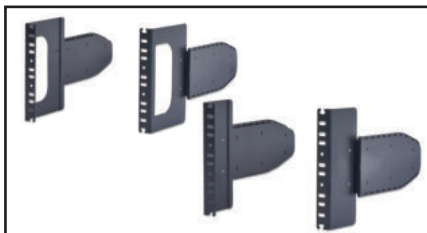
ECX-LOCKKIT, Door Lock Kit



ECX-MGTCLIPS, Management Clips



ECX-SPLICEKIT, Splice Tray Kit



ECX-BRKTMT-3 / ECX-BRKTMT-0, 4U Rack Mounting Brackets



ECX-4U-EXSTR, 4U Rear External Strain Relief



ECX-INTERSTR, ECX-4U-INTSTR, 4U Internal Strain Relief



ECX-1U2U-EXSTR, ECX-1U2U-EXSTRA, 1U/2U Rear External Strain Relief (Angled and non-angled)

FiberExpress Patch Panel Systems (continued) FX ECX Kits and Accessories

FX ECX Universal Accessories

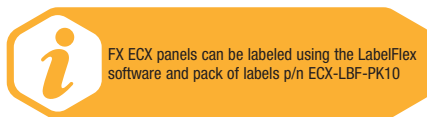
| Description | Belden Part Number |
|--|--------------------|
| Door Lock Kit | ECX-LOCKKIT |
| FX ECX Intermediare Strain Relief | ECX-INTERSTR |
| Managements Clips | ECX-MGTCLIPS |
| LabelFlex Label Pack for ECX Patch Panels, White (4/Sh)(10Sh/Pk) | ECX-LBF-PK10 |

FX ECX 4U Housing Accessories

| Description | Belden Part Number |
|---|--------------------|
| 4U Splice Tray Kit | ECX-SPLICEKIT |
| 4U Rack Mounting Bracket 3 In | ECX-BRKTMT-3 |
| 4U Rack Mounting Bracket Flush | ECX-BRKTMT-0 |
| 4U Rear External Strain Relief (Angled) | ECX-4U-EXSTRA |
| 4U External Strain Relief | ECX-4U-EXSTR |
| 4U Internal Strain Relief | ECX-4U-INTSTR |
| 4U Labelkit | ECX-LBL-4U |

FX ECX 1U/2U Housing Accessories

| Description | Belden Part Number |
|--|--------------------|
| 1U/2U Rear External Strain Relief (Angled) | ECX-1U2U-EXSTRA |
| 1U/2U External Strain Relief | ECX-1U2U-EXSTR |
| 1U/2U Internal Strain Relief | ECX-1U2U-INTSTR |
| 1U Labelkit | ECX-LBL-1U |
| 2U Labelkit | ECX-LBL-2U |



FX ECX panels can be labeled using the LabelFlex software and pack of labels p/n ECX-LBF-PK10

Faster.
Easier.
Better.

FiberExpress Patch Panel Systems (continued) FX Rack and Wall Mount Patch Panels, Adapter Strips and Accessories

Economical yet effective. Low to medium density rack mount fiber panels with simple adapter strips are the mainstay for fiber field termination.

FASTER

- Faster access to rear side (trunk) connectivity without removing patch cords

EASIER

- Easier on the budget with economical adapter strips
- Easier access to the trunk side connectivity with swing out faceplate

BETTER

- Better support for mixed field-term connectivity including splicing
- Better use of valuable space through a compact footprint

Rack Mount Patch Panels

| Description | Maximum Number of Adapter Strips | Splice Trays | Belden Part Number |
|-----------------------------|----------------------------------|---------------------------|--------------------|
| 1U Rack Mount | 2 | 1 x 8" (Up to 24-Splices) | AX100041 |
| 2U Rack Mount | 4 | 2 x 8" (Up to 48-Splices) | AX100068 |
| 3U Rack Mount (Rear Access) | 4 | 2 x 8" (Up to 48-Splices) | AX104934 |
| 4U Rack Mount | 8 | 4 x 8" (Up to 96-Splices) | AX100116 |

Wall Mount Patch Panels

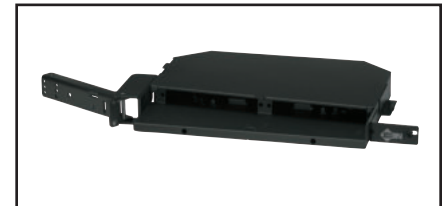
| Description | Maximum Number of Adapter Strips | Splice Trays | Belden Part Number |
|-------------------|----------------------------------|---------------------------|--------------------|
| Small Wall-Mount | 2 | 1 x 8" (Up to 24-Splices) | AX100495 |
| Medium Wall-Mount | 4 | 2 x 8" (Up to 48-Splices) | AX100540 |
| Large Wall-Mount | 8 | 4 x 8" (Up to 96-Splices) | AX100542 |

Standard Optical Fiber Adapter Strips

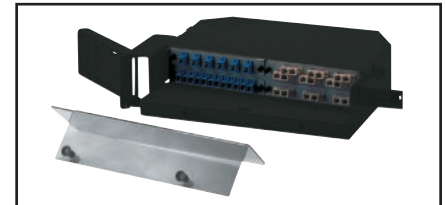
| Patch Ports (fibers) | Family | Belden Part Number | | | |
|----------------------|----------|---------------------|-------------------|------------------|-----------------------|
| | | OM1 Beige Adapters | OM3 Aqua Adapters | SM Blue Adapters | SM/APC Green Adapters |
| LC Duplex | | | | | |
| 12 (24) | FX Patch | AX101741 | – | AX101743 | AX105561 |
| 6 (12) | FX Patch | AX101729 | – | AX101731 | AX105537 |
| SC Duplex | | | | | |
| 6 (12) | FX Patch | AX100098 | – | AX101409 | AC301420 |
| 3 (6) | FX Patch | AX100094 | – | AX101407 | – |
| SC Simplex | | | | | |
| 12 (12) | FX Patch | – | – | AX100532 | AC302349 |
| ST | | | | | |
| 12 (12) | FX Patch | ← AX100528 → | | – | – |
| 6 (6) | FX Patch | ← AX100534 → | | – | – |

Standard Optical Fiber Accessories

| Description | Belden Part Number |
|--|--------------------|
| FX Patch Blank Strip | AX100066 |
| 1U Front Cover, Smoked Plexiglas | AX100045 |
| 8" Splice Kit (Tray, Holders, Wiremarkers & Cover) | A0649869 |



AX100041, FX 12/24 Port (1U) Rack Mount Patch Panel



AX100068, FX 24/48 Port (2U) Rack Mount Patch Panel (shown loaded)



AX104934, FX (3U) Rack Mount Patch Panel (Rear Access) (shown loaded)

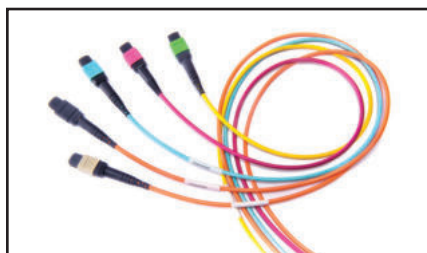


AX100116, FX 48/96 Port (4U) Rack Mount Patch Panel (shown loaded)

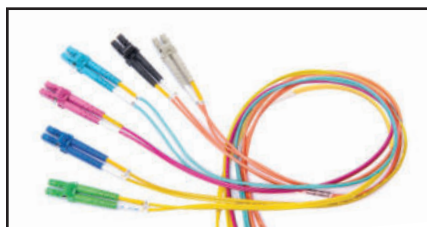


AX100495, Small Wall Mount

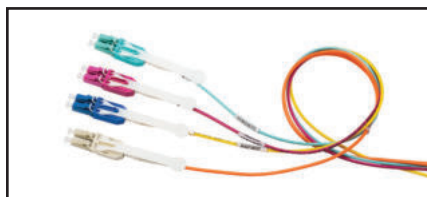
FiberExpress Pre-Terminated Assemblies FX Patch Cords



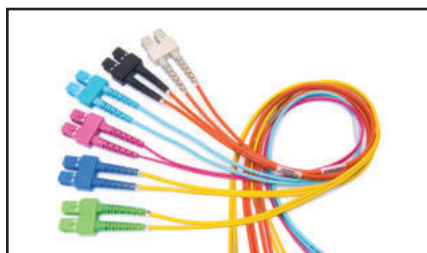
FX MPO-12(f) Patch Cords, Assortment



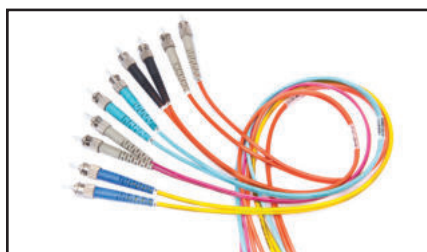
FX LC Duplex Patch Cords, Assortment



FX LC Duplex UHD Uniboot Patch Cords, Assortment



FX SC Duplex Patch Cords, Assortment



FX ST Patch Cords, Assortment

Uncomplicated, robust, versatile and conveniently available. Superior quality and performance FX patch cords deliver a robust design to withstand the rigours of daily use in both off-the-shelf standard configurations and rapid custom tailored installations.

FASTER

- Faster delivery with off-the shelf availability of standard items
- Faster identification of fiber type with Erika Violet for OM4 cable and connectors

EASIER

- Easier installation in dense cable trays with small diameter cord options
- Easier ordering with simple intelligent *SmartPart* Numbers
- Easier polarity management with industry leading easy-to-use duplex clips

BETTER

- Better architectural flexibility with low-loss OM4 0.2 dB MPO and 0.15 dB LC connectors
- Better ruggedization with larger diameter cord options
- Better flexibility with multiple connector options including LC, SC, ST and MPO
- Better quality through exhaustive design validation against TIA standards

FX Patch Cords - Standard Performance

| Description | FX OM1 | FX OM3 | FX OM4 | FX SM | FX SM/APC |
|---|--|---------|--------------|----------|-----------|
| Cable Performance - LC/SC/ST | | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.5/1.2 | 3.0/1.2 | 3.0/1.0 | - | |
| IL Max. 1310 nm/1550 nm (dB/Km) | - | - | - | 0.5/0.5 | |
| Fire Rating | LC/SC/ST: Riser | | | | |
| Cable Style | LC: Interconnect Duplex Zip 2 mm LC Uniboot: Interconnect Mini-Round 2 mm SC/ST/Hybrid: Interconnect Duplex Zip 3 mm | | | | |
| Jacket Color | Orange | Aqua | Erika Violet | Yellow | Yellow |
| Connector Performance - LC/SC/ST | | | | | |
| IL Max. (dB) | 0.25 | 0.25 | 0.15 | 0.35 | 0.35 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | PC - 30 | UPC - 55 | APC - 65 |
| Polarity | A-TO-B / B-TO-A | | | | |
| Connector Color | Beige | Aqua | Erika Violet | Blue | Green |
| Cable Performance - MPO | | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.5/1.2 | 3.0/1.2 | 3.0/1.0 | - | |
| IL Max. 1310 nm/1550 nm (dB/Km) | - | - | - | 0.5/0.5 | |
| Fire Rating | Plenum | | | | |
| Cable Style | MPO-12: Interconnect Mini-Round 2 mm | | | | |
| Jacket Color | Orange | Aqua | Erika Violet | Yellow | Yellow |
| Connector Performance - MPO | | | | | |
| IL Max. (dB) | 0.5 | 0.35 | 0.2 | - | 0.5 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | PC - 30 | - | APC - 60 |
| Polarity | Type-B | | | | |
| Connector Color | Beige | Aqua | Erika Violet | Blue | Green |

FX Accessory Duplex Clips

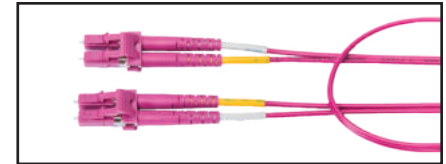
| Description | Belden Part Number | | | | |
|----------------|----------------------|--------------|---------------------|--------------|--------------|
| | OM1 Beige | OM3 Aqua | OM4 Erika Violet | OS2 Blue | OS2 Green |
| LC Duplex | FXFACLLDB25T | FXFACLLDB25A | FXFACLLDB25E | FXFACLLDB25B | FXFACLLDB25G |
| Mini-LC Duplex | FXFACLLMB25N (Black) | | | | |

Faster.
Easier.
Better.

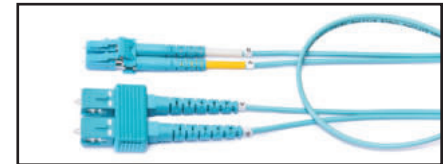
FiberExpress Pre-Terminated Assemblies (continued) FX Patch Cords

Standard FX Patch Cords

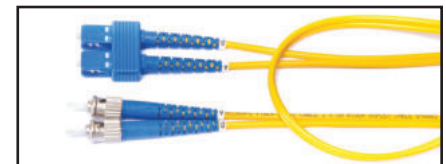
| Length (m) | OM1 Beige/Orange | OM3 Aqua | OM4 Erika Violet | OS2 Blue/Yellow | OS2/APC Green/Yellow |
|--|---------------------|-------------|---------------------|--------------------|-------------------------|
| MPO-12(8f) Female to MPO-12(8f) Female - Base8 | | | | | |
| 2 | - | FP34F4F002M | FP44F4F002M | - | FPS4F4F002M |
| 3 | - | FP34F4F003M | FP44F4F003M | - | FPS4F4F003M |
| 5 | - | FP34F4F005M | FP44F4F005M | - | FPS4F4F005M |
| MPO-12(12f) Female to MPO-12(12f) Female - Base12 | | | | | |
| 2 | - | FP3MFMF002M | FP4MFMF002M | - | FPSMFMF002M |
| 3 | - | FP3MFMF003M | FP4MFMF003M | - | FPSMFMF003M |
| 5 | - | FP3MFMF005M | FP4MFMF005M | - | FPSMFMF005M |
| MPO-24 Female to MPO-24 Female | | | | | |
| 2 | - | FP3NFMF002M | FP4NFMF002M | - | FPSNFMF002M |
| 3 | - | FP3NFMF003M | FP4NFMF003M | - | FPSNFMF003M |
| 5 | - | FP3NFMF005M | FP4NFMF005M | - | FPSNFMF005M |
| LC Duplex UHD Uniboot to LC Duplex UHD Uniboot | | | | | |
| 2 | - | FP3LULU002M | FP4LULU002M | FPSLULU002M | - |
| 3 | - | FP3LULU003M | FP4LULU003M | FPSLULU003M | - |
| 5 | - | FP3LULU005M | FP4LULU005M | FPSLULU005M | - |
| LC Duplex to LC Duplex | | | | | |
| 2 | FP1LDLD002M | FP3LDLD002M | FP4LDLD002M | FPSLDLD002M | FPSLALA002M |
| 3 | FP1LDLD003M | FP3LDLD003M | FP4LDLD003M | FPSLDLD003M | FPSLALA003M |
| 5 | FP1LDLD005M | FP3LDLD005M | FP4LDLD005M | FPSLDLD005M | FPSLALA005M |
| SC Duplex to SC Duplex | | | | | |
| 2 | FP1SDSD002M | FP3SDSD002M | FP4SDSD002M | FPSSDSD002M | FPSASA002M |
| 3 | FP1SDSD003M | FP3SDSD003M | FP4SDSD003M | FPSSDSD003M | FPSASA003M |
| 5 | FP1SDSD005M | FP3SDSD005M | FP4SDSD005M | FPSSDSD005M | FPSASA005M |
| ST to ST (Duplex Cord) | | | | | |
| 2 | FP1STST002M | FP3STST002M | FP4STST002M | FPSSTST002M | - |
| 3 | FP1STST003M | FP3STST003M | FP4STST003M | FPSSTST003M | - |
| 5 | FP1STST005M | FP3STST005M | FP4STST005M | FPSSTST005M | - |
| Hybrid: LC Duplex to SC Duplex | | | | | |
| 2 | FP1LDSD002M | FP3LDSD002M | FP4LDSD002M | FPSLDSD002M | FPSLASA002M |
| 3 | FP1LDSD003M | FP3LDSD003M | FP4LDSD003M | FPSLDSD003M | FPSLASA003M |
| 5 | FP1LDSD005M | FP3LDSD005M | FP4LDSD005M | FPSLDSD005M | FPSLASA005M |
| Hybrid: SC Duplex to ST | | | | | |
| 2 | FP1LDST002M | FP3LDST002M | - | FPSLDST002M | - |
| 3 | FP1LDST003M | FP3LDST003M | - | FPSLDST003M | - |
| 5 | FP1LDST005M | FP3LDST005M | - | FPSLDST005M | - |
| LC Simplex UHD to LC Simplex UHD, Simplex cord | | | | | |
| 2 | - | - | - | FPSLILIO02M | FPSLFLF002M |
| 3 | - | - | - | FPSLILIO03M | FPSLFLF003M |
| 5 | - | - | - | FPSLILIO05M | FPSLFLF005M |



FP4LDLD003M, LC Duplex to LC Duplex, Duplex Zip Cord, OM4 Erika Violet



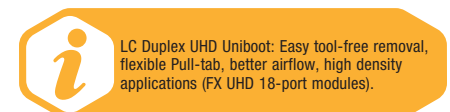
FP3LDSD003M, Hybrid LC Duplex to SC Duplex, OM3 Aqua



FPSSDST003M, Hybrid SC Duplex to ST, OS2 Blue



FPSLILIO05M, LC Simplex UHD to LC Simplex UHD, OS2 Yellow



FiberExpress Pre-Terminated Assemblies (continued) FX Patch Cords



FP4LULU003M, LC Duplex UHD Uniboot to LC Duplex UHD Uniboot, OM4 Erika Violet

Standard FX Patch Cords

Building a SmartPart Number

FX Patch Cord

FP

1. Choose Fiber Type

3

2. Choose Connector 1

LD

3. Choose Connector 2

LD

4. Choose Length*

003M

| Fiber Type | |
|------------|-----|
| 1 | OM1 |
| 3 | OM3 |
| 4 | OM4 |
| S | OS2 |

| Connector 1 | |
|-------------|-----------------------|
| LD | LC Duplex |
| LA | LC/APC Duplex |
| LI | LC Duplex UHD |
| LU | LC Duplex UHD Uniboot |
| LF | LC/APC Simplex UHD |
| SD | SC Duplex |
| SA | SC/APC Duplex |
| ST | ST |
| 4F | MPO-12 (F) Base 8 |
| MF | MPO-12 (F) |
| NF | MPO-24 (f) |

| Connector 2 | |
|-------------|-----------------------|
| LD | LC Duplex |
| LA | LC/APC Duplex |
| LI | LC Simplex UHD |
| LU | LC Duplex UHD Uniboot |
| LF | LC/APC Simplex UHD |
| SD | SC Duplex |
| SA | SC/APC Duplex |
| ST | ST |
| 4F | MPO-12 (F) Base 8 |
| MF | MPO-12 (F) |
| NF | MPO-24 (f) |

| Length* |
|-------------------|
| 003M to 015M |
| *use M as decimal |

See FX Patch cords - Standard Performance table for standard defaults (Page 24).

Tailored FX Patch Cords

Building a SmartPart Number

FX Patch Cord

FP

1. Choose Fiber Type

3

2. Choose Connector 1

LD

3. Choose Connector 2

LD

4. Choose Length*

003M

5. Choose Fire Rating

R

6. Choose Cable Construction

3

7. Choose Polarity

X

8. Choose Jacket Color

A

| Fiber Type | Connector 1 | Connector 2 | Length* | Fire Rating | Cable Construction | Polarity | Jacket Color |
|------------|-----------------------|--------------------------|--|-------------|-------------------------|------------------|--------------|
| 1 | LD LC Duplex | LD LC Duplex | 003M to 100M M Meters use M as decimal | R Riser | 2 Duplex ZipCord 2.0 mm | X A/B (Cross) | O Orange |
| 2 | LC LC Simplex | LC LC Simplex | | P Plenum | 3 Duplex ZipCord 3.0 mm | S A/A (Straight) | Y Yellow |
| 3 | LA LC/APC Duplex | LA LC/APC Duplex | | L LSZH | 4 Simplex Cord 2.0 mm | A Type-A | A Aqua |
| 4 | LB LC/APC Simplex | LB LC/APC Simplex | | | 5 Simplex Cord 3.0 mm | B Type-B | E Erika V. |
| LI | LC Simplex UHD | LI LC Simplex UHD | | | 6 Round 2.0 mm | C Type-C | |
| LU | LC Duplex UHD Uniboot | LU LC Duplex UHD Uniboot | | | 7 Round 3.0 mm | | |
| LF | LC/APC Simplex UHD | LF LC/APC Simplex UHD | | | | | |
| SD | SC Duplex | SD SC Duplex | | | | | |
| SC | SC Simplex | SC SC Simplex | | | | | |
| SA | SC/APC Duplex | SA SC/APC Duplex | | | | | |
| SB | SC/APC Simplex | SB SC/APC Simplex | | | | | |
| ST | ST | ST ST | | | | | |
| 4M | MPO-12 (M) Base 8 | 4M MPO-12 (M) Base 8 | | | | | |
| 4F | MPO-12 (F) Base 8 | 4F MPO-12 (F) Base 8 | | | | | |
| MM | MPO-12 (M) | MM MPO-12 (M) | | | | | |
| MF | MPO-12 (F) | MF MPO-12 (F) | | | | | |
| NM | MPO-24 (m) | NM MPO-24 (m) | | | | | |
| NF | MPO-24 (f) | NF MPO-24 (f) | | | | | |
| ZZ | OPEN | ZZ OPEN | | | | | |

Examples:

FP3LULU020MR6XA - FX Patch Cord, OM3, LC Duplex UHD Uniboot - LC Duplex UHD Uniboot, 20 m, OFNR, Round 2.0 mm, A-to-B, Aqua Jacket

FP4LULD030MR2XE - FX Patch Cord, OM4, LC Duplex - LC Duplex, 30 m, OFNR, Duplex Zip 2.0 mm, A-to-B, Erika Violet Jacket

FP4LULD030MR2XE - FX Patch Cord, OS2, SC Duplex - SC Duplex, 5 m, OFNP, Duplex Zip 3.0 mm, A-to-B, Yellow Jacket

FP3LDLH010MR2XA - FX Patch Cord, OM3, LC Duplex - LC Duplex UHD, 10 m, OFNR, Duplex Zip 2.0 mm, A-to-B, Aqua Jacket

FP4MFMF005MP6AE - FX Patch Cord, OM4, MPO-12 (F) - MPO-12 (F), 5 m, OFNP, Round 2.0 mm, Type-A, Erika Violet Jacket

Tailored FX Patch Cord SPN table should ONLY be used for any product combination that is not covered by the Standard FX Patch Cords configurator above.

Please contact Belden for any help configuring/validating SmartPart Numbers or for any other custom Engineered solutions

Faster.
Easier.
Better.

FiberExpress Pre-Terminated Assemblies (continued) FX Hydra Patch Cords

Uniquely suited within dense fixed environments. Compact alternative for statically configured patch cords and pre-term cassettes eliminates connection points to improve performance and alleviate space constraints.

FASTER

- Faster deployment at the switch with MPO to LC fanout construction
- Faster installation with lighter LPM transitions, 40% less weight

EASIER

- Easier upgradability from 10G to 40G or 100G with MPO connectivity
- Easier patch panel attachment with LPM transitions

BETTER

- Better identification of fiber type with Erika Violet for OM4 cable and connectors
- Better cable stress with LPM integrated transition boot for best bend radius control
- Better airflow and cable routing with our new smaller (25%) LPM transition

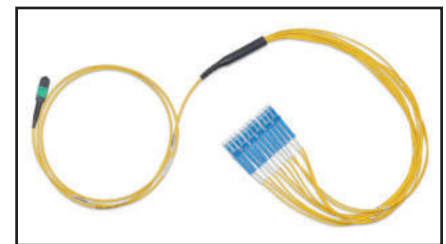


LPM transition on Hydra patch cord

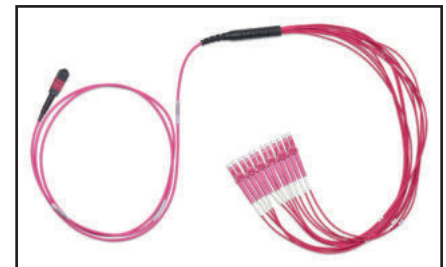
FX Hydra Patch Cords - Standard Performance

| Description | FX OM3 | FX OM4 | FX SM | FX SM/APC |
|-------------------------------------|--|--------------|----------|-----------|
| Cable Performance - LC/SC/ST | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.0/1.2 | 3.0/1.0 | - | |
| IL Max. 1310 nm/1550 nm (dB/Km) | - | - | 0.5/0.5 | |
| Fire Rating | Plenum | | | |
| Cable Style | MPO: Interconnect Mini-Round 3.0 mm LC Uniboot: Interconnect Mini-Round 2.0 mm LC: Interconnect Simplex Zip 2.0 mm | | | |
| Jacket Color | Aqua | Erika Violet | Yellow | Yellow |
| Connector Performance - LC | | | | |
| IL Max. (dB) | 0.25 | 0.15 | 0.35 | 0.35 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | UPC - 55 | APC - 65 |
| Fanout Length | 0.5 m, In-Line | | | |
| Connector Color | Aqua | Erika Violet | Blue | Green |
| Connector Performance - MPO | | | | |
| IL Max. (dB) | 0.35 | 0.2 | - | 0.5 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | - | APC - 60 |
| Polarity | Type-A | | | |
| Connector Color | Aqua | Erika Violet | Blue | Green |

See duplex clips on page 24



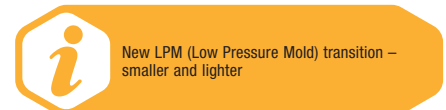
FP4LDMF002M, FX Hydra Patch Cord, OS2, MPO-12F (F) to 6 x LC Duplex, 2 m



FP4LDMF002M, FX Hydra Patch Cord, OM4, MPO-12F (F) to 6 x LC Duplex, 2 m

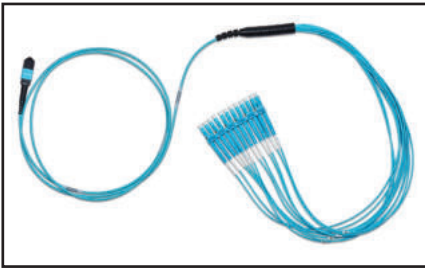
Standard FX Hydra Patch Cords

| Description | OM3 Aqua | OM4 Erika Violet | OS2 Blue/Yellow |
|--|-------------|---------------------|--------------------|
| Base12 Duplex | | | |
| MPO-12(12f) Female to 6 x LC Duplex UHD Uniboot, 0.5 m In-Line Fanout, 2 m in length | FP3LUMF002M | FP4LUMF002M | FPSLUMF002M |
| MPO-12(12f) Female to 6 x LC Duplex, 0.5 m In-Line Fanout, 2 m in length | FP3LDMF002M | FP4LDMF002M | FPSLDMF002M |
| Base8 Duplex for SR4 (QSFP+/QSFP28) Transceivers | | | |
| MPO-12(8f) Female to 4 x LC Duplex UHD Uniboot, 0.5 m In-Line Fanout, 2 m in length | FP3LU4F002M | FP4LU4F002M | FPSLU4F002M |
| MPO-12(8f) Female to 4 x LC Duplex, 0.5 m In-Line Fanout, 2 m in length | FP3LD4F002M | FP4LD4F002M | FPSLD4F002M |



New LPM (Low Pressure Mold) transition – smaller and lighter

FiberExpress Pre-Terminated Assemblies (continued) FX Hydra Patch Cords



FP3LDMF002M, FX Hydra Patch Cord, OM3, MPO-12F (F) to 6 x LC Duplex, 2 m

Standard FX Hydra Patch Cords Building a SmartPart Number

| | | | | |
|---------------|----------------------|--------------------------|-----------------------|-------------------|
| FX Patch Cord | 1. Choose Fiber Type | 2. Choose Connector 1 | 3. Choose Connector 2 | 4. Choose Length* |
| FP | 3 | LD | MF | 003M |
| | Fiber Type | Connector 1 | Connector 2 | Length* |
| | 3 OM3 | LD LC Duplex | MM MPO-12 (m) | 001M to 015M |
| | 4 OM4 | LM Mini-LC Duplex | MF MPO-12 (f) | *use M as decimal |
| | S OS2 | LA LC/APC Duplex | 4M MPO-12 (M) Base 8 | |
| | | LU LC Duplex UHD Uniboot | 4F MPO-12 (F) Base 8 | |

See FX Hydra Patch cords - Standard Performance table for standard defaults (Page 27)

Tailored FX Hydra Patch Cords Building a SmartPart Number

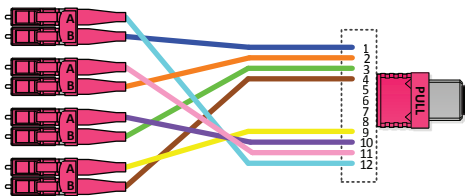
| | | | | | | | | |
|---------------|----------------------|--------------------------|-----------------------|-------------------|-----------------------|------------------------------|------------------------------|------------------------|
| FX Patch Cord | 1. Choose Fiber Type | 2. Choose Connector 1 | 3. Choose Connector 2 | 4. Choose Length | 5. Choose Fire Rating | 6. Choose Cable Construction | 7. Choose Polarity | 8. Choose Jacket Color |
| FP | 3 | LD | MF | 003M | P | 7 | A | A |
| | Fiber Type | Connector 1 | Connector 2 | Length | Fire Rating | Cable Construction | Polarity | Jacket Color |
| | 1 OM1 | LD LC Duplex | MM MPO-12 (m) | 001M to 300M | P Plenum | 7 Round 3.0 mm | A Type-A (Straight Polarity) | O Orange |
| | 2 OM2 | LC LC Simplex | MF MPO-12 (f) Female | *use M as decimal | L LSZH | | B Type-B (Reversed Polarity) | Y Yellow |
| | 3 OM3 | LA LC/APC Duplex | 4M MPO-12 (M) Base 8 | | | | 4 SR4 | A Aqua |
| | 4 OS4 | LB LC/APC Simplex | MF MPO-12 (F) Base 8 | | | | | E Erika V. |
| | S OS2 | LI LC Simplex UHD | | | | | | |
| | | LU LC Duplex UHD Uniboot | | | | | | |
| | | LF LC/APC Simplex UHD | | | | | | |
| | | SD SC Duplex | | | | | | |
| | | SC SC Simplex | | | | | | |
| | | SA SC/APC Duplex | | | | | | |
| | | SB SC/APC Simplex | | | | | | |
| | | ST ST | | | | | | |

Examples:
 FP3LDMF020MP7AA - FX Patch Cord, OM3, 6 x LC Duplex - MPO-12 (F), 20 m, OFNP, Round 3.0 mm, Type-A, Aqua Jacket
 FP4LUMM010MP7AA - FX Patch Cord, OM4, 6 x LC Duplex UHD Uniboot - MPO-12 (M), 10 m, OFNP, Round 3.0 mm, Type-A, Aqua Jacket
 FP3LDMM005MP7BA - FX Patch Cord, OM3, 6 x LC Duplex - MPO-12 (M), 5 m, OFNP, Round 3.0 mm, Type-B, Aqua Jacket
 FP4LDMF025MP7AE - FX Patch Cord, OM4, 6 x LC Duplex - MPO-12 (F), 25 m, OFNP, Round 3.0 mm, Type-A, Erika Violet Jacket

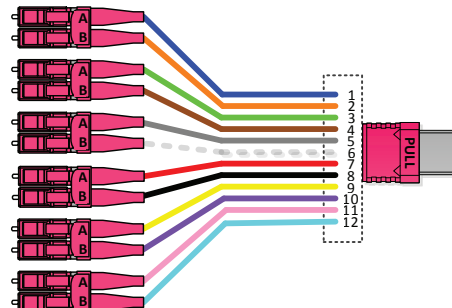
Tailored FX Hydra Patch Cords SPN table should ONLY be used for any product combination that is not covered by the Standard FX Hydra Patch Cords configurator above.

