### Fiber Express Connectors

### Optimax® Field Installable Connectors and Installation Tool Kits



AX100029 with AX101794 Optimax SC Connector



A0408835 with AX101793 Optimax ST Compatible Connector



AX100947 Optimax Tool Kit



#### **Optimax Field Installable Connector**

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

Optimax Connectors are high-quality LC, SC and ST Compatible connectors that use a ceramic ferrule with a physical contact (PC) polish for Multimode and super physical contact (SPC) polish for Single-mode that ensures the best possible mating of optical fibers. Connectors are available for 62.5 or 50/125  $\mu m$  Multimode fiber and Single-mode fiber installations.

#### **Optimax Installation Tool Kit**

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

The Optimax Installation Tool Kit has all the tools and supplies required to install both the Optimax LC, SC or ST Compatible Multimode and Single-mode connectors. Certain tool kit items can be purchased separately to accommodate installers already possessing basic optical fiber installation tools.

Description	Belden Part Number
Fiber <i>Express</i> Connectors	
Optimax Field Installable Connector	
LC 62.5 µm, Multimode*	AX101981
LC 50 μm, Multimode*	AX101982
LC Single-mode*	AX101983
SC 62.5 µm, Multimode*	AX100029
SC 50 µm, Multimode*	AX101077
SC Single-mode*	AX101792
ST Compatible 62.5 µm, Multimode*	A0408835
ST Compatible 50 µm, Multimode*	AX101075
ST Compatible Single-mode*	AX101791
LC Accessory Kit for jacketed fiber (2 mm boot and a crimp slee	ve) <b>AX101984</b>
SC Accessory Kit for jacketed fiber (3 mm boot, crimp sleeves, co	ord adapter) AX101794
ST Accessory Kit for jacketed fiber (3 mm boot, crimp sleeves)	AX101793
Optimax Installation Tool Kit	
LC/SC/ST Compatible (includes installation tools, fiber cleaver, crimping tool, instruction microscope, tweezers, alcohol wipes, marker, scissors, waste be fiber stripper, cable stripper and Training Video)	
Basic (excludes fiber stripper & cleaver)	AX100949
Optimax LC Tool Kit Upgrade (includes LC installation tool, instructions manual, foam for the	<b>AX102061</b> case)
Optimax Individual Components	
Fiber Cleaver	A0408829
Installation Tool LC (does not include tool-clamp)	AX102062
Installation Tools ST Compatible and SC (includes tool-clamp)	A0403634
Microscope	AX100910
Refurbishing Materials (80 alcohol wipes and a black felt tip man	rker) <b>AX100951</b>
Installation Instruction Manual, LC	AX102063
Installation Instruction Manual, SC	PX101318
Installation Instruction Manual, ST Compatible	PX101317
Installation & Training Video, CD (see literature ordering form or	n the web) NOT0651
Crimp Tool complete with die	A0403641

<sup>\*</sup>For 900 µm buffered fiber only. For Optimax Single-mode termination on jacketed fiber, please use the appropriate Accessory Kit.

### Fiber Express Connectors

**Epoxy Field Installable Connectors** 

A0390851 Optical Fiber Field Installable Epoxy Connector, ST Compatible



#### **Epoxy Field Installable Connector**

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

Both types have a ceramic ferrule. Each connector comes complete with all the parts necessary for termination of tight buffered fibers as well as jacketed fibers. Parts include crimp sleeves, boots, cord adapter and dust cap.

Description	Belden Part Number			
	Multimode	Single-mode		
Fiber Express Connectors				
<b>Epoxy Field Installable Connecto</b>	r			
ST Compatible	A0390851	AX101412		
SC Simplex	AX100919	AX101411		
SC Duplex	AX100929			

### **Pre-Connectorized Assemblies**

Fiber Express Patch Cords

AX200057 Patch Cord Multimode SC Duplex (568SC)



