Application Note: Terminating High Pair Count cables in SDX Wall Mount Enclosures

Application Note ID:
NSAN-20-0010-100120

Date:
10-01-2020

Product Line:
Fiber Optics

Part Numbers Affected:
SDX Wall Mount Enclosure 5WLRG-12C Splice Tray Mounting Hardware Kit PN: SPLMT-HKT Splice Trays: 24F Single splicing – T5PLS-24F, 72 Fiber Ribbon T6XRB-40Q BerkTek LTP, PDP and Ribbon Fiber Trunks

Performing High Pair Count Splicing in the SDX Large Wall Mount Enclosure

Opt-X SDX Wall-Mount Enclosures allow for inter-connect patching or cross-connect patching between cable and active equipment while using minimum wall space. The enclosure also is used for fusion splicing in either cable to cable or cable to assembly/connector applications. The large enclosure also features the capability to convert to a splicing only enclosure for higher fiber count, splice only applications. It can be retrofitted in the field to accept up to 24 splice trays.

Compatible Splice Trays: 24F Single splicing – T5PLS-24F, 72F Ribbon splicing - T6XRB-40Q

Preparing the Enclosure for cable routing

Full splicing configuration is achieved by simply removing the bulkhead from the enclosure base by removing the 4 mounting screws (one on each side and two on the bottom – See Figure 1). This creates the ability to mount two stacks of up to 12 Splice trays each. Install one each 5.5" threaded bolts (Figure 2) from QTY 2 Splice Tray Mounting Hardware Kits PN: SPLMT-HKT.

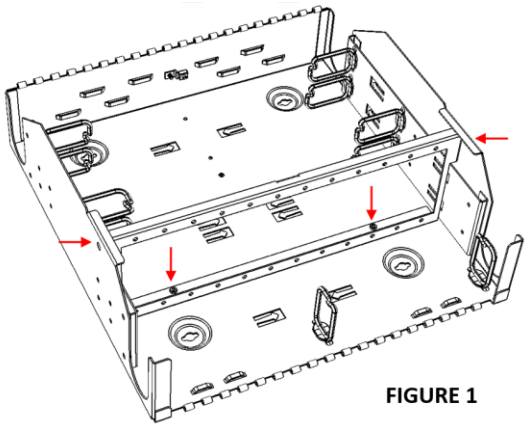


FIGURE 1

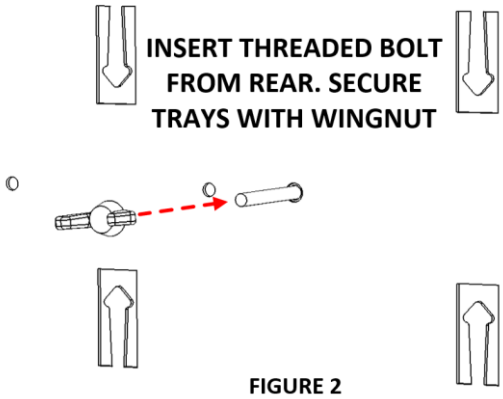
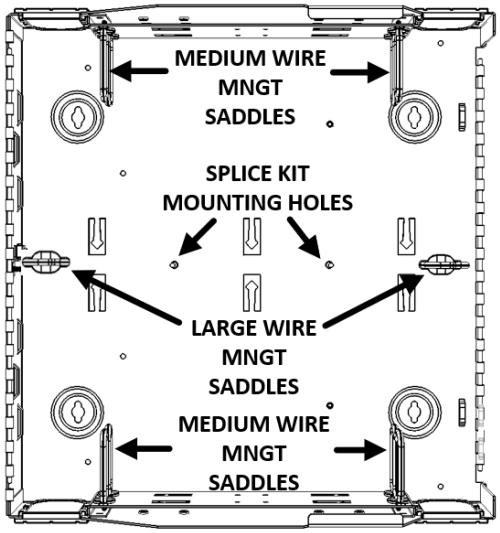
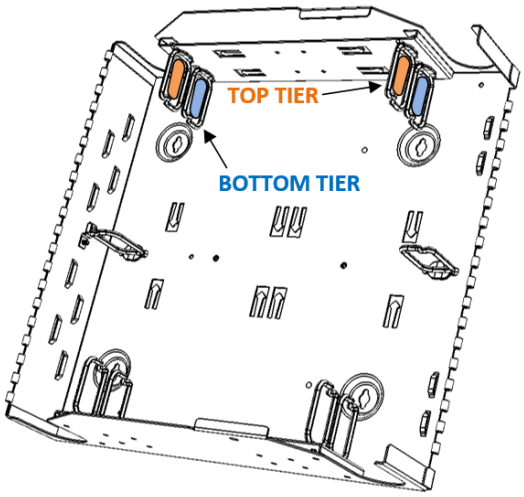