Please contact Belden for any help configuring/validating SmartPart Numbers or for any other custom Engineered solutions

FX Hydra Patch Cord SR4 Polarity MPO-12 8 Fiber (Base8)



FX Hydra Patch Cord Type A Polarity MPO-12 12 Fiber (Base12)



Faster.
Easier.
Better.

FiberExpress Pre-Terminated Assemblies (continued) FX MPO Trunks

Industry-leading low-loss MPO trunks are the foundation of Faster, Easier and Better pre-terminated fiber connectivity solutions revolutionizing the data center. Quality is enhanced through exhaustive design validation against TIA standards.

FASTER

- Faster fiber-type identification with Erika Violet for OM4 cable, connectors and adapters
- Faster installation with pre-terminated solutions and 40% lighter LPM transition
- Faster pulling eye removal in less than 20 seconds with LPM transition and pulling tension of up to 100 lbs

EASIER

- Easier installation with 3-flange reel and default pulling eye
- Easier ordering with simple, intelligent *SmartPart* Numbers
- Easier upgradeability to 40G and 100G with MPO pre-term solutions
- Easier patch panel attachment with LPM transition

BETTER

- Better architectural flexibility with high-performance 0.2 dB OM4 MPO connectors
- Better cable stress with LPM integrated transition boot for best bend radius control
- Better contamination control with Data Center Ready packaging



LPM transition on Hydra patch cord



FM4MMB1010M, FX MPO Trunk, OM4, MPO-12 (Male to Male), Type-B, 1 x MPO-12 (12 fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), Erika Violet Jacket

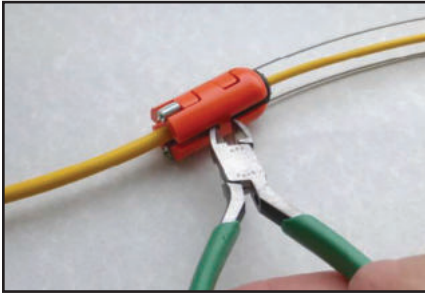
FX MPO Trunks - Standard Performance

| Description | FX OM3 | FX OM4 | FX SM |
|---------------------------------------|--|--------------|----------|
| Cable Performance | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.0/1.2 | 3.0/1.0 | – |
| IL Max. 1310 nm/1550 nm (dB/Km) | – | – | 0.5/0.5 |
| Fire Rating | Plenum | | |
| Cable Style | uMini-Distributon and Mini-Distribution cables | | |
| Jacket Color | Aqua | Erika Violet | Yellow |
| Connector Performance - MPO-12 | | | |
| IL Max. (dB) | 0.35 | 0.2 | 0.5 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | APC - 60 |
| Fanout Length | 0.5 m, In-Line | | |
| Connector Color | Aqua | Erika Violet | Yellow |
| Connector Performance - MPO-24 | | | |
| IL Max. (dB) | 0.35 | 0.35 | 0.75 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | APC - 60 |
| Connector Color | Aqua | Erika Violet | Green |



FM4MMB1010M, FX MPO Trunk, OM4, MPO-12 (Male to Male), Type-B, 1 x MPO-12 (12 fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), Erika Violet Jacket

FiberExpress Pre-Terminated Assemblies (continued) FX MPO Trunks



New Pulling Eye

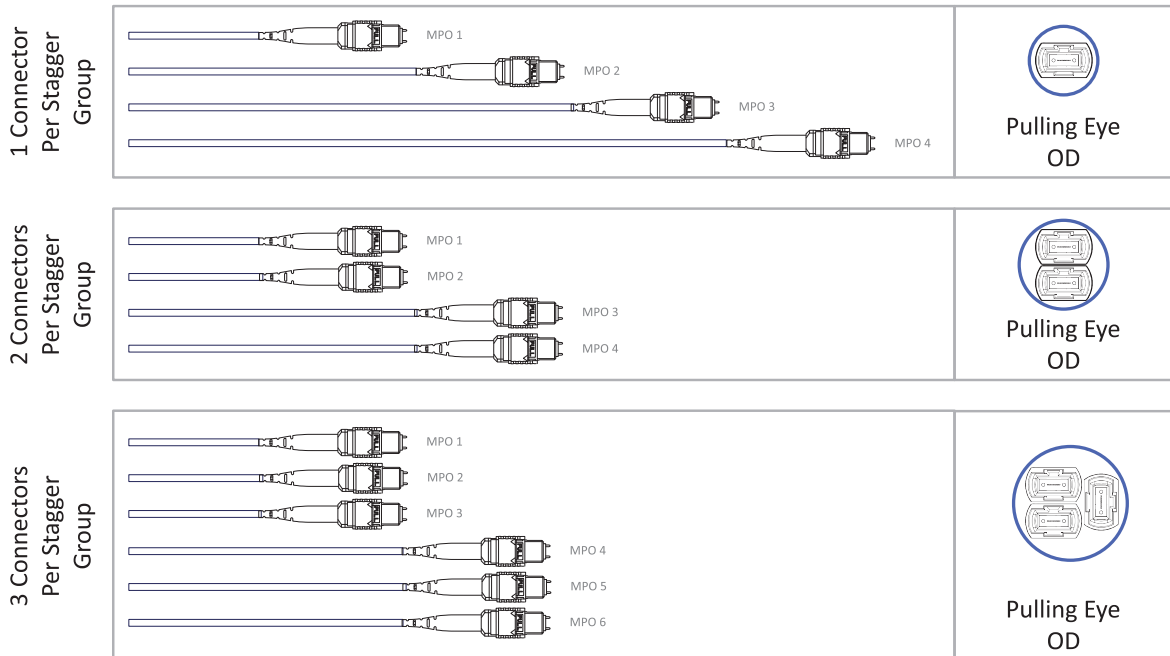
FX Trunks Pulling Eye

Belden's new low-pressure mold (LPM) makes transition points lighter, smaller and easier to handle during installation, and allows the addition of unique features - like our new pulling eye.

Pulling Eye Diameter

| Description | 12-Fiber | 24-Fiber | 36-Fiber | 48-Fiber | 72-Fiber | 96-Fiber | 144-Fiber |
|--|----------|----------|----------|----------|----------|----------|-----------|
| Installation Diameter - MPO-12 (Total Connectors) | 1 | 2 | 3 | 4 | 6 | 8 | 12 |
| 1 Connector per Bundle, 8 cm Bundle Stagger | | 22 mm | 22 mm | 22 mm | 22 mm | 22 mm | 22 mm |
| 2 Connectors per Bundle, 8 cm Bundle Stagger | | | | 25.4 mm | 25.4 mm | 25.4 mm | 25.4 mm |
| 3 Connectors per Bundle, 8 cm Bundle Stagger | | | | | 30.0 mm | 30.0 mm | 30.0 mm |
| 4 Connectors per Bundle, 8 cm Bundle Stagger | | | | | | 31.7 mm | 31.7 mm |
| 6 Connectors per Bundle, 8 cm Bundle Stagger | | | | | | | 38.1 mm |
| One Bundle, No Stagger (in-line) | 22 mm | 25.4 mm | 30.0 mm | 31.7 mm | 38.1 mm | 41.9 mm | 50.8 mm |

i Standard FX MPO Trunks 12F (Indoor) have a more robust cable construction using a Mini-Distribution cable (Double Jacket 4.8 mm). They are designed for safe pulling, and to withstand the rigors of installation while providing sufficient support (wire basket support).

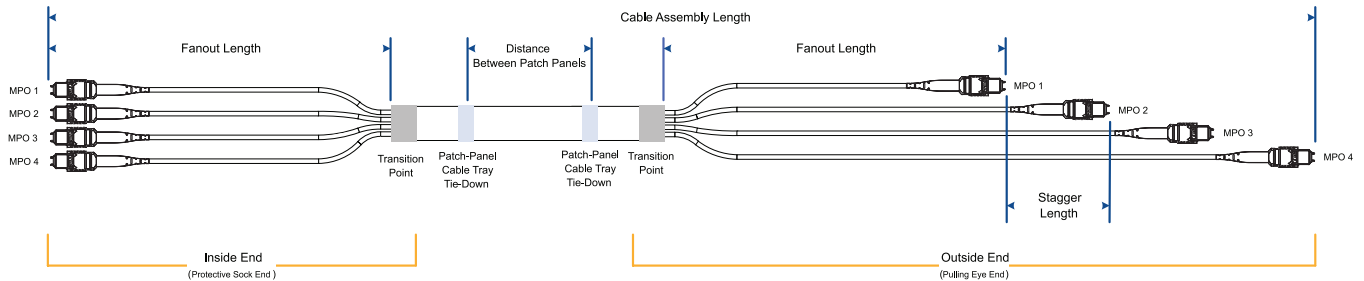


4 and 6 Connectors Per Stagger Group available

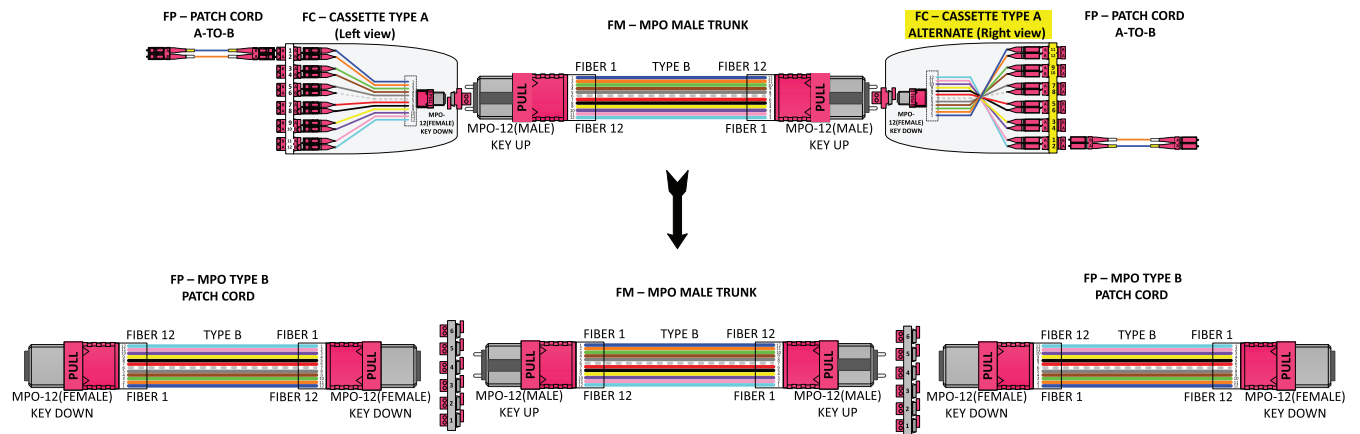
Faster.
Easier.
Better.

FiberExpress Pre-Terminated Assemblies (continued) FX MPO Trunks

FX MPO Trunks Diagram



Belden MPO Pre-Term Solution 2 points of connections (Using Type B trunks) 10G installation and migration to 40G solution



Keys to a Successful Upgrade:

- Be Ready for 40GBase-SR4 and future 100GBase-SR4 → MPO-12 fiber Connectors & Male to Male Trunk Assemblies
- Simplify Port Numbers → Type-A & Type-A-ALTERNATE Polarity Cassettes at each end of the channel
- Reduce Replacement Parts → Identical Patch Cords on Both Ends
- Prevent Damage to Active Equipment → MPO Female to Female Patch Cords

FiberExpress Pre-Terminated Assemblies (continued) FX MPO Trunks



FM3MMB1010M, FX MPO Trunk, OM3, MPO-12 (Male to Male), TYPE-B, 1 x MPO-12 (12 fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), Aqua Jacket

Standard FX MPO Trunks - Base12 - Building a SmartPart Number

| | | | | | | |
|--------------|----------------------|----------------------|---------------------|--------------------|---------------------------|------------------|
| FX MPO Trunk | 1. Choose Fiber Type | 2. Choose Connectors | 3. Connector Gender | 4. Choose Polarity | 5. Choose Connector Count | 6. Choose Length |
| FM | 3 | M | M | B | 3 | 010M |

| Fiber Type | Connectors | Connector Gender | Polarity (outside) | Connector Count | Length |
|------------|---------------|----------------------|--------------------|-----------------|-------------------|
| 3 OM3 | M MPO-12(12F) | M Male to Male | A Type-A | 1 12 Fibers | 005M to 500M |
| 4 OM4 | | F Female to Female | B Type-B | 2 24 Fibers | M Meters |
| S OS2 | | E Extension (M to F) | C Type-C | 3 36 Fibers | *use M as decimal |
| | | P Male to Open | | 4 48 fibers | |
| | | R Female to Open | | 6 72 Fibers | |
| | | | | 8 96 Fibers | |
| | | | | D 144 Fibers | |

See FX MPO Trunks - Standard Performance table for standard defaults (Page 29)

Examples:

FM3MMB1010M - FX MPO Trunk OM3, MPO-12 (Male to Male), Type-B, 1 MPO (12 Fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), Aqua Jacket.

FM4MMB4030M - FX MPO Trunk OM4, MPO-12 (Male to Male), Type-B, 4 MPO (48 Fibers), 30 m, OFNP, Mini-Distribution (2.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Erika Violet Jacket.

FMSMFAD025M - FX MPO Trunk OS2, MPO-12 (Female to Female), Type-A, 12 MPO (144 Fibers), 25 m, OFNP, Mini-Distribution (2.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Yellow Jacket.

Tailored FX MPO Trunks - Base12 - Building a SmartPart Number

| | | | | | | | | | | |
|--------------|----------------------|----------------------|----------------------------|------------------------------|--------------------------------------|------------------|-----------------------|------------------------------|---|-------------------------|
| FX MPO Trunk | 1. Choose Fiber Type | 2. Choose Connectors | 3. Choose Connector Gender | 4. Choose Polarity (outside) | 5. Choose Connector Count (per side) | 6. Choose Length | 7. Choose Fire Rating | 8. Choose Cable Construction | 9. Choose Fan-Out Cable Length & Geometry | 10. Choose Jacket Color |
| FM | 3 | M | M | B | 4 | 010M | P | M | E | A |

| Fiber Type | Connectors | Connector Gender | Polarity (outside) | Connector Count | Length | Fire Rating | Cable Construction | Fan-Out Geometry | Jacket Color |
|------------|----------------|----------------------|--------------------|-----------------|-------------------|----------------------------|--------------------|------------------------------|----------------|
| 1 OM1 | M MPO-12 (12F) | M Male to Male | A Type-A | 1 12 Fibers | 005M to 500M | P Plenum | U μMini-D | D None (1 Conn.) | O Orange |
| 2 OM2 | | F Female to Female | B Type-B | 2 24 Fibers | M Meters | I I/O Plenum | M Mini-D | D 0.5 m x In-Line (>2 Conn.) | N Black |
| 3 OM3 | | E Extension (M to F) | C Type-C | 3 36 Fibers | *use M as decimal | A Plenum Armored (AIA) | | E 1.0 m x In-Line | Y Yellow |
| 4 OM4 | | P Male to Open | | 4 48 Fibers | | B Plenum I/O Armored (AIA) | | F 1.5 m x In-Line | A Aqua |
| S OS2 | | R Female to Open | | 6 72 Fibers | | L LSZH | | G 2.0 m x In-Line | E Erika Violet |
| | | | | 8 96 Fibers | | | | 1 0.5 m x Stag 80 mm/1 conn. | |
| | | | | D 144 Fibers | | | | 2 0.5 m x Stag 80 mm/2 conn. | |
| | | | | | | | | 3 0.5 m x Stag 80 mm/3 conn. | |
| | | | | | | | | 4 0.5 m x Stag 80 mm/4 conn. | |
| | | | | | | | | N No Pulling Eye | |
| | | | | | | | | B Pulling Eye at both ends | |

Tailored FX MPO Trunks SPN table should ONLY be used for any product combination that is not covered by the Standard FX MPO Trunks configurator above.

Use of Tailored part numbers:

- Fiber Type: For any OM1 and OM2 trunk.
- Fire Rating: For any Plenum Armored, I/O Plenum, I/O Plenum Armored, LSZH trunks.
- Cable Construction:
 - "M" Mini-Distribution cable used for indoor Plenum 12F (1 conn.), for I/O Plenum, for Plenum Armored, for I/O Plenum Armored and LSZH.
 - "U" μMini-Distribution cable used for indoor Plenum >=24F (>=2 conn.).
- Fan-Out Length & Geometry: Different fan-out lengths and stagger options, No Pulling Eye, Pulling eye at both ends.

Examples:

FM3MMB1010MPMNA - FX MPO Trunk OM3, MPO-12 (Male to Male), Type-B, 1 MPO (12 Fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), No Pulling Eye, Aqua Jacket.

FM4MMB4020MAMDE - FX MPO Trunk OM4, MPO-12 (Male to Male), Type-B, 4 MPO (48 Fibers), 20 m, OFCP, (Plenum Armored), Mini-Distribution (3.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Erika Violet Jacket.

FMSMFA2030MPM1Y - FX MPO Trunk OS2, MPO-12 (Female to Female), Type-A, 2 MPO (24 Fibers), 30 m, OFNP, Mini-Distribution (3.0 mm Sub-Units) Fan-Out: 0.5 m Staggered 80 mm/1 CONN, Yellow Jacket.

Please contact Belden for any help configuring/validating SmartPart Numbers or for any other custom Engineered solutions

Faster.
Easier.
Better.

FiberExpress Pre-Terminated Assemblies (continued) FX MPO Trunks

Standard FX MPO Trunks - Base8 - Building a SmartPart Number

| | | | | | | |
|--------------|----------------------|----------------------|---------------------|--------------------|---------------------------|------------------|
| FX MPO Trunk | 1. Choose Fiber Type | 2. Choose Connectors | 3. Connector Gender | 4. Choose Polarity | 5. Choose Connector Count | 6. Choose Length |
| FM | 3 | 4 | M | B | 3 | 010M |

| Fiber Type | Connectors | Connector Gender | Polarity (outside) | Connector Count | Length |
|------------|---------------|----------------------|--------------------|-----------------|-------------------|
| 3 OM3 | 4 MPO-12 (8F) | M Male to Male | A Type-A | 1 8 Fibers | 005M to 500M |
| 4 OM4 | | F Female to Female | B Type-B | 2 16 Fibers | M Meters |
| S OS2 | | E Extension (M to F) | C Type-C | 3 24 Fibers | *use M as decimal |
| | | P Male to Open | | 4 32 fibers | |
| | | R Female to Open | | 6 48 Fibers | |
| | | | | 8 64 Fibers | |
| | | | | D 96 Fibers | |

See FX MPO Trunks - Standard Performance table for standard defaults (Page 29)

Examples:

FM34MB1010M - FX MPO Trunk OM3, MPO-12 Base 8 (Male to Male), Type-B, 1 MPO (8 Fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), Aqua Jacket.

FMS4FAD025M - FX MPO Trunk OS2, MPO-12 Base 8 (Female to Female), Type-A, 12 MPO (96 Fibers), 25 m, OFNP, Mini-Distribution (2.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Yellow Jacket.

Tailored FX MPO Trunks - Base8 - Building a SmartPart Number

| | | | | | | | | | | |
|--------------|----------------------|----------------------|----------------------------|------------------------------|--------------------------------------|------------------|-----------------------|------------------------------|-------------------------------------|-------------------------|
| FX MPO Trunk | 1. Choose Fiber Type | 2. Choose Connectors | 3. Choose Connector Gender | 4. Choose Polarity (outside) | 5. Choose Connector Count (per side) | 6. Choose Length | 7. Choose Fire Rating | 8. Choose Cable Construction | 9. Choose Fan-Out Length & Geometry | 10. Choose Jacket Color |
| FM | 3 | 4 | M | B | 3 | 010M | P | U | E | A |

| Fiber Type | Connectors | Connector Gender | Polarity (outside) | Connector Count | Length | Fire Rating | Cable Construction | Fan-Out Geometry | Jacket Color |
|------------|---------------|----------------------|--------------------|-----------------|-------------------|----------------------------|--------------------|------------------------------|----------------|
| 3 OM3 | 4 MPO-12 (8F) | M Male to Male | A Type-A | 1 8 Fibers | 005M to 500M | P Plenum | U μMini-D | D None (1 Conn.) | O Orange |
| 4 OM4 | | F Female to Female | B Type-B | 2 16 Fibers | M Meters | I I/O Plenum | M Mini-D | D 0.5 m x In-Line (>2 Conn.) | N Black |
| S OS2 | | E Extension (M to F) | C Type-C | 3 24 Fibers | *use M as decimal | A Plenum Armored (AIA) | | E 1.0 m x In-Line | Y Yellow |
| | | P Male to Open | | 4 32 Fibers | | B Plenum I/O Armored (AIA) | | F 1.5 m x In-Line | A Aqua |
| | | R Female to Open | | 6 48 Fibers | | L LSZH | | G 2.0 m x In-Line | E Erika Violet |
| | | | | 8 64 Fibers | | | | 1 0.5 m x Stag 80 mm/1 conn. | |
| | | | | D 96 Fibers | | | | 2 0.5 m x Stag 80 mm/2 conn. | |
| | | | | | | | | 3 0.5 m x Stag 80mm/3 conn. | |
| | | | | | | | | 4 0.5 m x Stag 80 mm/4 conn. | |
| | | | | | | | | N No Pulling Eye | |
| | | | | | | | | B Pulling Eye at both ends | |

Tailored FX MPO Trunks SPN table should ONLY be used for any product combination that is not covered by the Standard FX MPO Trunks configurator above.

Use of Tailored part numbers:

- Fiber Type: For any OM1 and OM2 trunk.
- Fire Rating: For any Plenum Armored, I/O Plenum, I/O Plenum Armored, LSZH trunks.
- Cable Construction:
 - "M" Mini-Distribution cable used for indoor Plenum 12F (1 conn.), for I/O Plenum, for Plenum Armored, for I/O Plenum Armored and LSZH.
 - "U" μMini-Distribution cable used for indoor Plenum >=24F (>=2 conn.).
- Fan-Out Length & Geometry: Different fan-out lengths and stagger options, No Pulling Eye, Pulling eye at both ends.

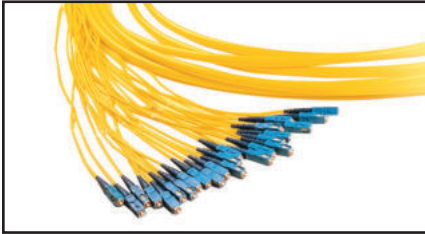
Examples:

FM34MB1010MPMNA - FX MPO Trunk OM3, MPO-12 Base 8 (Male to Male), Type-B, 1 MPO (8 Fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double-Jacket), No Pulling Eye, Aqua Jacket.

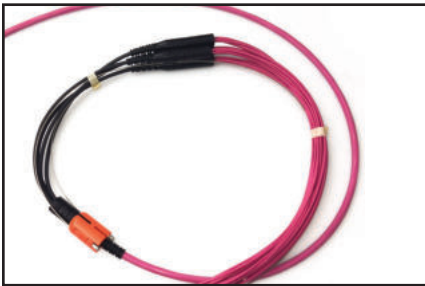
FM44MB4020MAMDE - FX MPO Trunk OM4, MPO-12 Base 8 (Male to Male), Type-B, 4 MPO (32 Fibers), 20 m, OFPC, (Plenum Armored), Mini-Distribution (3.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Erika Violet Jacket.

Please contact Belden for any help configuring/validating SmartPart Numbers or for any other custom Engineered solutions

FiberExpress Pre-Terminated Assemblies (continued) FX Multi-Fiber Trunks



FX Multi-fiber Trunk, OS2, 24F, Yellow jacket



FX Multi-fiber Trunk, OM4, 48F, Erika Violet jacket



FX Multi-fiber Trunk, OS2, 12F, OS2, Yellow jacket

Highly configurable, multi-fiber pre-terminated cable assemblies are engineered for maximum performance and crafted ensuring superior quality.

Belden's new low-pressure mold (LPM) makes transition points lighter, smaller and easier to handle during installation, and allows the addition of unique features - like our new pulling eye. The new pulling eye that allows installers to quickly pull up to 100 lbs of force with faster removal.

