BELDEN

Belden® Optical Fiber Catalog









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

Belden
Fiber*Express*®
Systems

BELDEN

Belden Fiber*Express*® 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 Fiber*Express* (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.



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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-492AAAD 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.

Fiber*Express* 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

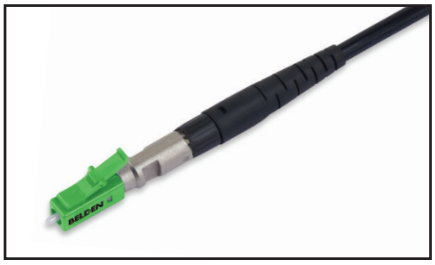


FT3SC900FS01, FX Fusion OM3/OM4 SC Connector with 900/250 µm Boot, Aqua

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.


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

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.

Fiber*Express* 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.



FXFSTOSPL, FX Fusion Active Cladding Splicer Kit

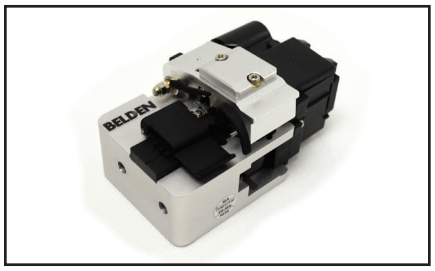
FX Fusion Splicer

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



FXFSTOSCL, FX Fusion Standard Cleaver

FX Fusion Accessories

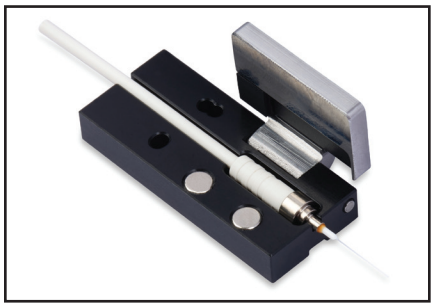
Installation Kit Accessories

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



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	
1	OM1
3	OM3
4	OM4
S	OS2

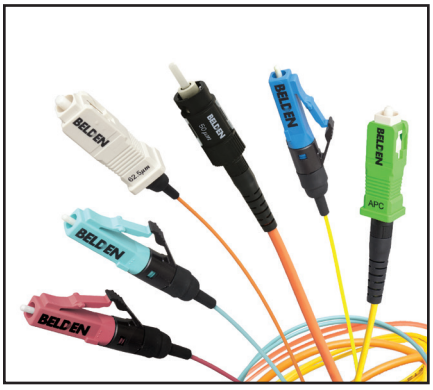
Connector	
LC	LC Simplex
LB	LC/APC Simplex
SC	SC Simplex
SB	SC/APC Simplex

Cable Type	
900	Tight Buffer
2MM	Jacketed

Product Family	
F	Splice-On

Packaging	
S01	Single Pack

Fiber*Express* 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







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	**FXBUBO250B25N**
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**

Fiber*Express* Field Termination (continued)

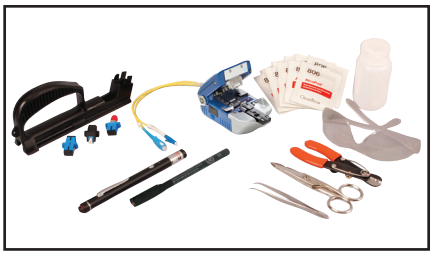
FX Brilliance Universal Installation Kits and Accessories

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

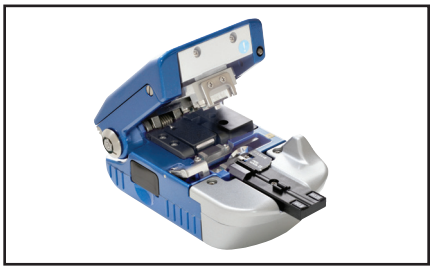
Description	Belden Part Number
Precision Installation Kit (Basic Kit, Fiber Preparation Tools, Precision Cleaver and Visual Fault Locator)	**AX104271**



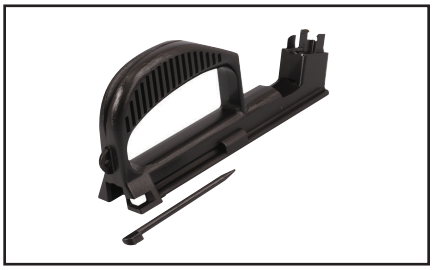
AX104271, FX Brilliance Precision Installation Kit

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



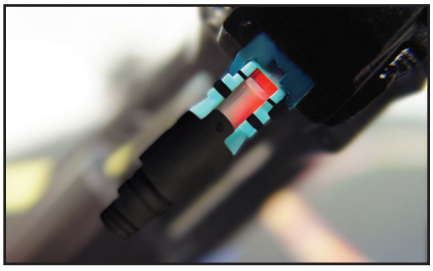
AX104276, Support Handle with Adapters

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

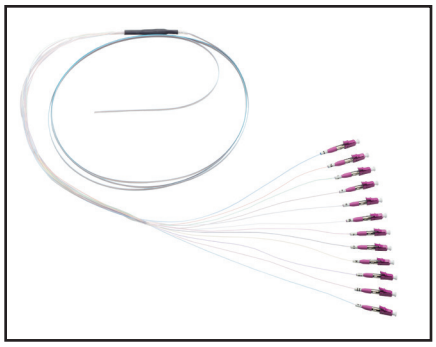
Description	Belden Part Number
Breakout Kit for 2.0 mm Subunits, 6-fiber, 1-Pack	**AX101100**
Breakout Kit for 3.0 mm Subunits, 12-fiber, 1-Pack	**AX101101**
Breakout kit for 5.2 mm Subunits (Central Tube), 6-fiber, 1-Pack	**AX104695**
Breakout kit for 5.2 mm Subunits (Central Tube), 12-fiber, 1-Pack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



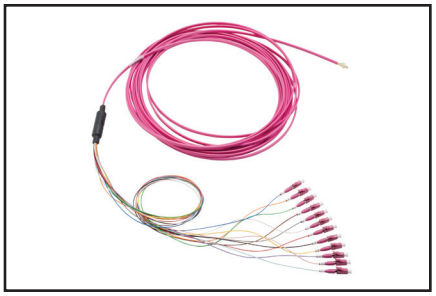
When used with the VFL, a light can be seen through the clear window on the connector body until a fiber has been properly terminated

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.

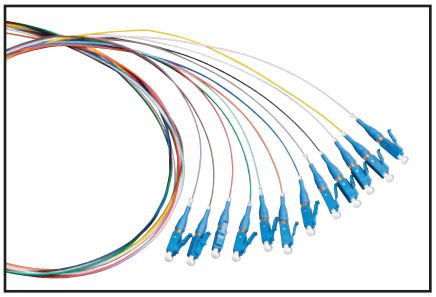
Fiber*Express* Field Termination (continued)
FX Pigtails



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 *Smart*Part 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).

Fiber*Express* 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.

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.

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.

Standard Single Pigtails (Connector on Jacketed Fiber)

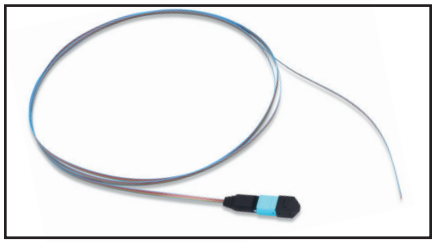
Description	Belden Part Number				
	OM1	OM3	OM4	OS2	OS2/APC
MPO-12(m)	–	FT3MM3MMPS01	FT4MM3MMPS01	–	FTSMM3MMPS01
LC	–	FT3LC2MMPS01	FT4LC2MMPS01	FTSLC2MMPS01	FTSLB2MMPS01
LC Duplex	–	FT3LD2MMPS01	FT4LD2MMPS01	FTSLD2MMPS01	FTSLA2MMPS01
SC	FT1SC3MMPS01	FT3SC3MMPS01	FT4SC3MMPS01	FTSSC3MMPS01	FTSSB3MMPS01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

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

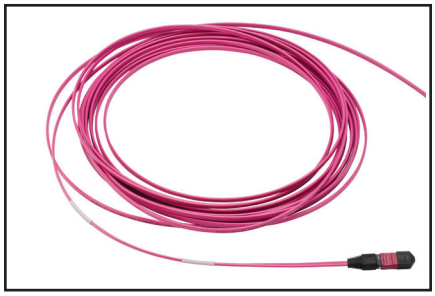
Fusion Splice Heat Shrink Protector Sleeves

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

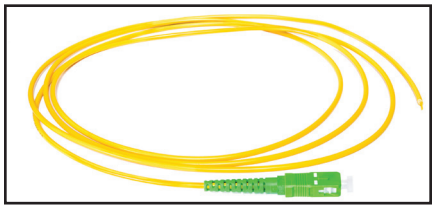
See page 10, Tailored Pigtails - Building a *Smart*Part Number table, for more options.



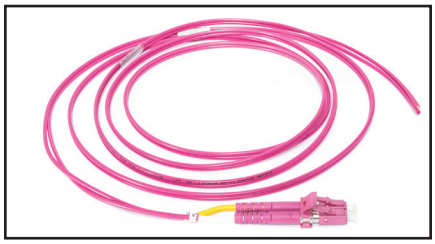
FT3MM250PS01, FX MPO Bare Ribbon Pigtail, OM3 Aqua, MPO(m), 2 m



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



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



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

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).

Fiber*Express* Field Termination (continued)
FX Pigtails

Tailored FX Pigtails
Building a *Smart*Part 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

Fiber Type	
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 µm Fiber
RIB	Jacketed Ribbon
900	900 µm 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

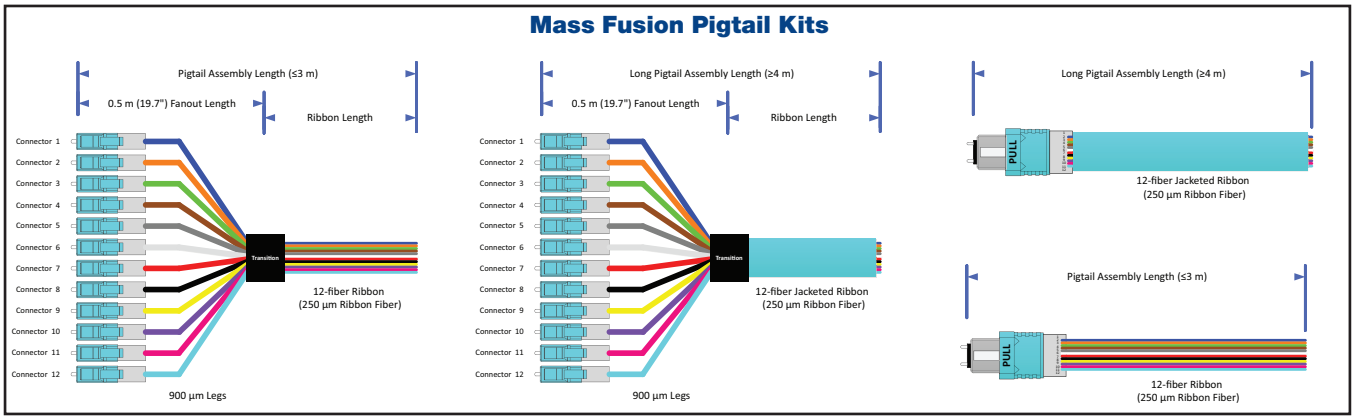
Use of Tailored part numbers:

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

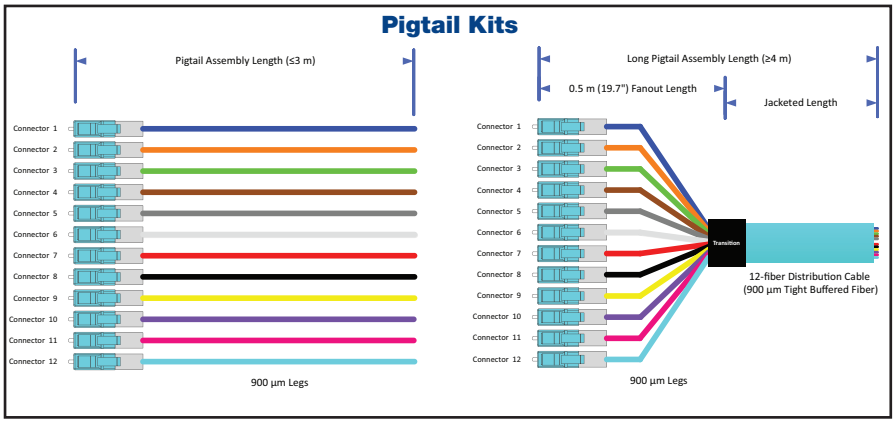
Examples:

FT3LC900PR123MD - FX Field-Termination Pigtail, OM3, LC Simplex, Tight Buffer 900 µm, Color-Coded 12-Fiber, 3 m
FTSST900PR125MY - FX Field-Termination Pigtail, OS2, ST, Tight Buffer 900 µm, 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

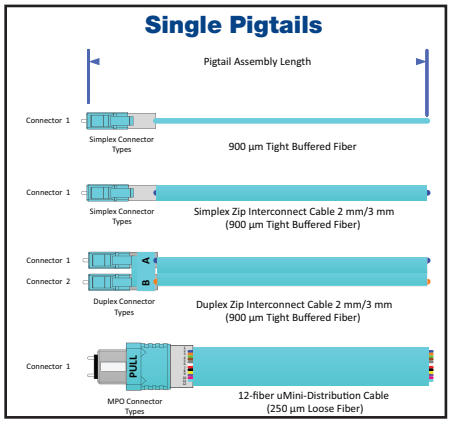
Mass Fusion Pigtail Kits



Pigtail Kits



Single Pigtails



Please contact Belden for any help configuring/validating *Smart*Part Numbers or for any other custom Engineered solutions

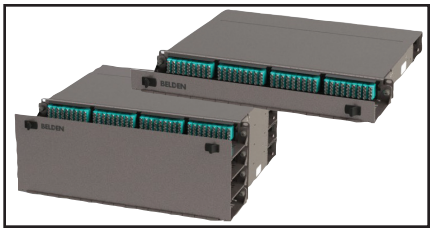
Fiber*Express* Patch Panel Systems
FX UHD Housings and Shelves

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

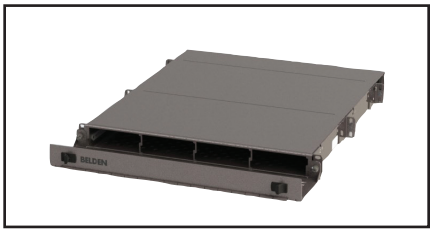
FASTER
- Faster field-termination with high-accessibility sliding and tilting drawers
- Faster pre-term installation with simple fixed shelves and cassettes

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

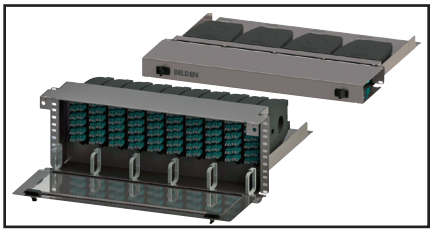
BETTER
- Better fiber protection with covered patch cord tray
- Better high density offering with 18-port modules for up to 72 LC Duplex ports per 1U
- Better visibility with light colored Titanium finish



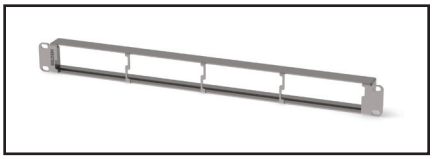
Top: AX104681, FX Ultra HD 1U Patch Panel Housing
Bottom: AX104683, FX UHD 4U Patch Panel Housing (shown loaded)



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

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.