FIGURE 2

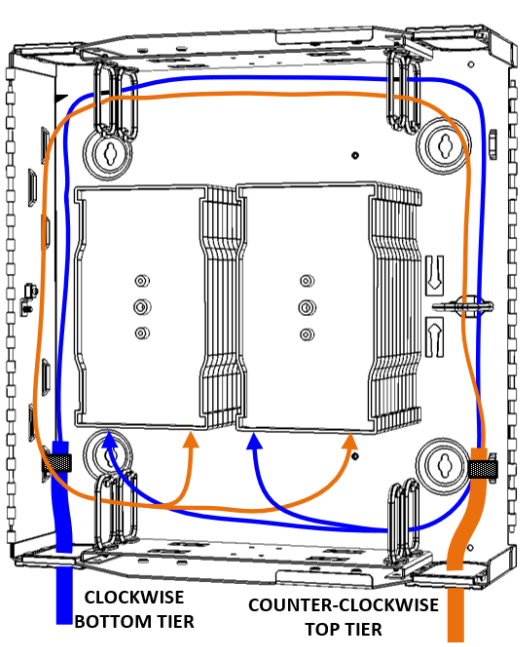
Install the wire management saddles in the following configuration

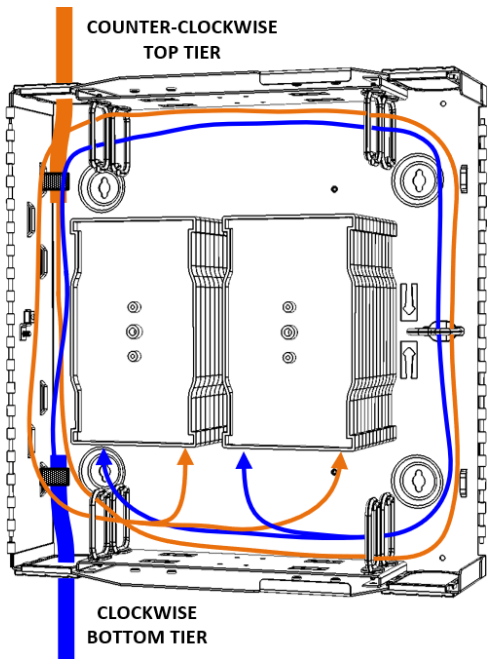




Routing Fibers

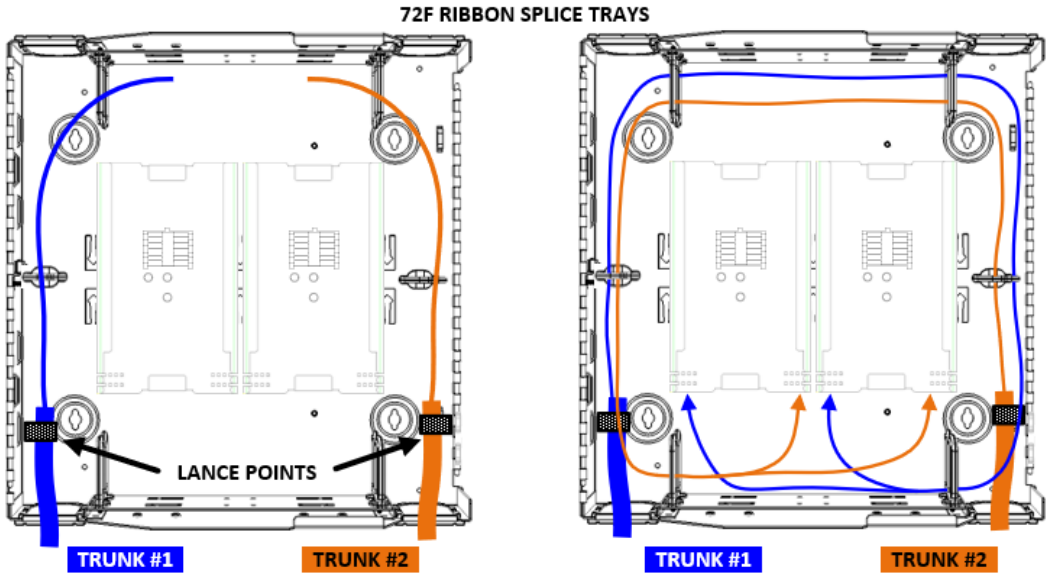
Trunks can be routed into the enclosure in several ways. In order for fibers within each trunk to present themselves correctly at the point of fusion splicing, it is recommended the trunks be routed into the splice trays at opposite entrance points of each other as shown below.