FASTER

- Faster fiber-type identification with Erika Violet for OM4 Cable, Connectors and Adapters
- Faster installation with pre-terminated solutions and 40% lighter LPM transition
- Faster pulling eye removal in less than 20 seconds with LPM transition and pulling tension of up to 100 lbs

EASIER

- Easier installation with 3-flange reel and default pulling eye
- Easier ordering with simple, intelligent *SmartPart* Numbers
- Easier upgradeability to 40G and 100G with MPO pre-term solutions
- Easier patch panel attachment with LPM transition

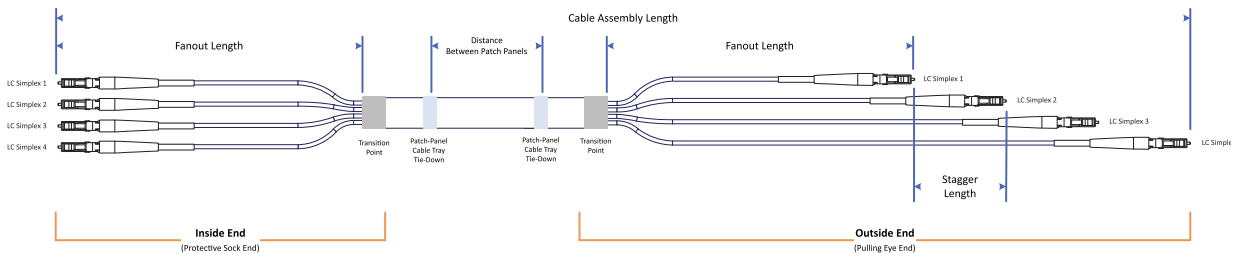
BETTER

- Better architectural flexibility with high-performance 0.2 dB OM4 MPO connectors
- Better cable stress with LPM integrated transition boot for best bend radius control
- Better contamination control with Data Center Ready packaging

FX Multi-Fiber Trunks - Standard Performance

| Description | FX OM3 | FX OM4 | FX SM | FX SM/APC |
|--------------------------------------|--|--------------|----------|-----------|
| Cable Performance | | | | |
| IL Max. 850 nm/1300 nm (dB/Km) | 3.0/1.2 | 3.0/1.0 | - | - |
| IL Max. 1310 nm/1550 nm (dB/Km) | - | - | 0.5/0.5 | |
| Fire Rating | Plenum | | | |
| Cable Style | µMini-Distributon and Mini-Distribution cables | | | |
| Jacket Color | Aqua | Erika Violet | Yellow | Yellow |
| Connector Performance - MPO | | | | |
| IL Max. (dB) | 0.35 | 0.2 | - | 0.5 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | - | APC - 60 |
| Connector Color | Aqua | Erika Violet | - | Green |
| Connector Performance - LC/SC | | | | |
| IL Max. (dB) | 0.25 | 0.15 | 0.35 | 0.35 |
| Polish - RL Typ. (dB) | PC - 30 | PC - 30 | UPC - 55 | APC - 65 |
| Connector Color | Aqua | Erika Violet | Blue | Green |

i All FX Multi-Fiber Trunks come with new FX Trunks Pulling Eyes. (See page 30 for more information)



Faster.
Easier.
Better.

FiberExpress Pre-Terminated Assemblies (continued) FX Multi-Fiber Trunks

FX Multi-Fiber Trunks - Building a SmartPart Number

FX Multi-Fiber Assemblies

1. Choose Fiber Type
2. Choose Fiber Count
3. Choose Connector 1
4. Choose Fan-out Const x Length: Conn 1
5. Choose Connector 2
6. Choose Fan-out Const x Length: Conn 2
7. Choose Fire Rating
8. Choose Length & Unit of Measure

A **3** **12** **LD** **A** **LD** **A** **P** **030M**

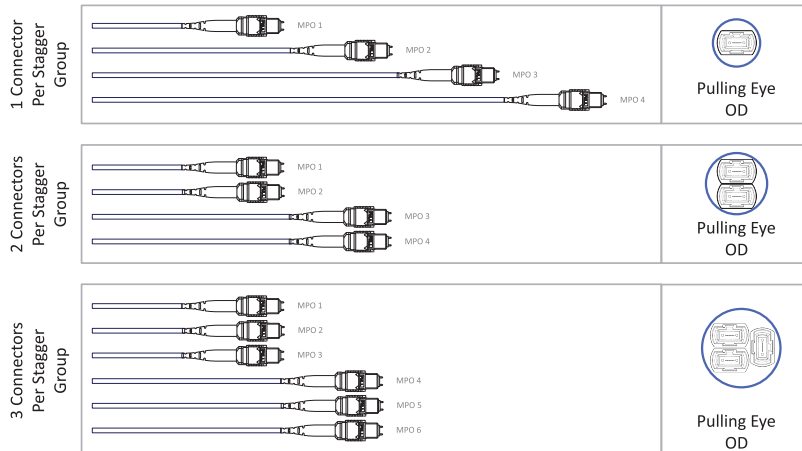
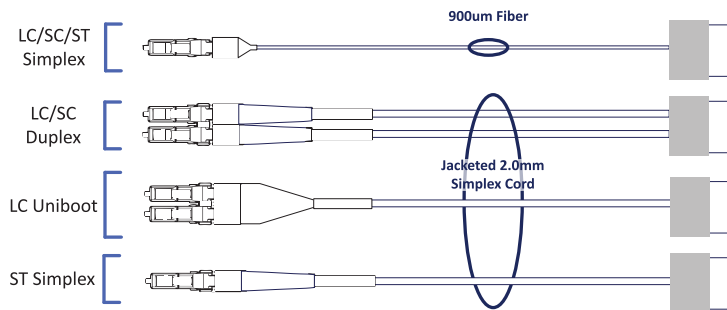
| Fiber Type | | Fiber Count | | Connector 1 | | Cable Construction 1 | | Connector 2 | | Cable Construction 2 | | Fire Rating | | Length |
|------------|-----|-------------|------------|-------------|-----------------------|----------------------|----------------------------|-------------|-------------------------------------|----------------------|----------------------------|-------------|--------------------------|---|
| 1 | OM1 | 06 | 6 Fibers | LD | LC Duplex | A | 900 µm x 0.5 m x In-Line | LD | LC Duplex | A | 900 µm x 0.5 m x In-Line | P | Plenum | 005M to 500M M = Meters *use M as decimal |
| 3 | OM3 | 08 | 8 Fibers | LC | LC Simplex | B | 900 µm x 1.0 m x In-Line | LC | LC Simplex | B | 900 µm x 1.0 m x In-Line | I | I/O Plenum | |
| 4 | OS4 | 12 | 12 Fibers | LA | LC/APC Duplex | C | 900 µm x 1.5 m x In-Line | LA | LC/APC Duplex | C | 900 µm x 1.5 m x In-Line | A | Plenum Armored (AIA) | |
| S | OS2 | 16 | 16 Fibers | LB | LC/APC Simplex | D | 900 µm x 2.0 m x In-Line | LB | LC/APC Simplex | D | 900 µm x 2.0 m x In-Line | B | Plenum I/O Armored (AIA) | |
| | | 24 | 24 Fibers | LI | LC Simplex UHD | E | Jacketed x 0.5 m x In-Line | LI | LC Simplex UHD | E | Jacketed x 0.5 m x In-Line | L | LSZH | |
| | | 32 | 32 Fibers | LU | LC Duplex UHD Uniboot | F | Jacketed x 1.0 m x In-Line | LU | LC Duplex UHD Uniboot | F | Jacketed x 1.0 m x In-Line | | | |
| | | 36 | 36 Fibers | LE | LC/APC Duplex UHD | G | Jacketed x 1.5 m x In-Line | LE | LC/APC Duplex UHD | G | Jacketed x 1.5 m x In-Line | | | |
| | | 48 | 48 Fibers | SD | SC Duplex | H | Jacketed x 2.0 m x In-Line | SD | SC Duplex | H | Jacketed x 2.0 m x In-Line | | | |
| | | 64 | 64 Fibers | SC | SC Simplex | | | SC | SC Simplex | | | | | |
| | | 72 | 72 Fibers | SA | SC/APC Duplex | | | SA | SC/APC Duplex | | | | | |
| | | 96 | 96 Fibers | SB | SC/APC Simplex | | | SB | SC/APC Simplex | | | | | |
| | | A8 | 144 Fibers | ST | ST | | | ST | ST | | | | | |
| | | | | | | | | 4M | MPO-12 (M) SR4 | | | | | |
| | | | | | | | | 4F | MPO-12 (F) SR4 | | | | | |
| | | | | | | | | MM | MPO-12 (M) | | | | | |
| | | | | | | | | MF | MPO-12 (F) | | | | | |
| | | | | | | | | ZZ | OPEN | | | | | |
| | | | | | | | | 1 | Jacketed x 0.5 m x Stag 80 mm/1 con | | | | | |
| | | | | | | | | 2 | Jacketed x 0.5 m x Stag 80 mm/2 con | | | | | |
| | | | | | | | | 3 | Jacketed x 0.5 m x Stag 80 mm/3 con | | | | | |
| | | | | | | | | 4 | Jacketed x 0.5 m x Stag 80 mm/4 con | | | | | |
| | | | | | | | | 6 | Jacketed x 0.5 m x Stag 80 mm/6 con | | | | | |
| | | | | | | | | R | 900 µm x 0.5 m x Stag 80 mm/1 con | | | | | |
| | | | | | | | | S | 900 µm x 0.5 m x Stag 80 mm/2 con | | | | | |
| | | | | | | | | T | 900 µm x 0.5 m x Stag 80 mm/3 con | | | | | |
| | | | | | | | | U | 900 µm x 0.5 m x Stag 80 mm/4 con | | | | | |
| | | | | | | | | V | 900 µm x 0.5 m x Stag 80 mm/6 con | | | | | |

Examples:

A412LDELDEP020M - FX Multi-Fiber Trunk, OM4, 12 Fibers, LC Duplex (Jacketed x 0.5 m x In-Line) - LC Duplex (Jacketed x 0.5 m x In-Line), OFNP, 20 m, Erika Violet Jacket

A324LALCAP050M - FX Multi-Fiber Trunk, OM3, 24 Fibers, LC Simplex (900 µm x 0.5 m x In-Line) - LC Simplex (900 µm x 0.5 m x In-Line), OFNP, 50 m, Aqua Jacket

AS48LDFSCBP030M - FX Multi-Fiber Trunk, OS2, 48 Fibers, LC Duplex (Jacketed x 1.0 m x In-Line) - SC Simplex (900 µm x 1.0 m x In-Line), OFNP, 30 m, Yellow Jacket



4 and 6 Connectors Per Stagger Group available

FiberExpress Workstation Connectivity FX Outlet Boxes



FWSWBF04SB, FX W-Box, 4 x SC/APC Simplex

Strategically placed connectivity through overt design. Compact, low-port-count field-term or pre-term distributed consolidation points minimize installation time by maximizing trunk capacity.

FASTER

- Faster installation with a variety of surface-mount options

EASIER

- Easier distribution of low-port-count connectivity and breakouts with self-contained designs
- Easier field termination with easily accessible consolidation points

BETTER

- Better options for pre-term and field-term, including splicing

FX Wall Boxes (W-Box)

Protect and manage field-terminated fiber within a compact, easily mounted termination box supporting both mechanical splice and Fusion splice termination techniques.

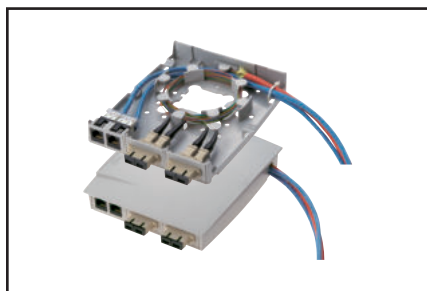


FW3MBP06LD, FX M-Box Pre-Term, 6 x LC Duplex, 1 MPO-12(f), OM3

| Description | Belden Part Number | | | |
|----------------------------|--------------------|------------------|------------|---------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Blue | OS2/APC Green |
| FX Wall-Box, 1x SC Simplex | – | – | FWSWBF01SC | FWSWBF01SB |
| FX Wall-Box, 2x SC Simplex | – | – | FWSWBF02SC | FWSWBF02SB |
| FX Wall-Box, 4x SC Simplex | – | – | FWSWBF04SC | FWSWBF04SB |

FX Multi Boxes (M-Box)

Extremely compact, the feature-rich M-Box is ideally suited for floor box and consolidation point applications. Supporting pre-terminated MPO-12(f) connectivity with an integrated fanout to LC, 1G and 10G Ethernet can be quickly deployed and re-deployed, eliminating field termination. When the need arises, additional versions of the M-Box are fully equipped to handle and protect field termination, including both mechanical splice and pigtail fusion splicing techniques.



A0643206, MDVO Multimedia Outlet Box (shown terminated)

| Description | Belden Part Number | | | |
|--|--------------------|------------------|------------|---------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Blue | OS2/APC Green |
| FX Multi-Box Pre-Term MPO-12(f) to 6 x LC Duplex | FW3MBP06LD | FW4MBP06LD | FWSMBP06LD | FWSMBP06LA |
| FX Multi-Box Field-Term, (with Pigtails) | FW3MBS06LD | FW4MBS06LD | FWSMBS06LD | FWSMBS06LA |
| FX Multi-Box Field-Term, (without Pigtails) | FW3MBF06LD | FW4MBF06LD | FWSMBF06LD | FWSMBF06LA |

Multimedia Outlet Boxes

The Multimedia Outlet Box brings unique versatility to multimedia work area installations. The box design provides cable management and helps maintain cable bend radius. The outlet box's low-profile design and side entry offers better protection for patch cords. The outlet box can accept up to six Modular Jacks or Multimedia Modules using 2-port inserts and three SC Duplex adapters using special bezel, or three SC Duplex adapters. The Multimedia Outlet Box can be mounted directly on the wall or attached to standard electrical boxes. Included with the Multimedia box are three SC Duplex Mounting bezels and three Modular Jack Adapters.

Multimedia Outlet Boxes

| Description | Belden Part Number | |
|---------------------------------------|--------------------|----------|
| | KeyConnect | MDVO |
| Multimedia Outlet Boxes | | |
| Multimedia Outlet Box, 6-port, Gray | AX107293 | A0643205 |
| Multimedia Outlet Box, 6-port, Almond | AX107294 | A0643206 |
| Multimedia Outlet Box, 6-port, White | AX107295 | A0643207 |
| Multimedia Outlet Box, 6-port, Black | AX107296 | A0643208 |

Blank Inserts included (50% of ports)

*See the Belden copper catalog for a larger selection.

i For MediaFlex Faceplates, Interface MDVO Faceplates and MDVO adapters, please refer to Belden Copper Catalog (Pages 57-62).

Faster.
Easier.
Better.

FiberExpress Workstation Connectivity (continued) FX Outlet Boxes, Multimedia Modules and Adapters

Multi-User Outlet Boxes

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 | | |
|--|--------------------|-------------|----------|
| | Almond | Elec. White | Black |
| Multi-User Outlet Box, 24-MDVO Ports (Empty) | AX100220 | AX100221 | AX100222 |
| Multi-User KeyConnect 12-Port Adapter Strip | - | - | AX104615 |
| Multi-User MDVO 12-Port Adapter Strip | - | - | AX100223 |

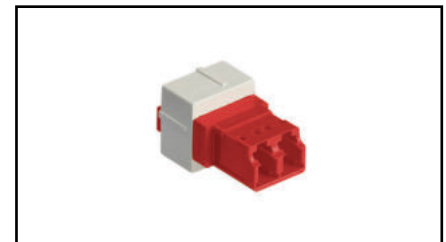


AX100222, Multi-User Outlet Box (shown here with optional modules)

MDVO Fiber Adapter Modules

| Description | Belden Part Number | | |
|---------------------------------|--------------------|-------------|-------------|
| | Almond | Elec. White | Black |
| LC Duplex - OM3 (Aqua Adapter) | AX105505-AL | AX105505-WH | AX105505-BK |
| SC Simplex - OM3 (Aqua Adapter) | AX105697-AL | AX105697-WH | AX105697-BK |

All MDVO Adapter Modules listed above come in quantities of 25 per package
Please contact Belden for any help configuring/validating *SmartPart* Numbers or for any other custom Engineered solutions



AX102101, OM4 MDVO Adapter Module with LC Keyed Red Adapter, White Holder

KeyConnect Multimedia Modules

| Description | Belden Part Number | | |
|--------------------------------------|--------------------|-------------|-------------|
| | Almond | Elec. White | Black |
| LC Duplex OM1 (Beige Adapter) | AX102415 | AX102416 | AX102417 |
| LC Duplex OM3 (Aqua Adapter) | AX104937 | AX104938 | AX104939 |
| LC Duplex OM4 (Erika Violet Adapter) | AX105641-AL | AX105641-EW | AX105641-BK |
| LC Duplex SM (Blue Adapter) | AX102419 | AX102420 | AX102421 |
| LC Duplex SM/APC (Green Adapter) | AX105642-AL | AX105642-EW | AX105642-BK |
| SC Simplex OM1 (Beige Adapter) | AX102683 | AX102684 | AX102685 |
| SC Simplex OM3 (Aqua Adapter) | AX105643-AL | AX105643-EW | AX105643-BK |
| SC Simplex SM (Blue Adapter) | AX102686 | AX102687 | AX102688 |
| SC/APC Simplex SM (Green Adapter) | AX105374-AL | AX105374-EW | AX105374-BK |
| ST (Metal) Compatible MM/SM | AX102242 | AX102243 | AX102244 |



AX104939, KeyConnect Adapter, LC Duplex, OM3 (Aqua Adapter), Black Holder

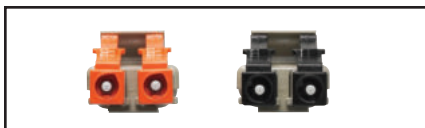
Standard Duplex Footprint Fiber Adapters

| Description | Belden Part Number | | | |
|----------------------------------|--------------------|------------------|--------------|---------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Blue | OS2/APC Green |
| SC Duplex, Flangeless | AX105691-B25 | AX105692-B25 | AX105002-B25 | AX105646-B25 |
| SC Duplex w/Shutters, Flangeless | - | - | AX105693-B25 | AX105694-B25 |

Refer to the Belden copper catalog for a larger selection of workstation connectivity options.



FiberExpress Secure/Keyed LC System FX Secure/Keyed LC System



FX Secure/Keyed LC System



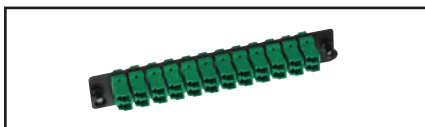
FX Brilliance Connectors



FX Secured/Keyed LC Ultra Cassette



FX Secure/Keyed LC Manager Module



FX Secure/Keyed LC Adapter Strip

The FX Secure/Keyed LC System allows for physical segregation of network 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 highly 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, Frames, Cassettes and Adapter Strips can be used in all mounting hardware for workstation area, Consolidation Point or Telecom Room applications. The Secure/Keyed LC FX Manager Modules can be used in 19- and 23-inch FX Manager Shelves to provide a high-density management system.

The Secure/Keyed LC FX Ultra Frames and Cassettes can be used with the FX UHD Rack and FX Ultra Wall-mount Patch Panels to provide an Ultra 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 Patch Cords and Pigtails are offered in Multimode 62.5 μm (OM1), laser-optimized 50 μm (OM3 and OM4) and Singlemode (OS2) for the most demanding network performance.

The Secure/Keyed LC Brilliance Universal Field Installable Connectors are available in Multimode 50 μm laser-optimized (OM4, OM3 compatible) and Singlemode (OS2) fiber versions.

FX Secure/Keyed LC System

| Description | Splices |
|-------------|---------|
| LC Key1 | Red |
| LC Key2 | Green |
| LC Key3 | Yellow |
| LC Key4 | Black |
| LC Key5 | Orange |
| LC Key6 | Blue |
| LC Key7 | Violet |
| LC Key8 | Rose |
| LC Key9 | Aqua |
| LC KeyA | Brown |
| LC KeyB | Slate |
| LC KeyC | White |

For additional details, please refer to the Secure/Keyed LC System Product Bulletin PB275.

Faster.
Easier.
Better.

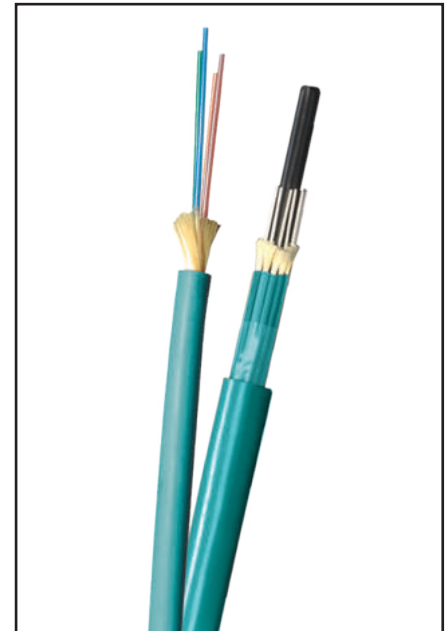
FiberExpress Optic Cables Introduction

The optical fiber cables featured in this section have been expanded to meet advances in technology and the demands of both commercial and industrial applications. Refer to page 3 for selecting a fiber type, color coding information, and optical specifications. Belden's extensive line of indoor and outdoor cable products is offered in tight buffer and loose tube designs. Armored, burial, and ruggedized designs are suited to a host of industrial environments. For each product design, items for OM1, OM2, OM3, OM4, and OS2 (Singlemode) items have been developed.

Belden fiber products are third party tested by either ETL or UL and approved for use according to the National Electric Code.

Customer Service

Many fiber designs are available from stock through our Distributors. For your new or custom application that you do not locate in this section, contact Customer Service at 1-800-Belden-1 (800.235.3361) for additional information or to request a quote. Further product and technical information is also available on our web site at www.belden.com.



Jacket Color Chart

| Cable Type | | Jacket Color |
|--|----------------------|---|
| Indoor Cables: Interconnect, Breakout, Distribution, Mini-Distribution and Tray Optic | | |
| OM1 & OM2 | | Orange |
| OM3 | | Aqua |
| OM4 | | Erika Violet (Standard) Aqua (Optional) |
| OS2 | | Yellow |
| Composite Indoor Cables: Breakout, Distribution & Mini-Distribution | | |
| Primary Fiber Type | Secondary Fiber Type | Jacket Color |
| OS2 | OM1 | Orange |
| OS2 | OM3 | Aqua |
| OS2 | OM4 | Erika Violet (Standard) |
| OM3 | OM1 | Aqua |
| OM4 | OM1 | Erika Violet (Standard) Aqua (Optional) |
| Indoor/Outdoor & Outdoor Cables: Distribution, Loose Tube, OSP | | |
| OM1, OM2, OM3, OM4, OS2 | | Black |
| Specialty Cables: Tactical | | |
| OM1, OM2, OM3, OM4, OS2 | | Black |

See page 3, FX Systems chart for technical performance.

The part numbers in the following pages represent standard fiber cables, additional constructions, colors, and stripes are available. Please contact your Belden representative for more information.



Documents contributing to LEED points are available at info.belden.com/leed-credits

SmartPart Number Configurator

Fiber Optic Cable

To use the configuration matrices, make a selection from each category (some selections will require measurements) and combine to form a custom part number.

Part number example from configuration shown below:

F13B004PB

| FI | | 3 | | B | | 004 | | P | | B | |
|---|----------------------|--|----------------|--------|----------------------------|--------------------------|------------|--------------------------|--|------------------------------|---------------------------|
| FX Fiber Cable | | Fiber Type | | Family | | Fiber Count | | Fire Rating & Protection | | Subunit Type / Configuration | |
| Breakout Cable | | | | | | | | | | | |
| FI | Indoor Cable | 1 | OM1 | B | Breakout | 002 | 2 Fibers | Plenum Group | | B | 2.0 mm, 1 x 900 µm Fiber |
| FD | Indoor/Outdoor Cable | 3 | OM3 | | | 004 | 4 Fibers | P | Plenum (OFNP) | | |
| | | 4 | OM4 | | | 006 | 6 Fibers | Riser Group | | | |
| | | S | OS2 (G.657.A1) | | | 008 | 8 Fibers | | | | |
| | | | | | | 010 | 10 Fibers | R | Riser (OFNR) | | |
| | | | | | | 012 | 12 Fibers | | | | |
| Non-Unitized Distribuion Cable | | | | | | | | | | | |
| FI | Indoor Cable | 3 | OM3 | D | Distribution | 002 | 2 Fibers | Plenum Group | | 9 | 900 µm Fiber |
| FD | Indoor/Outdoor Cable | 4 | OM4 | | | 004 | 4 Fibers | P | Plenum (OFNP) | | |
| | | S | OS2 (G.657.A1) | | | 006 | 6 Fibers | A | Plenum Interlocked Aluminum Armor (OFCP) | | |
| | | | | | | 012 | 12 Fibers | Riser Group | | | |
| | | | | | | 024 | 24 Fibers | R | Riser (OFNR) | | |
| | | | | | | | | F | Riser Interlocked Aluminum Armor (OFCR) | | |
| Unitized Distribuion Cable | | | | | | | | | | | |
| FI | Indoor Cable | 3 | OM3 | D | Distribution | 024 | 24 Fibers | Plenum Group | | J | 4.5 mm, 6 x 900 µm Fiber |
| FD | Indoor/Outdoor Cable | 4 | OM4 | | | 036 | 36 Fibers | P | Plenum (OFNP) | K | 5.5 mm, 12 x 900 µm Fiber |
| | | S | OS2 (G.657.A1) | | | 048 | 48 Fibers | A | Plenum Interlocked Aluminum Armor (OFCP) | | |
| | | Composite Assignments (Primary/Secondary) | | | | 072 | 72 Fibers | Riser Group | | | |
| | | E | OS2/OM4 | | | 096 | 96 Fibers | R | Riser (OFNR) | | |
| | | F | OS2/OM1 | | | 144 | 144 Fibers | F | Riser Interlocked Aluminum Armor (OFCR) | | |
| | | H | OS2/OM3 | | | Composite Configurations | | | | | |
| | | K | OM4/OM1 | | | H31 | 4 Subunits | | | | |
| | | M | OM3/OM1 | | | H22 | 4 Subunits | | | | |
| | | | | | | H13 | 4 Subunits | | | | |
| Mini-Distribution Cable (Non-Unitized) | | | | | | | | | | | |
| FI | Indoor Cable | 3 | OM3 | M | Mini-Distribution | 012 | 12 Fibers | Plenum Group | | 0 | 250 µm Fiber |
| | | 4 | OM4 | | | | | P | Plenum (OFNP) | 2 | 3.0 mm, 12 x 250 µm Fiber |
| | | S | OS2 (G.657.A1) | | | | | A | Plenum Interlocked Aluminum Armor (OFCP) | | |
| Mini-Distribution Cable (Unitized) | | | | | | | | | | | |
| FI | Indoor Cable | 3 | OM3 | M | Mini-Distribution | 024 | 24 Fibers | Plenum Group | | 1 | 2.0 mm, 12 x 250 µm Fiber |
| | | 4 | OM4 | | | 036 | 36 Fibers | P | Plenum (OFNP) | 2 | 3.0 mm, 12 x 250 µm Fiber |
| | | S | OS2 (G.657.A1) | | | 048 | 48 Fibers | A | Plenum Interlocked Aluminum Armor (OFCP) | | |
| | | | | | | 072 | 72 Fibers | Riser Group | | | |
| | | | | | | 096 | 96 Fibers | | | | |
| | | | | | | 144 | 144 Fibers | | | | |
| Loose-Tube | | | | | | | | | | | |
| FD | Indoor/Outdoor Cable | 1 | OM1 | L | Loose-Tube (Single-Jacket) | 012 | 12 Fibers | CM | | D | 12 Fibers per Tube Dry |
| FS | Outdoor Cable | 3 | OM3 | | | 024 | 24 Fibers | N | CM (OFN) | G | 12 Fibers per Tube Gel |
| | | 4 | OM4 | | | 036 | 36 Fibers | 6 | CM Corrugated Steel Tape Armor | | |
| | | S | OS2 (G.657.A1) | | | 048 | 48 Fibers | Riser Group | | | |
| | | | | | | 072 | 72 Fibers | R | Riser (OFNR) | | |
| | | | | | | 096 | 96 Fibers | 5 | Riser Corrugated Steel Tape Armor (OFCR) | | |
| | | | | | | 144 | 144 Fibers | | | | |

Consult individual technical data sheets for exact specifications.

Faster.
Easier.
Better.

FiberExpress Breakout Cables Tight Buffer — Indoor Riser, Plenum and LSZH Rated

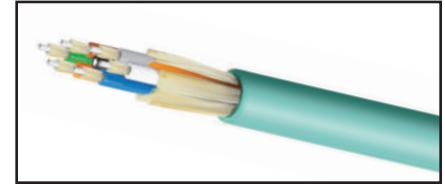
Robust terminations in demanding environments. All the ease of 900 μm tight buffered termination with only one fiber per sub-unit enables the ultimate bond between the connector and the cables' Aramid yarns resulting in unmatched strength and durability.