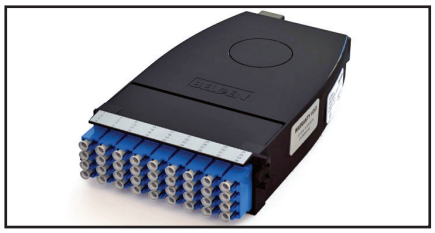
FX UHD Shelves, Single Cassette Holder

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

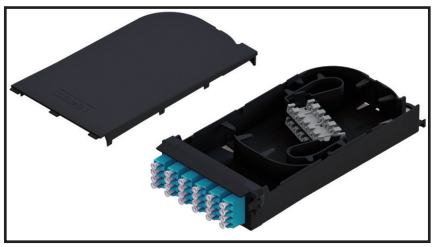
Fiber*Express* Patch Panel Systems (continued)
FX UHD and FX Ultra Cassettes



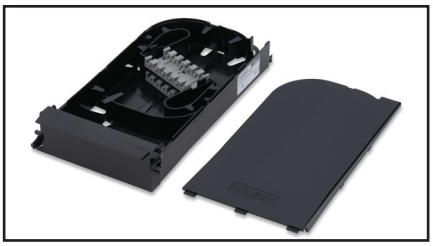
FCSH18LDMF, FX UHD Cassette, OS2, 18 Ports, MPO-12 (female), LC Duplex, Type-A, Blue Adapters



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



FCZH00BBFS, 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 →				

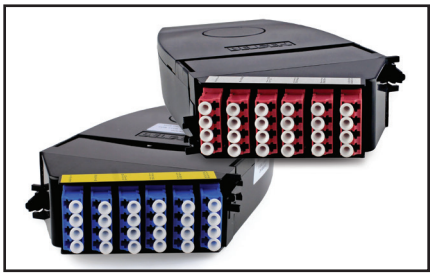
FX Brilliance Universal (page 4) or FX Pigtails (page 6) and Heat Shrink Splice Protector Sleeves (page 7) sold separately.

Fiber*Express* 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	FC3R12IDMF1A	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 *Smart*Part 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 *Smart*Part Number

Fiber Cassette	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count (Patch Side)	4. Choose Connector (Patch Side)	5. Choose Connector (Trunk Side)	6. Choose Polarity (Trunk)	7. Choose Adapter Color
FC	3	U	03	LD	MF	1	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

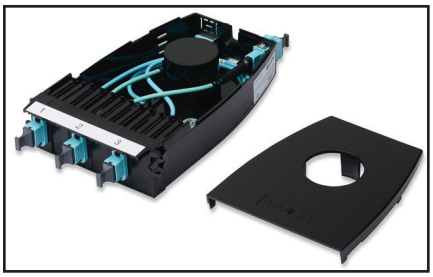
Connector (Trunk Side)	
MM	MPO-12 (m)
MF	MPO-12 (f)

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.

Fiber*Express* 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		
Patch Ports (fibers)	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 *Smart*Part Number

Fiber Cassette	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count (Patch Side)	4. Choose Connector (Patch Side)	5. Choose Connector (Trunk Side)	6. Choose Polarity (Trunk)	7. Choose Adapter Color
FC	3	U	04	LD	4M	4	A

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

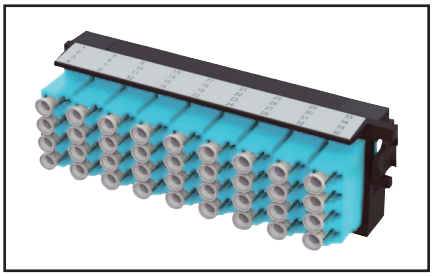
For further options, contact Belden for custom engineered solutions.

Fiber*Express* Patch Panel Systems (continued)

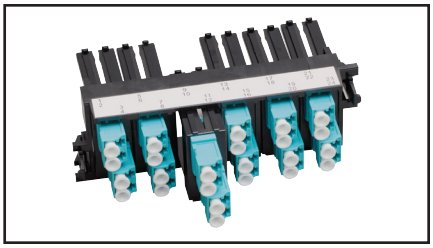
FX UHD and FX Ultra Frames

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 *Smart*Part 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

Fiber Type	
1	OM1
3	OM3
4	OM4
S	OS2

Product Family	
H	FX UHD
U	FX Ultra (1" Pull)

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

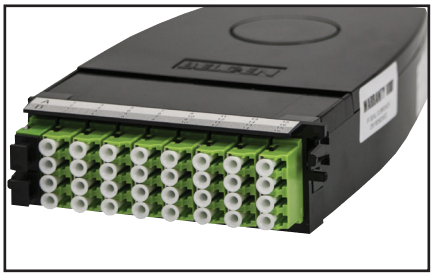
Highest density available with FX UHD style. Maximum density with SC or ST Connectors is 12-fiber.

FX UHD is a fixed bezel FX Ultra has a 1" pull-out

Fiber*Express* 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

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).

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

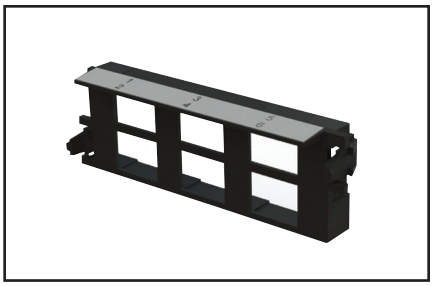
Belden Part Number			Number of Live A-Ports	TAP Ratio	Live A-Port	Live B-Port	TAP Port
OM4	OM4 (Aqua)	OM3					
TC4H06LDMFLD	**TC4H06LDMFLD7A**	**TC3H06LDMFLD**	6	70/30	LC Duplex	MPO Female (12f)	LC Duplex
TC4H02LDLDLD	**TC4H02LDLDLD7A**	**TC3H02LDLDLD**	2	70/30	LC Duplex	LC Duplex	LC Duplex
TC4H06LDMFMM	**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)

Fiber*Express* 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

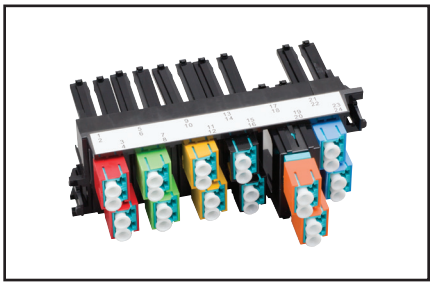
KeyConnect Fiber Modules

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**

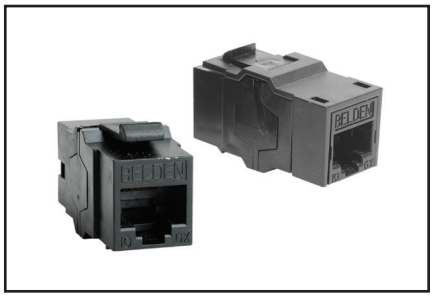
Above adapters are for Black Bezels. Contact your local Belden representative for a complete listing of KeyConnect adapters in other colors.



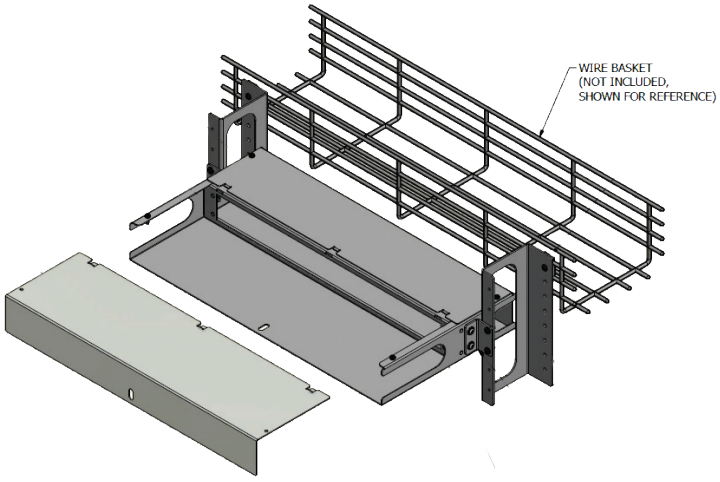
AX104572, FX Color-coded Icon Kit, (shown on frame)

Standard FX UHD Accessories

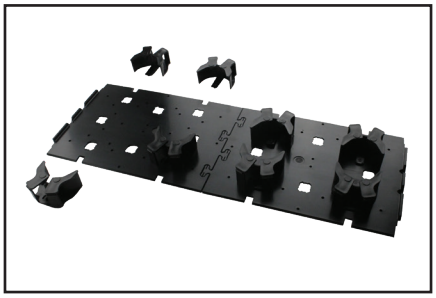
Description	Belden Part Number
FX UHD Blank Plate	**FFZH00BB**
FX UHD Patch Cord Release Tool	**AX104685**
FX Ultra LC Duplex Color-coded Icon Kit	**AX104572**
FX UHD Fiber Management Spool kit, includes base plates and eight spool segments	**AX105700**
1U Rackmount Enclosure for Cable Tray Mounting	**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



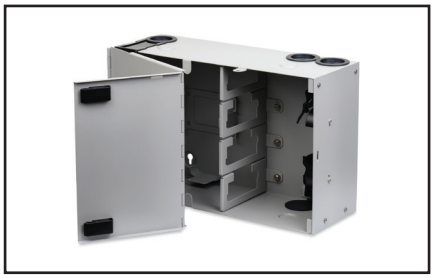
XPE-S0003, FX UHD Basket Hanger for 1U FX UHD Patch Panel Housings and Shelves.



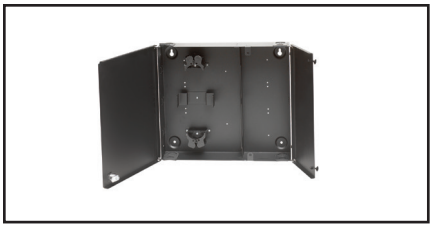
AX105700, FX UHD Fiber Management Spool Kit

Fiber*Express* Patch Panel Systems (continued)

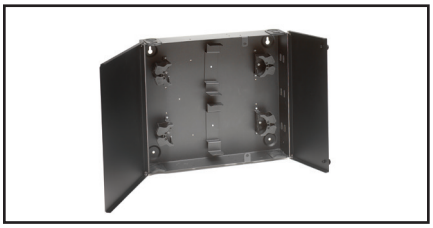
FX UHD and FX Ultra Wall Mount and Accessories



AX106818, FX UHD Stackable Wall Mount Patch Panel



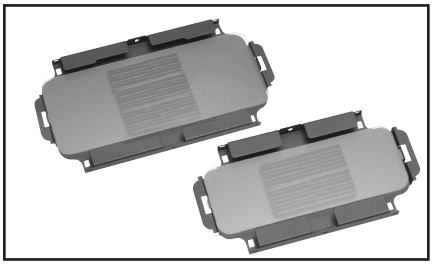
AX103928, FX Ultra Stackable Wall Mount Patch Panel



AX103930, FX Ultra Wall Mount Splice Enclosure



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



FX Ultra Splice Trays

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)

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

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

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**

Fiber*Express* 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

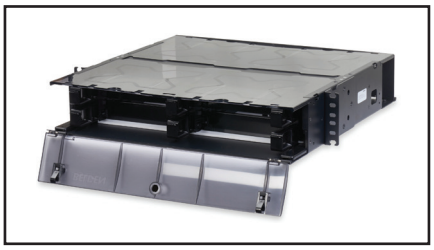
- Easier frequent MAC work with front and rear removable cassettes (patent pending)
- Easier to configure with flexible port count LC, SC, ST and MPO couplers as well as KeyConnect compatibility (copper and multimedia modules)
- Easier port identification with retractable label holder and compatibility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



ECX-01U, FX ECX 1U Housing



ECX-02U, FX ECX 2U Housing

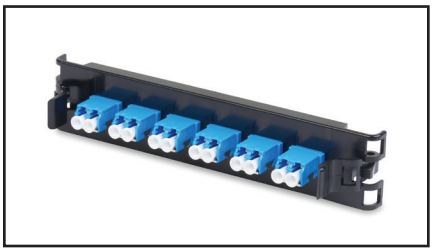


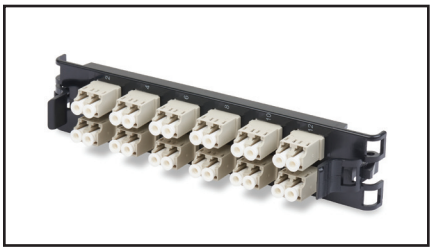
ECX-04U, FX ECX 4U Housing

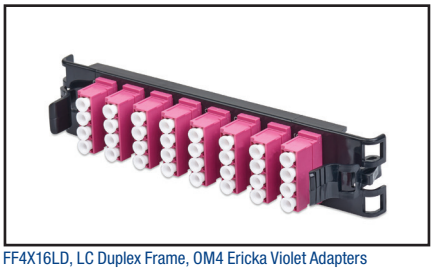
FX ECX Housings

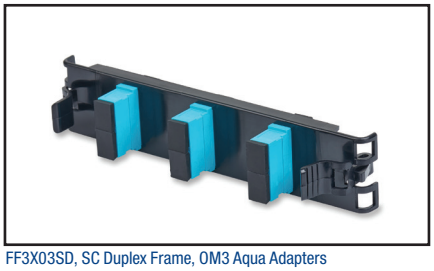
Description	Number of Module Bays	Total LC Duplex using ECX Frames	Total LC Duplex using ECX Cassettes	Belden Part Number
1U Housing	2 Cassettes or Frames	32	24	**ECX-01U**
2U Housing	4 Cassettes or Frames	64	48	**ECX-02U**
4U Housing	12 Cassettes or Frames	192	144	**ECX-04U**

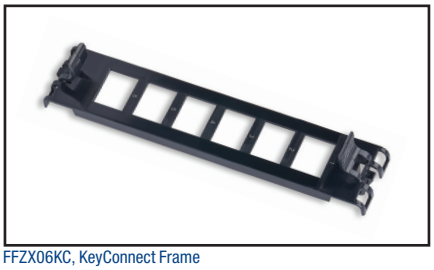
Fiber*Express* Patch Panel Systems (continued)
FX ECX Frames


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 *Smart*Part Number

Fixed Letter Series	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count	4. Choose Connector for Patch Side
FF	S	X	06	SC

Fiber Type	
1	OM1
3	OM3
4	OM4
S	OS2

Product Family	
X	ECX

Port Count (Patch Side)
03
06
08
12
16

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

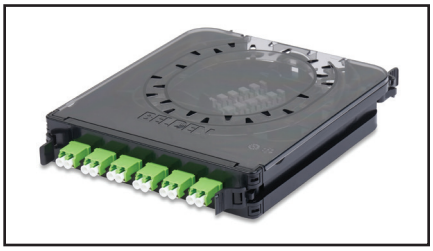
Maximum density with SC Connectors is 16-fibers.