PRE-ROUTE AND MEASURE ALL CABLES PRIOR TO STARTING TERMINATION

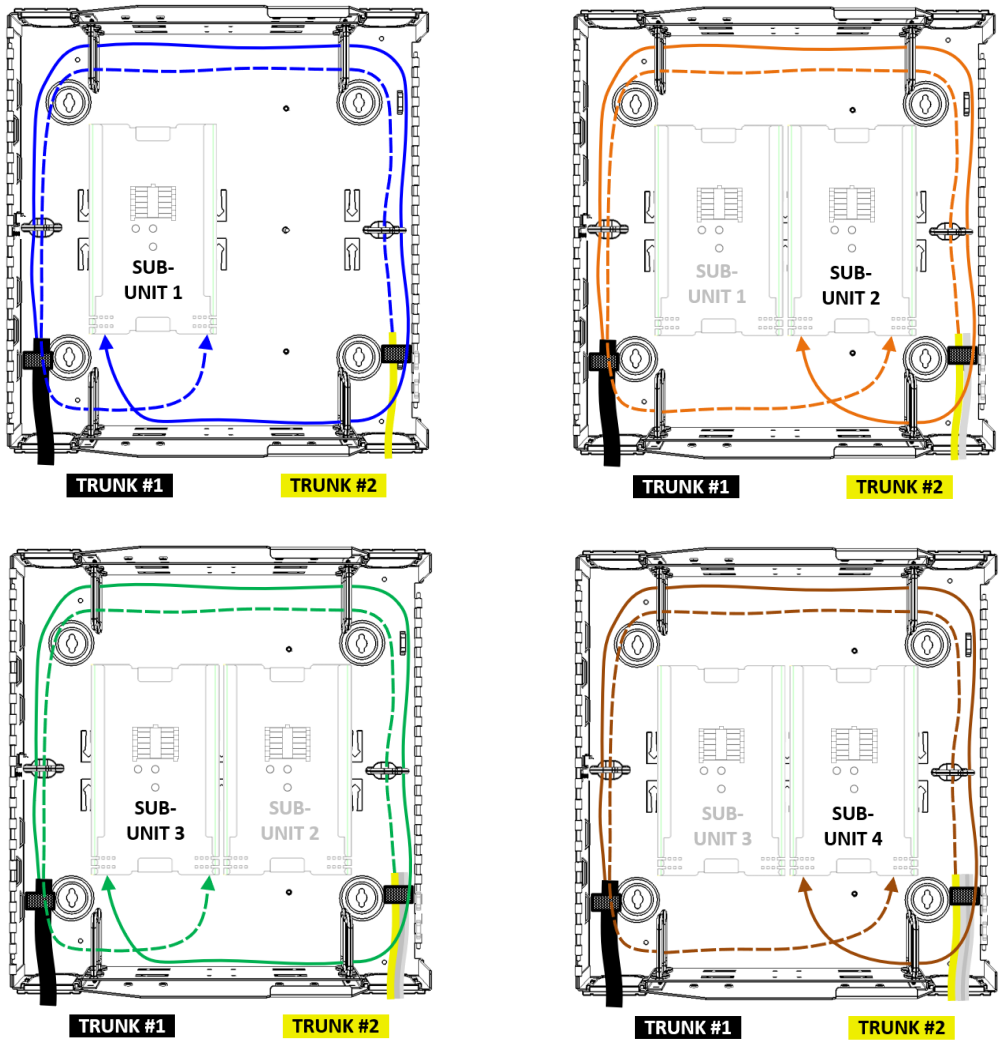
EACH CABLE TO BE SPLICED IS ROUTED IN THE OPPOSITE DIRECTION OF ITS PAIRED CABLE.



