

# OmniReach® FTTX Solutions

## DLX™ Fibre Optic Connector



ADC KRONE's DLX™ Fibre Optic Connector is a "Next Generation" hardened fibre optic connector designed to provide a cost-effective solution for connecting Outside Plant (OSP) fibre networks. The DLX connector is a miniature hardened connector that is used to speed residential connection in Fibre-To-The-Premises (FTTP) cabling networks. The connectors are strategically located in the distribution network to facilitate service connection, maintenance and reconfiguration of subscriber services. Connectors are typically staged at the street outside a residence to facilitate easy access and connection to the residence at a later date. The rugged connectors protect against extreme temperature, moisture, ultraviolet radiation, chemical exposure and other harsh conditions typically found in the outside plant. Rugged connectors provide a watertight seal and are typically installed in multiport fibre terminals or closures located on the street.

DLX connectors may also be installed in the Optical Network Terminal (ONT) equipment located at the premises. The hardened connectors are compatible with other hardened connectors or non-hardened SC adaptors mounted on the ONT enclosures.

DLX drop cables are connectorised in the factory with rugged connectors so that a technician, who need not be an expert in fibre splicing, can install the drop cable between the terminal and the home quickly. The DLX connector system consists of preconnectorised cable assemblies, terminals and converters that provide a plug-and-play solution for connecting between terminals at the street and at the residence. The DLX connectors also allow simplified testing during installation, easy connection during growth phases and maintenance access in the event of trouble or during service upgrades.



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## DLX™ Fibre Optic Connector

### Next Generation Connector

ADC KRONE's DLX™ Fibre Optic Connector System is a next generation system consisting of connectors, adaptors, converters, terminals and pre-connectorised cable assemblies. The connector system provides a next generation plug-and-play solution for connecting drop cables to the residence. The DLX adaptor offers a significantly smaller footprint that enables the construction of smaller closures and smaller multipoint terminals. Smaller terminals result in the reduction of space required on poles, in hand holes and in an ONT. The space saving benefit of the DLX connector system is a major advantage over previous generations of hardened connectors.

The DLX connector is significantly smaller in size than previous hardened connector systems allowing drop placement in smaller ducts.

The connectors require a much smaller hole for passing drops through walls, thus, the next generation connector is much less intrusive when routing through walls in structures.

The DLX connector is available with a variety of cable options allowing the user to easily specify the appropriate cable for aerial, underground or indoor/outdoor application.

The DLX connector is also backward compatible with the SC connectors and adaptors using a converter to quickly connect DLX connectors to SC adaptors or SC connectors to the DLX adaptor. This provides the user with significant flexibility when placing drops in a residential environment.



DLX Connector, DLX Adaptor and SC/APC Connector

### Features and Benefits

- Smaller adaptor enables smaller closure and smaller multipoint terminal, takes up less space on poles, in hand holes and in an ONT.
- Smaller connector drops fit in smaller conduit, requires smaller hole in dwelling, less intrusive entry into the residence, easier and more secure connection.
- SC/APC converter is backward compatible with SC connectors and adaptors, using DLX connector to SC adaptor converter. Allows flexibility in MDU cabling, reduces time and cost for connecting residential fibre.
- Variety of cable options allow cabling choice to be optimised for outdoor aerial or underground applications, or for indoor/outdoor applications.

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## DLX™ Fibre Optic Connector

### DLX Connector

The DLX™ Fibre Optic Connector system consists of new miniature hardened connector and adaptor designed to mate with a standard SC connector in the DLX adaptor. In addition the DLX connector can plug into any standard SC adaptor to provide a low loss optical connection. The connector design is based on standard SC single mode ferrule and spring assembly in a miniature rugged body. The connector is designed with a dual-locking feature that includes a push-pull detent engagement and twist-lock secure retention. The connector has a keying feature to allow it to be fully seated in the adaptor in only one orientation, therefore, ensuring proper alignment and mating of 8 degree APC ferrules. Once the connector is pushed inside the adaptor and passed the detent latch, the user will feel a distinctive latching engagement within the adaptor. Screwing the coupling nut to the adaptor provides a firm and long-term secure connection. The connector contains an O-ring to provide a water tight seal when engaged with the adaptor. The connector is supplied with a protective cap with an integrated pulling eye to protect the end face during installation. The DLX connector design is offered with a choice of cables thus providing the user with flexibility in selecting the appropriate cable for the application.