Applications:

- Horizontal distribution for Fiber-to-the-desk
- In-building backbone
- Factory floor automation
- Broadcast and A/V in-building installations

Additional Options

- 2.5 mm and 2.9 mm Subunits



Optical Fiber Breakout Cable

| Description | Construction | Fiber Count | Fiber | Sub-Unit OD | | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------|--------------|-------------|----------------------|----------------------|--------|----------|------|--------|-------------|------------------|-------|-----------|-------|
| | | | | mm | in. | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | | | N | lbs-f | N | lbs-f |
| Color-coded Sub-Units | | 2 | 900 μm TB | 2.0 | 0.0787 | 6.6 | 0.26 | 36 | 24 | 800 | 180 | 400 | 90 |
| | | 4 | 900 μm TB | 2.0 | 0.0787 | 8.2 | 0.32 | 52 | 35 | 1335 | 300 | 400 | 90 |
| | | 2.0 | 6 | 900 μm TB | 9.1 | 0.36 | 80 | 54 | 1335 | 300 | 400 | 90 | |
| | | | 12 | | 13.1 | 0.51 | 164 | 110 | 2670 | 600 | 1335 | 300 | |
| | | 2.9 | 6 | 10.8 | 0.42 | 90 | 62 | 1500 | 330 | 400 | 90 | | |
| | | | 12 | 14.6 | 0.57 | 180 | 124 | 3000 | 660 | 1335 | 300 | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| Fiber Count | Belden Part Number | | | |
|-------------------|--------------------|----------|------------------|------------|
| | OM1 Orange | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Plenum | | | | |
| 2 | F1B002PB | F3B002PB | F4B002PB | F5B002PB |
| 4 | F1B004PB | F3B004PB | F4B004PB | F5B004PB |
| 6 | F1B006PB | F3B006PB | F4B006PB | F5B006PB |
| 12 | F1B012PB | F3B012PB | F4B012PB | F5B012PB |
| LSZH/Riser | | | | |
| 2 | F1B002LB | F3B002LB | F4B002LB | F5B002LB |
| 4 | F1B004LB | F3B004LB | F4B004LB | F5B004LB |
| 6 | F1B006LB | F3B006LB | F4B006LB | F5B006LB |
| 12 | F1B012LB | F3B012LB | F4B012LB | F5B012LB |

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Specifications

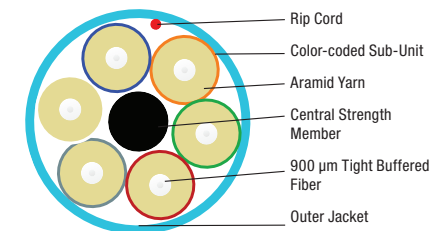
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

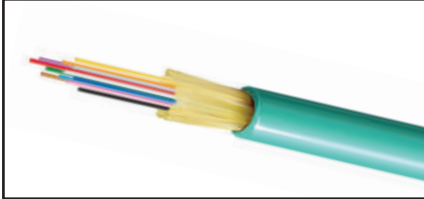
| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Plenum) | 0°C to 60°C 32°F to 140°F |
| Installation (Riser/LSZH) | -10°C to 60°C (14°F to 140°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation (Riser/LSZH) | -20°C to 70°C (-4°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNP/OFN FT.6 (PLENUM - PVC or PVDF)
- ICEA S-83-596



Optical Fiber Distribution Cable

FiberExpress Distribution Cables Tight Buffer – Indoor Riser and Plenum Rated

Fast installation, easy termination. Sub-unitized cables provide easy routing and 900 μm tight-buffered fiber supporter fast and robust field-termination.

Applications:

- Horizontal distribution for Fiber-to-the-desk
- In-building backbone
- Factory floor automation
- Data Center EDA areas

Indoor Specifications

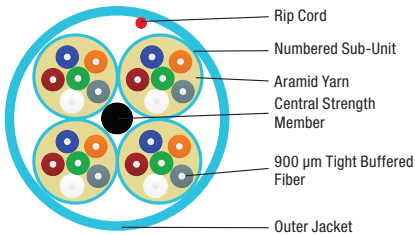
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Plenum) | 0°C to 60°C (32°F to 140°F) |
| Installation (Riser/LSZH) | -10°C to 60°C (14°F to 140°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation (Riser/LSZH) | -20°C to 70°C (-4°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNP FT6 (PLENUM PVC)
- ICEA S-83-596

| Description | Construction | Fiber Count | Fiber | Sub-Unit OD | Cable OD | | Weight | | Tensile Strength | | | | |
|-----------------------------|--------------|-------------|-----------|-------------|----------|------|--------|-------|------------------|--------------|-------|-----------|-------|
| | | | | | mm | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | | | N | lbs-f | N | lbs-f |
| Non-Unitized | | 2 | 900 μm TB | N/A | 4.8 | 0.19 | 22 | 15 | 1335 | 300 | 400 | 90 | |
| | | 4 | 900 μm TB | N/A | 4.8 | 0.19 | 25 | 17 | | | | | |
| | 6 | 31 | | | | | 21 | | | | | | |
| | 8 | 36 | | | | | 24 | | | | | | |
| | 10 | 39 | | | | | 26 | | | | | | |
| | 12 | 43 | | | | | 29 | | | | | | |
| 16 | 64 | 43 | | | | | | | | | | | |
| 24 | 80 | 54 | 2670 | 600 | 800 | 180 | | | | | | | |
| Unitized 6-Fiber Sub-Units | | 24 | 900 μm TB | 4.5 | 13.1 | 0.52 | 145 | 97 | 2670 | 600 | 800 | 180 | |
| | | 36 | | | 16.0 | 0.63 | 221 | 148 | | | | | |
| Unitized 12-Fiber Sub-Units | | 36 | 900 μm TB | 5.5 | 14.1 | 0.56 | 162 | 109 | 2670 | 600 | 800 | 180 | |
| | | 48 | | | 15.5 | 0.61 | 207 | 139 | | | | | |
| | | 72 | | | 19.0 | 0.75 | 321 | 216 | | | | | |
| | | 96 | | | 22.8 | 0.90 | 536 | 360 | | | | | |
| | | 144 | | | 25.4 | 1.00 | 602 | 404 | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Faster.
Easier.
Better.

FiberExpress Distribution Cables (continued)
Tight Buffer — Indoor Riser and Plenum Rated

Standard Indoor Configurations

| Fiber Count | Belden Part Number | | |
|--|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Non-Unitized - Riser | | | |
| 2 | FI3D002R9 | FI4D002R9 | FISD002R9 |
| 6 | FI3D006R9 | FI4D006R9 | FISD006R9 |
| 12 | FI3D012R9 | FI4D012R9 | FISD012R9 |
| 24 | FI3D024R9 | FI4D024R9 | FISD024R9 |
| Non-Unitized - Plenum | | | |
| 2 | FI3D002P9 | FI4D002P9 | FISD002P9 |
| 6 | FI3D006P9 | FI4D006P9 | FISD006P9 |
| 12 | FI3D012P9 | FI4D012P9 | FISD012P9 |
| 24 | FI3D024P9 | FI4D024P9 | FISD024P9 |
| Unitized 6 Fiber subunits riser | | | |
| 24 | FI3D024RJ | FI4D024RJ | FISD024RJ |
| Unitized 6 Fiber subunits plenum | | | |
| 24 | FI3D024PJ | FI4D024PJ | FISD024PJ |
| Unitized 12 Fiber subunits plenum | | | |
| 36 | FI3D036PK | FI4D036PK | FISD036PK |
| 48 | FI3D048PK | FI4D048PK | FISD048PK |
| 72 | FI3D072PK | FI4D072PK | FISD072PK |
| 96 | FI3D096PK | FI4D096PK | FISD096PK |
| 144 | FI3D144PK | FI4D144PK | FISD144PK |

OM1 available upon request. For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.



Optical Fiber Indoor/Outdoor Distribution Cable

FiberExpress Distribution Cables (continued) Tight Buffer – Indoor/Outdoor Riser, Plenum and LSZH Rated

Indoor/Outdoor Specifications

- Environmental Protection
 - UV Resistant Jacket
 - Moisture Resistant Jacket
 - Fungus Resistant Jacket
 - Water Blocking Aramid
 - Water Blocking Tape

Indoor/Outdoor Specifications

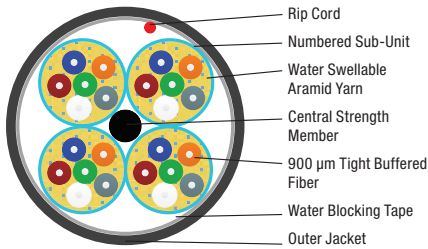
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Riser/LSZH) | -20 to 60°C (-4°F to 140°F) |
| Installation (Plenum) | -0 to 70°C (32°F to 140°F) |
| Operation | -40 to 70°C (-40°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNP FT6 (PLENUM - PVC)
- ICEA S-104-696

| Description | Construction | Fiber Count | Fiber | Sub-Unit OD | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|-----------|-------------|----------|------|--------|-------------|------------------|-------|-----------|-------|
| | | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | | N | lbs-f | N | lbs-f |
| Non-Unitized | | 2 | 900 µm TB | N/A | 4.8 | 0.19 | 22 | 15 | 1335 | 300 | 400 | 90 |
| | | 4 | 900 µm TB | N/A | 4.8 | 0.19 | 25 | 17 | | | | |
| | 6 | 31 | | | | | 21 | | | | | |
| | 8 | 5.8 | | | 0.23 | 36 | 24 | | | | | |
| | 10 | | | | | 39 | 26 | | | | | |
| | 12 | 43 | | | 29 | | | | | | | |
| 16 | 8.8 | 0.35 | | | 64 | 43 | | | | | | |
| 24 | | | 80 | 54 | 2670 | 600 | 800 | 180 | | | | |
| Unitized 6-Fiber Sub-Units | | 24 | 900 µm TB | 4.5 | 13.1 | 0.52 | 145 | 97 | 2670 | 600 | 800 | 180 |
| | | 36 | | | 16.0 | 0.63 | 221 | 148 | | | | |
| Unitized 12-Fiber Sub-Units | | 36 | 900 µm TB | 5.5 | 14.1 | 0.56 | 162 | 109 | 2670 | 600 | 800 | 180 |
| | | 48 | | | 15.5 | 0.61 | 207 | 139 | | | | |
| | 72 | 19.0 | | | 0.75 | 321 | 216 | | | | | |
| | 96 | 22.8 | | | 0.90 | 536 | 360 | | | | | |
| | 144 | 25.4 | | | 1.00 | 602 | 404 | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

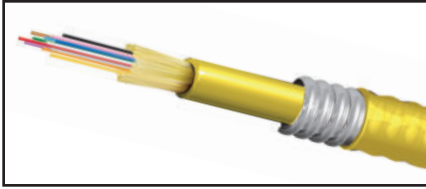
Faster.
Easier.
Better.

FiberExpress Distribution Cables (continued)
Tight Buffer — Indoor/Outdoor Riser, Plenum and LSZH Rated

Standard Indoor/Outdoor Configurations

| Fiber Count | Belden Part Number | | |
|---|--------------------|-----------|-----------|
| | OM3 Black | OM4 Black | OS2 Black |
| Non-Unitized - Riser/LSZH | | | |
| 2 | FD3D002L9 | FD4D002L9 | FSD002L9 |
| 6 | FD3D006L9 | FD4D006L9 | FSD006L9 |
| 12 | FD3D012L9 | FD4D012L9 | FSD012L9 |
| 24 | FD3D024L9 | FD4D024L9 | FSD024L9 |
| Non-Unitized - Riser | | | |
| 2 | FD3D002R9 | FD4D002R9 | FSD002R9 |
| 6 | FD3D006R9 | FD4D006R9 | FSD006R9 |
| 12 | FD3D012R9 | FD4D012R9 | FSD012R9 |
| 24 | FD3D024R9 | FD4D024R9 | FSD024R9 |
| Non-Unitized Plenum | | | |
| 2 | FD3D002P9 | FD4D002P9 | FSD002P9 |
| 6 | FD3D006P9 | FD4D006P9 | FSD006P9 |
| 12 | FD3D012P9 | FD4D012P9 | FSD012P9 |
| 24 | FD3D024P9 | FD4D024P9 | FSD024P9 |
| Unitized 6-Fiber Sub-Units - Riser | | | |
| 24 | FD3D024RJ | FD4D024RJ | FSD024RJ |
| Unitized 6-Fiber Sub-Units - Plenum | | | |
| 24 | FD3D024PJ | FD4D024PJ | FSD024PJ |
| Unitized 12-Fiber Sub-Units - Riser/LSZH | | | |
| 48 | FD3D048LK | FD4D048LK | FSD048LK |
| 72 | FD3D072LK | FD4D072LK | FSD072LK |
| 96 | FD3D096LK | FD4D096LK | FSD096LK |
| 144 | FD3D144LK | FD4D144LK | FSD144LK |
| Unitized 12-Fiber Sub-Units - Plenum | | | |
| 48 | FD3D048PK | FD4D048PK | FSD048PK |
| 72 | FD3D072PK | FD4D072PK | FSD072PK |
| 96 | FD3D096PK | FD4D096PK | FSD096PK |
| 144 | FD3D144PK | FD4D144PK | FSD144PK |

OM1 available upon request. For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.



Optical Fiber Armored Distribution Cable, Indoor

FiberExpress Armored Distribution Cables Tight Buffer – Indoor, Riser and Plenum Rated

Heightened Protection with simple termination. Augmenting the easy termination of Distribution cable with interlocking armor to provide an elevated resistance to cutting, crushing and the gnawing of rodents all while eliminating the additional expense of innerduct.

Applications:

- Campus/Inter Building
- Telecom Trunks
- Industrial
- Rugged Environments

Indoor Specifications

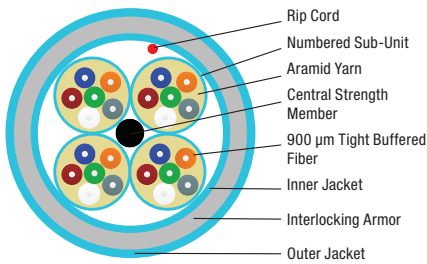
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 20 x OD |
| Operation | 15 x OD |

Temperature Range

| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Plenum) | 0°C to 60°C (32°F to 140°F) |
| Installation (Riser/LSZH) | -10°C to 60°C (14°F to 140°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation (Riser/LSZH) | -20°C to 70°C (-4°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFCR FT4 (RISER - PVC)
- NEC/CEC OFCR FT4 (LSZH - FRPE)
- NEC/CEC OFCP FT6 (PLENUM - PVC)
- ICEA S-83-596

| Description | Construction | Fiber Count | Fiber | Sub-Unit OD | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|-----------|-------------|----------|--------|--------|-------------|------------------|-------|-----------|-------|
| | | | | | mm | mm in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | | N | lbs-f | N | lbs-f |
| Non-Unitized | | 6 | 900 μm TB | N/A | 14.5 | 0.57 | 189 | 127 | 1335 | 300 | 400 | 90 |
| | | 12 | | | 15.7 | 0.62 | 150 | 223 | | | | |
| | | 24 | | | 17.0 | 0.67 | 335 | 225 | | | | |
| Unitized 12-Fiber Sub-Units | | 48 | 900 μm TB | 5.5 | 24.6 | 0.97 | 540 | 363 | 2670 | 600 | 890 | 200 |
| | | 72 | | | 27.8 | 1.09 | 716 | 481 | | | | |
| | | 96 | | | 32.5 | 1.28 | 930 | 625 | | | | |
| | | 144 | | | 35.6 | 1.40 | 1005 | 675 | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Standard Indoor Armored Configurations

| Fiber Count | Belden Part Number | | |
|---|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Non-Unitized Riser | | | |
| 6 | F13D006F9 | F14D006F9 | F15D006F9 |
| 12 | F13D012F9 | F14D012F9 | F15D012F9 |
| 24 | F13D024F9 | F14D024F9 | F15D024F9 |
| Non-unitized Plenum | | | |
| 6 | F13D006A9 | F14D006A9 | F15D006A9 |
| 12 | F13D012A9 | F14D012A9 | F15D012A9 |
| 24 | F13D024A9 | F14D024A9 | F15D024A9 |
| Unitized 12 fiber sub-units plenum | | | |
| 48 | F13D048AK | F14D048AK | F15D048AK |
| 72 | F13D072AK | F14D072AK | F15D072AK |
| 96 | F13D096AK | F14D096AK | F15D096AK |
| 144 | F13D144AK | F14D144AK | F15D144AK |

OM1 available upon request. For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Faster.
Easier.
Better.

FiberExpress Armored Distribution Cables (continued) Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated

Indoor/Outdoor Specifications

- Environmental Protection
 - UV Resistant Jacket
 - Moisture Resistant Jacket
 - Fungus Resistant Jacket
 - Water Blocking Aramid
 - Water Blocking Tape

| Description | Construction | Fiber Count | Fiber | Sub-Unit | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|-----------|----------|----------|------|--------|-------------|------------------|-------|-----------|-------|
| | | | | OD | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | mm | mm | in. | Kg/km | lb/1000 ft. | N | lbs-f | N | lbs-f |
| Non-Unitized | | 6 | 900 μm TB | N/A | 14.5 | 0.57 | 189 | 127 | 1335 | 300 | 400 | 90 |
| | | 12 | | | 15.7 | 0.62 | 150 | 223 | | | | |
| | | 24 | | | 17.0 | 0.67 | 335 | 225 | | | | |
| Unitized 12-Fiber Sub-Units | | 48 | 900 μm TB | 5.5 | 24.6 | 0.97 | 540 | 363 | 2700 | 600 | 890 | 200 |
| | | 72 | | | 27.8 | 1.09 | 716 | 481 | | | | |
| | | 96 | | | 32.5 | 1.28 | 930 | 625 | | | | |
| | | 144 | | | 35.6 | 1.40 | 1005 | 675 | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Standard Indoor / Outdoor Armored Configurations

| Fiber Count | Belden Part Number | | |
|---|--------------------|-----------|-----------|
| | OM3 Black | OM4 Black | OS2 Black |
| Non-Unitized Riser | | | |
| 6 | FD3D006F9 | FD4D006F9 | FSD006F9 |
| 12 | FD3D012F9 | FD4D012F9 | FSD012F9 |
| 24 | FD3D024F9 | FD4D024F9 | FSD024F9 |
| Non-unitized Plenum | | | |
| 6 | FD3D006A9 | FD4D006A9 | FSD006A9 |
| 12 | FD3D012A9 | FD4D012A9 | FSD012A9 |
| 24 | FD3D024A9 | FD4D024A9 | FSD024A9 |
| Unitized 12 fiber sub-units plenum | | | |
| 48 | FD3D048AK | FD4D048AK | FSD048AK |
| 72 | FD3D072AK | FD4D072AK | FSD072AK |
| 96 | FD3D096AK | FD4D096AK | FSD096AK |
| 144 | FD3D144AK | FD4D144AK | FSD144AK |

OM1 available upon request. For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.



Optical Fiber Armored Distribution Cable, Indoor/Outdoor

Indoor/Outdoor Specifications

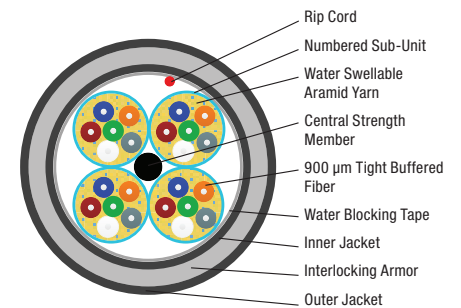
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 20 x OD |
| Operation | 15 x OD |

Temperature Range

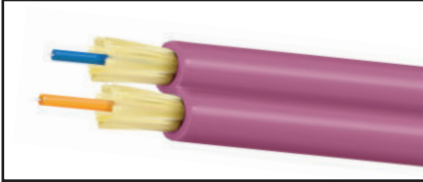
| | |
|-----------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Riser) | -20°C to 60°C (-4°F to 140°F) |
| Installation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation | -40°C to 70°C (-40°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFCR FT4 (RISER - PVC)
- NEC/CEC OFCR FT4 (LSZH - FRPE)
- NEC/CEC OFCP FT6 (PLENUM - PVC)
- ICEA S-104-696



Duplex Optical Fiber Interconnect Cable

FiberExpress Interconnect Cables Tight Buffer – Riser and Plenum Rated

Supple and compact yet undoubtedly resilient. Small form factor FX interconnect cables provide the right combination of flexibility, small size and robustness needed to withstand the rigours of daily patching without sacrificing density.

Applications:

- Patching
- Inside Cabinets
- Workstation Equipment Connections

Specifications

Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|--------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | 0°C to 60°C (32°F to 140°F) |
| Operation | 0°C to 70°C (32°F to 158°F) |

Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNP FT6 (PLENUM - PVC)
- IEC 60332-3-24, IEC 61034-2, IEC 60754-1&2 (LSZH - FRPE)
- ICEA S-83-596

Zip Cord (900 µm Fiber)

| Description | Construction | Fiber Count | Fiber | Cable OD | | Weight | | Tensile Strength | | | |
|-------------|--------------|-------------|-----------|-----------|-------------|--------|-------------|------------------|-------|-----------|-------|
| | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | N | lbs-f | N | lbs-f |
| Simplex | | 1 | 900 µm TB | 2.0 | 0.08 | 4 | 3 | 220 | 50 | 66 | 15 |
| | | | | 3.0 | 0.11 | 7 | 5 | | | | |
| Duplex Zip | | 2 | 900 µm TB | 2.0 x 4.0 | 0.08 x 0.16 | 7 | 5 | 220 | 50 | 66 | 15 |
| | | | | 3.0 x 5.8 | 0.11 x 0.22 | | | | | | |

Consult individual technical data sheets for exact specifications.

Standard Configurations

| Fiber Count | Belden Part Number | | |
|-------------------------------|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Simplex 2.0 mm - Riser | | | |
| 1 | FI3I001RB | FI4I001RB | FISI001RB |
| Simplex 3.0 mm - Riser | | | |
| 1 | FI3I001RC | FI4I001RC | FISI001RC |
| Duplex 2.0 mm - Riser | | | |
| 2 | FI3I002RB | FI4I002RB | FISI002RB |
| Duplex 3.0 mm - Riser | | | |
| 2 | FI3I002RC | FI4I002RC | FISI002RC |

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Mini Round (250 µm Fiber)

| Description | Construction | Fiber Count | Fiber | Cable OD | | Weight | | Tensile Strength | | | |
|-------------------|--------------|-------------|--------|----------|------|--------|-------------|------------------|-------|-----------|-------|
| | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | N | lbs-f | N | lbs-f |
| Duplex Mini-Round | | 2 | 250 µm | 2.0 | 0.08 | 3.4 | 2.3 | 445 | 100 | 133 | 30 |
| Mini-Round 8f | | 8 | 250 µm | 2.0 | 0.08 | 3.4 | 2.3 | 445 | 100 | 133 | 30 |
| Mini-Round 12f | | 12 | 250 µm | 2.0 | 0.08 | 3.4 | 2.3 | 445 | 100 | 133 | 30 |

Consult individual technical data sheets for exact specifications.

Standard Configurations

| Fiber Count | Belden Part Number | | |
|-----------------------------------|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Mini-Round 2.0 mm - Plenum | | | |
| 2 | FI3I002P0 | FI4I002P0 | FISI002P0 |
| 8 | FI3I008P0 | FI4I008P0 | FISI008P0 |
| 12 | FI3I012P0 | FI4I012P0 | FISI012P0 |

Faster.
Easier.
Better.

FiberExpress Composite Distribution Cables Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated

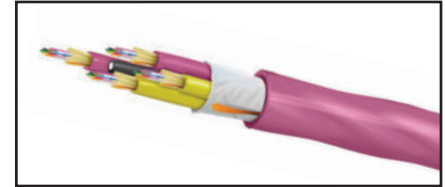
Composite cables combine multiple grades of fiber in a single unitized cable easily supporting various applications in a single cable which minimize installation labor.

Applications

- In building backbones
- Factory floor automation
- Broadcast and AV in-building installation

Additional Options

- Breakout Cable
- μMini-Distribution Cable
- 2-fiber to 144-fiber constructions
- Additional fiber grade combinations



Optical Fiber Composite Cable

Standard Composite Cable Color



Composite Distribution Configurations

Building a SmartPart Number

1. Choose FX Fiber Cable

FI

| FX Fiber Cable | |
|----------------|----------------------|
| FI | Indoor Cable |
| FD | Indoor/Outdoor Cable |

2. Choose Fiber Grade (Primary/Secondary)

H

| Fiber Grade (PRI/SEC) | |
|-----------------------|---------|
| E | OS2/OM4 |
| H | OS2/OM3 |
| F | OS2/OM1 |
| K | OM4/OM1 |
| M | OM3/OM1 |

3. Choose Family

D

| Family | |
|--------|--------------|
| D | Distribution |

4. Choose Fiber Configuration

H22

| Fiber Configuration | |
|---------------------|--|
| H13 | 4 Subunits, 1 Primary Subunit, 3 Secondary subunits |
| H22 | 4 Subunits, 2 Primary Subunits, 2 Secondary Subunits |
| H31 | 4 Subunits, 3 Primary Subunits, 1 Secondary Subunit |

5. Choose Flammability Rating and Protection

P

| Flammability Rating and Protection | |
|------------------------------------|--|
| Plenum Group | |
| P | Plenum (OFNP) |
| A | Plenum Interlocked Aluminum Armor (OFCP) |
| Riser Group | |
| R | Riser (OFNR) |
| F | Riser Interlocked Aluminum Armor (OFCR) |

6. Choose Subunit Type/Configuration

K

| Subunit Type/Configuration | |
|----------------------------|--------------------------------------|
| J | 4.5 mm Subunit, 6 x 900 μm Fiber |
| K | 5.5 mm Subunit, 12 x 900 μm Fiber |

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Examples:

FIHDH22PK - FX Indoor, OS2 / OM3, Distribution Tight Buffer, 24 Fibers / 24 Fibers, OFNP, Subunits (12F), Aqua Jacket

FDH31AK - FX Indoor/Outdoor, OS2 / OM4, Distribution Tight Buffer, 36 Fibers / 12 Fibers, OFCP Aluminum Interlocked Armor, Subunits (12F), Black Jacket



Fiber Optical Hybrid Copper-Fiber Cable

FiberExpress Hybrid Copper-Fiber Cables Tight Buffer – Indoor, Riser and Plenum Rated

Take advantage of the benefits of DC power and fiber in one cable, safely transmitting up to 100W of low-voltage power and data over long distances to remote locations where standard power is unavailable or too costly to install. Cables can be used for indoor (plenum and riser) and indoor/outdoor (plenum and riser) applications, and also reduce inventory costs through stocking and managing one cable vs. two.

Applications:

- DAS
- POLAN/PON
- Power over longer distances
- Entrance space
- Pre-term

Indoor Specifications

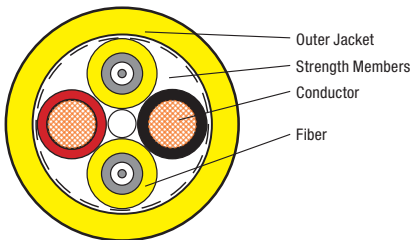
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|-----------------------|-----------------------------------|
| Operation (Riser) | -20°C to 70°C (-4°F to 158°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Storage (Riser) | -40°C to 70°C (-40°F to 158°F) |
| Storage (Plenum) | -40°C to 70°C (-40°F to 158°F) |
| Installation (Riser) | -10°C to 60°C (14°F to 140°F) |
| Installation (Plenum) | 0°C to 60°C (32°F to 140°F) |

Legend



- Outer Jacket
- Strength Members
- Conductor
- Fiber

Compliance

- ICEA S-120-742
- RoHS
- ANSI/TIA-568.3

Fiber Color (Outer Jacket/Fiber Sub-Unit)

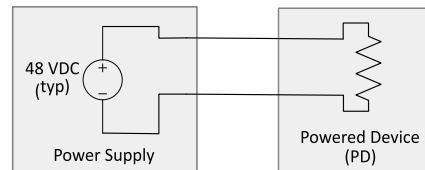
| | |
|----------------|-----------------------------|
| OM3 | Aqua / Aqua |
| OM4 | Erika Violet / Erika Violet |
| OS2 (G.657.A1) | Yellow / Yellow |
| Indoor/Outdoor | Black / Fiber type color |

| Description | Construction | Fire Rating | Sub-Unit Type | Fiber Count | #Conductors x AWG | Sub-Unit OD | | Cable OD | | Weight | | Tensile Strength | | | |
|----------------|--------------|-------------|---------------|-------------|-------------------|-------------|-----|----------|-----|--------|-------------|------------------|-----|-----------|--|
| | | | | | | mm | in. | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| Indoor | [Diagram] | Plenum | Breakout | 2 | 2 x 14 | 3.0 | 8.7 | 0.342 | 95 | 64 | 2700 | 600 | 810 | 180 | |
| | | | | | | | | | 79 | 51 | | | | | |
| | | | | | | | | | 71 | 48 | | | | | |
| | [Diagram] | | Distribution | 6 | 2 x 14 | 4.8 | 8.9 | 0.352 | 97 | 65 | | | | | |
| | | | | | | | | | 82 | 55 | | | | | |
| | | | | | | | | | 73 | 49 | | | | | |
| Indoor/Outdoor | [Diagram] | Plenum | Breakout | 2 | 2 x 14 | 3.0 | 9.3 | 0.366 | 101 | 68 | | | | | |
| | | | | | | | | | 85 | 57 | | | | | |
| | | | | | | | | | 77 | 52 | | | | | |
| | [Diagram] | | Distribution | 6 | 2 x 14 | 4.8 | 9.6 | 0.376 | 103 | 69 | | | | | |
| | | | | | | | | | 88 | 59 | | | | | |
| | | | | | | | | | 79 | 53 | | | | | |

Consult individual technical data sheets for exact specifications.