#### Fiber Express Patch Cords

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

	Belden Part Number						
Description	Multimode, FX300, 62.5 µm	Multimode, FX600, 50 µm	Multimode, FX2000, 50 µm	Single-mode SPC			
ber <i>Express</i> Pre-Connectorized	Assemblies						
uplex Patch Cord							
T-ST, 2 m (6 ft.)	70102419	AX200341	AX200799	AX200090			
T-ST, 3 m (10 ft.)	70102420	AX200459	AX200795	AX200091			
T-ST, 5 m (16 ft.)	70102447	AX200413	AX200800	AX200092			
68SC-568SC, 2 m (6 ft.)	AX200056	AX200084	AX200603	AX200094			
68SC-568SC, 3 m (10 ft.)	AX200057	AX200082	AX200589	AX200095			
68SC-568SC, 5 m (16 ft.)	AX200058	AX200280	AX200624	AX200096			
C duplex-LC duplex, 2 m (6 ft.)	AX200517	AX200527	AX200664	AX200507			
C duplex-LC duplex, 3 m (10 ft.)	AX200518	AX200528	AX200665	AX200508			
C duplex-LC duplex, 5 m (16 ft.)	AX200519	AX200529	AX200666	AX200509			
/ITRJ-MTRJ, 2 m (6 ft.)	AX101122	AX101139	AX200801	AX101157			
/ITRJ-MTRJ, 3 m (10 ft.)	AX101123	AX101138	AX200802	AX101156			
/ITRJ-MTRJ, 5 m (16 ft.)	AX101125	AX101137	AX200803	AX101155			
ybrid Patch Cord							
68SC-ST, 3 m (10 ft.)	AX200060	AX200196	AX200900	AX200421			
C duplex-ST, 3 m (10 ft.)	AX200699	AX200695	AX200809	AX200698			
C duplex-568SC, 3 m (10 ft.)	AX200580	AX200581	AX200668	AX200667			
/ITRJ-ST, 3 m (10 ft.)	AX101133	AX101151	AX200810	AX101166			
/ITRJ-568SC, 3 m (10 ft.)	AX101128	AX101143	AX200797	AX101161			
ingle-ended (pigtails)							
T-open, 2 m (6 ft.)	70100390	AX200458	AX200811	AX200097			
C-open, 2 m (6 ft.)	70101714	AX200192	AX200653	AX200098			
C-open, 2 m (6 ft.)	AX200657	AX200658	AX200660	AX200659			
/ITRJ(m)-open, 3 m (10 ft.)	AX101366	AX101367	AX200812	AX101368			

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

 $These \ products \ are \ in \ the \ process \ of \ being \ assessed \ for \ RoHS \ compliance. \ Please \ check \ our \ Web \ Site \ for \ the \ most \ current \ RoHS \ status.$ 

**Belden Part Number** 

### COMMERCIAL NETWORKING — OPTICAL FIBER

## Fiber Express Pre-Connectorized Assemblies

AX250105 MPO Cable Assembly

Cable Assemblies



Multi-fiber Cable Assembly



900 µm Fan-out Assembly



#### **MPO Cable Assembly**

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

### **Multi-fiber Cable Assembly**

Description

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

มธระเหน่าเกเ	Multimode, FX300, 62.5 µm	Multimode, FX600, 50 µm						
Fiber Express Pre-Connectorized Assemblies								
MPO Cable Assembly, FOMC, MPO(f)-MPO(f)								
1 pulling eye, OFNP, 12 fibers, 10 m (33 ft.)	AX250021	AX250345						
1 pulling eye, OFNP, 12 fibers, 20 m (66 ft.)	AX250105	AX250376						
1 pulling eye, OFNP, 12 fibers, 50 m (164 ft.)	AX250349	AX250065						
1 pulling eye, OFNP, 12 fibers, 75 m (246 ft.)	AX250060	AX250066						
1 pulling eye, OFNP, 12 fibers, 100 m (328 ft.)	AX250061	AX250067						
	Multimode, FX2000, 50 µm	Single-mode						
1 pulling eye, OFNP, 12 fibers, 10 m (33 ft.)	AX250457	AX250224						
1 pulling eye, OFNP, 12 fibers, 20 m (66 ft.)	AX250412	AX250106						
1 pulling eye, OFNP, 12 fibers, 50 m (164 ft.)	AX250387	AX250071						
1 pulling eye, OFNP, 12 fibers, 75 m (246 ft.)	AX250413	AX250072						
1 pulling eye, OFNP, 12 fibers, 100 m (328 ft.)		AX250073						
Also available in 6 or 8-fiber MPO Cable Assemblies, please cor		ls.						
Multi-fiber Cable Assembly, MPO(	<u> </u>							
Multimode FX300, 62.5 μm, 12 fibers	NXC-RPML-PGPNN							
Multimode FX600, 50 μm, 12 fibers	NXC-RPNL-PGPNNN-STPFBN-N-01.5							
Multimode FX2000, 50 μm, 12 fibers	NXC-RPFL-PGPNNN-STPFBN-N-01.5							
Single-mode, 12 fibers	NXC-RPSL-PGANNI	N-STSFBN-N-01.5						
Multi-fiber Cable Assembly, MPO(								
Multimode FX300, 62.5 μm, 12 fibers	NXC-RPML-PGPNN							
Multimode FX600, 50 μm, 12 fibers	NXC-RPNL-PGPNN							
Multimode FX2000, 50 μm, 12 fibers	NXC-RPFL-PGPNNI							
Single-mode, 12 fibers	NXC-RPSL-PGANNI	N-SCSFBN-N-01.5						
Multi-fiber Cable Assembly, MPO(		N 1 ADEDN N 04 5						
Multimode, FX300, 62.5 μm, 12 fibers	NXC-RPML-PGPNN							
Multimode FX600, 50 μm, 12 fibers	NXC-RPNL-PGPNN							
Multimode FX2000, 50 μm, 12 fibers	NXC-RPFL-PGPNNI							
Single-mode, 12 fibers	NXC-RPSL-PGANNI	N-LC9LRN-N-01.2						
Multi-fiber Cable Assembly, MPO(I		N IDDEDN N 04 E						
Multimode FX300, 62.5 µm, 12 fibers	NXC-RPML-PGPNN							
Multimode FX600, 50 µm, 12 fibers	NXC-RPNL-PGPNNI							
Multimode FX2000, 50 µm, 12 fibers	NXC-RPFL-PGPNNI							
Single-mode, 12 fibers	NXC-RPSL-PGANNI	N-1R9LRN-N-01'2						

