

Application Note: Polarity Options for Terminating HDX and SDX LC/SC Splice Module Discrete Pigtails

APPLICATION

Leviton Discrete Pigtails are designed to support fusion-splice terminations in HDX and SDX molded Splice Modules. The pigtails provide an easy means to terminate blunt end trunks of both loose tube and ribbonized construction.

Leviton Splice Module pigtails are constructed with both 250µm loose tube and ribbon style fiber within the same pigtail assembly. Each fiber is color coded per ANSI/TIA-598-E standards.

HDX and SDX Modules are intended to be terminated with the pigtail connectors remaining connected to the port connectors during the splicing process.

Application Note ID:
NS-AN-18-0029

Date:
04-15-24

Product Line:
Fiber Optics

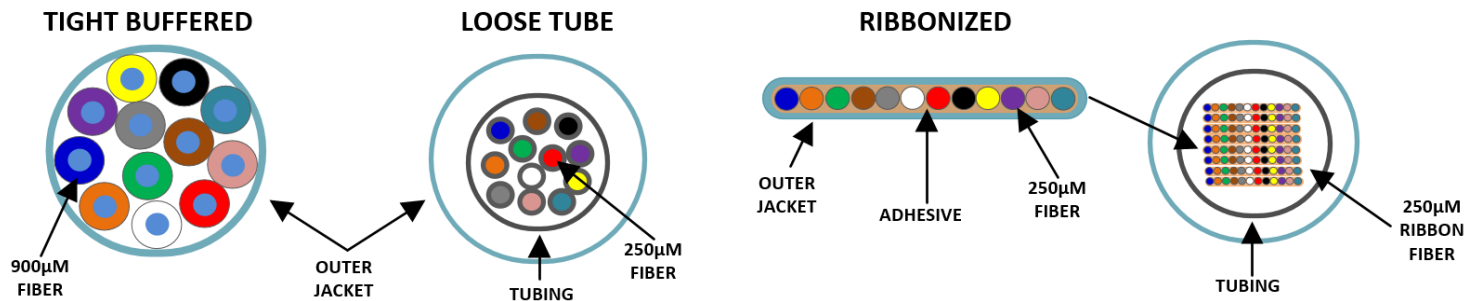
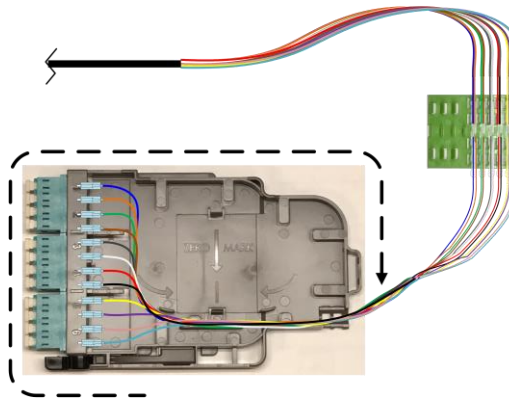
Part Numbers Affected:

- HDX Splice Modules
- SPLCH-12x
- SPLCH-12xx
- SDX Splice Modules
- SPLCS-2xL
- SPLCS-4xL
- SPSCS-2xC

Termination to different fiber constructions

Bulk fiber cable is available in several different constructions. The most typical are 900µm tight buffered, 250µm loose tube and 250µm ribbonized.

250µm ribbonized fiber consists of (12) 250µm bare fibers bonded together in a single flat row with adhesive. Multiple groupings of 12 ribbonized fibers may be housed in the same protective tube within a multifiber cable.

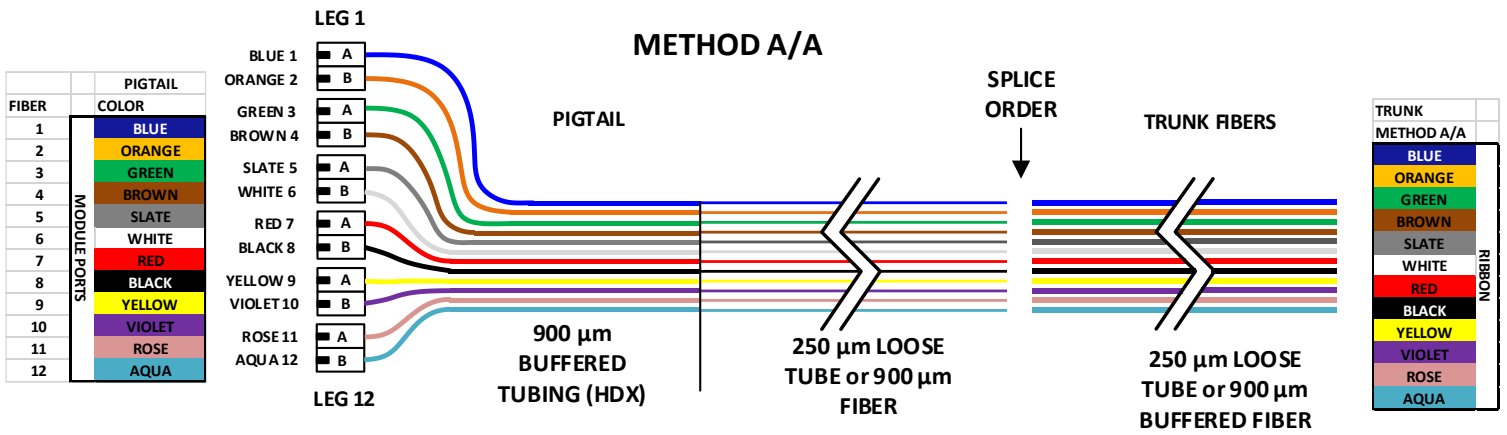


Termination information

Selection of the appropriate pigtail is crucial for optimal performance. The pigtail fiber grade must match the fiber that it will be spliced to. Once the termination style is verified, polarity must be determined.