Remote Power Delivery Systems

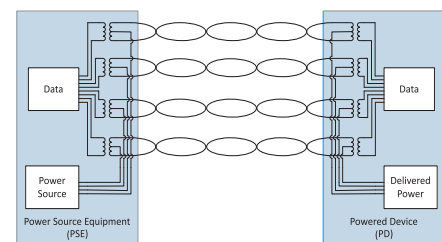
DC Systems



Low-Medium Power (15-100W)
Medium Distance (up to 1000 m)

Belden Solutions:
New Gen + Fiber Cable
Hybrid Cable
Fiber Connectivity

PoE



Low-Medium Power (15-100W max)
Short Distance (100 m max)

Belden Solutions:
Category Cable
REVConnect

Faster.
Easier.
Better.

FiberExpress Hybrid Copper-Fiber Cables (continued) Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated

Standard FX Hybrid Copper-Fiber Cables

| # Conductors x AWG | Belden Part Number | | | | | |
|------------------------------|--------------------|-------------------|---------------|-------------------|---------------|-------------------|
| | OM3 | | OM4 | | OS2 | |
| | Breakout (2F) | Distribution (6F) | Breakout (2F) | Distribution (6F) | Breakout (2F) | Distribution (6F) |
| Indoor Plenum | | | | | | |
| 2 x 14 | HI3B0020214PC | HI3D0060214PJ | HI4B0020214PC | HI4D0060214PJ | HISB0020214PC | HISD0060214PJ |
| 2 x 16 | HI3B0020216PC | HI3D0060216PJ | HI4B0020216PC | HI4D0060216PJ | HISB0020216PC | HISD0060216PJ |
| 2 x 18 | HI3B0020218PC | HI3D0060218PJ | HI4B0020218PC | HI4D0060218PJ | HISB0020218PC | HISD0060218PJ |
| Indoor/Outdoor Plenum | | | | | | |
| 2 x 14 | HD3B0020214PC | HD3D0060214PJ | HD4B0020214PC | HD4D0060214PJ | HDSB0020214PC | HSDS0060214PJ |
| 2 x 16 | HD3B0020216PC | HD3D0060216PJ | HD4B0020216PC | HD4D0060216PJ | HDSB0020216PC | HSDS0060216PJ |
| 2 x 18 | HD3B0020218PC | HD3D0060218PJ | HD4B0020218PC | HD4D0060218PJ | HDSB0020218PC | HSDS0060218PJ |



Fiber Optical Hybrid Copper-Fiber Cable

Indoor/Outdoor Specifications

Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 20 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|-----------------------|-----------------------------------|
| Storage (Riser) | -40°C to 70°C (-40°F to 158°F) |
| Storage (Riser) | -40°C to 70°C (-40°F to 158°F) |
| Installation (Riser) | -10°C to 60°C (14°F to 140°F) |
| Installation (Plenum) | 0°C to 60°C (32°F to 140°F) |
| Operation (Riser) | -40°C to 70°C (-40°F to 158°F) |
| Operation (Plenum) | -40°C to 70°C (-40°F to 158°F) |

Tailored FX Hybrid Copper-Fiber Cables

Building a SmartPart Number

| | | | | | | | |
|--------------------------------|----------------------|------------------|-----------------------|---------------------------|-----------------------|-----------------------|---------------------------------------|
| 1. Choose FX Fiber Cable | 2. Choose Fiber Type | 3. Choose Family | 4. Choose Fiber Count | 5. Choose Conductor Count | 6. Choose Copper Type | 7. Choose Fire Rating | 8. Choose Sub-Unit Type/Configuration |
| HI | 3 | B | 002 | 02 | 16 | R | C |
| FX Fiber Cable | Fiber Type | Family | Fiber Count | Conductor Count | Copper Type | Fire Rating | Sub-Unit Type/Configuration |
| HI Indoor Hybrid Cable | 1 OM1 | B Breakout | Breakout | 02 2 Conductors | 12 12 AWG | P Plenum | Breakout |
| HD Indoor/Outdoor Hybrid Cable | 3 OM3 | D Distribution | 001 1 Fiber | | 14 14 AWG | R Riser | C 3.0 mm Sub (1F x 900 µm) |
| | 4 OM4 | | 002 2 Fibers | | 16 16 AWG | | Distribution |
| | S OS2 (G.657.A1) | | Distribution | | 18 18 AWG | | J 4.8 mm Sub (Up to 6F x 900 µm) |
| | B G.657.A2/B2 | | 006 6 Fibers | | 20 20 AWG | | |
| | C G.657.B3 | | | | | | |

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Examples:

HI3D0060214RJ - FX Hybrid Indoor, OS2, Distribution, 6 Fibers, 02 x 14 AWG, CL3R-OF, 4.5 mm Sub x 900 µm, Yellow Jacket.

HI4D0020212PJ - FX Hybrid Indoor, OM4, Distribution, 2 Fibers, 02 x 12 AWG, CL3P-OF, 4.5 mm Sub x 900 µm, Erika Violet Jacket



Digital Electricity Fiber Optical Hybrid Copper-Fiber Cable

Digital Electricity™ Hybrid Copper-Fiber Cables Tight Buffer – Indoor Plenum Rated

Twisted pairs provide improved electrical performance, easy identification and quick installation. Hybrid cables reduce stock (only one cable to manage) and labor costs with only one cable to pull. Cables are designed to effectively and safely carry data and large amounts of power across long distances.

Applications:

- DAS
- POLAN/PON
- Power over longer distances
- Entrance space
- Pre-term

Indoor Specifications

Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

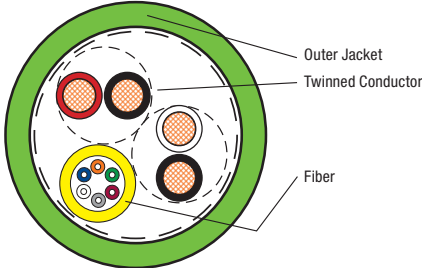
Temperature Range

| | |
|--------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | 0°C to 60°C (32°F to 140°F) |
| Operation | 0°C to 70°C (32°F to 158°F) |

| Description | Construction | Fire Rating | Sub-Unit Type | Fiber Count | #Pairs x AWG | Sub-Unit OD | Cable OD | | Weight | | Tensile Strength | | | |
|-------------|--------------|-------------|---------------|-------------|--------------|-------------|----------|-------|--------|-------------|------------------|-----|-----------|-----|
| | | | | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| Indoor | | Plenum | Breakout | 2 | 2 x 16 | 3.0 | 10 | 0.395 | 109 | 73 | 2700 | 600 | 810 | 180 |
| | | | | | | | 8.9 | 0.352 | 89 | 60 | | | | |
| | | | Distribution | 6 | 2 x 16 | 4.8 | 9.7 | 0.382 | 116 | 78 | | | | |
| | | | | | | | 9.4 | 0.369 | 100 | 67 | | | | |

Consult individual technical data sheets for exact specifications.

Legend



FX DE Hybrid Copper-Fiber Cables

| # Conductors x AWG | Belden Part Number | | | | | |
|----------------------|--------------------|-------------------|---------------|-------------------|---------------|-------------------|
| | OM3 | | OM4 | | OS2 | |
| | Breakout (2F) | Distribution (6F) | Breakout (2F) | Distribution (6F) | Breakout (2F) | Distribution (6F) |
| Indoor Plenum | | | | | | |
| 2 x 16 | DHIP162U3B02C | DHIP162U3D06J | DHIP162U4B02C | DHIP162U4D06J | DHIP162USB02C | DHIP162USD06J |
| 2 x 18 | DHIP182U3B02C | DHIP182U3D06J | DHIP182U4B02C | DHIP182U4D06J | DHIP182USB02C | DHIP182USD06J |

Compliance

- ICEA S-120-742
- RoHS
- ANSI/TIA-568.3

Fiber Color (Outer Jacket/Fiber Sub-unit)

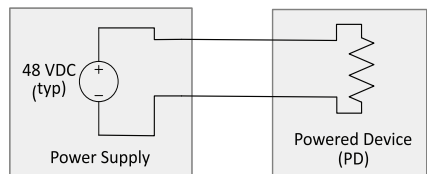
| | |
|----------------|----------------------------|
| OM3 | Apple Green / Aqua |
| OM4 | Apple Green / Erika Violet |
| OS2 (G.657.A1) | Apple Green / Yellow |
| Indoor/Outdoor | Black / Fiber type color |

Faster.
Easier.
Better.

Digital Electricity™ Hybrid Copper-Fiber Cables (continued) Tight Buffer – Indoor Plenum Rated

Remote Power Delivery Systems

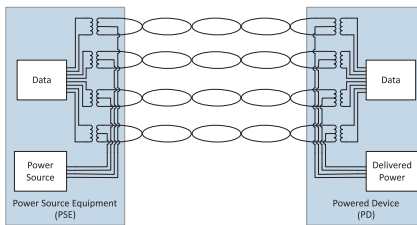
DC Systems



Low-Medium Power (15-200W)
Medium Distance (up to 1000 m)

Belden Solutions:
New Gen + Fiber Cable
Hybrid Cable
Fiber Connectivity

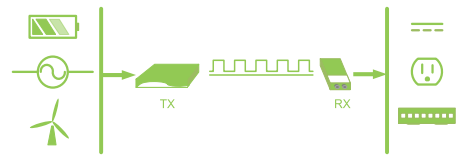
PoE



Low-Medium Power (15-100W max)
Short Distance (100 m max)

Belden Solutions:
Category Cable
REVConnect®

Digital Electricity™



High Power (up to 2000W)
Long Distance (up to 2000 m)

Belden Solutions:
DE Copper Cable
DE Hybrid Cable
Fiber Connectivity

Digital Electricity Configurations

Building a SmartPart Number

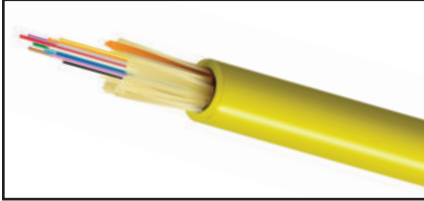
| 1. Choose FX Fiber Cable | 2. Choose Cable Location | 3. Choose Fire Rating | 4. Choose Copper Type | 5. Choose Pair Count | 6. Choose Cable Shielding | 7. Choose Fiber Type | 8. Choose Family | 9. Choose Fiber Count | 10. Choose Fiber Sub-Unit Configuration |
|--------------------------|--------------------------|-----------------------|-------------------------------------|----------------------|---------------------------|------------------------------------|------------------------------|----------------------------|--|
| DH | I | P | 16 | 2 | U | 3 | B | 02 | C |
| FX Fiber Cable | Location | Fire Rating | Copper Type | Pair Count | Shielding | Fiber Type | Family | Fiber Count | Sub-Unit Type/Configuration |
| DH Hybrid DE | I Indoor | P Plenum (OFNP/CL3P) | 16 16 AWG 18 18 AWG 20 20 AWG | 2 2 Pairs | U Unshielded | 3 OM3 4 OM4 S OS2 (G.657.A1) | B Breakout D Distribution | 02 2 Fibers 06 6 Fibers | Breakout C 3.0 mm Sub (1F x 900 µm) Distribution: Unitized J 4.8 mm Sub (Up to 6F x 900 µm) |

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

Examples:

DHIP162U4B02C - Digital Electricity optimized hybrid, Indoor, 16 AWG, 2 Stranded Tinned-Copper Pairs, OM4, Breakout, 2 Fiber Strands, 3.0 mm Subunit, Unshielded, Plenum Rated

DHIP182USD06J - Digital Electricity optimized hybrid, Indoor, 18 AWG, 2 Stranded Tinned-Copper Pairs, OS2, Distribution, 6 Fiber Strands, 4.5 mm Subunit, Unshielded, Plenum Rated OM4, Plenum Armored, Black Jacket



Optical Fiber μ Mini-Distribution Cable

FiberExpress μ Mini Distribution Cables Indoor Riser and Plenum Rated

Reduce diameter and prepare for the future. 250 μ m sub-unitized fiber provides the basis for MPO terminations while reducing size and weight, and maintaining compatibility with traditional LC/SC/ST terminations utilizing simple breakout kits

or labor saving mass-fusion splicing.

Applications:

- In-building backbone
- Data centers
- Broadcast and AV in-building installations

Indoor Specifications

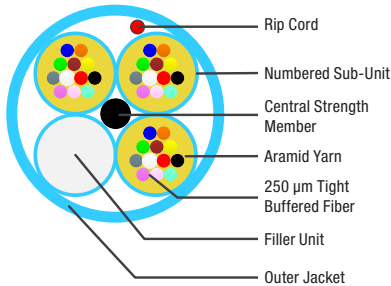
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Installation (Riser/LSZH) | -10°C to 70°C (14°F to 158°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation (Riser/LSZH) | -20°C to 70°C (-4°F to 158°F) |

Legend



Base12

| Name | Construction | Fiber Count | Fiber | Sub-Unit OD | | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|---|--------------|-------------|-------------|-------------|------|----------|-------|-------------|--------------|------------------------|-----------|-----|----|
| | | | | mm | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | | |
| Indoor μMini-Distribution Cable | | | | | | | | | | | | | |
| Non-Unitized | | 12 | 250 μ m | N/A | 3.0 | 0.12 | 9 | 6 | 445 | 100 | 200 | 45 | |
| Unitized 12-Fiber Sub-Units | | 12 | 250 μ m | 2.0 | 3.0 | 4.8 | 0.18 | 11 | 7 | 668 | 150 | 200 | 45 |
| | | 24 | | | 6.5 | 0.26 | 38 | 26 | | | | | |
| | | 36 | | | | | | | | | | | |
| | | 48 | | | | | | | | | | | |
| | | 72 | | | | | | | | | | | |
| | | 96 | | | | | | | | | | | |
| | 144 | 9.9 | 0.39 | 80.5 | 54.1 | | | | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for riser, plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-409-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNR FT6 (PLENUM - PVC or PVDF)
- ICEA S-83-596

Standard Indoor Configurations

| Fiber Count | Belden Part Number | | |
|--|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Non-Unitized - Plenum | | | |
| 12 | FI3M012P2 | FI4M012P2 | FISM012P2 |
| Double-Jacket Unitized - Plenum | | | |
| 12 | FI3M012P0 | FI4M012P0 | FISM012P0 |
| Unitized - Plenum | | | |
| 24 | FI3M024P1 | FI4M024P1 | FISM024P1 |
| 36 | FI3M036P1 | FI4M036P1 | FISM036P1 |
| 48 | FI3M048P1 | FI4M048P1 | FISM048P1 |
| 72 | FI3M072P1 | FI4M072P1 | FISM072P1 |
| 144 | FI3M144P1 | FI4M144P1 | FISM144P1 |

For an exhaustive selection, contact Belden customer service or your local Belden representative for more details.

Faster.
Easier.
Better.

FiberExpress μMini Distribution Cables (continued) Indoor Riser and Plenum Rated

Base8

| Name | Construction | Fiber Count | Fiber | Sub-Unit OD | | | Cable OD | | Weight | | Tensile Strength lsb-f | | | | | | | | |
|--|--------------|-------------|--------|-------------|-----|------|----------|-------------|--------------|-------|------------------------|-------|-----|------|------|------|--|--|--|
| | | | | mm | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | | | | | | | | |
| | | | | | | | | | N | lbs-f | N | lbs-f | | | | | | | |
| Indoor μMini-Distribution Cable | | | | | | | | | | | | | | | | | | | |
| Non-Unitized | | 8 | 250 μm | N/A | 3.0 | 0.12 | 9 | 6 | 445 | 100 | 200 | 50 | | | | | | | |
| Unitized 8-Fiber Sub-Units | | 8 | 250 μm | 3.0 | 4.8 | 0.18 | 11 | 7 | 668 | 150 | 200 | 45 | | | | | | | |
| Unitized 8-Fiber Sub-Units | | 24 | 250 μm | 2.0 | 6.5 | 0.26 | 38 | 26 | 668 | 150 | 200 | 45 | | | | | | | |
| | | 32 | | | | | | | | | | | | | | | | | |
| | | 48 | | | | | | | | | | | 7.5 | 0.30 | 54 | 36 | | | |
| | | 64 | | | | | | | | | | | 8.7 | 0.34 | 72 | 49 | | | |
| | | 96 | | | | | | | | | | | 9.9 | 0.39 | 80.5 | 54.1 | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for riser, plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| Fiber Count | Belden Part Number | | |
|--|--------------------|------------------|------------|
| | OM3 Aqua | OM4 Erika Violet | OS2 Yellow |
| Non-Unitized Plenum | | | |
| 8 | FI3M008P2 | FI4M008P2 | FISM008P2 |
| Double Jacket Unitized - Plenum | | | |
| 8 | FI3M008P8 | FI4M008P8 | FISM008P8 |
| Unitized Plenum | | | |
| 24 | FI3M024P8 | FI4M024P8 | FISM024P8 |
| 32 | FI3M032P8 | FI4M032P8 | FISM032P8 |
| 48 | FI3M048P8 | FI4M048P8 | FISM048P8 |
| 64 | FI3M064P8 | FI4M064P8 | FISM064P8 |
| 96 | FI3M096P8 | FI4M096P8 | FISM096P8 |

For an exhaustive selection, contact Belden customer service or your local Belden representative for more details.

Indoor Specifications

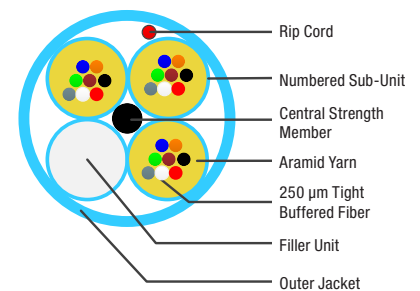
Bend Radius (vs. Cable OD)

| | |
|--------------|---------|
| Installation | 15 x OD |
| Operation | 10 x OD |

Temperature Range

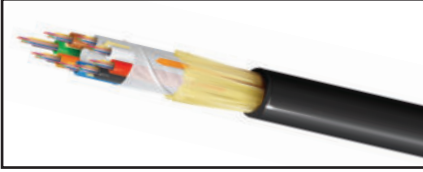
| | |
|---------------------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Installation (Riser/LSZH) | -10°C to 70°C (14°F to 158°F) |
| Operation (Plenum) | 0°C to 70°C (32°F to 158°F) |
| Operation (Riser/LSZH) | -20°C to 70°C (-4°F to 158°F) |

Legend



Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-409-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNP FT6 (PLENUM - PVC or PVDF)
- ICEA S-83-596



Optical Fiber All Dielectric Loose Tube Cable, Outdoor

FiberExpress All Dielectric Loose Tube Cables Single Jacket Loose Tube — Outdoor

Gel-filled or dry-blocked buffer tubes prevent water migration. Full dielectric construction, no grounding required. Available with up to 144 fibers. Length markings in meters for easy determination of cable length.

Applications:

- Medium to high fiber count requirements
- Inter-building duct installations
- Lashed aerial
- Industrial outside plant (OSP Type)

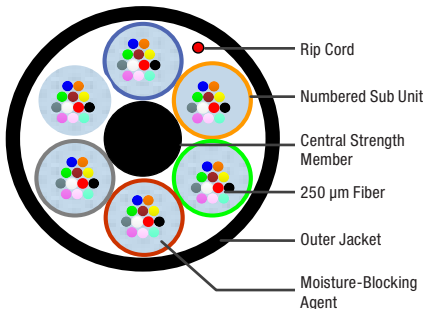
Jacket Specifications

| | | |
|--------------------------------|---------|-------------------|
| Jacket Material | Outdoor | PE |
| Buffer Tube | | PBT |
| Strength Member | | Aramid Yarn |
| Central Strength Member | | E-Glass |
| Color Code (Buffer) | | Per TIA/EIA-598-C |
| Jacket Color | | Black |

Specifications

| | |
|---|-----------------------------------|
| Temperature Range (Outdoor Series) | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |

Legend



Compliance

- TIA/EIA-568-C.3
- ICEA S-87-640
- GR-20-CORE

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 6 | 10.5 | 0.41 | 87 | 59 | 2700 | 600 | 890 | 200 |
| Unitized 12-Fiber Sub-Units | | 12 | 10.5 | 0.41 | 87 | 59 | 2700 | 600 | 890 | 200 |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| | | 48 | | | | | | | | |
| Unitized 72-Fiber Sub-Units | | 72 | 11.5 | 0.45 | 106 | 71 | 2700 | 600 | 890 | 200 |
| | | 96 | 13.2 | 0.52 | 136 | 91 | | | | |
| | | | | | | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| Fiber Count | Belden Part Number | | | |
|--|--------------------|-----------|-----------|-----------|
| | OM1 | OM3 | OM4 | OS2 |
| Outside Plant — Gel Filled Buffer Tubes | | | | |
| 6 | FS1L006NF | FS3L006NF | FS4L006NF | FSSL006NF |
| 12 | FS1L012NG | FS3L012NG | FS4L012NG | FSSL012NG |
| 24 | FS1L024NG | FS3L024NG | FS4L024NG | FSSL024NG |
| 36 | FS1L036NG | FS3L036NG | FS4L036NG | FSSL036NG |
| 48 | FS1L048NG | FS3L048NG | FS4L048NG | FSSL048NG |
| 72 | FS1L072NG | FS3L072NG | FS4L072NG | FSSL072NG |
| 96 | FS1L096NG | FS3L096NG | FS4L096NG | FSSL096NG |
| 144 | FS1L144NG | FS3L144NG | FS4L144NG | FSSL144NG |
| Outside Plant — Dry Buffer Tubes | | | | |
| 6 | FS1L006NC | FS3L006NC | FS4L006NC | FSSL006NC |
| 12 | FS1L012ND | FS3L012ND | FS4L012ND | FSSL012ND |
| 24 | FS1L024ND | FS3L024ND | FS4L024ND | FSSL024ND |
| 36 | FS1L036ND | FS3L036ND | FS4L036ND | FSSL036ND |
| 48 | FS1L048ND | FS3L048ND | FS4L048ND | FSSL048ND |
| 72 | FS1L072ND | FS3L072ND | FS4L072ND | FSSL072ND |
| 96 | FS1L096ND | FS3L096ND | FS4L096ND | FSSL096ND |
| 144 | FS1L144ND | FS3L144ND | FS4L144ND | FSSL144ND |

OM2 available upon request.

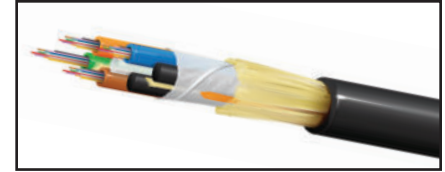
Faster.
Easier.
Better.

FiberExpress All Dielectric Loose Tube Cables (continued) Single Jacket Loose Tube - Indoor/Outdoor

Gel-filled or dry-blocked buffer tubes prevent water migration. Full dielectric construction, no grounding required. Available as riser-rated cable, eliminating the need for service entrance splicing to in-building cable. Length markings in meters for easy determination of cable length.

Applications:

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



Optical Fiber All Dielectric Loose Tube Cable, Outdoor

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-----|-----------|-----|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| Unitized 6-Fiber Sub-Units | | 6 | 12.9 | 0.51 | 164 | 110 | 2700 | 600 | 890 | 200 |
| | | 12 | 12.9 | 0.51 | 164 | 110 | 2700 | 600 | 890 | 200 |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| | | 48 | | | | | | | | |
| 72 | 13.7 | 0.54 | 190 | 128 | | | | | | |
| Unitized 12-Fiber Sub-Units | | 96 | 15.5 | 0.61 | 237 | 159 | | | | |
| | | 144 | 19.3 | 0.76 | 361 | 243 | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for riser, plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Jacket Specifications

| | |
|-------------------------|-------------------|
| Jacket Material | PVC |
| Riser | PVC |
| Buffer Tube | PBT |
| Strength Member | Aramid Yarn |
| Central Strength Member | E-Glass |
| Color Code (Buffer) | Per TIA/EIA 598-C |
| Jacket Color | Black |

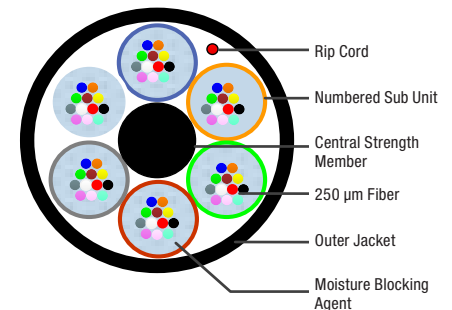
Ratings

| | |
|------------------|----------|
| Riser | |
| UL Type | OFNR |
| cUL Type | OFNR FT4 |
| Flame Resistance | UL 1666 |

Specifications

| | |
|----------------------------------|-----------------------------------|
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |
| Temperature Range (Riser Series) | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |

Legend

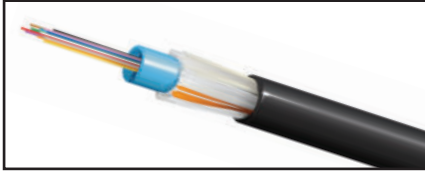


Compliance

- TIA/EIA-568-C.3
- ICEA S-104-696
- GR-20-CORE

| No. of Fibers | No. of Fibers Per Bundle | Smart Part to Legacy Part Number Cross | | | |
|---|--------------------------|--|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| Riser (NEC/CEC OFNR/OFN FT.4) Indoor/Outdoor – Gel Filled Buffer Tubes | | | | | |
| 6 | 6 | FD1L006RF | FD3L006RF | FD4L006RF | FDSL006RF |
| 12 | 12 | FD1L012RG | FD3L012RG | FD4L012RG | FDSL012RG |
| 24 | 12 | FD1L024RG | FD3L024RG | FD4L024RG | FDSL024RG |
| 36 | 12 | FD1L036RG | FD3L036RG | FD4L036RG | FDSL036RG |
| 48 | 12 | FD1L048RG | FD3L048RG | FD4L048RG | FDSL048RG |
| 72 | 12 | FD1L072RG | FD3L072RG | FD4L072RG | FDSL072RG |
| 96 | 12 | FD1L096RG | FD3L096RG | FD4L096RG | FDSL096RG |
| 144 | 12 | FD1L144RG | FD3L144RG | FD4L144RG | FDSL144RG |
| Riser (NEC/CEC OFNR/OFN FT.4) Indoor/Outdoor – Dry Buffer Tubes | | | | | |
| 6 | 6 | FD1L006RC | FD3L006RC | FD4L006RC | FDSL006RC |
| 12 | 12 | FD1L012RD | FD3L012RD | FD4L012RD | FDSL012RD |
| 24 | 12 | FD1L024RD | FD3L024RD | FD4L024RD | FDSL024RD |
| 36 | 12 | FD1L036RD | FD3L036RD | FD4L036RD | FDSL036RD |
| 48 | 12 | FD1L048RD | FD3L048RD | FD4L048RD | FDSL048RD |
| 72 | 12 | FD1L072RD | FD3L072RD | FD4L072RD | FDSL072RD |
| 96 | 12 | FD1L096RD | FD3L096RD | FD4L096RD | FDSL096RD |
| 144 | 12 | FD1L144RD | FD3L144RD | FD4L144RD | FDSL144RD |

OM2 available upon request.