Fiber*Express* 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 *Smart*Part Number

Fixed Letter Series	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count	4. Choose Connector for Patch Side	5. Choose Connector for Patch Side
FC	S	X	06	SC	FS

Fiber Type	
1	OM1
3	OM3
4	OM4
S	OS2

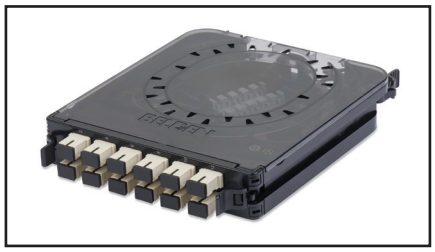
Product Family	
X	ECX

Port Count (Patch Side)
03
06
08
12

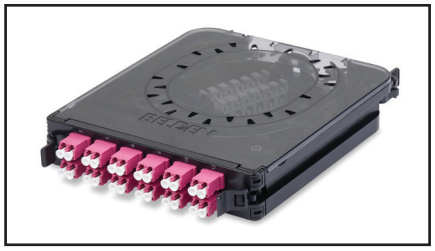
Connector (Patch Side)	
LD	LC Duplex
LA	LC/APC Duplex
SD	SC Duplex
SC	SC Simplex
SA	SC/APC Duplex
SB	SC/APC Simplex
ST	ST
MP	MPO Up/Down

Connector (Trunk Side)	
FS	Splice Cassette

Maximum density with SC Connectors is 12-fibers.



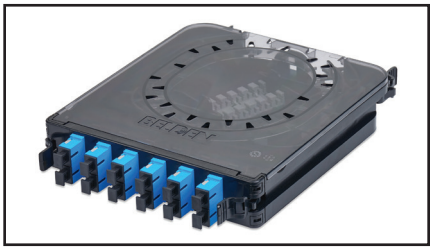
FC1X12SCFS, SC Simplex Splice Cassette, OM1 Beige Adapters



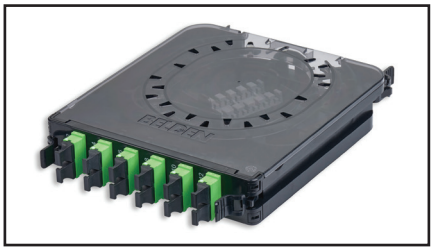
FC4X12LDFS, LC Duplex Splice Cassette, OM4 Ericka Violet Adapters

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



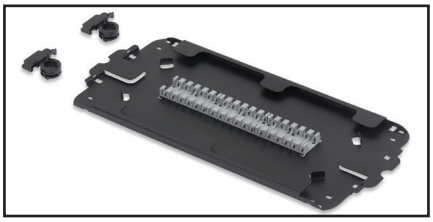
FCSX12MPFS, MPO Key Up/Down Splice Cassette, OS2 APC Green Adapters



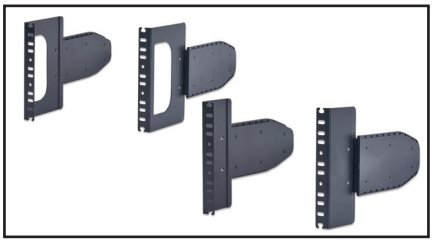
ECX-LOCKKIT, Door Lock Kit



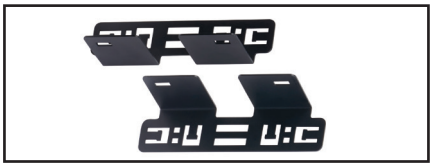
ECX-MGTCLIPS, Management Clips



ECX-SPLICEKIT, Splice Tray Kit



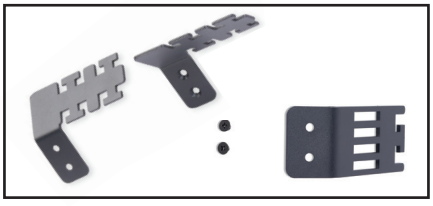
ECX-BRKTMNT-3 / ECX-BRKTMNT-0, 4U Rack Mounting Brackets



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)

Fiber*Express* 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-BRKTMNT-3
4U Rack Mounting Bracket Flush	ECX-BRKTMNT-0
4U Rear External Strain Relief (Angled)	ECX-4U-EXSTRA
4U External Strain Relief	ECX-4U-EXSTR
4U Internal Strain Relief	ECX-4U-INSTR
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-INSTR
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

Fiber*Express* 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

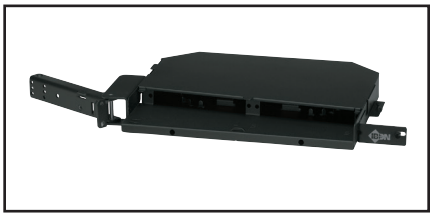
Description	Maximum Number of Adapter Strips	Splice Trays	Belden Part Number
Small Wall-Mount	2	1 x 8" (Up to 24-Splices)	**AX100495**
Medium Wall-Mount	4	2 x 8" (Up to 48-Splices)	**AX100540**
Large Wall-Mount	8	4 x 8" (Up to 96-Splices)	**AX100542**

Standard Optical Fiber Adapter Strips

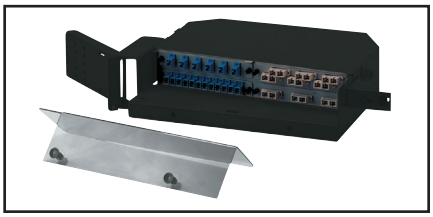
		Belden Part Number			
Patch Ports (fibers)	Family	OM1 Beige Adapters	OM3 Aqua Adapters	SM Blue Adapters	SM/APC Green Adapters
LC Duplex					
12 (24)	FX Patch	**AX101741**	–	**AX101743**	**AX105561**
6 (12)	FX Patch	**AX101729**	–	**AX101731**	**AX105537**
SC Duplex					
6 (12)	FX Patch	**AX100098**	–	**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**



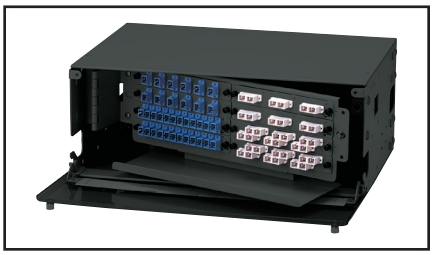
AX100041, FX 12/24 Port (1U) Rack Mount Patch Panel



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



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

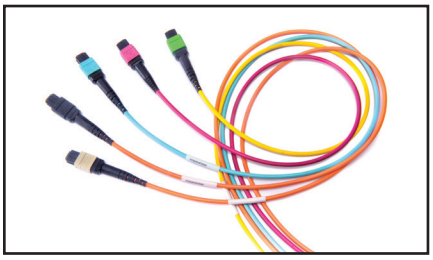


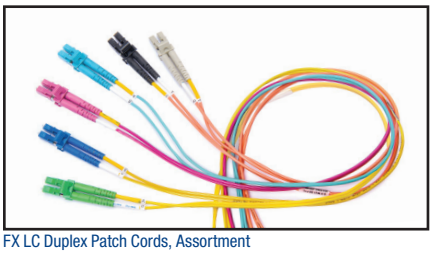
AX100116, FX 48/96 Port (4U) Rack Mount Patch Panel (shown loaded)

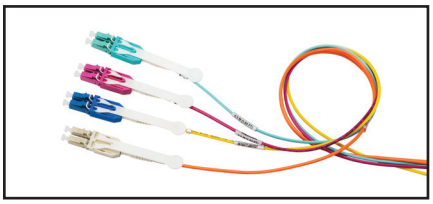


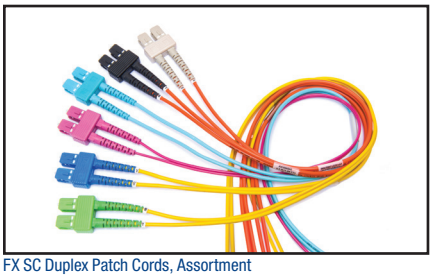
AX100495, Small Wall Mount

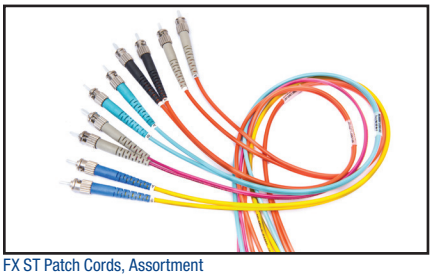
Fiber*Express* Pre-Terminated Assemblies
FX Patch Cords


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 *Smart*Part 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

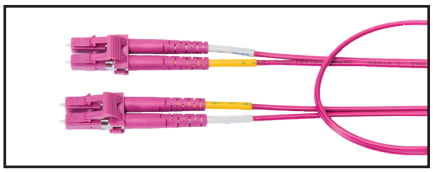
Description	Belden Part Number				
	OM1 Beige	OM3 Aqua	OM4 Erika Violet	OS2 Blue	OS2 Green
LC Duplex	FXFACLLDB25T	FXFACLLDB25A	FXFACLLDB25E	FXFACLLDB25B	FXFACLLDB25G
Mini-LC Duplex	← FXFACLLMB25N (Black) →				

Fiber*Express* Pre-Terminated Assemblies (continued)

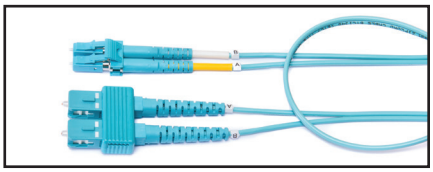
FX Patch Cords

Standard FX Patch Cords

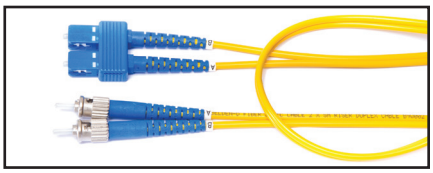
Length (m)	OM1 Beige/Orange	OM3 Aqua	OM4 Erika Violet	OS2 Blue/Yellow	OS2/APC Green/Yellow
MPO-12(8f) Female to MPO-12(8f) Female - Base8					
2	–	FP34F4F002M	FP44F4F002M	–	FPS4F4F002M
3	–	FP34F4F003M	FP44F4F003M	–	FPS4F4F003M
5	–	FP34F4F005M	FP44F4F005M	–	FPS4F4F005M
MPO-12(12f) Female to MPO-12(12f) Female - Base12					
2	–	FP3MFMF002M	FP4MFMF002M	–	FPSMFMF002M
3	–	FP3MFMF003M	FP4MFMF003M	–	FPSMFMF003M
5	–	FP3MFMF005M	FP4MFMF005M	–	FPSMFMF005M
MPO-24 Female to MPO-24 Female					
2	–	FP3NFNF002M	FP4NFNF002M	–	FPSNFNF002M
3	–	FP3NFNF003M	FP4NFNF003M	–	FPSNFNF003M
5	–	FP3NFNF005M	FP4NFNF005M	–	FPSNFNF005M
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	FPSSASA002M
3	FP1SDSD003M	FP3SDSD003M	FP4SDSD003M	FPSSDSD003M	FPSSASA003M
5	FP1SDSD005M	FP3SDSD005M	FP4SDSD005M	FPSSDSD005M	FPSSASA005M
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	–	–	–	FPSLILI002M	FPSLFLF002M
3	–	–	–	FPSLILI003M	FPSLFLF003M
5	–	–	–	FPSLILI005M	FPSLFLF005M



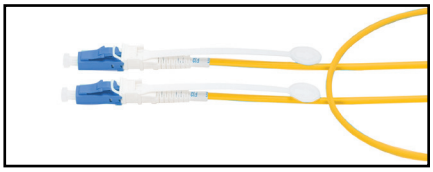
FP4LDLD003M, LC Duplex to LC Duplex, Duplex Zip Cord, OM4 Erika Violet



FP3LDSD003M, Hybrid LC Duplex to SC Duplex, OM3 Aqua



FPSSDST003M, Hybrid SC Duplex to ST, OS2 Blue



FPSLILI00M5, LC Simplex UHD to LC Simplex UHD, OS2 Yellow

LC Duplex UHD Uniboot: Easy tool-free removal, flexible Pull-tab, better airflow, high density applications (FX UHD 18-port modules).

Fiber*Express* 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 *Smart*Part Number

FX Patch Cord	1. Choose Fiber Type	2. Choose Connector 1	3. Choose Connector 2	4. Choose Length*
FP	3	LD	LD	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 *Smart*Part 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	LD	003M	R	3	X	A

Fiber Type	
1	OM1
2	OM2
3	OM3
4	OM4
S	OS2

Connector 1	
LD	LC Duplex
LC	LC Simplex
LA	LC/APC Duplex
LB	LC/APC Simplex
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
4M	MPO-12 (M) Base 8
4F	MPO-12 (F) Base 8
MM	MPO-12 (M)
MF	MPO-12 (F)
NM	MPO-24 (m)
NF	MPO-24 (f)

Connector 2	
LD	LC Duplex
LC	LC Simplex
LA	LC/APC Duplex
LB	LC/APC Simplex
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
4M	MPO-12 (M) Base 8
4F	MPO-12 (F) Base 8
MM	MPO-12 (M)
MF	MPO-12 (F)
NM	MPO-24 (m)
NF	MPO-24 (f)
ZZ	OPEN

Length*
003M to 100M M Meters use M as decimal

Fire Rating	
R	Riser
P	Plenum
L	LSZH

Cable Construction	
2	Duplex ZipCord 2.0 mm
3	Duplex ZipCord 3.0 mm
4	Simplex Cord 2.0 mm
5	Simplex Cord 3.0 mm
6	Round 2.0 mm
7	Round 3.0 mm

Polarity	
X	A/B (Cross)
S	A/A (Straight)
A	Type-A
B	Type-B
C	Type-C

Jacket Color	
O	Orange
Y	Yellow
A	Aqua
E	Erika V.