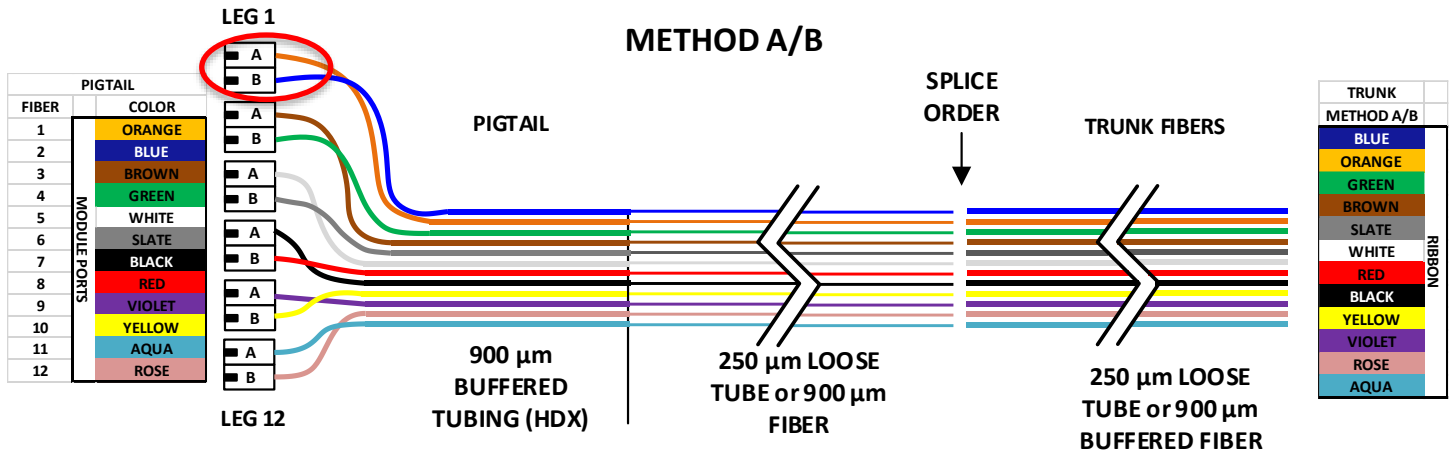
Duplex fiber polarity methods are easily achievable when terminating the discrete pigtail. Verification of the opposite end of the Fiber cable to be spliced along with the polarity method of the entire intended channel should be confirmed prior to performing the pigtail splice. Note that a Method A/B trunk is wired differently at each end.

Using standard pigtail, a Method A/A is achieved by terminating both ends of the trunk cable in the same order as identified by the following diagram:



When terminating Method A/B, note that a Method A/B trunk is wired differently at each end. One end is terminated in the A/A method and the other in an A/B method. This Applications Note assumes the far end of this cable is Method A/A. Method A/B polarity is identified by the following options and diagrams:

Method A/B, Option 1 (Recommended) – Splice fiber for fiber and re-position the discrete connectors in the module.



Method A/B, Option 2 – Leave the connectors in the A/A positions and fusion splice the fibers in a pair-wise flipped method.

NOT RECOMMENDED ON RIBBON FIBER - REQUIRES DE-RIBBONIZING/RIBBONIZING OF FIBERS

Method A/B	FIBER 1	FIBER 2	FIBER 3	FIBER 4	FIBER 5	FIBER 6	FIBER 7	FIBER 8	FIBER 9	FIBER 10	FIBER 11	FIBER 12
PIGTAIL	BLUE	ORANGE	GREEN	BROWN	SLATE	WHITE	RED	BLACK	YELLOW	VIOLET	ROSE	AQUA
TRUNK	ORANGE	BLUE	BROWN	GREEN	WHITE	SLATE	BLACK	RED	VIOLET	YELLOW	AQUA	ROSE

For assistance in other wiring methods including MPO/MTP to Duplex LC terminations contact us at appeng@leviton.com.

Cleaning Facts

- The most common cause of fiber system failures is contamination
- TIA, ISO and BICSI standards state that both field and factory terminated connectors, test leads and jumpers shall be inspected and, if necessary, cleaned prior to mating to other connectors and equipment
- For more information, review the Leviton Clean, Inspect, Connect (CLIC) document at www.leviton.com/clic

Summary

While pre-planning and validation are required, discrete polarity is easily managed when terminating in HDX and SDX Splice Modules providing ease of patching and administration in the client's network.

For more information visit: www.leviton.com

Leviton Manufacturing Co., Inc.
2222 222nd Street SE
Bothell, WA 98021

tech line 800 824-3005
fax 800 832-9538
www.leviton.com