EACH SUB-UNIT LEG ENTERS THE SPLICE TRAYS FROM THE BOTTOM AND OPPOSITE ITS PAIRED SUB-UNIT

Managing fiber Groups

Depending on the construction of the trunk cables, furcation or breakout of larger count legs may be required. It is recommended to organize each grouping of fibers in a splice tray from the base outward utilizing both stacks. This enables final routing and dressing from the rear to the front as the enclosure is populated.

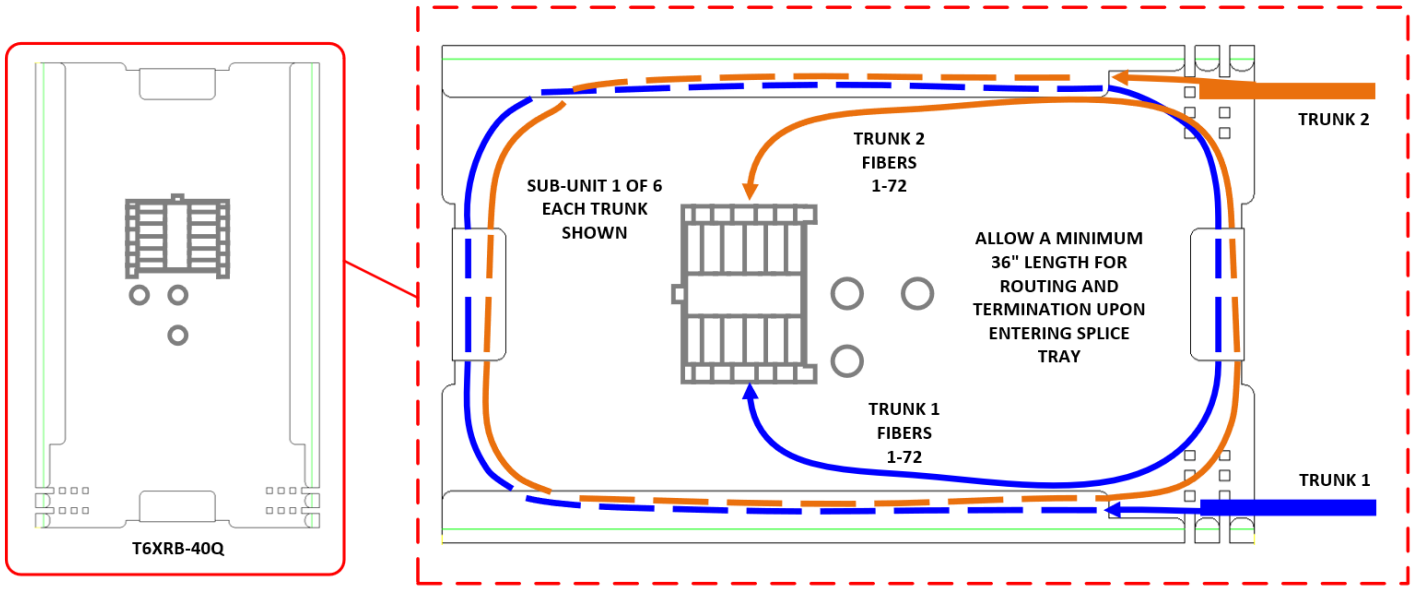


Performing Fusion Splicing

The fibers should enter the splice tray from different points to allow a routing path opposite of the other. Figures 3 and 4 indicate the routing path for Injection molded and metal ribbon splice trays. Pre-route and measure the required slack to be stored in the tray. Mark the fibers at the target point of fusion splicing for preparation. Perform splicing per the fusion splicer manufacturers settings and instructions based on the fiber grade being used.