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

FP4LDLD030MR2XE - FX Patch Cord, OM4, LC Duplex - LC Duplex, 30 m, OFNR, Duplex Zip 2.0 mm, A-to-B, Erika Violet Jacket

FP4LDLD030MR2XE - 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 *Smart*Part Numbers or for any other custom Engineered solutions

Fiber*Express* 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.



LPM transition on Hydra patch cord

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

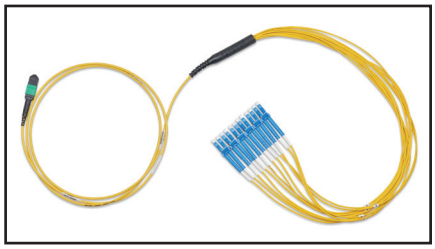
BETTER

- 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

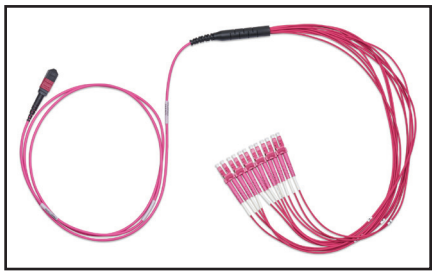
FX Hydra Patch Cords - Standard Performance

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



FPSLDMF002M, FX Hydra Patch Cord, OS2, MPO-12F (F) to 6 x LC Duplex, 2 m



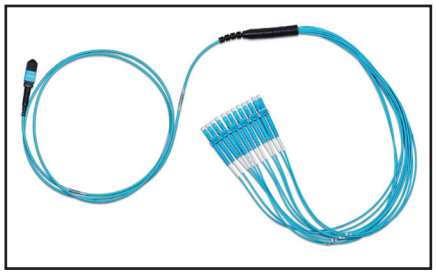
FP4LDMF002M, FX Hydra Patch Cord, OM4, MPO-12F (F) to 6 x LC Duplex, 2 m

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

Fiber*Express* 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 *Smart*Part 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	
3	OM3
4	OM4
S	OS2

Connector 1	
LD	LC Duplex
LM	Mini-LC Duplex
LA	LC/APC Duplex
LU	LC Duplex UHD Uniboot

Connector 2	
MM	MPO-12 (m)
MF	MPO-12 (f)
4M	MPO-12 (M) Base 8
4F	MPO-12 (F) Base 8

Length*
001M to 015M *use M as decimal

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

Tailored FX Hydra Patch Cords
Building a *Smart*Part 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	
1	OM1
2	OM2
3	OM3
4	OS4
S	OS2

Connector 1	
LD	LC Duplex
LC	LC Simplex
LA	LC/APC Duplex
LB	LC/APC Simplex
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

Connector 2	
MM	MPO-12 (m)
MF	MPO-12 (f) Female
4M	MPO-12 (M) Base 8
4F	MPO-12 (F) Base 8

Length
001M to 300M *use M as decimal

Fire Rating	
P	Plenum
L	LSZH

Cable Construction	
7	Round 3.0 mm

Polarity	
A	Type-A (Straight Polarity)
B	Type-B (Reversed Polarity)
4	SR4

Jacket Color	
O	Orange
Y	Yellow
A	Aqua
E	Erika V.

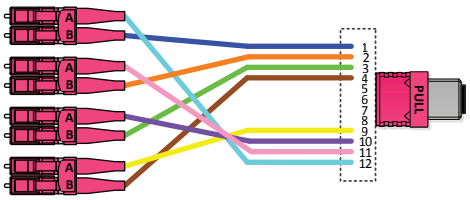
Examples:

FP3LDMF020MP7AA - FX Patch Cord, 0M3, 6 x LC Duplex -MPO-12 (F), 20 m, OFNP, Round 3.0 mm, Type-A, Aqua Jacket
FP4LUMM010MP7AA - FX Patch Cord, 0M4, 6 x LC Duplex UHD Uniboot - MPO-12 (M), 10 m, OFNP, Round 3.0 mm, Type-A, Aqua Jacket
FP3LDMM005MP7BA - FX Patch Cord, 0M3, 6 x LC Duplex - MPO-12 (M), 5 m, OFNP, Round 3.0 mm, Type-B, Aqua Jacket
FP4LDMF025MP7AE - FX Patch Cord, 0M4, 6 x LC Duplex - MPO-12 (F), 25 m, OFNP, Round 3.0 mm, Type-A, Erika Violet Jacket

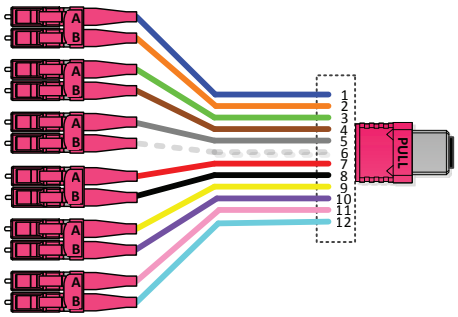
Tailored FX Hydra Patch Cords SPN table should ONLY be used for any product combination that is not covered by the Standard FX Hydra Patch Cords configurator above.

Please contact Belden for any help configuring/validating *Smart*Part 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)



Fiber***Express*** 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.



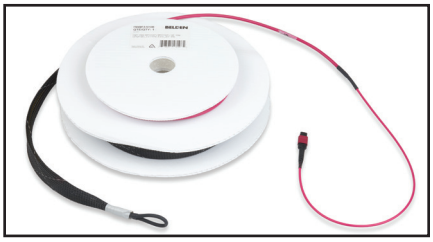
LPM transition on Hydra patch cord

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 *Smart*Part Numbers
- Easier upgradeability to 40G and 100G with MPO pre-term solutions
- Easier patch panel attachment with LPM transition



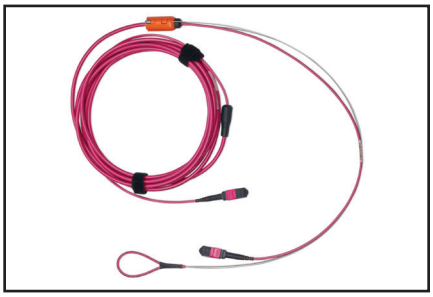
FM4MMB1010M, FX MPO Trunk, OM4, MPO-12 (Male to Male), Type-B, 1 x MPO-12 (12 fibers), 10 m, OFNP, Mini- Distribution 4.8 mm (Double-Jacket), Erika Violet Jacket

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

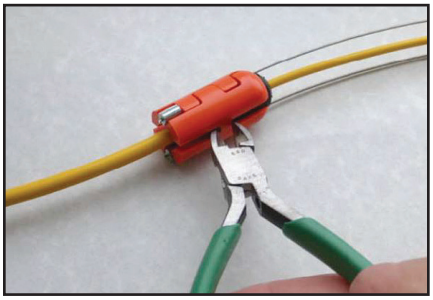
FX MPO Trunks - Standard Performance

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

Fiber*Express* Pre-Terminated Assemblies (continued)
FX MPO Trunks


New Pulling Eye

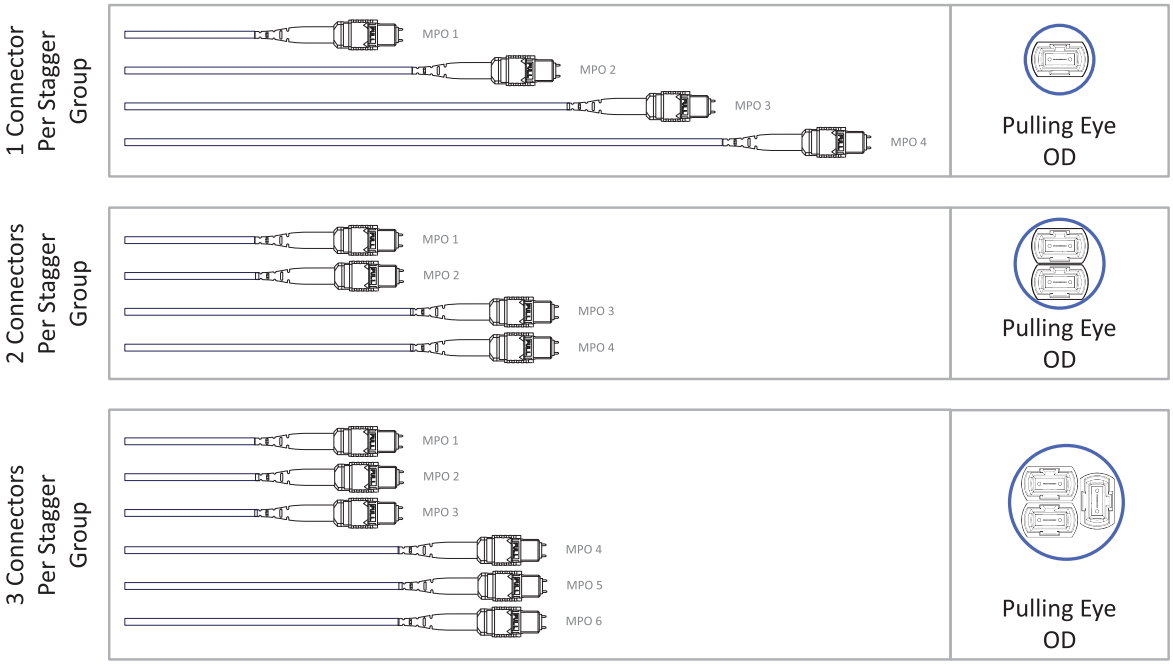
FX Trunks Pulling Eye

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

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).

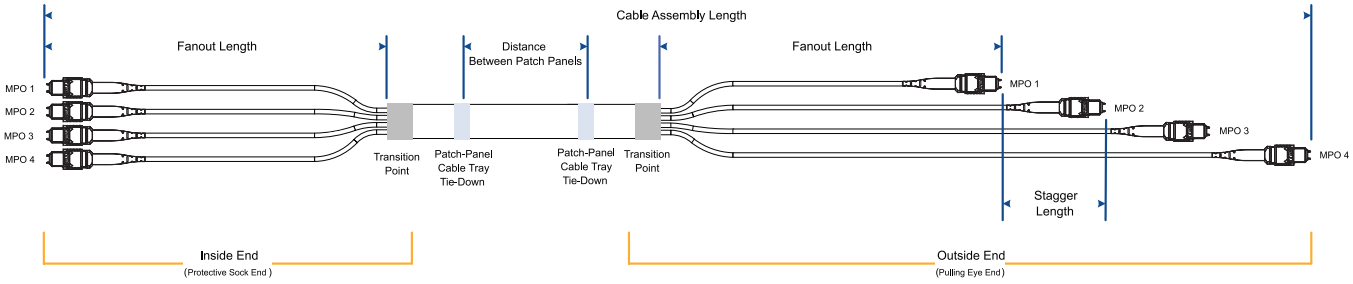


4 and 6 Connectors Per Stagger Group available

Fiber*Express* Pre-Terminated Assemblies (continued)

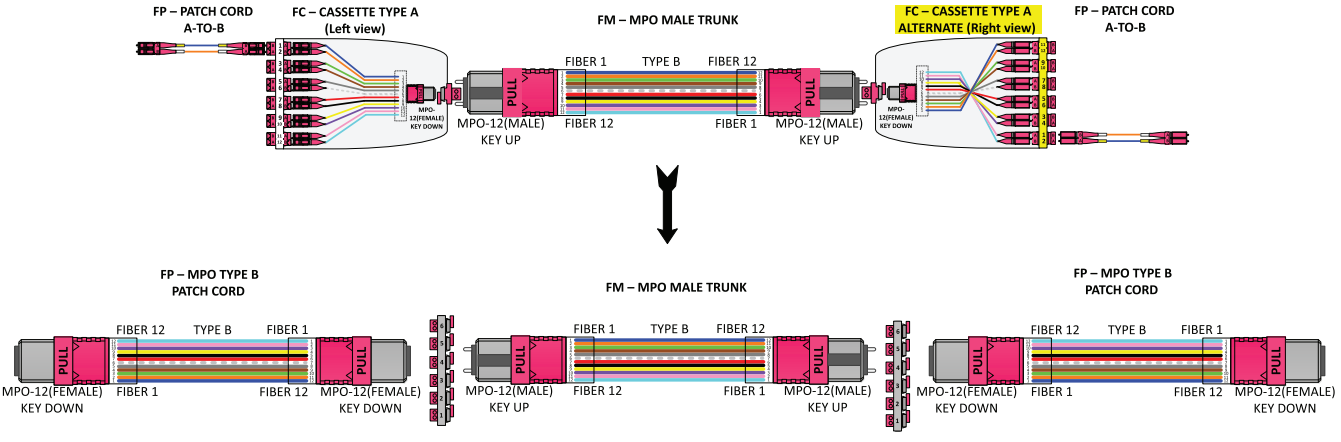
FX MPO Trunks

FX MPO Trunks Diagram



Belden MPO Pre-Term Solution

2 points of connections (Using Type B trunks)
10G installation and migration to 40G solution

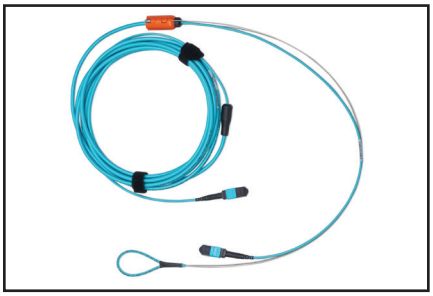


Keys to a Successful Upgrade:

- **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**

Fiber*Express* 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 *Smart*Part 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	
3	OM3
4	OM4
S	OS2

Connectors	
M	MPO-12(12F)

Connector Gender	
M	Male to Male
F	Female to Female
E	Extension (M to F)
P	Male to Open
R	Female to Open

Polarity (outside)	
A	Type-A
B	Type-B
C	Type-C

Connector Count	
1	12 Fibers
2	24 Fibers
3	36 Fibers
4	48 fibers
6	72 Fibers
8	96 Fibers
D	144 Fibers