Optical Fiber Central Loose Tube Cable, Outdoor

FiberExpress Central Tube Cables Loose Tube – Outdoor and Outdoor Armored

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.

Applications:

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

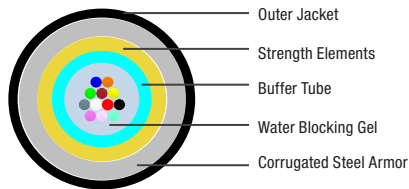
Jacket Specifications

| | |
|---------------------|-----------------------|
| Jacket Material | PE |
| Buffer Tube | PBT |
| Core Wrap | Water Swellable Tape |
| Strength Member | Fiberglass |
| Armor | Corrugated Steel Tape |
| Color Code (Buffer) | Per TIA/EIA 598-C |
| Jacket Color | Black |

Specifications

| | |
|--------------------------|-----------------------------------|
| Temperature Range | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operation | -40°C to 70°C (-40°F to 158°F) |
| Min. Bend Radius | |
| Installation | 15 x OD |
| Long Term | 10 x OD |

Legend



Compliance

- TIA/EIA-568.3-D
- ICEA S-87-640
- RoHS II 2011/65/EU
- REACH EC1907-2008

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|----------------|--------------|-------------|----------|-------|--------|-------------|------------------------|-----|-----------|-----|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| Outdoor | | | | | | | | | | |
| Single Subunit | | 2 | 8 | 0.315 | 50 | 34 | 2700 | 600 | 890 | 200 |
| | | 4 | | | | | | | | |
| | | 6 | | | | | | | | |
| | | 8 | | | | | | | | |
| | | 12 | | | | | | | | |
| 24 | | | | | | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for riser, plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| No. of Fibers | Belden Part Number | | | |
|----------------|--------------------|-----------|-----------|-----------|
| | OM1 | OM3 | OM4 | OS2 |
| Outdoor | | | | |
| 2 | FS1C002N0 | FS3C002N0 | FS4C002N0 | FSSC002N0 |
| 4 | FS1C004N0 | FS3C004N0 | FS4C004N0 | FSSC004N0 |
| 6 | FS1C006N0 | FS3C006N0 | FS4C006N0 | FSSC006N0 |
| 8 | FS1C008N0 | FS3C008N0 | FS4C008N0 | FSSC008N0 |
| 10 | FS1C010N0 | FS3C010N0 | FS4C010N0 | FSSC010N0 |
| 12 | FS1C012N0 | FS3C012N0 | FS4C012N0 | FSSC012N0 |

OM2 available upon request.

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------|--------------|-------------|----------|-------|--------|-------------|------------------------|-----|-----------|-----|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| Outdoor Armored | | | | | | | | | | |
| Single Subunit | | 2 | 10.4 | 0.410 | 140 | 95 | 2700 | 600 | 890 | 200 |
| | | 4 | | | | | | | | |
| | | 6 | | | | | | | | |
| | | 8 | | | | | | | | |
| | | 12 | | | | | | | | |
| 24 | | | | | | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for riser, plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| No. of Fibers | Belden Part Number | | | |
|------------------------|--------------------|-----------|-----------|-----------|
| | OM1 | OM3 | OM4 | OS2 |
| Outdoor Armored | | | | |
| 2 | FS1C00260 | FS3C00260 | FS4C00260 | FSSC00260 |
| 4 | FS1C00460 | FS3C00460 | FS4C00460 | FSSC00460 |
| 6 | FS1C00660 | FS3C00660 | FS4C00660 | FSSC00660 |
| 8 | FS1C00860 | FS3C00860 | FS4C00860 | FSSC00860 |
| 10 | FS1C01060 | FS3C01060 | FS4C01060 | FSSC01060 |
| 12 | FS1C01260 | FS3C01260 | FS4C01260 | FSSC01260 |

OM2 available upon request.

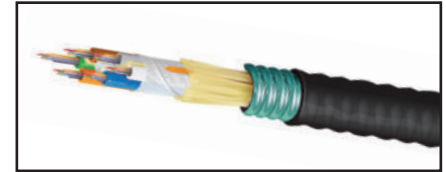
Faster.
Easier.
Better.

FiberExpress Armored Loose Tube Cables Single Jacket, Single Armor Loose Tube – Outdoor

Gel-filled or dry-blocked buffer tubes prevent 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 144 fibers. Length markings in meters for easy determination of cable length.

Applications:

- Direct burial
- Low to high fiber count requirements
- Inter-building duct installations
- Industrial outside plant (OSP Type)



Optical Fiber Loose Tube Cable, Outdoor

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 6 | 13.2 | 0.52 | 140 | 94 | 2700 | 600 | 800 | 180 |
| Unitized 12-Fiber Sub-Units | | 12 | 13.2 | 0.52 | 140 | 94 | 2700 | 600 | 800 | 180 |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| | | 48 | | | | | | | | |
| | | 72 | 14 | 0.55 | 161 | 108 | | | | |
| | 96 | 15.8 | 0.62 | 193 | 130 | | | | | |
| | 144 | 19.6 | 0.77 | 285 | 192 | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Jacket Specifications

| | | |
|--------------------------------|---------|-----------------------|
| 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-C |
| Jacket Color | | Black |

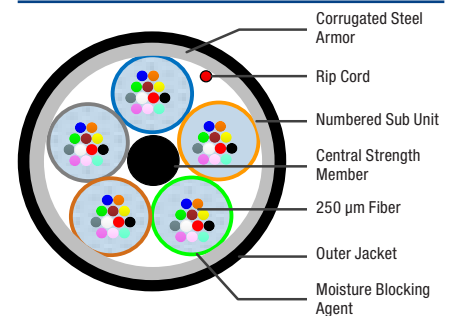
Specifications

| | |
|------------------------------------|-----------------------------------|
| Temperature Range (Outdoor) | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |

Min. Bend Radius

| | |
|--------------|---------|
| Installation | 20 x OD |
| Long Term | 15 x OD |

Legend

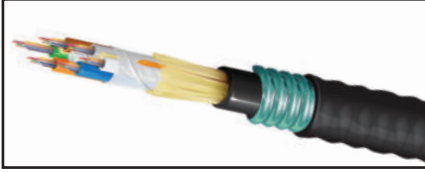


Compliance

- TIA/EIA-568-C.3
- ICEA S-87-640
- GR-20-CORE

| No. of Fibers | No. of Fibers Per Bundle | Belden Part Number | | | |
|--|--------------------------|--------------------|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| Outside Plant – Gel Filled Buffer Tubes | | | | | |
| 6 | 6 | FS1L0066F | FS3L0066F | FS4L0066F | FSSL0066F |
| 12 | 12 | FS1L0126G | FS3L0126G | FS4L0126G | FSSL0126G |
| 24 | 12 | FS1L0246G | FS3L0246G | FS4L0246G | FSSL0246G |
| 48 | 12 | FS1L0486G | FS3L0486G | FS4L0486G | FSSL0486G |
| 72 | 12 | FS1L0726G | FS3L0726G | FS4L0726G | FSSL0726G |
| 96 | 12 | FS1L0966G | FS3L0966G | FS4L0966G | FSSL0966G |
| 144 | 12 | FS1L1446G | FS3L1446G | FS4L1446G | FSSL1446G |
| Outside Plant – Dry Buffer Tubes | | | | | |
| 6 | 6 | FS1L0066C | FS3L0066C | FS4L0066C | FSSL0066C |
| 12 | 12 | FS1L0126D | FS3L0126D | FS4L0126D | FSSL0126D |
| 24 | 12 | FS1L0246D | FS3L0246D | FS4L0246D | FSSL0246D |
| 48 | 12 | FS1L0486D | FS3L0486D | FS4L0486D | FSSL0486D |
| 72 | 12 | FS1L0726D | FS3L0726D | FS4L0726D | FSSL0726D |
| 96 | 12 | FS1L0966D | FS3L0966D | FS4L0966D | FSSL0966D |
| 144 | 12 | FS1L1446D | FS3L1446D | FS4L1446D | FSSL1446D |

OM2 available upon request.



Optical Fiber Loose Tube Cable, Outdoor

FiberExpress Armored Loose Tube Cables (continued) Double Jacket, Single Armor Loose Tube — Outdoor

Gel-filled buffer tubes prevent 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.

Applications:

- Direct burial
- Low to high fiber count requirements
- Inter-building duct installations
- Industrial outside plant (OSP Type)

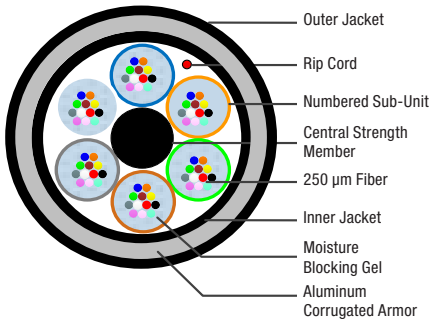
Jacket Specifications

| | | |
|--------------------------------|-----------------------|----|
| Jacket Material | | PE |
| Outdoor | | |
| Buffer Tube | Thermoplastic | |
| Strength Member | Aramid Yarn | |
| Central Strength Member | E-Glass | |
| Armor | Corrugated Steel Tape | |
| Color Code (Buffer) | Per TIA/EIA 598-C | |
| Jacket Color | Black | |

Specifications

| | |
|------------------------------------|-----------------------------------|
| Temperature Range (Outdoor) | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |

Legend



Compliance

- TIA/EIA-568-C.3
- ICEA S-87-640
- GR-20-CORE

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 6 | 15.5 | 0.62 | 200 | 134 | 2670 | 600 | 890 | 200 |
| Unitized 12-Fiber Sub-Units | | 12 | 15.5 | 0.62 | 200 | 134 | 2670 | 600 | 890 | 200 |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| | | 48 | | | | | | | | |
| | | 72 | 16.4 | 0.65 | 206 | 138 | | | | |
| | | 96 | 18.2 | 0.72 | 254 | 170 | | | | |
| | | 144 | 22.9 | 0.9 | 385 | 259 | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| No. of Fibers | No. of Fibers Per Bundle | Belden Part Number | | | |
|------------------------|--------------------------|--------------------|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| Outdoor Armored | | | | | |
| 6 | 6 | FS1H0066F | FS3H0066F | FS4H0066F | FSSH0066F |
| 12 | 12 | FS1H0126G | FS3H0126G | FS4H0126G | FSSH0126G |
| 24 | 12 | FS1H0246G | FS3H0246G | FS4H0246G | FSSH0246G |
| 36 | 12 | FS1H0366G | FS3H0366G | FS4H0366G | FSSH0366G |
| 48 | 12 | FS1H0486G | FS3H0486G | FS4H0486G | FSSH0486G |
| 72 | 12 | FS1H0726G | FS3H0726G | FS4H0726G | FSSH0726G |
| 96 | 12 | FS1H0966G | FS3H0966G | FS4H0966G | FSSH0966G |
| 144 | 12 | FS1H1446G | FS3H1446G | FS4H1446G | FSSH1446G |

OM2 available upon request.

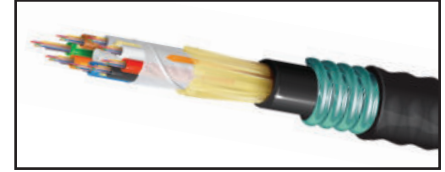
Faster.
Easier.
Better.

FiberExpress Armored Loose Tube Cables (continued) Double Jacket, Single Armor Loose Tube – Indoor/Outdoor

Gel-filled buffer tubes prevent 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.

Applications:

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



Optical Fiber Loose Tube Cable, Indoor/Outdoor

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 6 | 13.7 | 0.54 | 205 | 138 | 2700 | 600 | 890 | 200 |
| | | 12 | 13.7 | 0.54 | 205 | 138 | | | | |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| 48 | | | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 72 | 16.8 | 0.66 | 256 | 172 | 2700 | 600 | 890 | 200 |
| | | 96 | 17.8 | 0.7 | 307 | 206 | | | | |
| | | 144 | 22.4 | 0.88 | 449 | 302 | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

Jacket Specifications

| | |
|--------------------------------|-----------------------|
| Jacket Material | PVC |
| Buffer Tube | Thermoplastic |
| Strength Member | Aramid Yarn |
| Central Strength Member | E-Glass |
| Armor | Corrugated Steel Tape |
| Color Code (Buffer) | Per TIA/EIA 598-C |
| Jacket Color | Black |

Ratings

| | |
|--------------|------|
| Riser | OFGR |
|--------------|------|

Specifications

| | |
|----------------------------------|-----------------------------------|
| Temperature Range (Riser) | -40°C to 70°C |
| Storage | (-40°F to 158°F) |
| Installation | -10°C to 60°C (14°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |

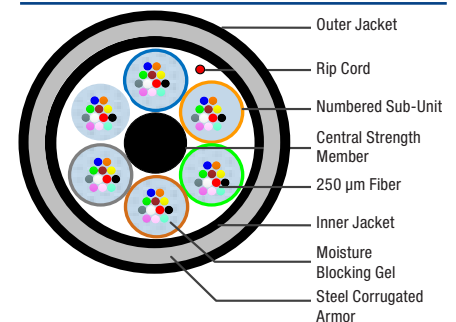
Min. Bend Radius

| | |
|--------------|---------|
| Installation | 20 x OD |
| Long Term | 15 x OD |

| No. of Fibers | No. of Fibers Per Bundle | Belden Part Number | | | |
|---|--------------------------|--------------------|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| Riser (NEC/CEC OFCR/OFC FT.4) Indoor/Outdoor | | | | | |
| 6 | 6 | FD1H0065F | FD3H0065F | FD4H0065F | FDSH0065F |
| 12 | 12 | FD1H0125G | FD3H0125G | FD4H0125G | FDSH0125G |
| 24 | 12 | FD1H0245G | FD3H0245G | FD4H0245G | FDSH0245G |
| 36 | 12 | FD1H0365G | FD3H0365G | FD4H0365G | FDSH0365G |
| 48 | 12 | FD1H0485G | FD3H0485G | FD4H0485G | FDSH0485G |
| 72 | 12 | FD1H0725G | FD3H0725G | FD4H0725G | FDSH0725G |
| 96 | 12 | FD1H0965G | FD3H0965G | FD4H0965G | FDSH0965G |
| 144 | 12 | FD1H1445G | FD3H1445G | FD4H1445G | FDSH1445G |

OM2 available upon request.

Legend



Compliance

- TIA/EIA-568-C.3
- ICEA S-104-696
- GR-20-CORE



Optical Fiber Heavy Duty Loose Tube Cable

FiberExpress Heavy Duty Loose Tube Cables Double Jacket, Heavy Duty Loose Tube – Outdoor

Gel-filled buffer tubes prevent water migration. Available with up to 216 fibers.

Applications:

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

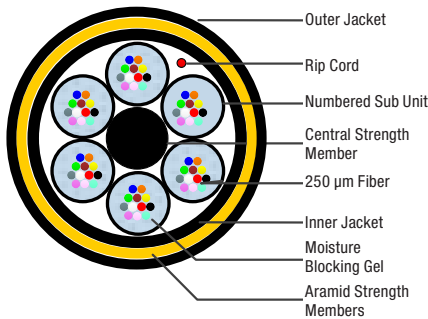
Jacket Specifications

| | |
|--------------------------------|----------------------|
| Jacket Material | |
| Outdoor | 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-C |
| Jacket Color | Black |

Specifications

| | |
|--------------------------|-----------------------------------|
| Temperature Range | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -30°C to 60°C (-22°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |
| Min. Bend Radius | |
| Installation | 20 x OD |
| Long Term | 15 x OD |

Legend



Compliance

- TIA/EIA-568-C.3
- ICEA S-87-640
- GR-20-CORE

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength Isb-f | | | |
|-----------------------------|--------------|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 12-Fiber Sub-Units | | 2 | 12.5 | 0.49 | 125 | 84 | 2700 | 600 | 890 | 200 |
| | | 4 | | | | | | | | |
| | | 6 | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 12 | 12.5 | 0.49 | 125 | 84 | 2700 | 600 | 890 | 200 |
| | | 24 | | | | | | | | |
| | | 36 | | | | | | | | |
| | | 48 | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 72 | 13.4 | 0.53 | 144 | 97 | 2700 | 600 | 890 | 200 |
| | | 96 | | | | | | | | |
| | | 144 | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 144 | 19 | 0.75 | 274 | 184 | 2700 | 600 | 890 | 200 |
| | | 216 | | | | | | | | |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| No. of Fibers | No. of Fibers Per Bundle | Belden Part Number | | | |
|----------------|--------------------------|--------------------|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| Outdoor | | | | | |
| 2 | 2 | FS1H002NF | FS3H002NF | FS4H002NF | FSSH002NF |
| 4 | 4 | FS1H004NF | FS3H004NF | FS4H004NF | FSSH004NF |
| 6 | 6 | FS1H006NF | FS3H006NF | FS4H006NF | FSSH006NF |
| 8 | 8 | FS1H008NG | FS3H008NG | FS4H008NG | FSSH008NG |
| 12 | 12 | FS1H012NG | FS3H012NG | FS4H012NG | FSSH012NG |
| 18 | 12 | FS1H018NG | FS3H018NG | FS4H018NG | FSSH018NG |
| 24 | 12 | FS1H024NG | FS3H024NG | FS4H024NG | FSSH024NG |
| 36 | 12 | FS1H036NG | FS3H036NG | FS4H036NG | FSSH036NG |
| 48 | 12 | FS1H048NG | FS3H048NG | FS4H048NG | FSSH048NG |
| 72 | 12 | FS1H072NG | FS3H072NG | FS4H072NG | FSSH072NG |
| 96 | 12 | FS1H096NG | FS3H096NG | FS4H096NG | FSSH096NG |
| 144 | 12 | FS1H144NG | FS3H144NG | FS4H144NG | FSSH144NG |
| 216 | 12 | FS1H216NG | FS3H216NG | FS4H216NG | FSSH216NG |

OM2 available upon request.

Faster.
Easier.
Better.


FiberExpress Drop Cables Tight Buffer – Indoor/Outdoor Riser Rated

Fast installation, easy termination. Cables provide easy routing and 900 µm tight-buffered fiber support fast and robust field terminations. Ideal for fiber to the subscriber applications.

Indoor/Outdoor Specifications:

*Environmental Protection

- UV Resistant Jacket
- Moisture Resistant Jacket
- Fungus Resistant Jacket
- Water blocking aramid

| Name | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength lsb-f | | | |
|--------------------|---|-------------|----------|------|--------|-------------|------------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| 1 Fiber Drop Cable |  | 1 | 4.8 | 0.19 | 21 | 14 | 445 | 100 | 200 | 40 |

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

| Fiber Count | Belden Part Number | |
|---|--------------------|--------------|
| | Black | White |
| Drop cable with ITU G.657.B3 Glass – Riser | | |
| 1 | FDCP001R9 | FDCP001R9W |
| Drop cable with ITU G.657.B3 Glass – Riser – 450m Reel-In-A-Box Put-Up | | |
| 1 | FDCP001R9NBY | FDCP001R9WBY |

Specifications

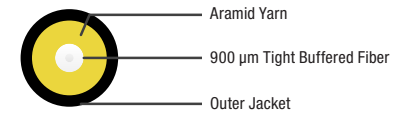
Temperature Range

| | |
|--------------|-----------------------------------|
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -10°C to 60°C (14°F to 140°F) |
| Operating | -40°C to 70°C (-40°F to 158°F) |

Min. Bend Radius

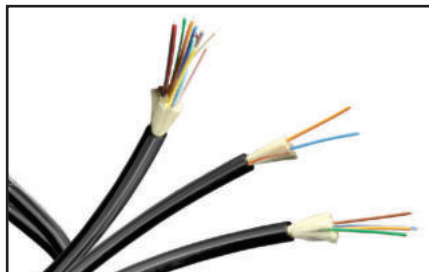
| | |
|--------------|-------------|
| Installation | 0.2" (5 mm) |
| Long Term | 0.2" (5 mm) |

Legend



Compliance

- TIA/EIA-568-C.3
- ICEA-S-104-696
- NEC/CEC OFNR FT4 (RISER - PVC)
- TPR.9424



Optical Fiber Tactical Cable

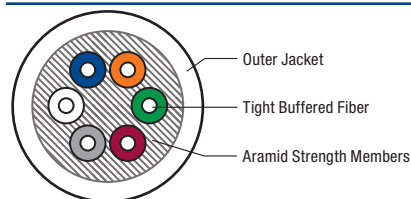
Jacket Specifications

| | |
|------------------------|--|
| Jacket Material | UV Resistant PU |
| Buffer Tube | |
| Type | Thermoplastic Tight Buffer |
| Diameter | 900 µm TB |
| Strength Member | Aramid Yarn |
| Assembly | Color-coded fibers with strength members |
| Jacket Color | Black |

Specifications

| | |
|--------------------------|-----------------------------------|
| Temperature Range | |
| Storage | -55°C to 85°C (-67°F to 185°F) |
| Operating | -46°C to 85°C (-50°F to 185°F) |
| Installation | -46°C to 85°C (-50°F to 185°F) |

Legend



Fiber and Sub-unit

| | |
|-------|---------|
| 1 | Blue |
| 2 | Orange |
| 3 | Green |
| 4 | Brown |
| 5 | Gray |
| 6 | White |
| 7 | Red |
| 8 | Black |
| 9 | Yellow |
| 10 | Violet |
| 11 | Pink |
| 12 | Aqua |
| 13-24 | Striped |

Compliance

- TIA/EIA-568.3-D
- RoHS II 2011/65/EU
- REACH EC1907-2006

FiberExpress Tactical Cables Tight Buffer - Outdoor

Rated for outside plant applications, providing unprecedented flexibility coupled with high crush resistance. The cable's military-inspired MaxiBend™ Tactical Fiber provides the utmost durability for repeated deployment and retrieval in severe environments.

Applications:

- Re-deployable audio/video communications
- Outdoor news, sporting, and other events
- Harsh environments



| Description | Construction | Fiber Count | Cable OD | | Weight | | Tensile Strength | | | |
|-------------|--------------|-------------|----------|-------|--------|-------------|------------------|-------|-----------|-------|
| | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | N | lbs-f | N | lbs-f |
| Tactical | | 2 | 6.10 | 0.240 | 33 | 22 | 578 | 130 | 1780 | 400 |
| | | 4 | 6.10 | 0.240 | 33 | 22 | 578 | 130 | 1780 | 400 |
| | | 6 | 6.10 | 0.240 | 34 | 23 | 578 | 130 | 1780 | 400 |
| | | 12 | 6.99 | 0.275 | 42 | 28 | 712 | 160 | 2090 | 470 |
| | | 24 | 8.38 | 0.330 | 58 | 39 | 979 | 220 | 2980 | 670 |

Consult individual technical data sheets for exact specifications.

Standard Configurations

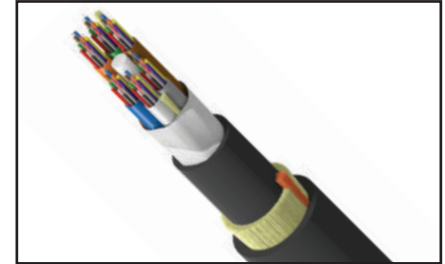
| Fiber Count | Belden Part Number | |
|-------------|--------------------|---------|
| | OM1 | OS2 |
| 2 | B96571 | B96566 |
| 4 | B96551 | B96639 |
| 6 | B96572 | B96567 |
| 8 | special | special |
| 12 | B96575 | B96570 |
| 24 | special | B96576 |

Faster.
Easier.
Better.

FiberExpress Loose Tube Arctic Cables Double Jacket — Indoor/Outdoor

Ideal for outdoor and indoor/outdoor applications, including conduit, direct burial, lashed aerial and trunking. Design utilizes 250µm fibers in central and multi loose tube constructions ranging in fiber counts from 12 to 288. Standard offerings include outside

plant or OFNG-LS “general low smoke” for UL ratings. Double-jacketed Arctic Cable is ideal for harsh, low-temperature environments with an operating temperature from -55°C to 70°C.



Optical Fiber Arctic Cable

Indoor/Outdoor UL Type OFNG-LS / CSA OFNG-LS FT4



| Description | Construction | Fiber Count | Fiber/Tube | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|------------|----------|-------|--------|-------------|------------------|-------|-----------|-------|
| | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 12-Fiber Sub-Units | | 12 | 12 | 14.61 | 0.575 | 209 | 140 | 4400 | 990 | 1300 | 290 |
| | | 24 | 12 | 14.61 | 0.575 | 207 | 139 | | | | |
| | | 36 | 12 | 14.61 | 0.575 | 205 | 138 | | | | |
| | | 48 | 12 | 14.61 | 0.575 | 202 | 136 | | | | |
| | | 72 | 12 | 14.61 | 0.575 | 197 | 133 | | | | |
| | | 96 | 12 | 16.21 | 0.638 | 233 | 156 | | | | |
| | | 144 | 12 | 19.71 | 0.776 | 297 | 199 | | | | |
| | | 288 | 12 | 22.61 | 0.890 | 393 | 264 | | | | |

Consult individual technical data sheets for exact specifications.

Standard Configurations

| Fiber Count | No. of Fibers Per Bundle | Belden Part Number | | | |
|-------------|--------------------------|--------------------|-----------|-----------|-----------|
| | | OM1 | OM3 | OM4 | OS2 |
| 12 | 12 | FD1A012MD | FD3A012MD | FD4A012MD | FDSA012MD |
| 24 | 12 | FD1A024MD | FD3A024MD | FD4A024MD | FDSA024MD |
| 36 | 12 | FD1A036MD | FD3A036MD | FD4A036MD | FDSA036MD |
| 48 | 12 | FD1A048MD | FD3A048MD | FD4A048MD | FDSA048MD |
| 72 | 12 | FD1A072MD | FD3A072MD | FD4A072MD | FDSA072MD |
| 96 | 12 | FD1A096MD | FD3A096MD | FD4A096MD | FDSA096MD |
| 144 | 12 | FD1A144MD | FD3A144MD | FD4A144MD | FDSA144MD |
| 288 | 12 | FD1A288MD | FD3A288MD | FD4A288MD | FDSA288MD |

OM2 available upon request.

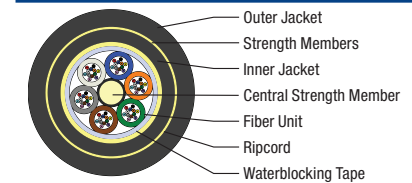
Jacket Specifications

| | |
|------------------------------|--|
| Fiber Type | See table |
| Buffer Type | Loose tube – gel-free |
| Assembly | Color coded fibers in color-coded loose tubes, around a central member |
| Strength Members | Aramid/E-Glass (central member) |
| Inner Jacket Material | Thermoplastic |
| Outer Jacket Material | Thermoplastic |
| Jacket Color | Black |

Specifications

| | |
|--------------------------|---------------------------------|
| Temperature Range | |
| Storage | -60 to 75°C (-76°F to 167°F) |
| Operating | -55 to 70°C (-67°F to 158°F) |
| Installation | -30 to 50°C (-22°F to 122°F) |

Legend

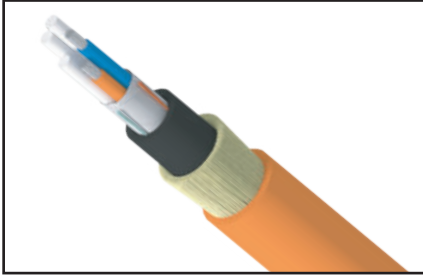


Fiber & Sub-Unit

| | |
|----|--------|
| 1 | Blue |
| 2 | Orange |
| 3 | Green |
| 4 | Brown |
| 5 | Gray |
| 6 | White |
| 7 | Red |
| 8 | Black |
| 9 | Yellow |
| 10 | Violet |
| 11 | Pink |
| 12 | Aqua |

Compliance

- TIA/EIA-568.3-D
- NEC/CEC OFNG-LS/OFNG-LS FT4
- ICEA S-104-696
- RoHS II 2011/65/EU
- REACH EC1907-200



Industrial Optical Fiber Heavy-Duty Armored Cable

TrayOptic® Industrial Heavy-Duty Armored Cables Loose Tube – Indoor/Outdoor Riser Rated

Handle Gigabit Ethernet lights sources and expanded bandwidth requirements. Passes IEEE 1202/583-2003 flame test. Waterblocking agent offers moisture protection. CPE outer jacket option provides extra chemical and abrasion resistance.