These products are in the process of being assessed for RoHS compliance. Please check our Web Site for the most current RoHS status.

### Fiber Express Pre-Connectorized Assemblies

Fiber Express Bar

AX250001 Fiber Express Bar 12ST



MX100154 Fiber Express MPO Adapter



#### Fiber Express Bar

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

#### Fiber Express Bar Accessories

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

**The 19 in. Rack Mount Housing** is a 1U metal panel that holds 1 Fiber *Express* Bar. It has a live hinge on the left-hand side and swings out giving access to the MPO connection and facilitate cable management and slack storage when used with the Slack Storage Tray.

**The Front Cover** is a smoked Plexiglas cover that protects the fiber cords connected to the Fiber *Express* Bar. It has 2 push rivets for positive locking and easy handling.

**The Slack Storage Tray** attaches to the back of the 19 in. Rack Mount Housing to facilitate cable management and slack storage. It has a storage capacity of 5 meters of 12-fiber ribbon cable.

**The Wall Mount Enclosure** can contain one Fiber *Express* Bar. It is made of heavy gauge steel and has a locking cover.

	Belden Part Number		
Description	Multimode, FX300, 62.5 µm	Multimode, FX600, 50 µm	

#### Fiber Express Pre-Connectorized Assemblies

Fiber Express Bar		
12 ST type, MPO (m), 1 m	AX250001	AX250052
6 SC duplex, MPO (m), 12 fibers, 1 m	AX250005	AX250054
6 MT-RJ, MPO (m), 12 fibers, 1 m	AX250178	AX250179
12 LC, MPO (m), 1 m	AX250539	AX250540
	Multimode, FX2000, 50 µm	Single-mode
12 ST type, MPO (m), 1 m	Multimode, FX2000, 50 μm AX250459	Single-mode AX250009
12 ST type, MPO (m), 1 m 6 SC duplex , MPO (m), 12 fibers, 1 m		
7.	AX250459	AX250009

Also available for 6 fibers, please contact Customer Service for more details.

Fiber Express Bar Accessories	
MPO Adapter (6 or 12 fibers) included with each Fiber <i>Express</i> Bar (1 m - Male)	MX100154
19 in. Rack Mount Housing for Fiber Express Bar, Gray	AX100331
19 in. Rack Mount Housing for Fiber Express Bar, Black	AX100330
Front Cover for Fiber Express rack mount housing	AX100332
Slack Storage Tray for Fiber <i>Express</i> Bar, (capacity: 5 meters) including top cover, Gray	AX100329
Slack Storage Tray for Fiber <i>Express</i> Bar, (capacity: 5 meters) including top cover, Black	AX100328
Wall Mount Enclosure, can contain one bar, Black	AC200004

### COMMERCIAL NETWORKING — OPTICAL FIBER

### Fiber Express Secure/Keyed LC System

Optimax Field Installable Connectors and Patch Cords & Pigtails





Secure/Keyed LC System





#### Fiber Express Secure/Keyed LC System

The Fiber Express Secure/Keyed LC System allows for physical segregation of networks segments in secure fiber cabling infrastructures. All Secure/Keyed LC products are available with 6 different keying options each carrying a different color to facilitate network administration. The keying detail inside the connector is totally tamper-resistant and cannot be re-produced inside a standard LC connector to violate the network security. All products comply with the FOCIS 10 standard and optical performance exceeds all industry standards for SFF connectors.

