

# UTG SOLUTIONS BRIEF BELDEN



## OPTICAL FIBER

The Utility Grade INFRASTRUCTURE (UTG<sup>SM</sup>) program has been developed alongside world-class global Technology Alliance Partners<sup>SM</sup>. These UTG-rated components from Belden enable you to support the rapid evolution of technology in today's building environments.

### PRODUCT OVERVIEW

Belden's UTG solutions provide a common infrastructure platform optimized for operational technology and high-performance applications. The below fiber recommendations complement a full UTG solution.

As part of the UTG connected architecture, the following convergence zones identify the most common environments fiber will be utilized within and around the building:

### INTER-BUILDING | INTRA-BUILDING | EXTENDED-EDGE

### CONSTRUCTION AND PERFORMANCE

#### INTER-BUILDING CONVERGENCE ZONE (BUILDING-TO-BUILDING)

Utilized to connect two or more buildings together, it is a recommended UTG best practice to install single-mode optical fiber for interbuilding environments.

#### UTG OPTICAL FIBER TIER 1 CRITICAL

- I/O mini-distribution plenum

#### FEATURES AND BENEFITS

- Offers the high-bandwidth and low-loss performance necessary for longer links
- Simplifies the design process and minimizes the risk of overcomplicating the solution
- Eliminates the 50-foot transition from OSP cable to plenum

	OS2	OM3	OM4
I/O Mini-distribution Plenum	FDSM072P2	FD3M072P2	FD4M072P2
	FDSM096P2	FD3M096P2	FD4M096P2
	FDSM144P2	FD3M144P2	FD4M144P2

#### UTG OPTICAL FIBER TIER 2 ESSENTIAL

- FiberExpress distribution cable

#### FEATURES AND BENEFITS

- 900µm tight-buffered fibers - fast and robust field termination
- All-dielectric designs - eliminates the need for grounding
- Interlocking armor - removes the need for conduit
- Environmental protection - UV, moisture and fungus resistant

I/O	OS2	OM3	OM4
All Dielectric	FDS072PK	FD3D072PK	FD4D072PK
	FDS096PK	FD3D096PK	FD4D096PK
	FDS144PK	FD3D144PK	FD4D144PK
AIA	FDS072AK	FD3D072AK	FD4D072AK
	FDS096AK	FD3D096AK	FD4D096AK
	FDS144AK	FD3D144AK	FD4D144AK
Grounding Kit for Interlock Armor			
Item Number	AX101099		

### INTRA-BUILDING CONVERGENCE ZONE (FLOOR-TO-FLOOR)

Utilized to connect two or more areas or floors within a building, it is a recommended UTG best practice to install laser-optimized multimode optical fiber for intrabuilding environments.

#### UTG OPTICAL FIBER TIER 1 CRITICAL

- Indoor mini-distribution plenum

#### FEATURES AND BENEFITS

- Offers the best balance of installation, bandwidth and loss parameters while minimizing cost of installation
- Best suited for within building and connected ceiling applications
- FiberExpress mini-distribution cable can support high-performance applications up to 400G

	OS2	OM3	OM4
Indoor Mini-distribution Plenum	FISM012P2	FI3M012P2	FI4M012P2
	FISM024P1	FI3M024P1	FI4M024P1
	FISM036P1	FI3M036P1	FI4M036P1
	FISM048P1	FI3M048P1	FI4M048P1
	FISM072P1	FI3M072P1	FI4M072P1
	FISM144P1	FI3M144P1	FI4M144P1

#### UTG OPTICAL FIBER TIER 2 ESSENTIAL

- All-dielectric indoor

#### FEATURES AND BENEFITS

- 900µm tight-buffered fibers - fast and robust field termination
- All-dielectric designs - eliminates the need for grounding

	OS2	OM3	OM4
All-dielectric Indoor	FISD012P9	FI3D012P9	FI4D012P9
	FISD024P9	FI3D024P9	FI4D024P9
	FISD048PK	FI3D048PK	FI4D048PK

### EXTENDED-EDGE CONVERGENCE ZONE (POWERED)

Utilized to extend the distances of certain devices on the network beyond the building, it is a recommended UTG best practice to install combined optical fibers for connectivity and copper conductors for power as a common cable.

#### UTG OPTICAL FIBER TIER 1 CRITICAL

- 48V FX hybrid cable

#### FEATURES AND BENEFITS

- Power and data - hybrid cables allow customers to bring power and data to low-voltage applications like security (cameras, sensors, wireless access points, phones, monitors, etc.)
- Flexibility - can be used for indoor (plenum and riser) and indoor/outdoor (plenum and riser) applications
- Fewer cables to stock - hybrid construction means that you can reduce your inventory by stocking and managing one cable versus two
- Single cable pull for time savings - you only need to pull a single cable versus two cables, reducing labor costs and installation time

# Conductors x AWG	Belden Part Number					
	OM3		OM4		OS2	
	Breakout 3mm (2F)	Distribution (6F)	Breakout 3mm (2F)	Distribution (6F)	Breakout 3mm (2F)	Distribution (6F)
Indoor Plenum						
2 x 14	HI3B-0020214PC	HI3D-0020214PJ	HI4B-0020214PC	HI4D-0020214PJ	HISB-0020214PC	HISD-0020214PJ
2 x 16	HI3B-0020216PC	HI3D-0020216PJ	HI4B-0020216PC	HI4D-0020216PJ	HISB-0020216PC	HISD-0020216PJ
2 x 18	HI3B-0020218PC	HI3D-0020218PJ	HI4B-0020218PC	HI4D-0020218PJ	HISB-0020218PC	HISD-0020218PJ
Indoor/Outdoor Plenum						
2 x 14	HD3B-0020214PC	HD-3D0020214PJ	HD4B-0020214PC	HD-4D0020214PJ	HDSB-0020214PC	HDSD-0020214PJ
2 x 16	HD3B-0020216PC	HD-3D0020216PJ	HD4B-0020216PC	HD-4D0020216PJ	HDSB-0020216PC	HDSD-0020216PJ
2 x 18	HD3B-0020218PC	HD-3D0020218PJ	HD4B-0020218PC	HD-4D0020218PJ	HDSB-0020218PC	HDSD-0020218PJ

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