Applications:

- Industrial and other harsh environments
- Factory automation
- Direct burial

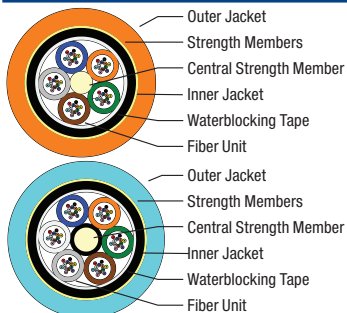
Jacket Specifications

| | |
|------------------------|--------------|
| Jacket Material | PVC or CPE |
| Strength Member | Aramid Yarn |
| Jacket Color | |
| OM1 | Orange |
| OM3 | Aqua |
| OM4 | Erika Violet |
| OS2 | Yellow |

Specifications

| | |
|--|--|
| Temperature Range | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -10°C to 60°C (14°F to 140°F) |
| Operating † | -40°C to 70°C (-40°F to 158°F) |
| Crush Resistance (EIA-455-41) | 440 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) |

Legend



Riser (NEC/CEC OFNR/OFNR FT4) PVC or CPE Jacket Indoor/Outdoor



| Description | Construction | Fiber Count | Fiber/Tube | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|------------|----------|-------|------------------------|------------------------|------------------|-------|-----------|-------|
| | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 2 | 2 | 13.44 | 0.529 | 165 (PVC) or 162 (CPE) | 111 (PVC) or 109 (CPE) | 2670 | 600 | 810 | 180 |
| | | 4 | 4 | | | | | | | | |
| | | 6 | 6 | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 8 | 8 | | | | | | | | |
| | | 12 | 12 | | | | | | | | |
| | | 24 | 12 | | | | | | | | |
| | | 36 | 12 | | | | | | | | |
| Unitized 72-Fiber Sub-Units | | 48 | 12 | 14.12 | 0.556 | 176 (PVC & CPE) | 118 (PVC & CPE) | | | | |
| | | 60 | 12 | | | | | | | | |
| | | 72 | 12 | | | | | | | | |

Consult individual technical data sheets for exact specifications.

Standard Configurations

| Fiber Count | No. of Fibers Per Bundle | Belden Part Number | | | |
|-------------|--------------------------|--------------------|-----------|-----------|------------|
| | | OM1 | OM3 | OM4 | OS2 |
| 2 | 2 | FD1T002RF | FD3T002RF | FD4T002RF | FDS T002RF |
| 4 | 4 | FD1T004RF | FD3T004RF | FD4T004RF | FDS T004RF |
| 6 | 6 | FD1T006RF | FD3T006RF | FD4T006RF | FDS T006RF |
| 8 | 8 | FD1T008RG | FD3T008RG | FD4T008RG | FDS T008RG |
| 12 | 12 | FD1T012RG | FD3T012RG | FD4T012RG | FDS T012RG |
| 24 | 12 | FD1T024RG | FD3T024RG | FD4T024RG | FDS T024RG |
| 36 | 12 | FD1T036RG | FD3T036RG | FD4T036RG | FDS T036RG |
| 48 | 12 | FD1T048RG | FD3T048RG | FD4T048RG | FDS T048RG |
| 60 | 12 | FD1T060RG | FD3T060RG | FD4T060RG | FDS T060RG |
| 72 | 12 | FD1T072RG | FD3T072RG | FD4T072RG | FDS T072RG |

Part numbers shown are PVC. For CPE version, replace part number T with Y. OM2 available upon request.

Compliance

- TIA/EIA-568.3-D
- NEC/CEC OFNR/OFNR FT4
- ICEA S-104-696
- Flame Resistance IEEE 1202 / 383-2003
- RoHS II 2011/65/EU
- REACH EC1907-2006

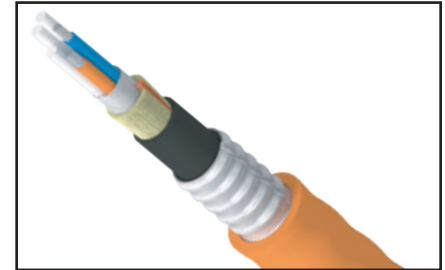
Faster.
Easier.
Better.

TrayOptic® Industrial Heavy-Duty Armored Cables (continued) Loose Tube — Indoor/Outdoor Riser Rated

Handle Gigabit Ethernet lights sources and expanded bandwidth requirements. Passes IEEE 1202/583-2003 flame test. Waterblocking agent offers moisture protection. CPE outer jacket option provides extra chemical and abrasion resistance.

Applications:

- Industrial and other harsh environments
- Factory automation
- Direct burial



Industrial Optical Fiber Heavy-Duty Armored Cable

Riser (NEC/CEC OFNR/OFGR FT4) PVC or CPE Jacket Indoor/Outdoor - Armored

| Description | Construction | Fiber Count | Fiber/ Tube | Cable OD | | Weight | | Tensile Strength | | | |
|-----------------------------|--------------|-------------|-------------|----------|-------|------------------------|------------------------|------------------|-------|-----------|-------|
| | | | | mm | in. | Kg/km | lb/1000 ft. | Installation | | Operation | |
| | | | | | | | | N | lbs-f | N | lbs-f |
| Unitized 6-Fiber Sub-Units | | 2 | 2 | 18.54 | 0.730 | 356 (PVC) or 350 (CPE) | 239 (PVC) or 235 (CPE) | 2670 | 600 | 810 | 180 |
| | | 4 | 4 | | | | | | | | |
| | | 6 | 6 | | | | | | | | |
| Unitized 12-Fiber Sub-Units | | 8 | 8 | | | | | | | | |
| | | 12 | 12 | | | | | | | | |
| | | 24 | 12 | | | | | | | | |
| | | 36 | 12 | | | | | | | | |
| | | 48 | 12 | | | | | | | | |
| Unitized 72-Fiber Sub-Units | | 60 | 12 | 19.56 | 0.770 | 378 (PVC) or 374 (CPE) | 254 (PVC) or 251 (CPE) | | | | |
| | | 72 | 12 | | | | | | | | |

Consult individual technical data sheets for exact specifications.

Standard Configurations

| Fiber Count | No. of Fibers Per Bundle | Belden Part Number | | | |
|-------------|--------------------------|--------------------|-----------|-----------|----------|
| | | OM1 | OM3 | OM4 | OS2 |
| 2 | 2 | FD1T0025F | FD3T0025F | FD4T0025F | FDS0025F |
| 4 | 4 | FD1T0045F | FD3T0045F | FD4T0045F | FDS0045F |
| 6 | 6 | FD1T0065F | FD3T0065F | FD4T0065F | FDS0065F |
| 8 | 8 | FD1T0085G | FD3T0085G | FD4T0085G | FDS0085G |
| 12 | 12 | FD1T0125G | FD3T0125G | FD4T0125G | FDS0125G |
| 24 | 12 | FD1T0245G | FD3T0245G | FD4T0245G | FDS0245G |
| 36 | 12 | FD1T0365G | FD3T0365G | FD4T0365G | FDS0365G |
| 48 | 12 | FD1T0485G | FD3T0485G | FD4T0485G | FDS0485G |
| 60 | 12 | FD1T0605G | FD3T0605G | FD4T0605G | FDS0605G |
| 72 | 12 | FD1T0725G | FD3T0725G | FD4T0725G | FDS0725G |

Part numbers shown are PVC. For CPE version, replace part number T with Y. OM2 available upon request.

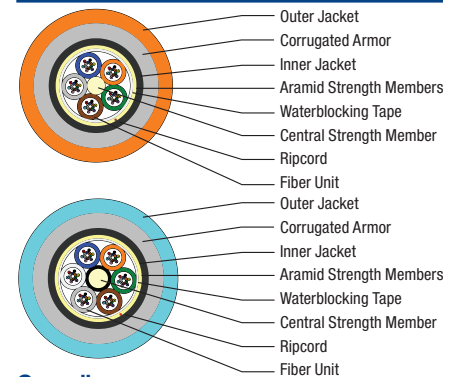
Jacket Specifications

| | |
|-----------------|--------------|
| Jacket Material | PVC or CPE |
| Strength Member | Aramid Yarn |
| Jacket Color | |
| OM1 | Orange |
| OM3 | Aqua |
| OM4 | Erika Violet |
| OS2 | Yellow |

Specifications

| | |
|--|--|
| Temperature Range | |
| Storage | -40°C to 70°C (-40°F to 158°F) |
| Installation | -10°C to 60°C (14°F to 140°F) |
| Operating † | -40°C to 70°C (-40°F to 158°F) |
| Crush Resistance (EIA-455-41) | 440 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) |

Legend



Compliance

- TIA/EIA-568.3-D
- NEC/CEC OFCR/OFGR FT4
- ICEA S-104-696
- Flame Resistance IEEE 1202 / 383-2003
- RoHS II 2011/65/EU
- REACH EC1907-2006

Part Number Index

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|----------|--------|----------|--------|--------------|--------|--------------|--------|-----------------|------|
| 0643205 | 36 | AX102416 | 37 | AX104684 | 11 | AX105564 | 11 | B96571 | 64 |
| A0643206 | 36 | AX102417 | 37 | AX104685 | 17 | AX105565 | 11 | B96572 | 64 |
| A0643207 | 36 | AX102419 | 37 | AX104695 | 7 | AX105641-AL | 17, 37 | B96575 | 64 |
| A0643208 | 36 | AX102420 | 37 | AX104696 | 7 | AX105641-BK | 17, 37 | B96576 | 64 |
| A0649869 | 23 | AX102421 | 37 | AX104934 | 23 | AX105641-EW | 17, 37 | B96639 | 64 |
| AC301420 | 23 | AX102683 | 17, 37 | AX104937 | 17, 37 | AX105642-AL | 37 | DHIP162U3B02C | 52 |
| AC302349 | 23 | AX102684 | 17, 37 | AX104938 | 17, 37 | AX105642-BK | 37 | DHIP162U3D06J | 52 |
| AX100041 | 23 | AX102685 | 17, 37 | AX104939 | 17, 37 | AX105642-EW | 37 | DHIP162U4B02C | 52 |
| AX100045 | 23 | AX102686 | 37 | AX105002-B25 | 37 | AX105643-AL | 17, 37 | DHIP162U4D06J | 52 |
| AX100066 | 23 | AX102687 | 37 | AX105162 | 11 | AX105643-BK | 17, 37 | DHIP162USB02C | 52 |
| AX100068 | 23 | AX102688 | 37 | AX105164 | 11 | AX105643-EW | 17, 37 | DHIP162USD06J | 52 |
| AX100094 | 23 | AX103151 | 7 | AX105165 | 11 | AX105646-B25 | 37 | DHIP182U3B02C | 52 |
| AX100098 | 23 | AX103912 | 18 | AX105166 | 11 | AX105672 | 11 | DHIP182U3D06J | 52 |
| AX100116 | 23 | AX103913 | 18 | AX105167 | 11 | AX105673 | 11 | DHIP182U4B02C | 52 |
| AX100220 | 37 | AX103928 | 18 | AX105200-B25 | 6 | AX105674 | 11 | DHIP182U4D06J | 52 |
| AX100221 | 37 | AX103930 | 18 | AX105202-B25 | 6 | AX105675 | 11 | DHIP182USB02C | 52 |
| AX100222 | 37 | AX103932 | 18 | AX105203-B25 | 6 | AX105676 | 11 | DHIP182USD06J | 52 |
| AX100223 | 37 | AX103934 | 18 | AX105203-S1 | 6 | AX105678 | 11 | ECX-01U | 19 |
| AX100495 | 23 | AX104019 | 17 | AX105205-B25 | 6 | AX105691-B25 | 37 | ECX-1U2U-EXSTR | 22 |
| AX100528 | 23 | AX104023 | 17 | AX105207-B25 | 6 | AX105692-B25 | 37 | ECX-1U2U-EXSTRA | 22 |
| AX100532 | 23 | AX104024 | 17 | AX105208-B25 | 6 | AX105693-B25 | 37 | ECX-1U2U-INSTR | 22 |
| AX100534 | 23 | AX104210 | 17 | AX105208-S1 | 6 | AX105694-B25 | 37 | ECX-02U | 19 |
| AX100540 | 23 | AX104214 | 17 | AX105209-B25 | 6 | AX105697-AL | 37 | ECX-04U | 19 |
| AX100542 | 23 | AX104215 | 17 | AX105209-S1 | 6 | AX105697-BK | 37 | ECX-4U-EXSTR | 22 |
| AX100951 | 7 | AX104271 | 7 | AX105210-B25 | 6 | AX105697-WH | 37 | ECX-4U-EXSTRA | 22 |
| AX101100 | 7 | AX104276 | 7 | AX105212-B25 | 6 | AX105700 | 17 | ECX-4U-INSTR | 22 |
| AX101101 | 7 | AX104278 | 7 | AX105213-B25 | 6 | AX105812 | 11 | ECX-BRKTMTNT-0 | 22 |
| AX101320 | 17 | AX104279 | 7 | AX105213-S1 | 6 | AX105813 | 11 | ECX-BRKTMTNT-3 | 22 |
| AX101321 | 17 | AX104280 | 7 | AX105214-B25 | 6 | AX106817 | 18 | ECX-INTERSTR | 22 |
| AX101326 | 17 | AX104281 | 7 | AX105215-B25 | 6 | AX106818 | 18 | ECX-LBF-PK10 | 22 |
| AX101407 | 23 | AX104282 | 7 | AX105252-B25 | 6 | AX107293 | 36 | ECX-LBL-1U | 22 |
| AX101409 | 23 | AX104283 | 7 | AX105253-B25 | 6 | AX107294 | 36 | ECX-LBL-2U | 22 |
| AX101729 | 23 | AX104286 | 7 | AX105254-B25 | 6 | AX107295 | 36 | ECX-LBL-4U | 22 |
| AX101731 | 23 | AX104289 | 7 | AX105374-AL | 37 | AX107296 | 36 | ECX-LOCKKIT | 22 |
| AX101741 | 23 | AX104290 | 7 | AX105374-BK | 37 | AX203567 | 7 | ECX-MGTCLIPS | 22 |
| AX101743 | 23 | AX104291 | 7 | AX105374-EW | 37 | AX203568 | 7 | ECX-SPLICEKIT | 22 |
| AX102242 | 17, 37 | AX104293 | 7 | AX105379 | 11 | AX203569 | 7 | FC1H06SDFS | 12 |
| AX102243 | 17, 37 | AX104572 | 17 | AX105505-AL | 37 | AX203895 | 7 | FC1H12LDFS | 12 |
| AX102244 | 17, 37 | AX104593 | 7 | AX105505-BK | 37 | AX203930 | 7 | FC1H12MPFS | 12 |
| AX102282 | 17 | AX104615 | 37 | AX105505-WH | 37 | B96551 | 64 | FC1U06SDMF | 12 |
| AX102283 | 17 | AX104681 | 11 | AX105537 | 23 | B96566 | 64 | FC1U06SDMF1T | 12 |
| AX102288 | 17 | AX104682 | 11 | AX105561 | 23 | B96567 | 64 | FC1U12LDMF | 12 |
| AX102415 | 37 | AX104683 | 11 | AX105563 | 11 | B96570 | 64 | FC1U12LDMF1T | 12 |

Faster.
Easier.
Better.

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|--------------|------|--------------|------|--------------|------|-----------|------|-----------|------|
| FC1X03SDFS | 21 | FC4R12LDMF | 13 | FCSU12LDMF | 12 | FD1L072RG | 57 | FD3D012P9 | 45 |
| FC1X06LDFS | 21 | FC4R12LDMF1E | 13 | FCSU12LDMF1B | 12 | FD1L096RD | 57 | FD3D012R9 | 45 |
| FC1X06SDFS | 21 | FC4U04LD4F | 14 | FCSU12SBMF | 12 | FD1L096RG | 57 | FD3D024A9 | 47 |
| FC1X12LDFS | 21 | FC4U06SDMF | 12 | FCSU12SBMF1G | 12 | FD1L144RD | 57 | FD3D024F9 | 47 |
| FC3H06SDFS | 12 | FC4U06SDMF1E | 12 | FCSU12SCMF | 12 | FD1L144RG | 57 | FD3D024L9 | 45 |
| FC3H12LDFS | 12 | FC4U08LD4F | 14 | FCSU12SCMF1B | 12 | FD1T002RF | 66 | FD3D024P9 | 45 |
| FC3H12MPFS | 12 | FC4U12LD4F | 14 | FCSU034MMF | 14 | FD1T004RF | 66 | FD3D024PJ | 45 |
| FC3H16LD4F | 14 | FC4U12LDMF | 12 | FCSU064MMF | 14 | FD1T006RF | 66 | FD3D024R9 | 45 |
| FC3H18LDMF | 12 | FC4U12LDMF1E | 12 | FCSX03SAFS | 21 | FD1T008RG | 66 | FD3D024RJ | 45 |
| FC3H18LDMF1A | 12 | FC4U034MMF | 14 | FCSX03SDFS | 21 | FD1T012RG | 66 | FD3D048AK | 47 |
| FC3L06SDMF | 13 | FC4U064MMF | 14 | FCSX06LAFS | 21 | FD1T024RG | 66 | FD3D048LK | 45 |
| FC3L06SDMF1A | 13 | FC4X03SDFS | 21 | FCSX06LDFS | 21 | FD1T0025F | 67 | FD3D048PK | 45 |
| FC3L12LD4F | 14 | FC4X06LDFS | 21 | FCSX06SAFS | 21 | FD1T036RG | 66 | FD3D072AK | 47 |
| FC3L12LDMF | 13 | FC4X06SDFS | 21 | FCSX06SDFS | 21 | FD1T0045F | 67 | FD3D072LK | 45 |
| FC3L12LDMF1A | 13 | FC4X12LDFS | 21 | FCSX12LAFS | 21 | FD1T048RG | 66 | FD3D072PK | 45 |
| FC3R06SDMF | 13 | FCSH06SDFS | 12 | FCSX12LDFS | 21 | FD1T060RG | 66 | FD3D096AK | 47 |
| FC3R06SDMF1A | 13 | FCSH12LAFS | 12 | FCZ00BBFS | 12 | FD1T0065F | 67 | FD3D096LK | 45 |
| FC3R12LDMF | 13 | FCSH12LDFS | 12 | FD1A012MD | 65 | FD1T072RG | 66 | FD3D096PK | 45 |
| FC3R12LDMF1A | 13 | FCSH12MPFS | 12 | FD1A024MD | 65 | FD1T0085G | 67 | FD3D144AK | 47 |
| FC3U04LD4F | 14 | FCSH12SBFS | 12 | FD1A036MD | 65 | FD1T0125G | 67 | FD3D144LK | 45 |
| FC3U06SDMF | 12 | FCSH12STFS | 12 | FD1A048MD | 65 | FD1T0245G | 67 | FD3D144PK | 45 |
| FC3U06SDMF1A | 12 | FCSH16LD4F | 14 | FD1A072MD | 65 | FD1T0365G | 67 | FD3H0065F | 61 |
| FC3U08LD4F | 14 | FCSH18LAMF | 12 | FD1A096MD | 65 | FD1T0485G | 67 | FD3H0125G | 61 |
| FC3U12LD4F | 14 | FCSH18LAMF1G | 12 | FD1A144MD | 65 | FD1T0605G | 67 | FD3H0245G | 61 |
| FC3U12LDMF | 12 | FCSH18LDMF | 12 | FD1A288MD | 65 | FD1T0725G | 67 | FD3H0365G | 61 |
| FC3U12LDMF1A | 12 | FCSH18LDMF1B | 12 | FD1H0065F | 61 | FD3A012MD | 65 | FD3H0485G | 61 |
| FC3U034MMF | 14 | FCSL06SDMF | 13 | FD1H0125G | 61 | FD3A024MD | 65 | FD3H0725G | 61 |
| FC3U064MMF | 14 | FCSL06SDMF1B | 13 | FD1H0245G | 61 | FD3A036MD | 65 | FD3H0965G | 61 |
| FC3X03SDFS | 21 | FCSL12LD4F | 14 | FD1H0365G | 61 | FD3A048MD | 65 | FD3H1445G | 61 |
| FC3X06LDFS | 21 | FCSL12LDMF | 13 | FD1H0485G | 61 | FD3A072MD | 65 | FD3L006RC | 57 |
| FC3X06SDFS | 21 | FCSL12LDMF1B | 13 | FD1H0725G | 61 | FD3A096MD | 65 | FD3L006RF | 57 |
| FC3X12LDFS | 21 | FCSR06SDMF | 13 | FD1H0965G | 61 | FD3A144MD | 65 | FD3L012RD | 57 |
| FC4H06SDFS | 12 | FCSR06SDMF1B | 13 | FD1H1445G | 61 | FD3A288MD | 65 | FD3L012RG | 57 |
| FC4H12LDFS | 12 | FCSR12LDMF | 13 | FD1L006RC | 57 | FD3D002L9 | 45 | FD3L024RD | 57 |
| FC4H12MPFS | 12 | FCSR12LDMF1B | 13 | FD1L006RF | 57 | FD3D002P9 | 45 | FD3L024RG | 57 |
| FC4H16LD4F | 14 | FCSU04LD4F | 14 | FD1L012RD | 57 | FD3D002R9 | 45 | FD3L036RD | 57 |
| FC4H18LDMF | 12 | FCSU06SAMF | 12 | FD1L012RG | 57 | FD3D006A9 | 47 | FD3L036RG | 57 |
| FC4H18LDMF1E | 12 | FCSU06SAMF1G | 12 | FD1L024RD | 57 | FD3D006F9 | 47 | FD3L048RD | 57 |
| FC4L06SDMF | 13 | FCSU06SDMF | 12 | FD1L024RG | 57 | FD3D006L9 | 45 | FD3L048RG | 57 |
| FC4L06SDMF1E | 13 | FCSU06SDMF1B | 12 | FD1L036RD | 57 | FD3D006P9 | 45 | FD3L072RD | 57 |
| FC4L12LD4F | 14 | FCSU08LD4F | 14 | FD1L036RG | 57 | FD3D006R9 | 45 | FD3L072RG | 57 |
| FC4L12LDMF | 13 | FCSU12LAMF | 12 | FD1L048RD | 57 | FD3D012A9 | 47 | FD3L096RD | 57 |
| FC4L12LDMF1E | 13 | FCSU12LAMF1G | 12 | FD1L048RG | 57 | FD3D012F9 | 47 | FD3L096RG | 57 |
| FC4R06SDMF | 13 | FCSU12LD4F | 14 | FD1L072RD | 57 | FD3D012L9 | 45 | FD3L144RD | 57 |

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|-----------|------|-----------|------|--------------|------|-----------|------|-----------|------|
| FD3L144RG | 57 | FD4D024P9 | 45 | FD4T024RG | 66 | FDSO024R9 | 45 | FDST036RG | 66 |
| FD3T002RF | 66 | FD4D024PJ | 45 | FD4T0025F | 67 | FDSO024RJ | 45 | FDST0045F | 67 |
| FD3T004RF | 66 | FD4D024R9 | 45 | FD4T036RG | 66 | FDSO048AK | 47 | FDST048RG | 66 |
| FD3T006RF | 66 | FD4D024RJ | 45 | FD4T0045F | 67 | FDSO048LK | 45 | FDST060RG | 66 |
| FD3T008RG | 66 | FD4D048AK | 47 | FD4T048RG | 66 | FDSO048PK | 45 | FDST0065F | 67 |
| FD3T012RG | 66 | FD4D048LK | 45 | FD4T060RG | 66 | FDSO072AK | 47 | FDST072RG | 66 |
| FD3T024RG | 66 | FD4D048PK | 45 | FD4T0065F | 67 | FDSO072LK | 45 | FDST0085G | 67 |
| FD3T0025F | 67 | FD4D072AK | 47 | FD4T072RG | 66 | FDSO072PK | 45 | FDST0125G | 67 |
| FD3T036RG | 66 | FD4D072LK | 45 | FD4T0085G | 67 | FDSO096AK | 47 | FDST0245G | 67 |
| FD3T0045F | 67 | FD4D072PK | 45 | FD4T0125G | 67 | FDSO096LK | 45 | FDST0365G | 67 |
| FD3T048RG | 66 | FD4D096AK | 47 | FD4T0245G | 67 | FDSO096PK | 45 | FDST0485G | 67 |
| FD3T060RG | 66 | FD4D096LK | 45 | FD4T0365G | 67 | FDSO144AK | 47 | FDST0605G | 67 |
| FD3T0065F | 67 | FD4D096PK | 45 | FD4T0485G | 67 | FDSO144LK | 45 | FDST0725G | 67 |
| FD3T072RG | 66 | FD4D144AK | 47 | FD4T0605G | 67 | FDSO144PK | 45 | FF1U06SD | 15 |
| FD3T0085G | 67 | FD4D144LK | 45 | FD4T0725G | 67 | FDSH0065F | 61 | FF1U12LD | 15 |
| FD3T0125G | 67 | FD4D144PK | 45 | FD4T0725G | 67 | FDSH0125G | 61 | FF1X03SD | 20 |
| FD3T0245G | 67 | FD4H0065F | 61 | FD4T0725G | 67 | FDSH0245G | 61 | FF1X06LD | 20 |
| FD3T0365G | 67 | FD4H0125G | 61 | FDCP001R9 | 63 | FDSH0365G | 61 | FF1X06SD | 20 |
| FD3T0485G | 67 | FD4H0245G | 61 | FDCP001R9NBY | 63 | FDSH0485G | 61 | FF1X12LD | 20 |
| FD3T0605G | 67 | FD4H0365G | 61 | FDCP001R9W | 63 | FDSH0725G | 61 | FF1X16LD | 20 |
| FD3T0725G | 67 | FD4H0485G | 61 | FDCP001R9WBY | 63 | FDSH0965G | 61 | FF3H18LD | 15 |
| FD4A012MD | 65 | FD4H0725G | 61 | FDSA012MD | 65 | FDSH1445G | 61 | FF3H18MP | 15 |
| FD4A024MD | 65 | FD4H0965G | 61 | FDSA036MD | 65 | FDSL006RC | 57 | FF3U06SD | 15 |
| FD4A036MD | 65 | FD4H1445G | 61 | FDSA048MD | 65 | FDSL006RF | 57 | FF3U12LD | 15 |
| FD4A048MD | 65 | FD4L006RC | 57 | FDSA072MD | 65 | FDSL012RD | 57 | FF3U12MP | 15 |
| FD4A072MD | 65 | FD4L006RF | 57 | FDSA096MD | 65 | FDSL012RG | 57 | FF3X03SD | 20 |
| FD4A096MD | 65 | FD4L012RD | 57 | FDSA144MD | 65 | FDSL024RD | 57 | FF3X06LD | 20 |
| FD4A144MD | 65 | FD4L012RG | 57 | FDSA288MD | 65 | FDSL024RG | 57 | FF3X06SD | 20 |
| FD4A288MD | 65 | FD4L024RD | 57 | FDSO002L9 | 45 | FDSL036RD | 57 | FF3X12LD | 20 |
| FD4D002L9 | 45 | FD4L024RG | 57 | FDSO002P9 | 45 | FDSL036RG | 57 | FF3X16LD | 20 |
| FD4D002P9 | 45 | FD4L036RD | 57 | FDSO002R9 | 45 | FDSL048RD | 57 | FF4H18LD | 15 |
| FD4D002R9 | 45 | FD4L036RG | 57 | FDSO006A9 | 47 | FDSL048RG | 57 | FF4H18MP | 15 |
| FD4D006A9 | 47 | FD4L048RD | 57 | FDSO006F9 | 47 | FDSL072RD | 57 | FF4U06SD | 15 |
| FD4D006F9 | 47 | FD4L048RG | 57 | FDSO006L9 | 45 | FDSL072RG | 57 | FF4U12LD | 15 |
| FD4D006L9 | 45 | FD4L072RD | 57 | FDSO006P9 | 45 | FDSL096RD | 57 | FF4U12MP | 15 |
| FD4D006P9 | 45 | FD4L072RG | 57 | FDSO006R9 | 45 | FDSL096RG | 57 | FF4X03SD | 20 |
| FD4D006R9 | 45 | FD4L096RD | 57 | FDSO012A9 | 47 | FDSL144RD | 57 | FF4X06LD | 20 |
| FD4D012A9 | 47 | FD4L096RG | 57 | FDSO012F9 | 47 | FDSL144RG | 57 | FF4X06SD | 20 |
| FD4D012F9 | 47 | FD4L144RD | 57 | FDSO012L9 | 45 | FDST002RF | 66 | FF4X12LD | 20 |
| FD4D012L9 | 45 | FD4L144RG | 57 | FDSO012P9 | 45 | FDST004RF | 66 | FF4X16LD | 20 |
| FD4D012P9 | 45 | FD4T002RF | 66 | FDSO012R9 | 45 | FDST006RF | 66 | FFSH18LA | 15 |
| FD4D012R9 | 45 | FD4T004RF | 66 | FDSO024A9 | 47 | FDST008RG | 66 | FFSH18LD | 15 |
| FD4D024A9 | 47 | FD4T006RF | 66 | FDSO024F9 | 47 | FDST012RG | 66 | FFSH18MP | 15 |
| FD4D024F9 | 47 | FD4T008RG | 66 | FDSO024L9 | 45 | FDST024RG | 66 | FFSU06SA | 15 |
| FD4D024L9 | 45 | FD4T012RG | 66 | FDSO024P9 | 45 | FDST0025F | 67 | FFSU06SD | 15 |
| | | | | FDSO024PJ | 45 | | | | |

Faster.
Easier.
Better.