The Secure/Keyed LC Optimax field installable connectors are available in Multimode 50 µm laseroptimized and 62.5 µm fiber versions. They are high-quality connectors that use a ceramic ferrule with a physical contact (PC) polish for Multimode connectors.

The Secure/Keyed LC Patch Cords and Pigtails are offered in Multimode 62.5 μm (FX300), 50/125 μm (FX600) and laser-optimized 50/125  $\mu m$  (FX2000) for the most demanding network performance.

			Belden Pa	Belden Part Number		
Description	K1, Red	K2, Green	K3, Yellow	K4, Black	K5, Orange	K6, Blue
ber <i>Express</i> Secure/Keyed LC Sy	stem					
Secure/Keyed LC Optimax*						
Multimode 62.5 µm**	AX102203	AX102204	AX102205	AX102206	AX102207	AX102208
Multimode 50 μm**	AX102197	AX102198	AX102199	AX102200	AX102201	AX102202
or 900 μm buffered fiber only. The same accessory kit (Αλ	(101984) is used for 2 mn	n jacketed cable connect	or termination as for our	regular Optimax LC offer	ing.	
ecure/Keyed LC Duplex Patch C	ord, KEYx-KE	Yx*				
2 m (6 ft.), Multimode FX300, 62.5 μm	AX201365	AX201366	AX201367	AX201368	AX201369	AX201370
2 m (6 ft.), Multimode FX600, 50 μm	AX201383	AX201384	AX201385	AX201386	AX201387	AX201388
2 m (6 ft.), Multimode FX2000, 50 μm	AX201401	AX201402	AX201403	AX201404	AX201405	AX201406
3 m (10 ft.), Multimode FX300, 62.5 μm	AX201371	AX201372	AX201373	AX201374	AX201375	AX201376
3 m (10 ft.), Multimode FX600, 50 μm	AX201389	AX201390	AX201391	AX201392	AX201393	AX201394
3 m (10 ft.), Multimode FX2000, 50 μm	AX201407	AX201408	AX201409	AX201410	AX201411	AX201412
5 m (16 ft.), Multimode FX300, 62.5 μm	AX201377	AX201378	AX201379	AX201380	AX201381	AX201382
5 m (16 ft.), Multimode FX600, 50 μm	AX201395	AX201396	AX201397	AX201398	AX201399	AX201400
5 m (16 ft.), Multimode FX2000, 50 μm	AX201413	AX201414	AX201415	AX201416	AX201417	AX201418
secure/Keyed LC Duplex Hybrid	Patch Cord, KI	EYx-LCD*				
2 m (6 ft.), Multimode FX300, 62.5 µm	AX201419	AX201420	AX201421	AX201422	AX201423	AX201424
2 m (6 ft.), Multimode FX600, 50 µm	AX201437	AX201438	AX201439	AX201440	AX201441	AX201442
m (6 ft.), Multimode FX2000, 50 μm	AX201455	AX201456	AX201457	AX201458	AX201459	AX201460
3 m (10 ft.), Multimode FX300, 62.5 μm	AX201425	AX201426	AX201427	AX201428	AX201429	AX201430
3 m (10 ft.), Multimode FX600, 50 µm	AX201443	AX201444	AX201445	AX201446	AX201447	AX201448
3 m (10 ft.), Multimode FX2000, 50 μm	AX201461	AX201462	AX201463	AX201464	AX201465	AX201466
5 m (16 ft.), Multimode FX300, 62.5 μm	AX201431	AX201432	AX201433	AX201434	AX201435	AX201436
5 m (16 ft.), Multimode FX600, 50 μm	AX201449	AX201450	AX201451	AX201452	AX201453	AX201454
5 m (16 ft.), Multimode FX2000, 50 μm	AX201467	AX201468	AX201469	AX201470	AX201471	AX201472
Secure/Keyed LC Duplex Hybrid			713/201100	70.201110	70.201111	750201172
2 m (6 ft.), Multimode FX300, 62.5 μm	AX201473	AX201474	AX201475	AX201476	AX201477	AX201478
2 m (6 ft.), Multimode FX600, 50 μm	AX201491	AX201492	AX201493	AX201494	AX201495	AX201496
2 m (6 ft.), Multimode FX2000, 50 µm	AX201509	AX201510	AX201511	AX201512	AX201513	AX201514
3 m (10 ft.), Multimode FX300, 62.5 μm	AX201479	AX201480	AX201481	AX201482	AX201483	AX201484
3 m (10 ft.), Multimode FX600, 50 μm	AX201497	AX201498	AX201499	AX201500	AX201501	AX201502
B m (10 ft.), Multimode FX2000, 50 μm	AX201515	AX201516	AX201517	AX201518	AX201519	AX201520
i m (16 ft.), Multimode FX300, 62.5 μm	AX201485	AX201010	AX201017 AX201487	AX201010	AX201013 AX201489	AX201020
5 m (16 ft.), Multimode FX600, 52.5 μm	AX201403	AX201400 AX201504	AX201407 AX201505	AX201400 AX201506	AX201409 AX201507	AX201490
5 m (16 ft.), Multimode FX2000, 50 μm	AX201503 AX201521	AX201504 AX201522	AX201505 AX201523	AX201500 AX201524	AX201507 AX201525	AX201506
ecure/Keyed LC Pigtail, KEYx-o		MAZUIÜZZ	WVTO LOTO	MAZU 1024	MVTALATO	MAZU 1920
2 m (6 ft.), Multimode FX300, 62.5 μm	AX201527	AX201528	AX201529	AX201530	AX201531	AX201532
2 m (6 ft.), Multimode FX300, 62.5 µm			AX201529 AX201535			
, , ,	AX201533	AX201534		AX201536	AX201537	AX201538
2 m (6 ft.), Multimode FX2000, 50 μm er Patch Cord lengths and configurations may be available	AX201539	AX201540	AX201541	AX201542	AX201543	AX201544