Length
005M to 500M M Meters *use M as decimal

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 *Smart*Part 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	M	M	B	4	010M	P	M	E	A

Fiber Type	
1	OM1
2	OM2
3	OM3
4	OM4
S	OS2

Connectors	
M	MPO-12 (12F)

Connector Gender	
M	Male to Male
F	Female to Female
E	Extension (M to F)
P	Male to Open
R	Female to Open

Polarity (outside)	
A	Type-A
B	Type-B
C	Type-C

Connector Count	
1	12 Fibers
2	24 Fibers
3	36 Fibers
4	48 Fibers
6	72 Fibers
8	96 Fibers
D	144 Fibers

Length
005M to 500M M Meters *use M as decimal

Fire Rating	
P	Plenum
I	I/O Plenum
A	Plenum Armored (AIA)
B	Plenum I/O Armored (AIA)
L	LSZH

Cable Construction	
U	µMini-D
M	Mini-D

Fan-Out Geometry	
D	None (1 Conn.)
D	0.5 m x In-Line (>2 Conn.)
E	1.0 m x In-Line
F	1.5 m x In-Line
G	2.0 m x In-Line
1	0.5 m x Stag 80 mm/1 conn.
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

Jacket Color	
O	Orange
N	Black
Y	Yellow
A	Aqua
E	Erika Violet

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 *Smart*Part Numbers or for any other custom Engineered solutions

Fiber*Express* Pre-Terminated Assemblies (continued)

FX MPO Trunks

Standard FX MPO Trunks - Base8 - Building a *Smart*Part 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	
3	OM3
4	OM4
S	OS2

Connectors	
4	MPO-12 (8F)

Connector Gender	
M	Male to Male
F	Female to Female
E	Extension (M to F)
P	Male to Open
R	Female to Open

Polarity (outside)	
A	Type-A
B	Type-B
C	Type-C

Connector Count	
1	8 Fibers
2	16 Fibers
3	24 Fibers
4	32 fibers
6	48 Fibers
8	64 Fibers
D	96 Fibers

Length
005M to 500M
M Meters
*use M as decimal

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 *Smart*Part 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	
3	OM3
4	OM4
S	OS2

Connectors	
4	MPO-12 (8F)

Connector Gender	
M	Male to Male
F	Female to Female
E	Extension (M to F)
P	Male to Open
R	Female to Open

Polarity (outside)	
A	Type-A
B	Type-B
C	Type-C

Connector Count	
1	8 Fibers
2	16 Fibers
3	24 Fibers
4	32 Fibers
6	48 Fibers
8	64 Fibers
D	96 Fibers

Length
005M to 500M
M Meters
*use M as decimal

Fire Rating	
P	Plenum
I	I/O Plenum
A	Plenum Armored (AIA)
B	Plenum I/O Armored (AIA)
L	LSZH

Cable Construction	
U	µMini-D
M	Mini-D

Fan-Out Geometry	
D	None (1 Conn.)
D	0.5 m x In-Line (>2 Conn.)
E	1.0 m x In-Line
F	1.5 m x In-Line
G	2.0 m x In-Line
1	0.5 m x Stag 80 mm/1 conn.
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

Jacket Color	
O	Orange
N	Black
Y	Yellow
A	Aqua
E	Erika Violet

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.

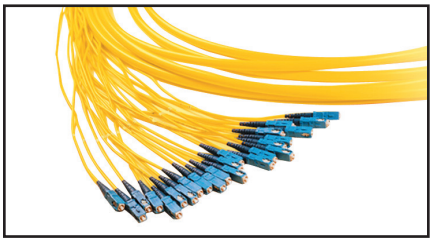
Examples:

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.

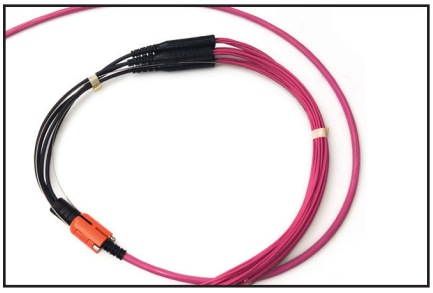
FM44MB4020MAMDE - FX MPO Trunk OM4, MPO-12 Base 8 (Male to Male), Type-B, 4 MPO (32 Fibers), 20 m, OFCP, (Plenum Armored), Mini-Distribution (3.0 mm Sub-Units) Fan-Out: 0.5 m In-Line, Erika Violet Jacket.

Please contact Belden for any help configuring/validating *Smart*Part Numbers or for any other custom Engineered solutions

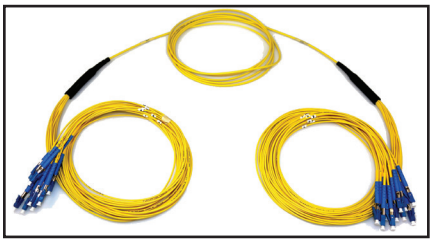
Fiber*Express* Pre-Terminated Assemblies (continued)
FX Multi-Fiber Trunks



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

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

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

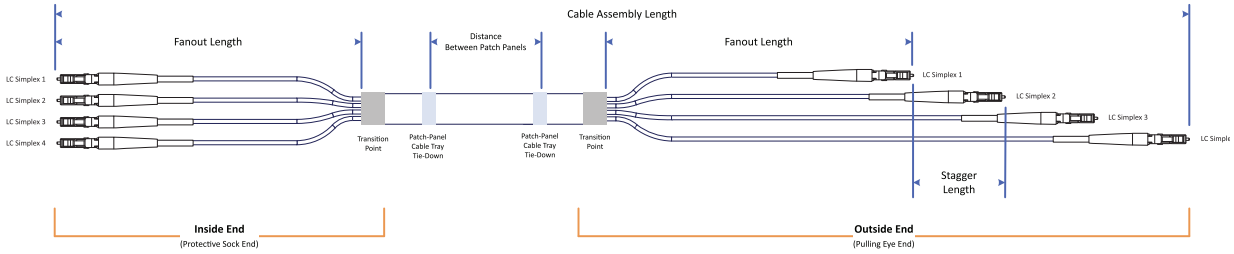
- Easier installation with 3-flange reel and default pulling eye
- Easier ordering with simple, intelligent *Smart*Part Numbers
- Easier upgradeability to 40G and 100G with MPO pre-term solutions
- Easier patch panel attachment with LPM transition

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



Fiber*Express* Pre-Terminated Assemblies (continued)
FX Multi-Fiber Trunks

FX Multi-Fiber Trunks - Building a *Smart*Part 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	
1	OM1
3	OM3
4	OS4
S	OS2

Fiber Count	
06	6 Fibers
08	8 Fibers
12	12 Fibers
16	16 Fibers
24	24 Fibers
32	32 Fibers
36	36 Fibers
48	48 Fibers
64	64 Fibers
72	72 Fibers
96	96 Fibers
A8	144 Fibers

Connector 1	
LD	LC Duplex
LC	LC Simplex
LA	LC/APC Duplex
LB	LC/APC Simplex
LI	LC Simplex UHD
LU	LC Duplex UHD Uniboot
LE	LC/APC Duplex UHD
SD	SC Duplex
SC	SC Simplex
SA	SC/APC Duplex
SB	SC/APC Simplex
ST	ST

Cable Construction 1	
A	900 µm x 0.5 m x In-Line
B	900 µm x 1.0 m x In-Line
C	900 µm x 1.5 m x In-Line
D	900 µm x 2.0 m x In-Line
E	Jacketed x 0.5 m x In-Line
F	Jacketed x 1.0 m x In-Line
G	Jacketed x 1.5 m x In-Line
H	Jacketed x 2.0 m x In-Line

Connector 2	
LD	LC Duplex
LC	LC Simplex
LA	LC/APC Duplex
LB	LC/APC Simplex
LI	LC Simplex UHD
LU	LC Duplex UHD Uniboot
LE	LC/APC Duplex UHD
SD	SC Duplex
SC	SC Simplex
SA	SC/APC Duplex
SB	SC/APC Simplex
ST	ST
4M	MPO-12 (M) SR4
4F	MPO-12 (F) SR4
MM	MPO-12 (M)
MF	MPO-12 (F)
ZZ	OPEN

Cable Construction 2	
A	900 µm x 0.5 m x In-Line
B	900 µm x 1.0 m x In-Line
C	900 µm x 1.5 m x In-Line
D	900 µm x 2.0 m x In-Line
E	Jacketed x 0.5 m x In-Line
F	Jacketed x 1.0 m x In-Line
G	Jacketed x 1.5 m x In-Line
H	Jacketed x 2.0 m x In-Line
Z	250 µm x 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

Fire Rating	
P	Plenum
I	I/O Plenum
A	Plenum Armored (AIA)
B	Plenum I/O Armored (AIA)
L	LSZH

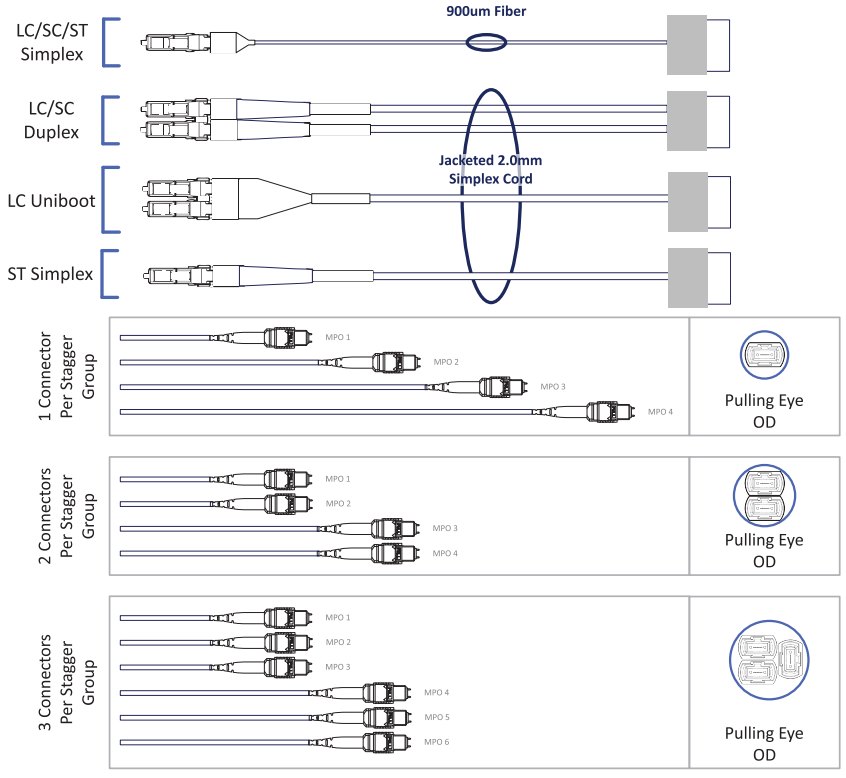
Length
005M to 500M M = Meters *use M as decimal

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

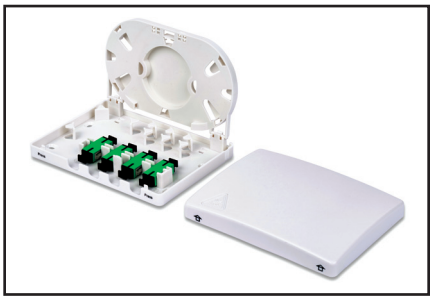
A324LCALCAP050M - FX Multi-Fiber Trunk, OM3, 24 Fibers, LC Simplex (900 µm x 0.5 m x In-Line) - LC Simplex (900 µm x 0.5 m x In-Line), OFNP, 50 m, Aqua Jacket

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

Fiber*Express* 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

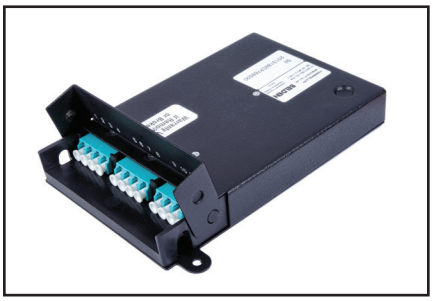
EASIER
- Easier distribution of low-port-count connectivity and breakouts with self-contained designs
- Easier field termination with easily accessible consolidation points

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.

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

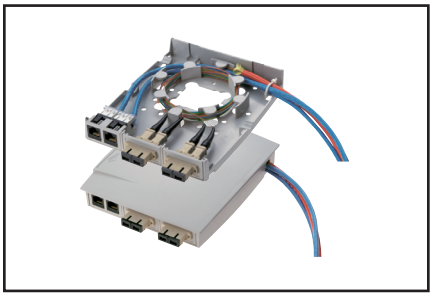


FW3MBP06LD, FX M-Box Pre-Term, 6 x LC Duplex, 1 MPO-12(f), OM3

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.

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



A0643206, MDVO Multimedia Outlet Box (shown terminated)

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	
Multimedia Outlet Boxes	KeyConnect	MDVO
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.

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

Fiber*Express* 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

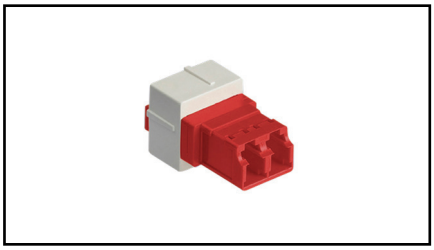


AX100222, Multi-User Outlet Box (shown here with optional modules)

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

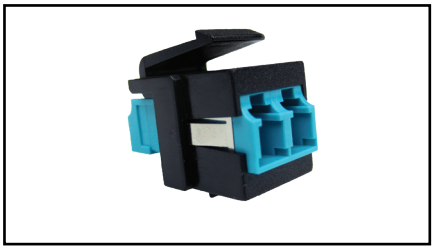
All MDVO Adapter Modules listed above come in quantities of 25 per package
Please contact Belden for any help configuring/validating *Smart*Part Numbers or for any other custom Engineered solutions



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

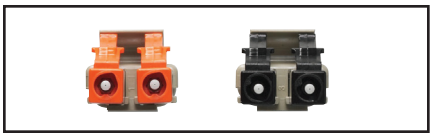
Standard Duplex Footprint Fiber Adapters

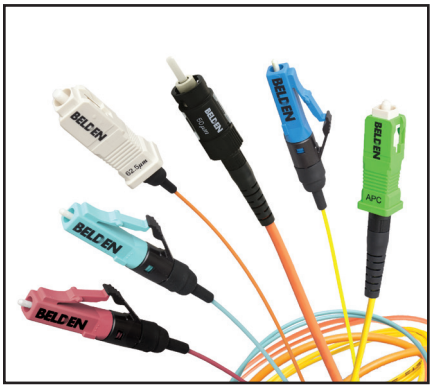
Description	Belden Part Number			
	OM3 Aqua	OM4 Erika Violet	OS2 Blue	OS2/APC Green
SC Duplex, Flangeless	AX105691-B25	AX105692-B25	AX105002-B25	AX105646-B25
SC Duplex w/Shutters, Flangeless	–	–	AX105693-B25	AX105694-B25

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

For MediaFlex Faceplates, KeyConnect Faceplates and KeyConnect adapters, please refer to Belden Copper Catalog (Pages 54-59).