DLX Connector

### DLX Adaptor

The DLX™ Fibre Optic Connector system consists of new miniature hardened adaptors. The adaptor design is a heavy duty plastic case environmentally sealed for extreme weather conditions. One side of the adaptor receives the hardened DLX connector and the other end is designed to receive a standard SC connector plug. The SC side of the adaptor provides a rugged stationary SC receptacle per standard industry specifications. The DLX adaptor has an opening designed specifically to receive the DLX connector and to provide a sealing surface for the connector O-ring.

The adaptor's inner body holds two retainers and a split sleeve using snap latches and provides the plug with both push-pull and twist-lock engagement. The inner body also contains detent latch and alignment features that guide and hold the DLX connector inside the adaptor. A jam nut and O-ring are used to mount the adaptor onto a panel or bulkhead. Keying features on the outside of the adaptor keep it from rotating in a panel.



DLX Adaptor

# OmniReach® FTTX Solutions

## DLX™ Fibre Optic Connector

The DLX connector to SC adaptor converter consists of a converter housing that can easily be threaded onto to the DLX connector in the field. The DLX connector to SC adaptor converter then allows the assembly to be connected to a standard SC adaptor. The DLX connector to SC adaptor assembly provides a unique locking feature that seats the assembly into the SC adaptor with a push-pull locking engagement.

An SC connector to DLX adaptor converter is available to provide an interface of a standard SC connector into the DLX adaptor. A threaded nut is installed over the connector and the converter is snapped onto the SC inner body. The converter assembly simply threads into the DLX adaptor.



DLX Connector to SC Adaptor Converter



SC Connector to DLX Adaptor Converter

# OmniReach® FTTX Solutions

## DLX™ Fibre Optic Connector

### Mini Multiport Service Terminals (MSTs) with DLX Connectors

The Mini MST Terminal incorporates DLX™ hardened adaptors resulting in a much smaller terminal package than available with previous generations of connectors. Mini MST terminals are environmentally sealed terminals that withstand all the rigors of the OSP environment. The terminals are factory-terminated with individual connectors and provided with a stub cable for splicing in the field.

The Mini MST Terminal is available in 4-port, 6-port, 8-port and 12-port configurations. The stub cable lengths range from 50' to 2000' long. The terminal connector ports are clearly marked with numbers for quick drop cable connections, and the hardened adaptors are factory cleaned and compatible with DLX connectors.

A Universal Mounting Bracket is supplied with each Mini MST terminal. The USB provides a flexible means of installing the terminal in pole-mount, strand-mount and in below ground hand-hole-mount applications using standard fasteners.



#### Features and Benefits

- Mini MST terminals with DLX adaptors are much smaller than previous multiports, take up less space on the pole and reduce space requirement for hand-holes
- Factory terminated high quality and high performance connectors
- Mini MST terminals are terminated using reduced bend radius fibre to ensure high performance within the miniature package
- Flexible choice in number of ports; 4-, 6-, 8- or 12-port terminals
- Flexible choice in cable lengths: 50' to 2000'
- Universal mounting bracket supplied with each terminal facilitates installation in pole-strand-and hand-hole mounting

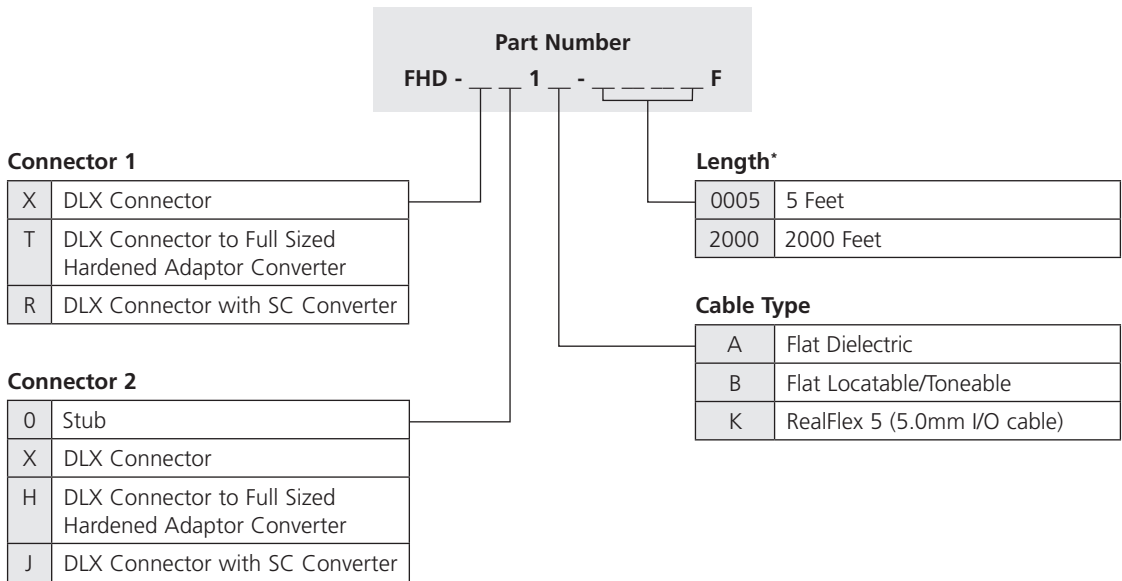
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## DLX™ Fibre Optic Connector