### Fiber Express Secure/Keyed LC System

Adapter Modules, Adapter Strips and Fiber Express Manager Modules

AX102098 Secure/Keyed LC Adapter Module



AX102124 Secure/Keyed LC Adapter Strip



AX102114 Secure/Keyed LC Fiber Express Manager Module



#### Fiber Express Secure/Keyed LC System

The Fiber Express Secure/Keyed LC System allows for physical segregation of networks segments in secure fiber cabling infrastructures. All Secure/Keyed LC products are available with 6 different keying options each carrying a different color to facilitate network administration. The keying detail inside the connector is totally tamper-resistant and cannot be re-produced inside a standard LC connector to violate the network security. All products comply with the FOCIS 10 standard and optical performance exceeds all industry standards for SFF connectors.

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

**The Secure/Keyed LC Fiber***Express* **Manager Modules** can be used in 19 and 23 inch Fiber*Express* Manager Shelves to provide a high-density management system of up to 1920 terminated fibers per rack.

		Belden Part Number				
Description	K1, Red	K2, Green	K3, Yellow	K4, Black	K5, Orange	K6, Blue
Fiber Express Secure/Keyed	LC System		•	•		
Secure/Keyed LC Adapter M	odule*					
Gray holder	AX102089	AX102090	AX102091	AX102092	AX102093	AX102094
Almond holder	AX102095	AX102096	AX102097	AX102098	AX102099	AX102100
White holder	AX102101	AX102102	AX102103	AX102104	AX102105	AX102106
Black holder	AX102107	AX102108	AX102109	AX102110	AX102111	AX102112
Secure/Keyed LC FiberExpre	ess Adapter Strip*					
12 fibers	AX102119	AX102120	AX102121	AX102122	AX102123	AX102124
24 fibers	AX102125	AX102126	AX102127	AX102128	AX102129	AX102130
Secure/Keyed LC FiberExpre	ess Manager Modu	le*				
12 fibers	AX102113	AX102114	AX102115	AX102116	AX102117	AX102118
24 fibers	AX102310	AX102311	AX102312	AX102313	AX102314	AX102315
-						

<sup>\*</sup> Patent Pending.

# Fiber Express Manager

## Rack Components and Modules

AX100934 Fiber Express Manager Shelf



AX101943 Fiber Express Manager 1U Rack Mount Patch Panel



AX102032 Fiber Express Manager 1U Cable Management Accessory



AX101525 Connector Module Pre-terminated MPO-MT-RJ



#### Fiber Express Manager Shelf

COMMERCIAL NETWORKING — OPTICAL FIBER

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

#### Fiber Express Manager 1U

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

#### Fiber Express Manager Connector Module

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

Belden Part Number			
Gray	Black		
AX100934	AX100935		
AX101084	AX101085		
AX101944	AX101943		
2 lb) <b>AX102033</b>	AX102032		
	AX100934 AX101084 AX101944		

	Belden Part Number					
Description	ST Type	SC Simplex	SC Duplex	SC Duplex (ST in)	LC	FC
Fiher Fynress Manager						