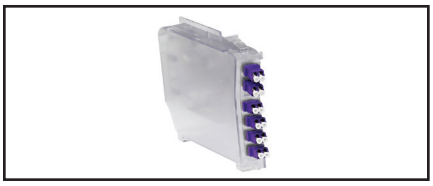
Fiber*Express* Secure/Keyed LC System
FX Secure/Keyed LC System

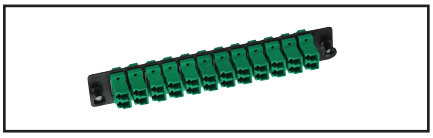

FX Secure/Keyed LC System



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 compatable) 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.

Fiber*Express* 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.



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

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.

BELDEN

*Smart*Part 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: **FI3B004PB**

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				
						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.

Fiber*Express* Breakout Cables

Tight Buffer — Indoor Riser, Plenum and LSZH Rated

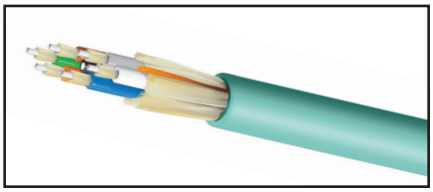
Robust terminations in demanding environments. All the ease of 900 µm tight buffered termination with only one fiber per sub-unit enables the ultimate bond between the connector and the cables' Aramid yarns resulting in unmatched strength and durability.

Applications:

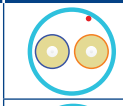
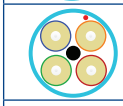
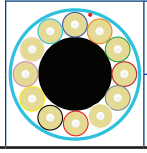
- Horizontal distribution for Fiber-to-the-desk
- In-building backbone
- Factory floor automation
- Broadcast and A/V in-building installations

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			
									Installation		Operation	
				mm	mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Color-coded Sub-Units		2	900 µm TB	2.0	6.6	0.26	36	24	800	180	400	90
		4	900 µm TB	2.0	8.2	0.32	52	35	1335	300	400	90
		6	900 µm TB	2.0	9.1	0.36	80	54	1335	300	400	90
		12			13.1	0.51	164	110	2670	600	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	FI1B002PB	FI3B002PB	FI4B002PB	FISB002PB
4	FI1B004PB	FI3B004PB	FI4B004PB	FISB004PB
6	FI1B006PB	FI3B006PB	FI4B006PB	FISB006PB
12	FI1B012PB	FI3B012PB	FI4B012PB	FISB012PB
LSZH/Riser				
2	FI1B002LB	FI3B002LB	FI4B002LB	FISB002LB
4	FI1B004LB	FI3B004LB	FI4B004LB	FISB004LB
6	FI1B006LB	FI3B006LB	FI4B006LB	FISB006LB
12	FI1B012LB	FI3B012LB	FI4B012LB	FISB012LB

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

Specifications

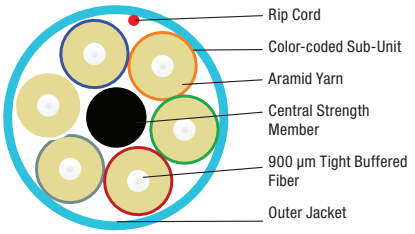
Bend Radius (vs. Cable OD)

Installation	15 x OD
Operation	10 x OD

Temperature Range

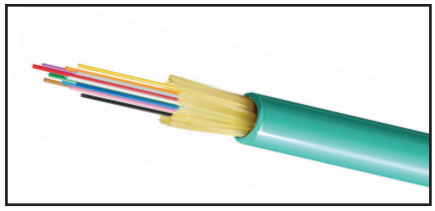
Storage	-40°C to 70°C (-40°F to 158°F)
Installation (Plenum)	0°C to 60°C 32°F to 140°F
Installation (Riser/LSZH)	-10°C to 60°C (14°F to 140°F)
Operation (Plenum)	0°C to 70°C (32°F to 158°F)
Operation (Riser/LSZH)	-20°C to 70°C (-4°F to 158°F)

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

Fiber*Express* 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

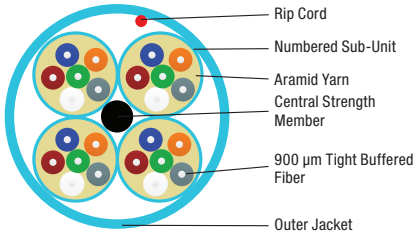
Bend Radius (vs. Cable OD)

Installation	15 x OD
Operation	10 x OD

Temperature Range

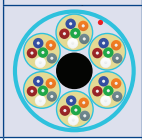
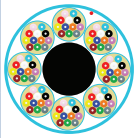
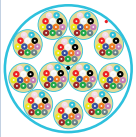
Storage	-40°C to 70°C (-40°C to 158°F)
Installation (Plenum)	0°C to 60°C (32°F to 140°F)
Installation (Riser/LSZH)	-10°C to 60°C (14°F to 140°F)
Operation (Plenum)	0°C to 70°C (32°F to 158°F)
Operation (Riser/LSZH)	-20°C to 70°C (-4°F to 158°F)

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			
									Installation		Operation	
				mm	mm	in.	Kg/km	lb/1000 ft.	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	2670	600	800	180
		24					80	54				
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.

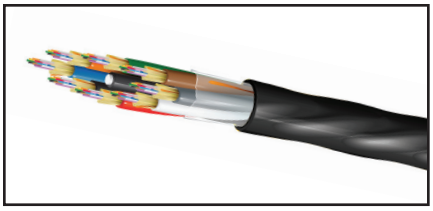
Fiber*Express* Distribution Cables (continued)

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

Indoor/Outdoor Specifications

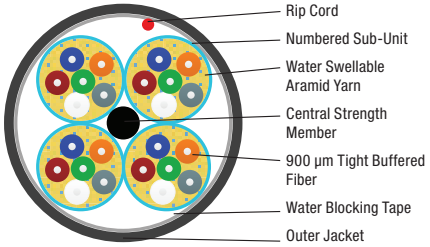
Bend Radius (vs. Cable OD)

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

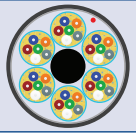
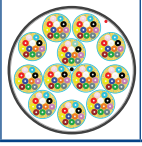
- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR FT4 (RISER - PVC)
- NEC/CEC OFNR FT4 (LSZH - FRPE)
- NEC/CEC OFNP FT6 (PLENUM - PVC)
- ICEA S-104-696

Fiber*Express* 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

Description	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
									Installation		Operation	
				mm	mm	in.	Kg/km	lb/1000 ft.	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	2670	600	800	180
		24					80	54				
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.

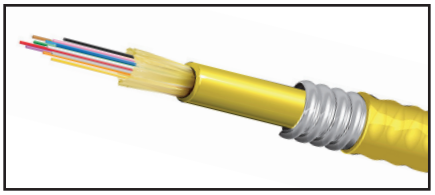
Fiber*Express* Distribution Cables (continued)

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	FDSD002L9
6	FD3D006L9	FD4D006L9	FDSD006L9
12	FD3D012L9	FD4D012L9	FDSD012L9
24	FD3D024L9	FD4D024L9	FDSD024L9
Non-Unitized - Riser			
2	FD3D002R9	FD4D002R9	FDSD002R9
6	FD3D006R9	FD4D006R9	FDSD006R9
12	FD3D012R9	FD4D012R9	FDSD012R9
24	FD3D024R9	FD4D024R9	FDSD024R9
Non-Unitized Plenum			
2	FD3D002P9	FD4D002P9	FDSD002P9
6	FD3D006P9	FD4D006P9	FDSD006P9
12	FD3D012P9	FD4D012P9	FDSD012P9
24	FD3D024P9	FD4D024P9	FDSD024P9
Unitized 6-Fiber Sub-Units - Riser			
24	FD3D024RJ	FD4D024RJ	FDSD024RJ
Unitized 6-Fiber Sub-Units - Plenum			
24	FD3D024PJ	FD4D024PJ	FDSD024PJ
Unitized 12-Fiber Sub-Units - Riser/LSZH			
48	FD3D048LK	FD4D048LK	FDSD048LK
72	FD3D072LK	FD4D072LK	FDSD072LK
96	FD3D096LK	FD4D096LK	FDSD096LK
144	FD3D144LK	FD4D144LK	FDSD144LK
Unitized 12-Fiber Sub-Units - Plenum			
48	FD3D048PK	FD4D048PK	FDSD048PK
72	FD3D072PK	FD4D072PK	FDSD072PK
96	FD3D096PK	FD4D096PK	FDSD096PK
144	FD3D144PK	FD4D144PK	FDSD144PK

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

Fiber*Express* 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

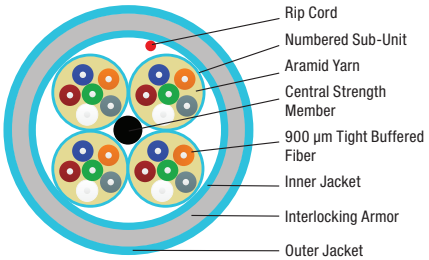
Bend Radius (vs. Cable OD)

Installation	20 x OD
Operation	15 x OD

Temperature Range

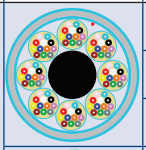
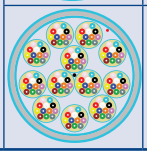
Storage	-40°C to 70°C (-40°F to 158°F)
Installation (Plenum)	0°C to 60°C (32°F to 140°F)
Installation (Riser/LSZH)	-10°C to 60°C (14°F to 140°F)
Operation (Plenum)	0°C to 70°C (32°F to 158°F)
Operation (Riser/LSZH)	-20°C to 70°C (-4°F to 158°F)

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			
									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	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.

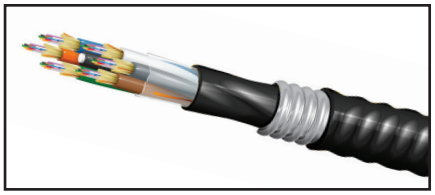
Standard Indoor Armored Configurations

Fiber Count	Belden Part Number		
	OM3 Aqua	OM4 Erika Violet	OS2 Yellow
Non-Unitized Riser			
6	FI3D006F9	FI4D006F9	FISD006F9
12	FI3D012F9	FI4D012F9	FISD012F9
24	FI3D024F9	FI4D024F9	FISD024F9
Non-unitized Plenum			
6	FI3D006A9	FI4D006A9	FISD006A9
12	FI3D012A9	FI4D012A9	FISD012A9
24	FI3D024A9	FI4D024A9	FISD024A9
Unitized 12 fiber sub-units plenum			
48	FI3D048AK	FI4D048AK	FISD048AK
72	FI3D072AK	FI4D072AK	FISD072AK
96	FI3D096AK	FI4D096AK	FISD096AK
144	FI3D144AK	FI4D144AK	FISD144AK

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

Fiber*Express* Armored Distribution Cables (continued)

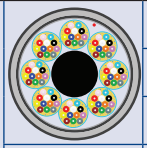
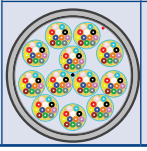
Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated



Optical Fiber Armored Distribution Cable, Indoor/Outdoor

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 OD	Cable OD		Weight		Tensile Strength			
									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.

Indoor/Outdoor Specifications

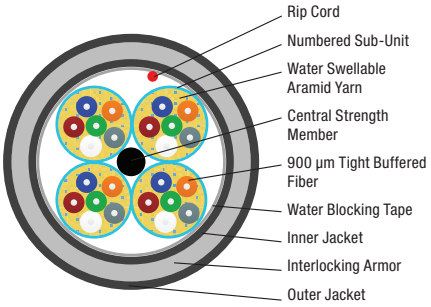
Bend Radius (vs. Cable OD)

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



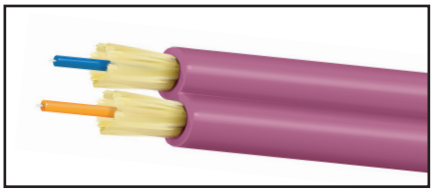
Standard Indoor / Outdoor Armored Configurations

Fiber Count	Belden Part Number		
	OM3 Black	OM4 Black	OS2 Black
Non-Unitized Riser			
6	FD3D006F9	FD4D006F9	FDSD006F9
12	FD3D012F9	FD4D012F9	FDSD012F9
24	FD3D024F9	FD4D024F9	FDSD024F9
Non-unitized Plenum			
6	FD3D006A9	FD4D006A9	FDSD006A9
12	FD3D012A9	FD4D012A9	FDSD012A9
24	FD3D024A9	FD4D024A9	FDSD024A9
Unitized 12 fiber sub-units plenum			
48	FD3D048AK	FD4D048AK	FDSD048AK
72	FD3D072AK	FD4D072AK	FDSD072AK
96	FD3D096AK	FD4D096AK	FDSD096AK
144	FD3D144AK	FD4D144AK	FDSD144AK

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

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

Fiber*Express* 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			
								Installation		Operation	
				mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Simplex		1	900 µm TB	2.0	0.08	4	3	220	50	66	15
		1		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
		2		3.0 x 5.8	0.11 x 0.22	16	11				

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			
								Installation		Operation	
				mm	in.	Kg/km	lb/1000 ft.	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

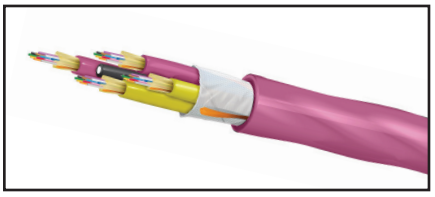
Consult individual technical data sheets for exact specifications.