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### Ordering Information

Cable Length	Part Number	Cable Length	Part Number
<b>DLX™ Drop Cable, Single Fibre Flat Dielectric, DLX Connector Both Ends</b>			
60	FHD-XX1A-0060F	165	FHD-XX1A-0165F
75	FHD-XX1A-0075F	180	FHD-XX1A-0180F
90	FHD-XX1A-0090F	200	FHD-XX1A-0200F
105	FHD-XX1A-0105F	250	FHD-XX1A-0250F
120	FHD-XX1A-0120F	300	FHD-XX1A-0300F
135	FHD-XX1A-0135F	350	FHD-XX1A-0350F
150	FHD-XX1A-0150F		
<b>DLX Drop Cable, Single Fibre Flat Toneable, DLX Connector Both Ends</b>			
60	FHD-XX1B-0060F	165	FHD-XX1B-0165F
75	FHD-XX1B-0075F	180	FHD-XX1B-0180F
90	FHD-XX1B-0090F	200	FHD-XX1B-0200F
105	FHD-XX1B-0105F	250	FHD-XX1B-0250F
120	FHD-XX1B-0120F	300	FHD-XX1B-0300F
135	FHD-XX1B-0135F	350	FHD-XX1B-0350F
150	FHD-XX1B-0150F		



\*Standard cable lengths provided in list above; other lengths up to 2,000 available upon request.

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## DLX™ Fibre Optic Connector

### Ordering Information

Description	Part Number
Converter Kit - Bag of converter parts containing 25 DLX connectors to SC adaptor converters and 25 nuts	DLX-SC-CONV-25
Converter Kit - Bag of converter parts containing 25 SC connectors to DLX adaptor converters and 25 nuts	SC-DLX-CONV-25

### Specifications

**Primary Requirements:**

GR-326 Generic Requirements for SM Optical Connector  
 GR-3120 Generic Requirements for Hardened Fibre Connector  
 TIA/EIA 604-3a Optic Connector Intermateability Standard Type SC  
 GR771 Generic Requirements for Fibre Splice Closures  
 GR-63 Generic Requirements for Network Equipment Building Standards  
 GR-20 Generic Requirements for Single Mode Fibre Optic Cables

**Minimum Hole Size for Connector:**

0.625 inches

**Latching:**

Keyed alignment

**Physical Contact:**

Dual latching, push-pull detent, twist-lock secure long term connection  
 Angled Polished Contact (APC), standard 8 degree angle

**Insertion Loss:**

≤0.35dB

**Reflection:**

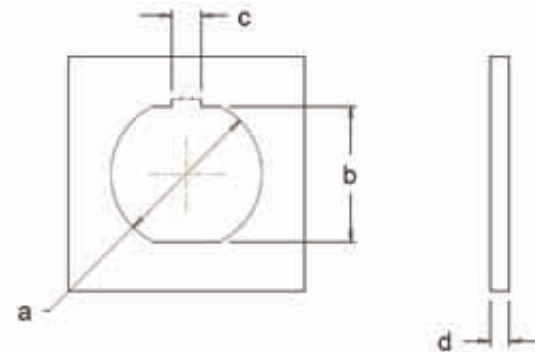
≤ - 65dB

**Retention Force:**

25lbs

### DLX Adaptor Mounting

	Dimensions (mm)	
	Min	Max
<b>a</b>	16.05	16.25
<b>b</b>	14.43	14.63
<b>c</b>	3.06	3.26
<b>d</b>	1.00	3.00



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