Fiber Express Manager Connector Module							
Metal Sleeve, Multimode, 6 fibers	AX101089		AX101092				
Zirconia Ceramic, Single-mode, 6 fibers	AX100936	AX100943	AX100944				
Metal Sleeve, Multimode, 12 fibers	AX101187		AX101714	AX101120	AX101528		
Zirconia Ceramic, Single-mode, 12 fibers	AX101186		AX101713	AX101119	AX101527		
Zirconia Ceramic, Single-mode, 12 UPC pigta	ils		AX101715				
Metal Sleeve, Multimode, 24 fibers					AX102306		
Zirconia Ceramic, Single-mode, 24 fibers					AX102305		
Zirconia Ceramic, Single-mode/Multimode, 6	fibers					AX100937	

Zirodina odramio, omgio modo/ivatamodo, o	717(100301			
	Multimode 62.5 µm	Multimode 50 µm	Single-mode	_
MPO(m)-ST type, 12 pre-terminated	AX101189	AX101190	AX101188	
MPO(m)-SC Duplex, 12 pre-terminated	AX101091	AX101114	AX101090	
MPO(m)-MT-RJ(m), 12 pre-terminated	AX101525	AX101526	AX101524	
MPO(m)-LC, 12 pre-terminated	AX101530	AX101531	AX101529	
MPO(m)-LC, 24 pre-terminated	AX102309	AX102308	AX102307	
MT-RJ, Beige, Multimode, 12 fibers				AX101096
MT-RJ, Blue, Single-mode, 12 fibers				AX101581

### Fiber Express Patch Panels

Rack Mount Patch Panels

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



AX100069 Fiber Express, 24/48 Port (2U) Rack Mount Patch Panel



AX100078 Fiber Express (3U) Rack Mount Patch Panel



AX100115 Fiber Express, 48/96 Port (4U) Rack Mount Patch Panel



#### Fiber Express Rack Mount Patch Panel 1U and 2U

The Fiber Express 1U and 2U Rack Mount Patch Panels are equipped with a special hinge that allows easy access to the rear of the patch panel without disturbing the optical fiber cable. A specially designed front panel allows connector protection and easy routing of optical fiber patch cords. The Fiber Express Rack Mount Patch Panels are also compatible with our 203 mm (8 in.) Splice Organizer Trays. This allows the optical fiber cable to be either terminated with fiber single-ended patch cords or field-installable connectors. The patch panels can be used with ST Compatible, SC, 568SC, FC, LC or MT-RJ adapters strips (ordered separately).

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

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

#### Fiber Express Rack Mount Patch Panel 3U

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

The Fiber Express 3U Rack Mount Patch Panel is a compact cross-connect assembly for the termination of optical fiber cables. The low-profile design minimizes required rack space to 127 mm (5 in.). It is compatible with ST Compatible, SC, 568SC, MT-RJ, LC and FC adapters strips (ordered separately).

#### Fiber Express Rack Mount Patch Panel 4U

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

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

Description	Belden Part Number
Fiber Express Patch Panels	
Fiber Express Rack Mount Patch Panel 1U*	
Gray	AX100042
Black	AX100041
Fiber Express Rack Mount Patch Panel 2U*	
Gray	AX100069
Black	AX100068
Fiber Express Rack Mount Patch Panel 3U	
Gray	AX100078
Black	AX100077
Fiber Express Rack Mount Patch Panel 4U	
Gray	AX100115
Black	AX100116

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

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

### Fiber Express Patch Panels

Rack Mount Accessories and Wall Mount Patch Panels

COMMERCIAL NETWORKING — OPTICAL FIBER

AX101800 127 mm (5 in.) Universal Offset Bracket Kit, for 19 in. and 23 in. Racks 1U



AX101802 23 in. Rack Universal Extension Bracket for 1U and 2U



AX100047 Right Side Cable Entry Bracket for 1U



AX100045 Front Cover for 1U



AX100543 Large Wall Mount



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

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

Description	Belden Part Number
Fiber Express Patch Panels	
Rack Mount Accessories (1U and 2U)	
127 mm (5 in.) Universal Offset Bracket Kit:	
for 19 in. and 23 in. racks (1U), Black	AX101799
for 19 in. and 23 in. racks (1U), Gray	AX101800
for 19 in. and 23 in. racks (2U), Black	AX101797
for 19 in. and 23 in. racks (2U), Gray	AX101798
23 in. Universal extension bracket, Black	AX101801
23 in. Universal extension bracket, Gray	AX101802
Right side cable entry bracket (1U), Black	AX100046
Right side cable entry bracket (1U), Gray	AX100047
Right side cable entry bracket (2U), Black AX100073	
Right side cable entry bracket (2U), Gray	AX100074
Front Cover (1U), Smoked Plexiglass	AX100045

#### Fiber Express Wall Mount Patch Panel

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

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

Available in gray and black, the Fiber Express Wall Mount Patch Panels have an ergonomic design, rugged construction and compact assemblies to effectively protect your optical fiber terminations and splices.