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

Fiber*Express* Composite Distribution Cables

Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated



Optical Fiber Composite Cable

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

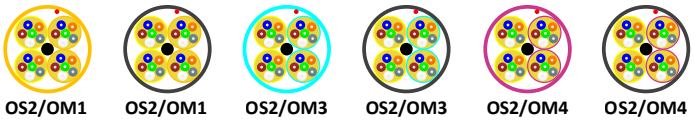
Applications

- 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

Standard Composite Cable Color



Composite Distribution Configurations

Building a *Smart*Part 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**

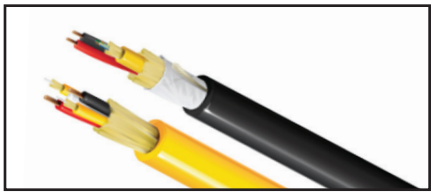
Subunit Type/Configuration	
J	4.5 mm Subunit, 6 x 900 µm Fiber
K	5.5 mm Subunit, 12 x 900 µm Fiber

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

FDEDH31AK - 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

Indoor Specifications

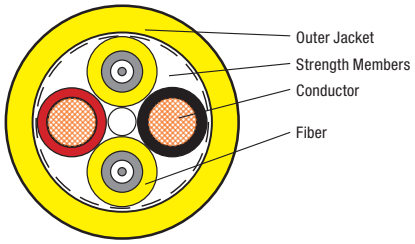
Bend Radius (vs. Cable OD)

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



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**

Fiber*Express* 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:

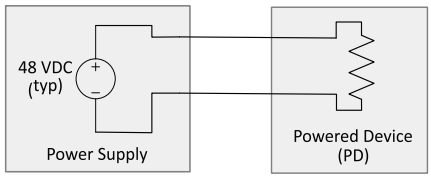
- DAS
- POLAN/PON
- Power over longer distances
- Entrance space
- Pre-term

Description	Construction	Fire Rating	Sub-Unit Type	Fiber Count	#Conductors x AWG	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
											Installation		Operation	
						mm	mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Indoor		Plenum	Breakout	2	2 x 14	3.0	8.7	0.342	95	64	2700	600	810	180
					2 x 16		8	0.315	79	51				
					2 x 18		8	0.315	71	48				
			Distribution	6	2 x 14	4.8	8.9	0.352	97	65				
					2 x 16		8.6	0.34	82	55				
					2 x 18		8.4	0.332	73	49				
Indoor/Outdoor			Breakout	2	2 x 14	3.0	9.3	0.366	101	68				
					2 x 16		8.6	0.339	85	57				
					2 x 18		8.6	0.339	77	52				
			Distribution	6	2 x 14	4.8	9.6	0.376	103	69				
					2 x 16		9.2	0.364	88	59				
					2 x 18		9	0.356	79	53				

Consult individual technical data sheets for exact specifications.

Remote Power Delivery Systems

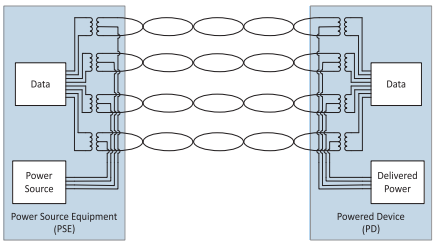
DC Systems



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

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

PoE

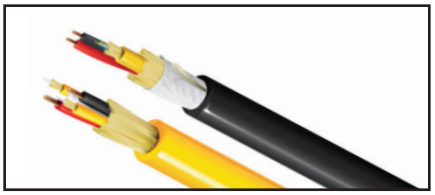


Low-Medium Power (15-100W max)
Short Distance (100 m max)

Belden Solutions:
Category Cable
REVConnect

Fiber*Express* Hybrid Copper-Fiber Cables (continued)

Tight Buffer — Indoor/Outdoor, Riser and Plenum Rated



Fiber Optical Hybrid Copper-Fiber Cable

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	HDSD0060214PJ
2 x 16	HD3B0020216PC	HD3D0060216PJ	HD4B0020216PC	HD4D0060216PJ	HDSB0020216PC	HDSD0060216PJ
2 x 18	HD3B0020218PC	HD3D0060218PJ	HD4B0020218PC	HD4D0060218PJ	HDSB0020218PC	HDSD0060218PJ

.

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 *Smart*Part 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	
HI	Indoor Hybrid Cable
HD	Indoor/Outdoor Hybrid Cable

Fiber Type	
1	OM1
3	OM3
4	OM4
S	OS2 (G.657.A1)
B	G.657.A2/B2
C	G.657.B3

Family	
B	Breakout
D	Distribution

Fiber Count	
Breakout	
001	1 Fiber
002	2 Fibers
Distribution	
006	6 Fibers

Conductor Count	
02	2 Conductors

Copper Type	
12	12 AWG
14	14 AWG
16	16 AWG
18	18 AWG
20	20 AWG

Fire Rating	
P	Plenum
R	Riser

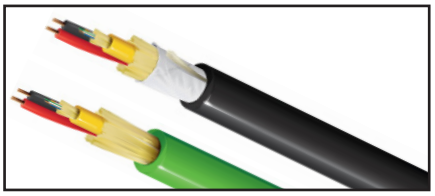
Sub-Unit Type/ Configuration	
Breakout	
C	3.0 mm Sub (1F x 900 µm)
Distribution	
J	4.8 mm Sub (Up to 6F x 900 µm)

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

Examples:

HISD0060214RJ - 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

Description	Construction	Fire Rating	Sub-Unit Type	Fiber Count	#Pairs x AWG	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
											Installation		Operation	
						mm	mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Indoor		Plenum	Breakout	2	2 x 16	3.0	10	0.395	109	73	2700	600	810	180
					2 x 18		8.9	0.352	89	60				
			Distribution	6	2 x 16	4.8	9.7	0.382	116	78				
					2 x 18		9.4	0.369	100	67				

Consult individual technical data sheets for exact specifications.

Indoor Specifications

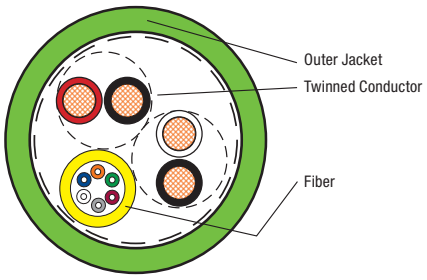
Bend Radius (vs. Cable OD)

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)

Legend



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**

FX DE Hybrid Copper-Fiber Cables

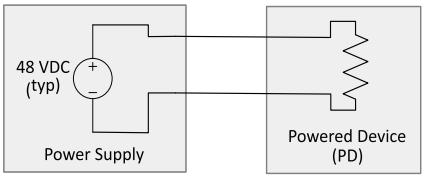
# Conductors x AWG	Belden Part Number					
	OM3		OM4		OS2	
	Breakout (2F)	Distribution (6F)	Breakout (2F)	Distribution (6F)	Breakout (2F)	Distribution (6F)
Indoor Plenum						
2 x 16	**DHIP162U3B02C**	**DHIP162U3D06J**	**DHIP162U4B02C**	**DHIP162U4D06J**	**DHIP162USB02C**	**DHIP162USD06J**
2 x 18	**DHIP182U3B02C**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

Digital Electricity™ Hybrid Copper-Fiber Cables (continued)

Tight Buffer — Indoor Plenum Rated

Remote Power Delivery Systems

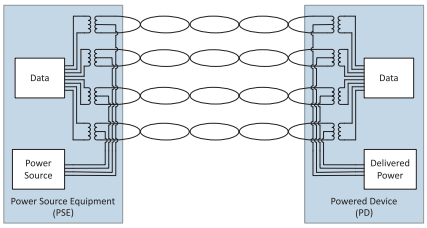
DC Systems



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

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

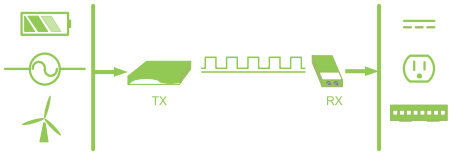
PoE



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 *Smart*Part 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	
DH	Hybrid DE

Location	
I	Indoor

Fire Rating	
P	Plenum (OFNP/CL3P)

Copper Type	
16	16 AWG
18	18 AWG
20	20 AWG

Pair Count	
2	2 Pairs

Shielding	
U	Unshielded

Fiber Type	
3	OM3
4	OM4
S	OS2 (G.657.A1)

Family	
B	Breakout
D	Distribution

Fiber Count	
02	2 Fibers
06	6 Fibers

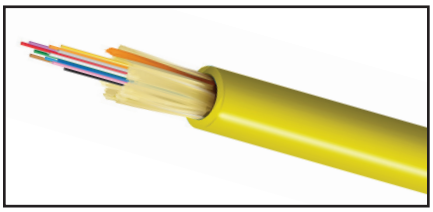
Sub-Unit Type/ Configuration	
Breakout	
C	3.0 mm Sub (1F x 900 µm)
Distribution: Unitized	
J	4.8 mm Sub (Up to 6F x 900 µm)

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 µMini-Distribution Cable

Fiber*Express* µMini Distribution Cables

Indoor Riser and Plenum Rated

Reduce diameter and prepare for the future. 250 µm 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

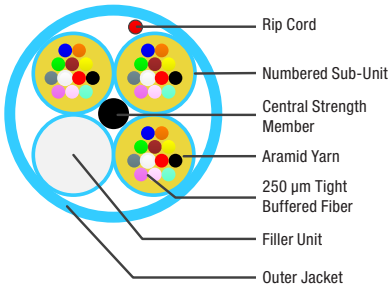
Bend Radius (vs. Cable OD)

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)

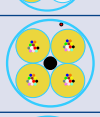
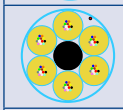
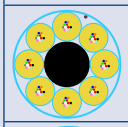
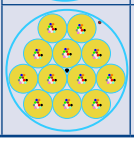
Legend



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

Base12

Name	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength lsb-f			
									Installation		Operation	
				mm	mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Indoor µMini-Distribution Cable												
Non-Unitized		12	250 µm	N/A	3.0	0.12	9	6	445	100	200	45
Unitized 12-Fiber Sub-Units		12	250 µm	3.0	4.8	0.18	11	7	668	150	200	45
		24		2.0	6.5	0.26	38	26				
		36										
		48										
		72			7.5	0.30	54	36				
		96			8.7	0.34	72	49				
		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.

Standard Indoor Configurations

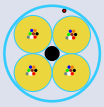
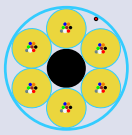
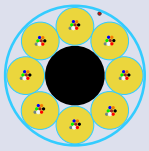
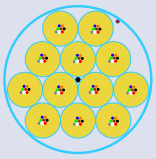
Fiber Count	Belden Part Number		
	OM3 Aqua	OM4 Erika Violet	OS2 Yellow
Non-Unitized - Plenum			
12	FI3M012P2	FI4M012P2	FISM012P2
Double-Jacket Unitized - Plenum			
12	FI3M012P0	FI4M012P0	FISM012P0
Unitized - Plenum			
24	FI3M024P1	FI4M024P1	FISM024P1
36	FI3M036P1	FI4M036P1	FISM036P1
48	FI3M048P1	FI4M048P1	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.

Fiber*Express* 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			
									Installation		Operation	
				mm	mm	in.	Kg/km	lb/1000 ft.	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

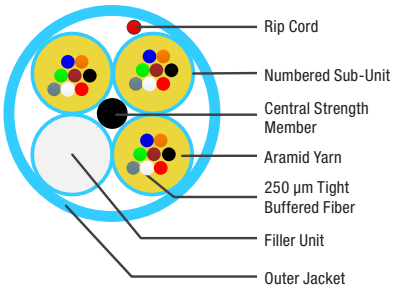
Bend Radius (vs. Cable OD)

Installation	15 x OD
Operation	10 x OD

Temperature Range

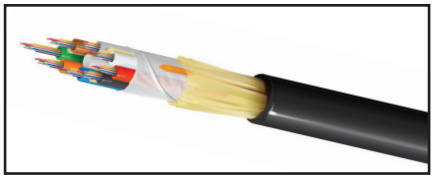
Storage	-40°C to 70°C (-40°F to 158°F)
Installation (Plenum)	0°C to 70°C (32°F to 158°F)
Installation (Riser/LSZH)	-10°C to 70°C (14°F to 158°F)
Operation (Plenum)	0°C to 70°C (32°F to 158°F)
Operation (Riser/LSZH)	-20°C to 70°C (-4°F to 158°F)

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

Fiber*Express* 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)

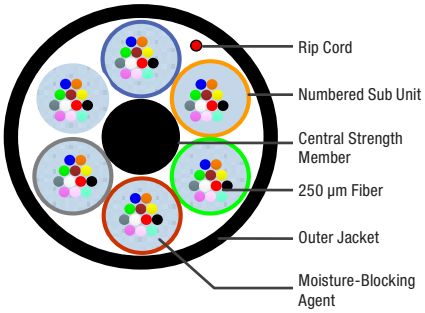
Jacket Specifications

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

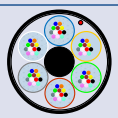
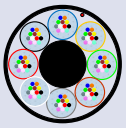
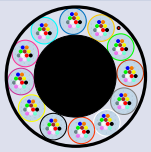
Temperature Range (Outdoor Series)	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-30°C to 60°C (-22°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)
Min. Bend Radius	
Installation	15 x OD
Long Term	10 x OD

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	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 24 36 48	10.5	0.41	87	59	2700	600	890	200
		72	11.5	0.45	106	71				
		96	13.2	0.52	136	91				
		144	17	0.67	220	148				

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.

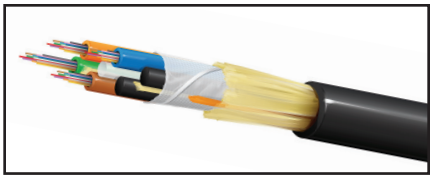
Fiber*Express* All Dielectric Loose Tube Cables (continued)

Single Jacket Loose Tube - Indoor/Outdoor

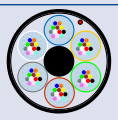
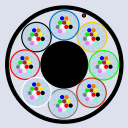
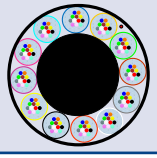
Gel-filled or dry-blocked buffer tubes prevent water migration. Full dielectric construction, no grounding required. Available as riser-rated cable, eliminating the need for service entrance splicing to in-building cable. Length markings in meters for easy determination of cable length.

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Unitized 6-Fiber Sub-Units		6	12.9	0.51	164	110	2700	600	890	200
Unitized 12-Fiber Sub-Units		12 24 36 48	12.9	0.51	164	110	2700	600	890	200
		72	13.7	0.54	190	128				
		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.

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.