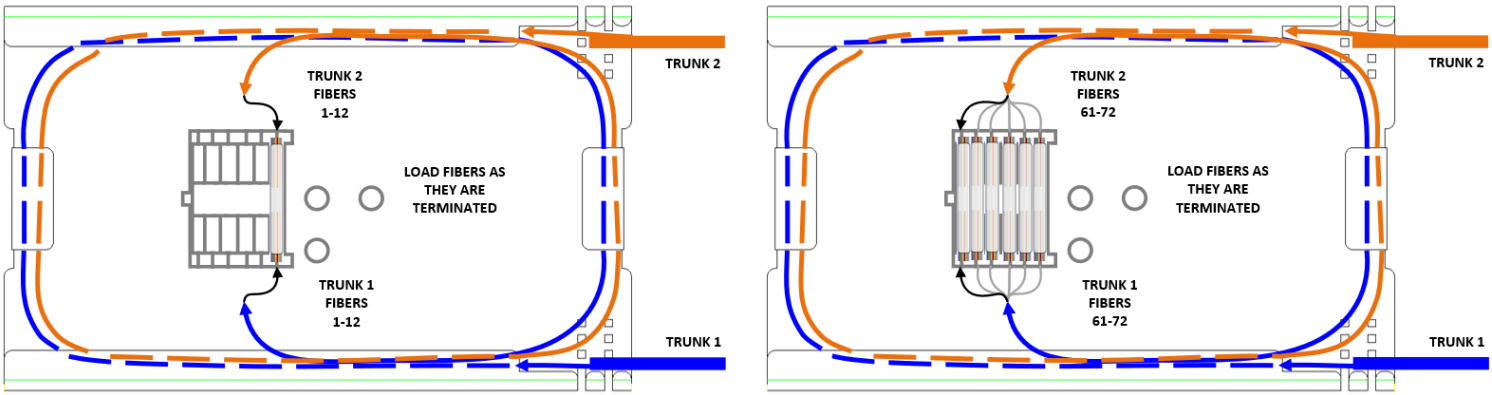
FIGURE 3

RIBBON SPLICE TRAY IN AN SDX ENCLOSURE



Load fibers as you go until all terminations are complete for that tray.

FIGURE 4



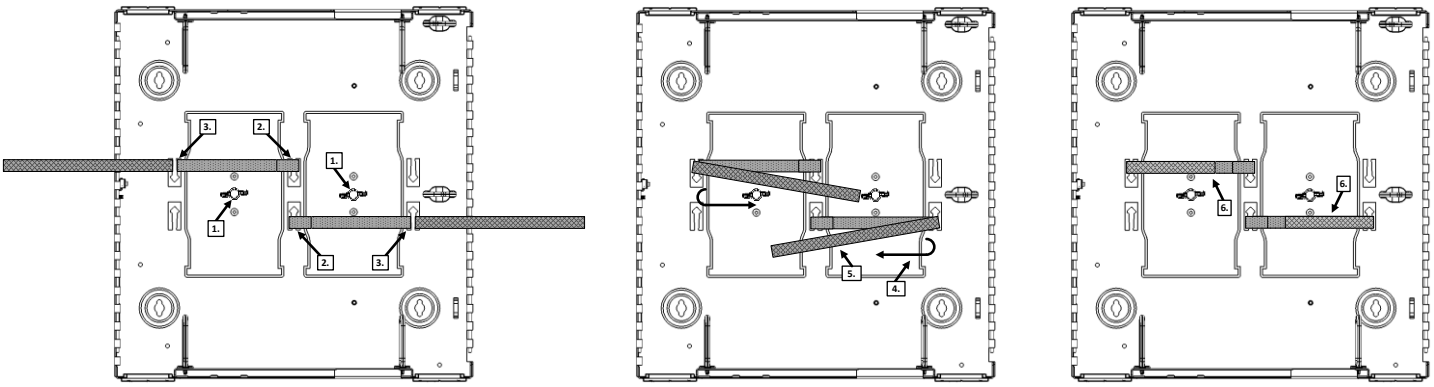
Securing the Splice trays
Once all fusion splicing is completed, coil all fiber slack in the splice trays and enclosure respectively according to the pre-measured routing design.

NOTE: This step can also be done at the completion of each splice tray using the two-tiered routing configuration.

Securing the splice trays requires two components:
• Splice Tray Mounting Kit SPLMT-HKT including appropriate #10-32 threaded bolt and wing nut
• Velcro strip (bulk Velcro or Velcro supplied in the Splice Tray Mounting Kit)

Place each tray over the threaded rod and secure each stack with a wing nut and the looped Velcro ties as shown below and in the enclosure Instruction Sheets.

1. As previously instructed in the preparation section, prior to mounting the enclosure, install appropriate #10-32 threaded bolt from the rear of the enclosure base and secure trays with wing nut.
2. Insert Velcro strip under the first arrow lance point with the hook side facing up.
3. Place the Velcro under and around the second lance point
4. Fold the end over the splice tray(s).
5. Create a snug mating of the Velcro to the trays.
6. Trim excess Velcro as necessary.



A complete installation video on this SDX configuration can be found at:
https://www.leviton.com/en/support/contact-us/product-support/networking/network-solutions-videos

For more information or assistance with fiber optic solutions, contact Leviton Technical Support or visit us at www.leviton.com.

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