Description	Belden Part Number		
Fiber <i>Express</i> Patch Panels			
Wall Mount			
Small, Gray	AX100496		
Small, Black	AX100495		
Medium, Gray	AX100541		
Medium, Black	AX100540		
Large, Gray	AX100543		
Large, Black	AX100542		

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

AX100541 Medium Wall Mount



AX100495 Small Wall Mount



### Fiber Express Patch Panels Accessories

Universal Optical Fiber Adapter Strips and Accessories

AX101729 Adapters loaded with 6 LC Duplex



AX100094 Adapters loaded with 3 SC Duplex





AX101100 Field Breakout Kit



A0649869 Optical Fiber Splice Organizer Kits and Trays



AX100945 Flex Kit



AX101098 Splice Holder Kit



#### **Optical Fiber Adapter Strips**

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

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

#### **Optical Fiber Accessories**

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

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

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

A Splice Holder Kit can be used to hold fusion or mechanical splices.

Each splice holder can handle up to 6 splices.

	Belden Part Number		
Description	Phosphor Bronze, Multimode	Zirconia Ceramic, Single-mode	
	manmoud	omgro modo	

#### Fiber Express Optical Fiber Adapter Strips

Single Density, Black				
Loaded with 6 ST Compatible Adapters	AX100088		AX100534	
Loaded with 3 SC Duplex Adapters	AX100094		AX101407	
Loaded with 6 SC Simplex Adapters	AX100092		AX100538	
Loaded with 6 FC Adapters	AX100090		AX100536	
Loaded with 6 LC Duplex Adapters	AX101729		AX101731	
MT-B.I loaded with 6 MT-B.I Multimode/Single-mode		AX101115		

MT-RJ, loaded with 6 MT-RJ, Multimode/Single-m	node	AX101115	
Double Density, Black			
Loaded with 12 ST Compatible Adapters	AX100080		AX100528
Loaded with 6 SC Duplex Adapters	AX100098		AX101409
Loaded with 12 SC Simplex Adapters	AX100084		AX100532
Loaded with 12 FC Adapters	AX100082		AX100530
Loaded with 12 LC Duplex Adapters	AX101741		AX101743
MT-RJ, loaded with 12 MT-RJ, Multimode/Single-	mode	AX101117	
Blank Strip			

### Black AX100066

Fiber Express Accessories		
Optical Fiber Field Breakout Kit		
6 fibers, 1/pack	AX101100	
12 fibers, 1/pack	AX101101	
Optical Fiber Splice Organizer Kit		
Splice kit, tray, 203 mm (8 in.)	A0649869	
Splice kit, tray, 305 mm (12 in.)	A0318904	
Optical Fiber Splice Tray		
Fusion, 203 mm (8 in.)	A0335015	
Fusion, 305 mm (12 in.)	A0316446	
Universal (mechanical or fusion), 203 mm (8 in.)	AX100079	
Universal (mechanical or fusion), 305 mm (12 in.)	A0394328	
Tray cover, 203 mm (8 in.)	A0394331	
Tray cover, 305 mm (12 in.)	A0394330	
Flex Kit	AX100945	

These products are in the process of being assessed for RoHS compliance. Please check our Web Site for the most current RoHS status.