Jacket Specifications

Jacket Material	
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

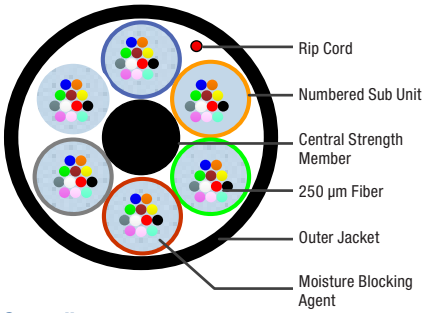
Ratings

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

Specifications

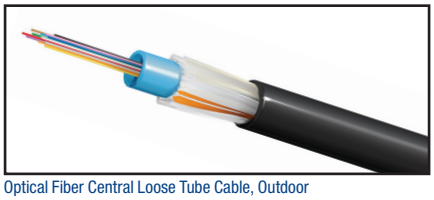
Min. Bend Radius	
Installation	15 x OD
Long Term	10 x OD
Temperature Range (Riser Series)	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-30°C to 60°C (-22°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)

Legend



Compliance

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



Optical Fiber Central Loose Tube Cable, Outdoor

Fiber*Express* 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

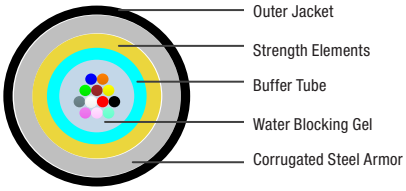
Jacket Specifications

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Outdoor										
Single Subunit		2 4 6 8 12 24	8	0.315	50	34	2700	600	890	200

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Outdoor Armored										
Single Subunit		2 4 6 8 12 24	10.4	0.410	140	95	2700	600	890	200

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.

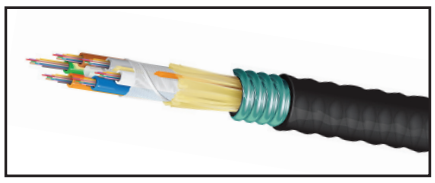
Fiber*Express* Armored Loose Tube Cables

Single Jacket, Single Armor Loose Tube — Outdoor

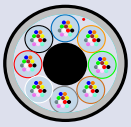
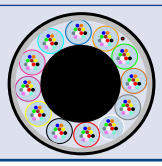
Gel-filled or dry-blocked buffer tubes prevent water migration. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Rodent resistant. Available in sizes up to 144 fibers. Length markings in meters for easy determination of cable length.

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	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 24 36 48	13.2	0.52	140	94	2700	600	800	180
		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.

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.

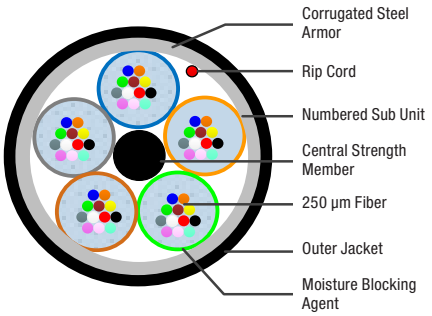
Jacket Specifications

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

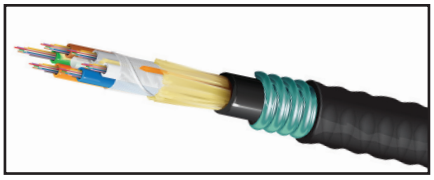
Temperature Range (Outdoor)	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-30°C to 60°C (-22°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD

Legend



Compliance

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



Optical Fiber Loose Tube Cable, Outdoor

Fiber*Express* 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)

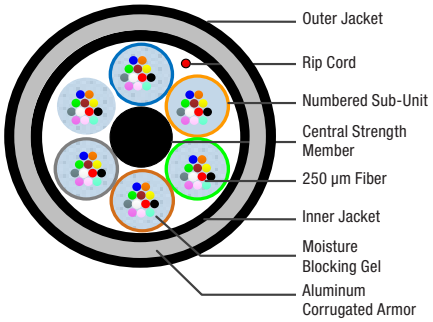
Jacket Specifications

Jacket Material	
Outdoor	PE
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

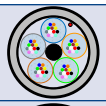
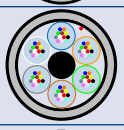
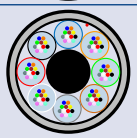
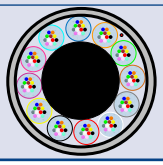
Temperature Range (Outdoor)	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-30°C to 60°C (-22°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	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 24 36 48	15.5	0.62	200	134	2670	600	890	200
		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.

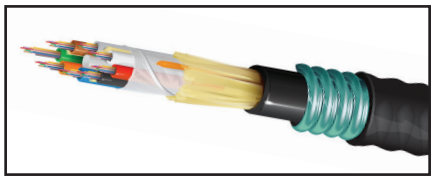
Fiber*Express* Armored Loose Tube Cables (continued)

Double Jacket, Single Armor Loose Tube — Indoor/Outdoor

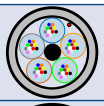
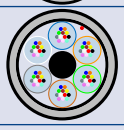
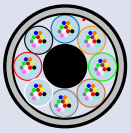
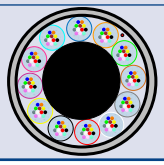
Gel-filled buffer tubes prevent water migration. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Rodent resistant. Available in sizes up to 216 fibers. Length markings in meters for easy determination of cable length.

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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Unitized 6-Fiber Sub-Units		6	13.7	0.54	205	138	2700	600	890	200
Unitized 12-Fiber Sub-Units		12 24 36 48	13.7	0.54	205	138	2700	600	890	200
		72	16.8	0.66	256	172				
		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.

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.

Jacket Specifications

Jacket Material	
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

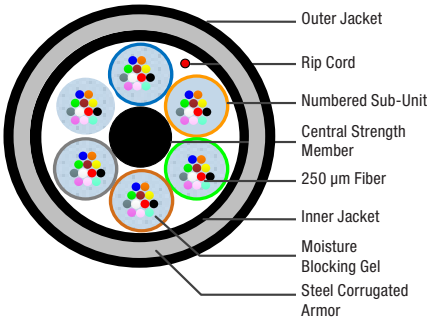
Ratings

Riser	OFCR

Specifications

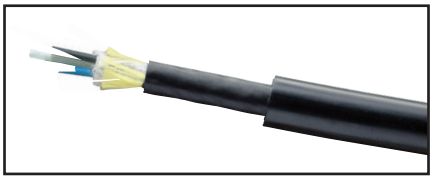
Temperature Range (Riser)	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-10°C to 60°C (14°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD

Legend



Compliance

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



Optical Fiber Heavy Duty Loose Tube Cable

Fiber*Express* 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

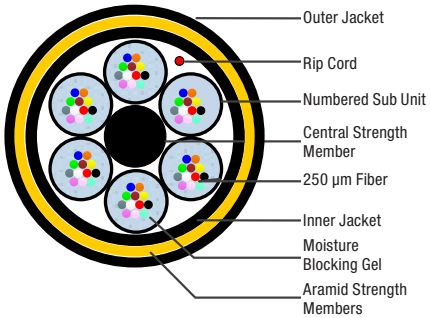
Jacket Specifications

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

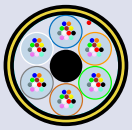
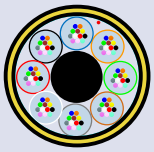
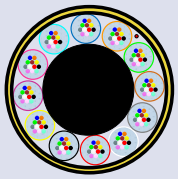
Temperature Range	
Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-30°C to 60°C (-22°F to 140°F)
Operating	-40°C to 70°C (-40°F to 158°F)
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD

Legend



Compliance

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

Name	Construction	Fiber Count	Cable OD		Weight		Tensile Strength lsb-f			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	N	lbs-f	N	lbs-f
Unitized 12-Fiber Sub-Units		2 4 6	12.5	0.49	125	84	2700	600	890	200
Unitized 12-Fiber Sub-Units		12 24 36 48	12.5	0.49	125	84	2700	600	890	200
		72	13.4	0.53	144	97				
		96	15.2	0.6	180	121				
		144	19	0.75	274	184				

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.

Fiber*Express* 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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	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

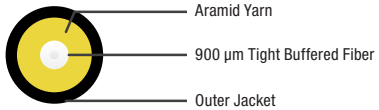
Temperature Range

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

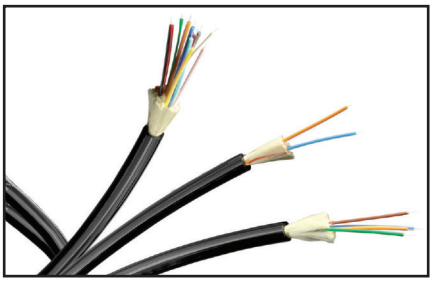
Installation	0.2" (5 mm)
Long Term	0.2" (5 mm)

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

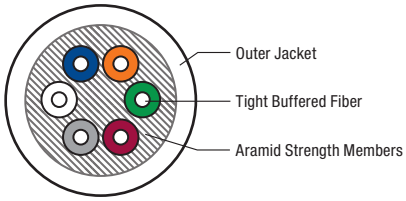
Assembly Color-coded fibers with strength members

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

Fiber*Express* 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			
							Installation		Operation	
			mm	in.	Kg/km	lb/1000 ft.	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.

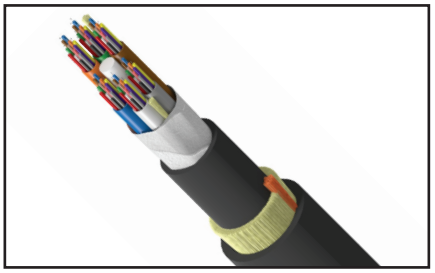
Standard Configurations

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**

Fiber*Express* 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			
								Installation		Operation	
				mm	in.	Kg/km	lb/1000 ft.	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.

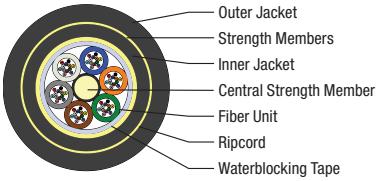
Jacket Specifications

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

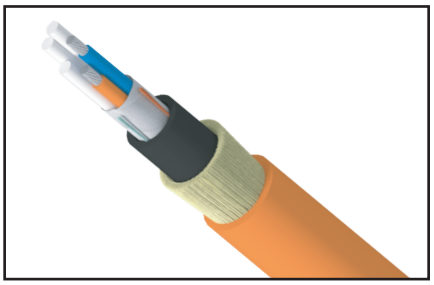


Fiber & Sub-Unit

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

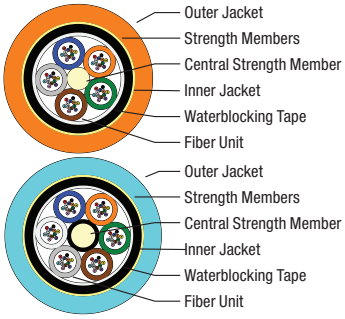
Jacket Specifications

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 OFNR/OFNR FT4
- ICEA S-104-696
- Flame Resistance IEEE 1202 / 383-2003
- RoHS II 2011/65/EU
- REACH EC1907-2006

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

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

Description	Construction	Fiber Count	Fiber/ Tube	Cable OD		Weight		Tensile Strength			
								Installation		Operation	
				mm	in.	Kg/km	lb/1000 ft.	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								
		48	12								
		60	12								
		72	12	14.12	0.556	176 (PVC & CPE)	118 (PVC & CPE)				

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	FDST002RF
4	4	FD1T004RF	FD3T004RF	FD4T004RF	FDST004RF
6	6	FD1T006RF	FD3T006RF	FD4T006RF	FDST006RF
8	8	FD1T008RG	FD3T008RG	FD4T008RG	FDST008RG
12	12	FD1T012RG	FD3T012RG	FD4T012RG	FDST012RG
24	12	FD1T024RG	FD3T024RG	FD4T024RG	FDST024RG
36	12	FD1T036RG	FD3T036RG	FD4T036RG	FDST036RG
48	12	FD1T048RG	FD3T048RG	FD4T048RG	FDST048RG
60	12	FD1T060RG	FD3T060RG	FD4T060RG	FDST060RG
72	12	FD1T072RG	FD3T072RG	FD4T072RG	FDST072RG

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

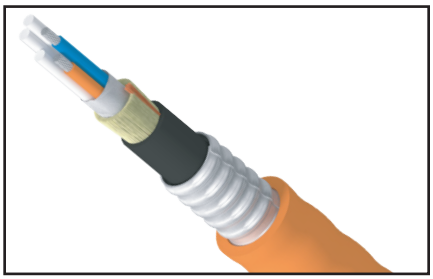
TrayOptic® Industrial Heavy-Duty Armored Cables (continued)

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/OFCR FT4) PVC or CPE Jacket Indoor/Outdoor - Armored

Description	Construction	Fiber Count	Fiber/ Tube	Cable OD		Weight		Tensile Strength			
								Installation		Operation	
				mm	in.	Kg/km	lb/1000 ft.	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								
		60	12								
		72	12	19.56	0.770	378 (PVC) or 374 (CPE)	254 (PVC) or 251 (CPE)				

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	FDST0025F
4	4	FD1T0045F	FD3T0045F	FD4T0045F	FDST0045F
6	6	FD1T0065F	FD3T0065F	FD4T0065F	FDST0065F
8	8	FD1T0085G	FD3T0085G	FD4T0085G	FDST0085G
12	12	FD1T0125G	FD3T0125G	FD4T0125G	FDST0125G
24	12	FD1T0245G	FD3T0245G	FD4T0245G	FDST0245G
36	12	FD1T0365G	FD3T0365G	FD4T0365G	FDST0365G
48	12	FD1T0485G	FD3T0485G	FD4T0485G	FDST0485G
60	12	FD1T0605G	FD3T0605G	FD4T0605G	FDST0605G
72	12	FD1T0725G	FD3T0725G	FD4T0725G	FDST0725G

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

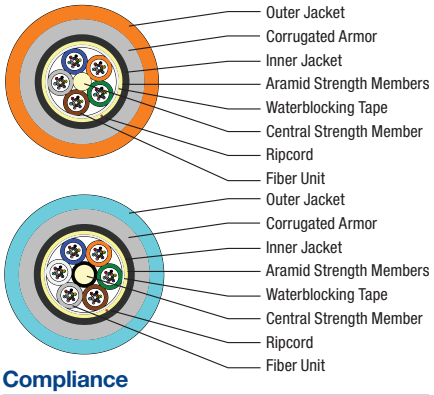
Jacket Specifications

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/OFCR FT4
- ICEA S-104-696
- Flame Resistance IEEE 1202 / 383-2003
- RoHS II 2011/65/EU
- REACH EC1907-2006

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