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|-----------|------|-----------|------|-----------|------|-----------|------|--------------|------|
| FFSU12LA | 15 | F3D012F9 | 46 | FI4B012LB | 41 | FI4M072P1 | 54 | FISM012P0 | 54 |
| FFSU12LD | 15 | F3D012P9 | 43 | FI4B012PB | 41 | FI4M096P8 | 55 | FISM012P2 | 54 |
| FFSU12MP | 15 | F3D012R9 | 43 | FI4D002P9 | 43 | FI4M144P1 | 54 | FISM024P1 | 54 |
| FFSU12SB | 15 | FI3D024A9 | 46 | FI4D002R9 | 43 | FISB002LB | 41 | FISM024P8 | 55 |
| FFSU12SC | 15 | FI3D024F9 | 46 | FI4D006A9 | 46 | FISB002PB | 41 | FISM032P8 | 55 |
| FFSU12ST | 15 | FI3D024P9 | 43 | FI4D006F9 | 46 | FISB004LB | 41 | FISM036P1 | 54 |
| FFSX03SA | 20 | FI3D024PJ | 43 | FI4D006P9 | 43 | FISB004PB | 41 | FISM048P1 | 54 |
| FFSX03SD | 20 | FI3D024R9 | 43 | FI4D006R9 | 43 | FISB006LB | 41 | FISM048P8 | 55 |
| FFSX06LA | 20 | FI3D024RJ | 43 | FI4D012A9 | 46 | FISB006PB | 41 | FISM064P8 | 55 |
| FFSX06LD | 20 | FI3D036PK | 43 | FI4D012F9 | 46 | FISB012LB | 41 | FISM072P1 | 54 |
| FFSX06SA | 20 | FI3D048AK | 46 | FI4D012P9 | 43 | FISB012PB | 41 | FISM096P8 | 55 |
| FFSX06SD | 20 | FI3D048PK | 43 | FI4D012R9 | 43 | FISD002P9 | 43 | FISM144P1 | 54 |
| FFSX12LA | 20 | FI3D072AK | 46 | FI4D024A9 | 46 | FISD002R9 | 43 | FP1LDLD002M | 25 |
| FFSX12LD | 20 | FI3D072PK | 43 | FI4D024F9 | 46 | FISD006A9 | 46 | FP1LDLD003M | 25 |
| FFSX16LA | 20 | FI3D096AK | 46 | FI4D024P9 | 43 | FISD006F9 | 46 | FP1LDLD005M | 25 |
| FFSX16LD | 20 | FI3D096PK | 43 | FI4D024PJ | 43 | FISD006P9 | 43 | FP1LSD002M | 25 |
| FFZH00BB | 17 | FI3D144AK | 46 | FI4D024R9 | 43 | FISD006R9 | 43 | FP1LSD003M | 25 |
| FFZH06KC | 17 | FI3D144PK | 43 | FI4D024RJ | 43 | FISD012A9 | 46 | FP1LSD005M | 25 |
| FFZH08KC | 17 | FI3I001RB | 48 | FI4D036PK | 43 | FISD012F9 | 46 | FP1LDST002M | 25 |
| FFZX00BB | 20 | FI3I001RC | 48 | FI4D048AK | 46 | FISD012P9 | 43 | FP1LDST003M | 25 |
| FFZX04KC | 20 | FI3I002P0 | 48 | FI4D048PK | 43 | FISD012R9 | 43 | FP1LDST005M | 25 |
| FFZX06KC | 20 | FI3I002RB | 48 | FI4D072AK | 46 | FISD024A9 | 46 | FP1SDSD002M | 25 |
| FI1B002LB | 41 | FI3I002RC | 48 | FI4D072PK | 43 | FISD024F9 | 46 | FP1SDSD003M | 25 |
| FI1B002PB | 41 | FI3I008P0 | 48 | FI4D096AK | 46 | FISD024P9 | 43 | FP1SDSD005M | 25 |
| FI1B004LB | 41 | FI3I012P0 | 48 | FI4D096PK | 43 | FISD024PJ | 43 | FP1STST002M | 25 |
| FI1B004PB | 41 | FI3M008P2 | 55 | FI4D144AK | 46 | FISD024R9 | 43 | FP1STST003M | 25 |
| FI1B006LB | 41 | FI3M008P8 | 55 | FI4D144PK | 43 | FISD024RJ | 43 | FP1STST005M | 25 |
| FI1B006PB | 41 | FI3M012P0 | 54 | FI4I001RB | 48 | FISD036PK | 43 | FP3LD4F002M | 27 |
| FI1B012LB | 41 | FI3M012P2 | 54 | FI4I001RC | 48 | FISD048AK | 46 | FP3LDLD002M | 25 |
| FI1B012PB | 41 | FI3M024P1 | 54 | FI4I002P0 | 48 | FISD048PK | 43 | FP3LDLD003M | 25 |
| FI3B002LB | 41 | FI3M024P8 | 55 | FI4I002RB | 48 | FISD072AK | 46 | FP3LDLD005M | 25 |
| FI3B002PB | 41 | FI3M032P8 | 55 | FI4I002RC | 48 | FISD072PK | 43 | FP3LDMF002M | 27 |
| FI3B004LB | 41 | FI3M036P1 | 54 | FI4I008P0 | 48 | FISD096AK | 46 | FP3LSDSD002M | 25 |
| FI3B004PB | 41 | FI3M048P1 | 54 | FI4I012P0 | 48 | FISD096PK | 43 | FP3LSDSD003M | 25 |
| FI3B006LB | 41 | FI3M048P8 | 55 | FI4M008P2 | 55 | FISD144AK | 46 | FP3LSDSD005M | 25 |
| FI3B006PB | 41 | FI3M064P8 | 55 | FI4M008P8 | 55 | FISD144PK | 43 | FP3LDST002M | 25 |
| FI3B012LB | 41 | FI3M072P1 | 54 | FI4M012P0 | 54 | FISIO01RB | 48 | FP3LDST003M | 25 |
| FI3B012PB | 41 | FI3M096P8 | 55 | FI4M012P2 | 54 | FISIO01RC | 48 | FP3LDST005M | 25 |
| FI3D002P9 | 43 | FI3M144P1 | 54 | FI4M024P1 | 54 | FISIO02P0 | 48 | FP3LU4F002M | 27 |
| FI3D002R9 | 43 | FI4B002LB | 41 | FI4M024P8 | 55 | FISIO02RB | 48 | FP3LULU002M | 25 |
| FI3D006A9 | 46 | FI4B002PB | 41 | FI4M032P8 | 55 | FISIO02RC | 48 | FP3LULU003M | 25 |
| FI3D006F9 | 46 | FI4B004LB | 41 | FI4M036P1 | 54 | FISIO08P0 | 48 | FP3LULU005M | 25 |
| FI3D006P9 | 43 | FI4B004PB | 41 | FI4M048P1 | 54 | FISIO12P0 | 48 | FP3LUMF002M | 27 |
| FI3D006R9 | 43 | FI4B006LB | 41 | FI4M048P8 | 55 | FISM008P2 | 55 | FP3MFMF002M | 25 |
| FI3D012A9 | 46 | FI4B006PB | 41 | FI4M064P8 | 55 | FISM008P8 | 55 | FP3MFMF003M | 25 |

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|-------------|------|-------------|------|-----------|------|-----------|------|-----------|------|
| FP3MFMF005M | 25 | FPSLALA002M | 25 | FS1C004N0 | 58 | FS1L072ND | 56 | FS3H216NG | 62 |
| FP3NFMF002M | 25 | FPSLALA003M | 25 | FS1C006N0 | 58 | FS1L072NG | 56 | FS3H0246G | 60 |
| FP3NFMF003M | 25 | FPSLALA005M | 25 | FS1C008N0 | 58 | FS1L096ND | 56 | FS3H0366G | 60 |
| FP3NFMF005M | 25 | FPSLASA002M | 25 | FS1C010N0 | 58 | FS1L096NG | 56 | FS3H0486G | 60 |
| FP3SDSD002M | 25 | FPSLASA003M | 25 | FS1C012N0 | 58 | FS1L0126D | 59 | FS3H0726G | 60 |
| FP3SDSD003M | 25 | FPSLASA005M | 25 | FS1C00260 | 58 | FS1L0126G | 59 | FS3H0966G | 60 |
| FP3SDSD005M | 25 | FPSLD4F002M | 27 | FS1C00460 | 58 | FS1L144ND | 56 | FS3H1446G | 60 |
| FP3STST002M | 25 | FPSLDLD002M | 25 | FS1C00660 | 58 | FS1L144NG | 56 | FS3L006NC | 56 |
| FP3STST003M | 25 | FPSLDLD003M | 25 | FS1C00860 | 58 | FS1L0246D | 59 | FS3L006NF | 56 |
| FP3STST005M | 25 | FPSLDLD005M | 25 | FS1C01060 | 58 | FS1L0246G | 59 | FS3L012ND | 56 |
| FP4LD4F002M | 27 | FPSLDMF002M | 27 | FS1C01260 | 58 | FS1L0486D | 59 | FS3L012NG | 56 |
| FP4LDLD002M | 25 | FPSLSD002M | 25 | FS1H002NF | 62 | FS1L0486G | 59 | FS3L024ND | 56 |
| FP4LDLD003M | 25 | FPSLSD003M | 25 | FS1H004NF | 62 | FS1L0726D | 59 | FS3L024NG | 56 |
| FP4LDLD005M | 25 | FPSLSD005M | 25 | FS1H006NF | 62 | FS1L0726G | 59 | FS3L036ND | 56 |
| FP4LDMF002M | 27 | FPSLDST002M | 25 | FS1H008NG | 62 | FS1L0966D | 59 | FS3L036NG | 56 |
| FP4LDS002M | 25 | FPSLDST003M | 25 | FS1H012NG | 62 | FS1L0966G | 59 | FS3L048ND | 56 |
| FP4LDS003M | 25 | FPSLDST005M | 25 | FS1H018NG | 62 | FS1L1446D | 59 | FS3L048NG | 56 |
| FP4LDS005M | 25 | FPSLFLF002M | 25 | FS1H024NG | 62 | FS1L1446G | 59 | FS3L0066C | 59 |
| FP4LU4F002M | 27 | FPSLFLF003M | 25 | FS1H036NG | 62 | FS3C002N0 | 58 | FS3L0066F | 59 |
| FP4LULU002M | 25 | FPSLFLF005M | 25 | FS1H048NG | 62 | FS3C004N0 | 58 | FS3L072ND | 56 |
| FP4LULU003M | 25 | FPSLILIO02M | 25 | FS1H0066F | 60 | FS3C006N0 | 58 | FS3L072NG | 56 |
| FP4LULU005M | 25 | FPSLILIO03M | 25 | FS1H072NG | 62 | FS3C008N0 | 58 | FS3L096ND | 56 |
| FP4LUMF002M | 27 | FPSLILIO05M | 25 | FS1H096NG | 62 | FS3C010N0 | 58 | FS3L096NG | 56 |
| FP4MFMF002M | 25 | FPSLU4F002M | 27 | FS1H0126G | 60 | FS3C012N0 | 58 | FS3L0126D | 59 |
| FP4MFMF003M | 25 | FPSLULU002M | 25 | FS1H144NG | 62 | FS3C00260 | 58 | FS3L0126G | 59 |
| FP4MFMF005M | 25 | FPSLULU003M | 25 | FS1H216NG | 62 | FS3C00460 | 58 | FS3L144ND | 56 |
| FP4NFMF002M | 25 | FPSLULU005M | 25 | FS1H0246G | 60 | FS3C00660 | 58 | FS3L144NG | 56 |
| FP4NFMF003M | 25 | FPSLUMF002M | 27 | FS1H0366G | 60 | FS3C00860 | 58 | FS3L0246D | 59 |
| FP4NFMF005M | 25 | FPSMFMF002M | 25 | FS1H0486G | 60 | FS3C01060 | 58 | FS3L0246G | 59 |
| FP4SDSD002M | 25 | FPSMFMF003M | 25 | FS1H0726G | 60 | FS3C01260 | 58 | FS3L0486D | 59 |
| FP4SDSD003M | 25 | FPSMFMF005M | 25 | FS1H0966G | 60 | FS3H002NF | 62 | FS3L0486G | 59 |
| FP4SDSD005M | 25 | FPSNFMF002M | 25 | FS1H1446G | 60 | FS3H004NF | 62 | FS3L0726D | 59 |
| FP4STST002M | 25 | FPSNFMF003M | 25 | FS1L006NC | 56 | FS3H006NF | 62 | FS3L0726G | 59 |
| FP4STST003M | 25 | FPSNFMF005M | 25 | FS1L006NF | 56 | FS3H008NG | 62 | FS3L0966D | 59 |
| FP4STST005M | 25 | FPSSASA002M | 25 | FS1L012ND | 56 | FS3H012NG | 62 | FS3L0966G | 59 |
| FP34F4F002M | 25 | FPSSASA003M | 25 | FS1L012NG | 56 | FS3H018NG | 62 | FS3L1446D | 59 |
| FP34F4F003M | 25 | FPSSASA005M | 25 | FS1L024ND | 56 | FS3H024NG | 62 | FS3L1446G | 59 |
| FP34F4F005M | 25 | FPSSSD002M | 25 | FS1L024NG | 56 | FS3H036NG | 62 | FS4C002N0 | 58 |
| FP44F4F002M | 25 | FPSSSD003M | 25 | FS1L036ND | 56 | FS3H048NG | 62 | FS4C004N0 | 58 |
| FP44F4F003M | 25 | FPSSSD005M | 25 | FS1L036NG | 56 | FS3H0066F | 60 | FS4C006N0 | 58 |
| FP44F4F005M | 25 | FPSSTST002M | 25 | FS1L048ND | 56 | FS3H072NG | 62 | FS4C008N0 | 58 |
| FPS4F4F002M | 25 | FPSSTST003M | 25 | FS1L048NG | 56 | FS3H096NG | 62 | FS4C010N0 | 58 |
| FPS4F4F003M | 25 | FPSSTST005M | 25 | FS1L0066C | 59 | FS3H0126G | 60 | FS4C012N0 | 58 |
| FPS4F4F005M | 25 | FS1C002N0 | 58 | FS1L0066F | 59 | FS3H144NG | 62 | FS4C00260 | 58 |

Faster.
Easier.
Better.

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|-----------|------|-----------|------|--------------|------|--------------|------|---------------|------|
| FS4C00460 | 58 | FS4L144ND | 56 | FSSH1446G | 60 | FT3LC2MMPS01 | 9 | FTSLC900PR12 | 9 |
| FS4C00660 | 58 | FS4L144NG | 56 | FSSL006NC | 56 | FT3LC250PR12 | 9 | FTSLC900PS01 | 9 |
| FS4C00860 | 58 | FS4L0246D | 59 | FSSL006NF | 56 | FT3LC900FS01 | 4 | FTSLD2MMPS01 | 9 |
| FS4C01060 | 58 | FS4L0246G | 59 | FSSL012ND | 56 | FT3LC900PR12 | 9 | FTSMM3MMPS01 | 9 |
| FS4C01260 | 58 | FS4L0486D | 59 | FSSL012NG | 56 | FT3LC900PS01 | 9 | FTSMM250PS01 | 9 |
| FS4H002NF | 62 | FS4L0486G | 59 | FSSL024ND | 56 | FT3LD2MMPS01 | 9 | FTSSA3MMPS01 | 9 |
| FS4H004NF | 62 | FS4L0726D | 59 | FSSL024NG | 56 | FT3MM3MMPS01 | 9 | FTSSB2MMFS01 | 4 |
| FS4H006NF | 62 | FS4L0726G | 59 | FSSL036ND | 56 | FT3MM250PS01 | 9 | FTSSB3MMPS01 | 9 |
| FS4H008NG | 62 | FS4L0966D | 59 | FSSL036NG | 56 | FT3SC2MMFS01 | 4 | FTSSB250PR12 | 9 |
| FS4H012NG | 62 | FS4L0966G | 59 | FSSL048ND | 56 | FT3SC3MMPS01 | 9 | FTSSB900FS01 | 4 |
| FS4H018NG | 62 | FS4L1446D | 59 | FSSL048NG | 56 | FT3SC250PR12 | 9 | FTSSB900PR12 | 9 |
| FS4H024NG | 62 | FS4L1446G | 59 | FSSL0066C | 59 | FT3SC900FS01 | 4 | FTSSB900PS01 | 9 |
| FS4H036NG | 62 | FSSC002N0 | 58 | FSSL0066F | 59 | FT3SC900PR12 | 9 | FTSSC2MMFS01 | 4 |
| FS4H048NG | 62 | FSSC004N0 | 58 | FSSL072ND | 56 | FT3SC900PS01 | 9 | FTSSC3MMPS01 | 9 |
| FS4H0066F | 60 | FSSC006N0 | 58 | FSSL072NG | 56 | FT3SD3MMPS01 | 9 | FTSSC250PR12 | 9 |
| FS4H072NG | 62 | FSSC008N0 | 58 | FSSL096ND | 56 | FT3ST3MMPS01 | 9 | FTSSC900FS01 | 4 |
| FS4H096NG | 62 | FSSC010N0 | 58 | FSSL096NG | 56 | FT3ST900PR12 | 9 | FTSSC900PR12 | 9 |
| FS4H0126G | 60 | FSSC012N0 | 58 | FSSL0126D | 59 | FT3ST900PS01 | 9 | FTSSC900PS01 | 9 |
| FS4H144NG | 62 | FSSC00260 | 58 | FSSL0126G | 59 | FT4LC2MMFS01 | 4 | FTSSD3MMPS01 | 9 |
| FS4H216NG | 62 | FSSC00460 | 58 | FSSL144ND | 56 | FT4LC2MMPS01 | 9 | FTSST3MMPS01 | 9 |
| FS4H0246G | 60 | FSSC00660 | 58 | FSSL144NG | 56 | FT4LC250PR12 | 9 | FTSST900PR12 | 9 |
| FS4H0366G | 60 | FSSC00860 | 58 | FSSL0246D | 59 | FT4LC900FS01 | 4 | FTSST900PS01 | 9 |
| FS4H0486G | 60 | FSSC01060 | 58 | FSSL0246G | 59 | FT4LC900PR12 | 9 | FW3MBF06LD | 36 |
| FS4H0726G | 60 | FSSC01260 | 58 | FSSL0486D | 59 | FT4LC900PS01 | 9 | FW3MBP06LD | 36 |
| FS4H0966G | 60 | FSSH002NF | 62 | FSSL0486G | 59 | FT4LD2MMPS01 | 9 | FW3MBS06LD | 36 |
| FS4H1446G | 60 | FSSH004NF | 62 | FSSL0726D | 59 | FT4MM3MMPS01 | 9 | FW4MBF06LD | 36 |
| FS4L006NC | 56 | FSSH006NF | 62 | FSSL0726G | 59 | FT4MM250PS01 | 9 | FW4MBP06LD | 36 |
| FS4L006NF | 56 | FSSH008NG | 62 | FSSL0966D | 59 | FT4SC2MMFS01 | 4 | FW4MBS06LD | 36 |
| FS4L012ND | 56 | FSSH012NG | 62 | FSSL0966G | 59 | FT4SC3MMPS01 | 9 | FWSMBF06LA | 36 |
| FS4L012NG | 56 | FSSH018NG | 62 | FSSL1446D | 59 | FT4SC900FS01 | 4 | FWSMBF06LD | 36 |
| FS4L024ND | 56 | FSSH024NG | 62 | FSSL1446G | 59 | FT4SC900PR12 | 9 | FWSMBP06LA | 36 |
| FS4L024NG | 56 | FSSH036NG | 62 | FT1LC2MMFS01 | 4 | FT4SC900PS01 | 9 | FWSMBP06LD | 36 |
| FS4L036ND | 56 | FSSH048NG | 62 | FT1LC900FS01 | 4 | FT4SD3MMPS01 | 9 | FWSMBS06LA | 36 |
| FS4L036NG | 56 | FSSH0066F | 60 | FT1SC2MMFS01 | 4 | FTSLA2MMPS01 | 9 | FWSMBS06LD | 36 |
| FS4L048ND | 56 | FSSH072NG | 62 | FT1SC3MMPS01 | 9 | FTSLB2MMFS01 | 4 | FWSWBF01SB | 36 |
| FS4L048NG | 56 | FSSH096NG | 62 | FT1SC250PR12 | 9 | FTSLB2MMPS01 | 9 | FWSWBF01SC | 36 |
| FS4L0066C | 59 | FSSH0126G | 60 | FT1SC900FS01 | 4 | FTSLB250PR12 | 9 | FWSWBF02SB | 36 |
| FS4L0066F | 59 | FSSH144NG | 62 | FT1SC900PR12 | 9 | FTSLB900FS01 | 4 | FWSWBF02SC | 36 |
| FS4L072ND | 56 | FSSH216NG | 62 | FT1SC900PS01 | 9 | FTSLB900PR12 | 9 | FWSWBF04SB | 36 |
| FS4L072NG | 56 | FSSH0246G | 60 | FT1SD3MMPS01 | 9 | FTSLB900PS01 | 9 | FWSWBF04SC | 36 |
| FS4L096ND | 56 | FSSH0366G | 60 | FT1ST3MMPS01 | 9 | FTSLC2MMFS01 | 4 | FXBUB0250B25N | 6 |
| FS4L096NG | 56 | FSSH0486G | 60 | FT1ST900PR12 | 9 | FTSLC2MMPS01 | 9 | FXBUCLLDB25N | 6 |
| FS4L0126D | 59 | FSSH0726G | 60 | FT1ST900PS01 | 9 | FTSLC250PR12 | 9 | FXBUCLSDB25N | 6 |
| FS4L0126G | 59 | FSSH0966G | 60 | FT3LC2MMFS01 | 4 | FTSLC900FS01 | 4 | FXFACLLDB25A | 24 |

| Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page | Part No. | Page |
|--------------|------|---------------|------|---------------|------|---------------|------|----------------|------|
| FXFACLLDB25B | 24 | FXFSTOSSD | 5 | HD4B0020218PC | 51 | HI4D0060218PJ | 51 | TC3H02LDLDD | 16 |
| FXFACLLDB25E | 24 | FXFSTOSSE | 5 | HD4D0060214PJ | 51 | HISB0020214PC | 51 | TC3H06LDMFLD | 16 |
| FXFACLLDB25G | 24 | FXFSTOSSS | 5 | HD4D0060216PJ | 51 | HISB0020216PC | 51 | TC3H06LDMFMM | 16 |
| FXFACLLDB25T | 24 | FXFSTOSTB | 5 | HD4D0060218PJ | 51 | HISB0020218PC | 51 | TC3H044F4F4M | 16 |
| FXFACLLMB25N | 24 | FXFSTOSTK | 5 | HDSB0020214PC | 51 | HISD0060214PJ | 51 | TC4H02LDLDD | 16 |
| FXFSSHFM1 | 5 | FXFUBRDHM | 11 | HDSB0020216PC | 51 | HISD0060216PJ | 51 | TC4H02LDLDD7A | 16 |
| FXFSSHFM2 | 5 | FXFUBRDHS | 11 | HDSB0020218PC | 51 | HISD0060218PJ | 51 | TC4H06LDMFLD | 16 |
| FXFSSHFM3 | 5 | FXFUBRSHM | 11 | HDS0060214PJ | 51 | SCSX1102SLF | 21 | TC4H06LDMFLD7A | 16 |
| FXFSSHFM4 | 5 | FXFUBRSHS | 11 | HDS0060216PJ | 51 | SCSX1104SLF | 21 | TC4H06LDMFMM | 16 |
| FXFSTOPCL | 5 | FXFUHS9T2CB25 | 9 | HDS0060218PJ | 51 | SCSX1108SLF | 21 | TC4H06LDMFMM7A | 16 |
| FXFSTOPTK | 5 | FXFUHS250DB25 | 9 | HI3B0020214PC | 51 | SCSX1116SLF | 21 | TC4H044F4F4M | 16 |
| FXFSTOSAC | 5 | FXFUHS900AB25 | 9 | HI3B0020216PC | 51 | SCSX1132SLF | 21 | TC4H044F4F4M7A | 16 |
| FXFSTOSCB | 5 | FXFUHSRIBEB12 | 9 | HI3B0020218PC | 51 | SCSX1204SLF | 21 | XPE-S0003 | 17 |
| FXFSTOSCC | 5 | HD3B0020214PC | 51 | HI3D0060214PJ | 51 | SCSX1208SLF | 21 | 9810-0100 | 17 |
| FXFSTOSCD | 5 | HD3B0020216PC | 51 | HI3D0060216PJ | 51 | SCSX1216SLF | 21 | 9811-0200 | 17 |
| FXFSTOSCL | 5 | HD3B0020218PC | 51 | HI3D0060218PJ | 51 | SCSX1232SLF | 21 | 9813-0400 | 17 |
| FXFSTOSCT | 5 | HD3D0060214PJ | 51 | HI4B0020214PC | 51 | SCSX2116SLF | 21 | | |
| FXFSTOSFC | 5 | HD3D0060216PJ | 51 | HI4B0020216PC | 51 | SCSX2208SLF | 21 | | |
| FXFSTOSKY | 5 | HD3D0060218PJ | 51 | HI4B0020218PC | 51 | SCSX2216LLF | 21 | | |
| FXFSTOSLT | 5 | HD4B0020214PC | 51 | HI4D0060214PJ | 51 | SCSX4108LLF | 21 | | |
| FXFSTOSPL | 5 | HD4B0020216PC | 51 | HI4D0060216PJ | 51 | SCSX4208MLF | 21 | | |

Faster.
Easier.
Better.

New for 2020!

DCX System

Optical Distribution Frame

Handle high amounts of fiber cable, and add density to fiber frames without compromising on ease-of-use, with the new DCX Optical Distribution Frame, which features innovations like slide-out cassette trays, complete bend radius protection and multiple frame and cabinet configuration options. This solution optimizes and futureproofs the ROI of fiber infrastructure, ensuring the ability to support ever-increasing data center bandwidths, IP migration and new types of technology requiring more fiber connections.



- **Scalable**
Cable Management to support a potentially unlimited number of fiber connections
- **Customizable**
Side-by-side, back-to-back and left or right configurations
- **High Density**
4,608 fibers per frame; up to 55% higher density without compromising ease-of-use
- **Modular**
Migrate from Base-12 to Base-8/16/24 without changing housings

For more information visit:
www.belden.com/dcx

GLOBAL LOCATIONS

For worldwide Sales and Technical Support, visit: www.belden.com



UNITED STATES

Division Headquarters

401 Pennsylvania Parkway, #200
Indianapolis, IN 46280
USA
Phone: +1 317-818-6300
Inside Sales: 800-235-3361
Fax: +1 317-818-6382
info@belden.com

CANADA

National Business Center

2310 Alfred-Nobel
St-Laurent Quebec H4S 2B4
Canada
Phone: +1 514-822-2345
Fax: +1 514-822-7979
info@belden.com

MEXICO

Regional Office

Insurgentes Sur #1602
Piso 1 Oficina 102
Col. Crédito Constructor
Del. Benito Juárez, C.P. 03940
Mexico
Phone: +52 55-5523-7733
Fax: +52 55-5528-8077
marketingla@belden.com