AX101098

Splice Holder Kit

16.15

### Fiber Express Outlets

#### MediaFlex Plates and Inserts

AX101869 MediaFlex Plate, Double Gang



AX101874 MediaFlex Adapter Box, Double Gang



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



AX101937 MediaFlex SC Duplex Insert, Angled



#### MediaFlex Plate

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

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

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

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

#### **MediaFlex Adapter Box**

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

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

#### MediaFlex MDVO (style) Insert

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

#### **MediaFlex Multimedia Insert**

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

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

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

### Fiber Express Outlets

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

A0643205 MDVO Multimedia Outlet Box, shown here as terminated





A0407005 MDVO SC Fiber Module



A0649254 SC Duplex Adapter



A0407010 MDVO ST Compatible Fiber Module



AX101467 MDVO MT-RJ Fiber Module



AX100222 Multi-User Outlet Box, shown here with modules



#### **MDVO Multimedia Outlet Box**

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

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

#### **MDVO Multimedia Modules**

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

#### **Multi-User Outlet Box**

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

		Belden Pa	rt Number	
Description	Gray	Almond	White	Black
Fiber Express Outlets				
<b>MDVO Multimedia Outlet E</b>	Вох			
6-port	A0643205	A0643206	A0643207	A0643208
Please note that SC Duplex adapters must be ord	ered separately (A064	19254).		
<b>MDVO Multimedia Module</b>				
LC Duplex Multimode	AX102209	AX102210	AX102211	AX102212
LC Duplex Single-mode	AX102213	AX102214	AX102215	AX102216
SC Simplex, Multimode, Blue insert	A0407003	A0407004	A0407005	A0407006
SC Duplex Adapter, Multimode		A0649254		
ST Compatible, Multimode	A0407007	A0407008	A0407009	A0407010
MT-RJ, Multimode		AX101467		
MT-RJ, Single-mode, Blue		AX10	1466	
Custom multimedia connectors are also available	, please contact Custo	mer Service for more	details.	
Multi-User Outlet Box				
24-port	AX100219	AX100220	AX100221	AX100222

#### COMMERCIAL NETWORKING — OPTICAL FIBER

### **Network Connectivity Products**

Media Converters, Transceivers & Hubs and Network Tester

#### Media Converters



AX-1912 Media Converter Rack



AX050, 70 and 80 Transceivers and AX-509 Ethernet Hub



AX-110BT Realtime 10/100 Base-TX Ethernet Network Test Unit



#### **Media Converters for Ethernet and Fast Ethernet**

Media Converters enable the connection of dissimilar network cabling types, while maintaining the same network speed. A legacy Thinnet segment can be connected to a 10Base-T Hub or switch port with an AX-200 Converter or, link two different 10Base-T networks together over a multimode fiber optic link with a pair of AX-270s. Connect a legacy Thinnet segment over fiber with the AX-280 converter. The AX-5270 can be used for interbuilding links or attached to a fiber backbone.

#### **Transceivers and Ethernet Hubs**

The AX-50, 70 and 80 Transceivers enable the connection of a legacy AUI port to 10Base-T, Thinnet, or Fiber Optic media. The transceiver is powered from the host and requires no external power supply.

The AX-509 Ethernet Hub has an AUI port which accepts UTP, Fiber Optic or BNC transceivers. Specified for use by many U.S. Government Agencies. Includes a 110v/12v power supply.

#### Realtime 10/100 Base-TX Ethernet Network Test Unit

The AX-110BT Realtime 10/100 Base-TX Ethernet Network Test Unit is a cost effective way to quickly determine a network's operating condition. Plug the unit's patch cord into the tester, then into any open RJ-45 jack in an office, cubicle or conference room. Immediately see if the jack is a live network node capable of either 100 Mb/s or 10 Mb/s. Next check patch cord continuity and polarity. Connect the downlink to a PC to check NIC card link, speed and full or half duplex capabilities. Connect the uplink to a hub or switch port to verify link and speed.

Description	Belden Part Number
Network Connectivity Products	
Media Converter	
10Base-T/10Base2, RJ-45 to BNC	AX-200
10Base-T/10Base-FL, RJ-45 to ST-Compatible fiber connectors	AX-270
10Base2/10Base-FL, BNC to ST-Compatible fiber connectors	AX-280
100Base-TX/100Base-FX, SC-Compatible fiber connectors	AX-5270SC
100Base-TX/100Base-FX, ST-Compatible fiber connectors	AX-5270ST
Media Converter Rack	
Holds up to 12 converters and multi lead power supplies, 19 in. rack-mount ready	AX-1912-MCR
Power Supply, 4-lead 110v/12v, powers up to 4 converters	AX-270P4U
Power Supply, 8-lead 110v/12v, powers up to 8 converters	AX-270P8U
Transceivers and Ethernet Hubs	
UTP Transceiver, 10Base-T, AUI to RJ-45, side port	AX-50
UTP Transceiver, 10Base-T, AUI to RJ-45, rear port	AX-50R
Fiber Transceiver, 10Base-FL, AUI to ST-Compatible	AX-70
Thinnet Transceiver, 10Base2, AUI to BNC	AX-80
Ethernet Hub with 8 RJ-45 10Base-T ports and 1 AUI port	AX-509
Network Tester	
Realtime 10/100 Base-TX Ethernet Network Test Unit	AX-110BT