

High-Density Fiber Solution for Rugged Environments

PRODUCT BULLETIN



Belden Micro Tactical Fiber Optic Cable Assemblies are designed and constructed to facilitate fast, easy field deployment. The singlemode cables are ideal for use in digital camera transmissions, electronic news gathering and OB vehicles and other event-related communications systems. Belden Micro Tactical Fiber Optic Cable Assemblies are future proofed for 10/40/100G.

By combining rugged cable assemblies with proven mechanical transfer (MT) technology for multi-fiber ferrules, termination of 24 and 48 fibers with one connection is possible to drastically reduce installation time and termination costs.

This solution consists of a Micro Tactical Cable with 24 or 48 fibers terminated on each end with aluminum hard-anodized hermaphroditic connectors that contain 2 or 4 MT Base-12/APC (angled) ferrules and patch panels with 12 or 24 LC/UPC Duplex connectors.

Key Features

- Made with bend-insensitive fibers
- Aramid yarn strength members below a jacket made from exceptionally tough, sunlight- and chemical-resistant polyurethane (PUR) that resists abrasion, crushing and cut-through
- MT Base-12/APC technology for termination of 24 and 48 fibers with one MT Base-12 ferrule with mated pair
- Color-coded labels are included and can be used for port identification and polarity management

Benefits at a Glance

- Smaller and lighter in weight than traditional tactical fiber cables
- Smaller bend radius capability and improved flexibility and resiliency (cable memory) over a broad range of outdoor temperatures and weather conditions
- Compact, rugged cable design allows easy transportation and deployment
- Hermaphroditic design easily allows connectors to be mated/concatenated regardless of gender and offers seamless point-to-point connections
- All-metal shell construction ensures that connections can withstand wide temperature ranges and provides extreme impact resistance
- IP68 rating reinforces the robust connector and keeps connector end faces well protected against dirt, dust and water

Key Applications

AV/Broadcast

- Broadcast trucks and vans
- Digital camera transmission
- Field video broadcast
- Military communications
- Re-deployable communications

Technical Information

Cable Assembly

Physical Characteristics					
	Description	Type	Material	Color	Size
Materials	Connector Plugs at Both Ends	IP68 Hermaphroditic	Aluminum Hard-Anodized	Black	Size 19
	Fiber Optic Ferrules	MT Base-12/APC Ferrules	Plastic	Black	12f (each)
Cable Color	Black				
Fiber Count	24 Fibers - 2x MT-12 APC or 48 Fibers - 4x MT-12 APC				
Wiring Scheme	TIA-568.3				
Packaging	Individually packaged on 3-flange plastic reel. Deployable reels are optional.				
Mechanical Characteristics					
Storage Temperature Range	-40°C to +75°C				
Installation Temperature Range	-20°C to +65°C				
Operating Temperature Range	-40°C to +75°C				
Environmental/Mechanical Characteristics	Test	Method		Performance	
	Humidity	EIA/TIA-455-5		+75°C, 90-95% RH, 7 days	
	Cable Retention	EIA/TIA-455-6		400 lbs	
	Durability	EIA/TIA-455-21		500 Cycles	
	Vibration	EIA/TIA-455-11, Cond. I		10 to 55 Hz	
	Impact	EIA/TIA-455-2		8 Impacts @ 2.5 m	
	Shock	EIA/TIA-455-14, Cond. A		50 g for 11 ms	
	Water Submersion	IP68		Water Immersion 1 m	
	Crush Resistance (cable)	IEC 60794-1-21-E3		50 kN/m	
	Cable Min Bend Radius Operation (Long-Term)	IEC 60794-1-21 E11		10x Cable OD	
Cable Min Bend Radius Operation (Short-Term)	IEC 60794-1-21 E6		15x Cable OD		
Transmission Characteristics					
Fiber Type	Singlemode ITU G.652.D & G.657.A1				
Optical Connector Performance	Wavelength (nm)	Max Insertion Loss (dB) Per < mated Pair		Min Return Loss (dB) Per < mated Pair	
	1310/1550	0.5		-60	
Optical Fiber Characteristics	Mode-Field/Cladding Diameter (µm)	Wavelength (nm)		Attenuation max. (dB/km)	
	8.9 ± 0.4	1310/1550/1625		0.5	



Hermaphroditic Connector Detail



Optional Deployable Reel

Patch Panel

Physical Characteristics				
Max. Capacity	Panel 24 Fibers - LC Duplex/UPC/MT-12 APC or Panel 48 Fibers - LC Duplex/UPC/MT-12 APC			
Access	Front Connection - LC Adapters		Rear Connection - Ruggedized MT Plug	
Dimensions	Height (in)		Width (in)	
	1.75		19	
Materials	Description	Type	Material	Color
	Panel	N/A	Aluminum	Black
	Front Adapters	LC-Duplex w/ Internal Shutters	Plastic	Blue
	Back Receptable	IP68 Hermaphroditic	Aluminum Hard-Anodized	Black
	Receptable Termini	MT- Ferrule SM APC	Thermo-Plastic	Black
Color	Black			
Weight	5.95 lbs			
Included Parts	Receptable, adapters and internal cabling			
Packaging	Individually packaged			
Transmission Characteristics				
Fiber Type	Singlemode ITU G.652.D & G.657.A1			
Transmission Specifications	Wavelength (nm)	Max Insertion Loss (dB) Per Panel	Return Loss (dB) Per MT-APC Mated Pair	Return Loss (dB) Per LC-UPC Mated Pair
	1310/1550	0.850	-60	-55



Standard Patch Panel



Patch Panel Shown with
Optional Color-coded Labels



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