

Application Note

Installing Fibers In The DFR100

Introduction

This application note provides information and guidance on how to best route the fibers and position the splice protectors in the DFR100. The DFR100 has a capacity of 12 fusion splices and two mechanical splices but since there are no 14 fiber cables only a total of 12 fusion and or two mechanical splices will be housed. Typically the DFR100 is used to repair a drop fiber in FTTH applications and only one or two fibers require splicing within the enclosure to re-connect the damaged cable.

Fiber Winding

If only one or two fibers are to be spliced as is the most common situation, the technician should utilize splice locations 1 and or 12 so that the chance of a Macrobend is minimized. Using position #1 or #12 can sometimes be a challenge due to the fibers “memory” and if the fiber was cut short due to a bad cleave etc.

It is suggested that two or more loops of fiber are utilized so as to enable any future rework.

The following fiber winding convention should be used to minimize the possibility of Macrobends.

| | |
|----------------|---|
| Splice 1 - 6 | Fiber 1 Splice holder RHS & Fiber 2 Splice holder LHS |
| Splice 7 - 12 | Fiber 1 Splice holder LHS & Fiber 2 Splice holder RHS |
| Mech. Splice 1 | Fiber 1 Splice holder RHS & Fiber 2 Splice holder LHS |
| Mech. Splice 2 | Fiber 1 Splice holder LHS & Fiber 2 Splice holder RHS |

RHS = Right Hand Side

LHS = Left Hand Side

Note that the direction of fiber winding for both fibers is reversed at Splices 6 and 7.

If this method is used, the minimum bend radius of standard Singlemode fiber will not be violated.

For example as shown in the drawings below:

Fiber #1 Splice holder LHS & Fiber #2 Splice holder RHS; to position the fusion splice in Splice #12.

Is interpreted as:

Fiber #1 is routed counterclockwise and goes to the LHS of Splice #12 and Fiber #2 is routed clockwise which goes to the RHS of Splice #12.

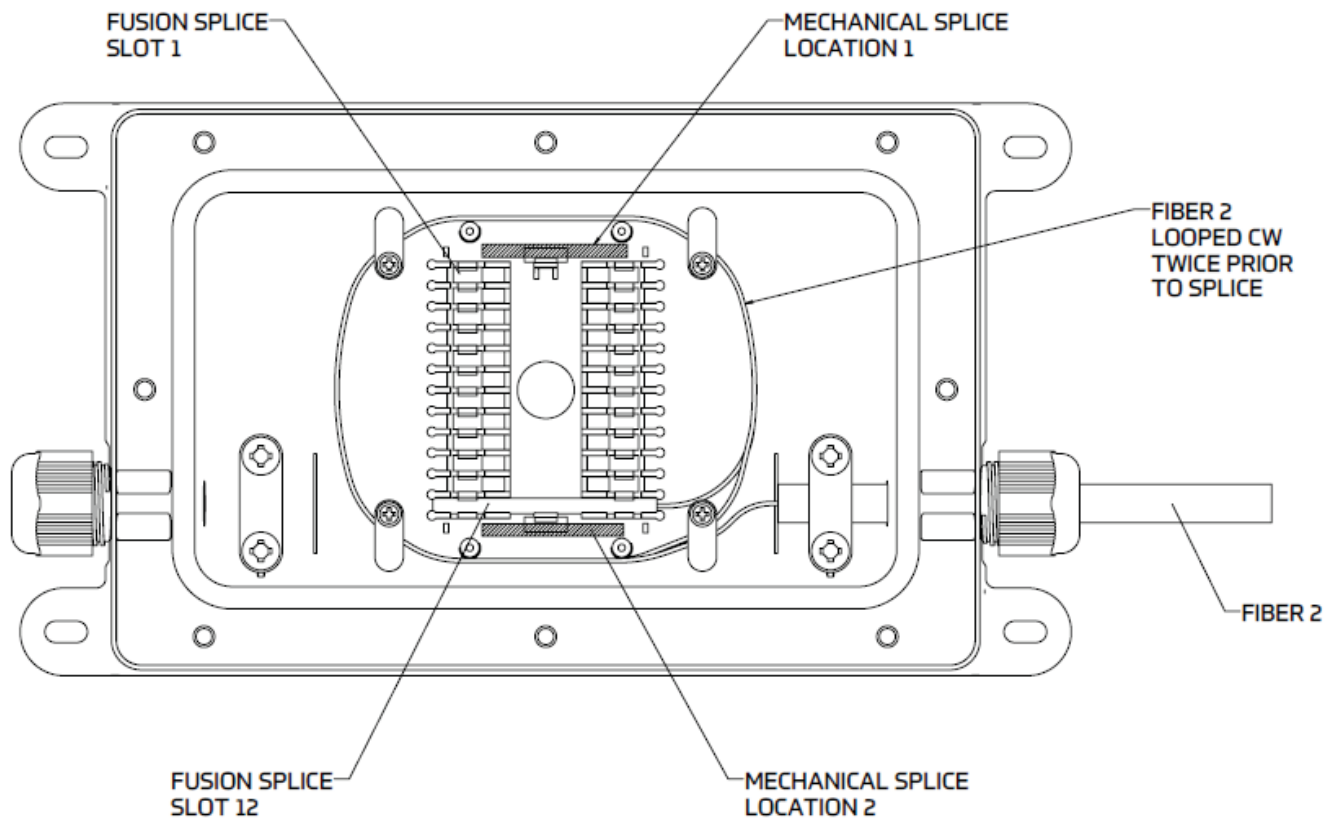
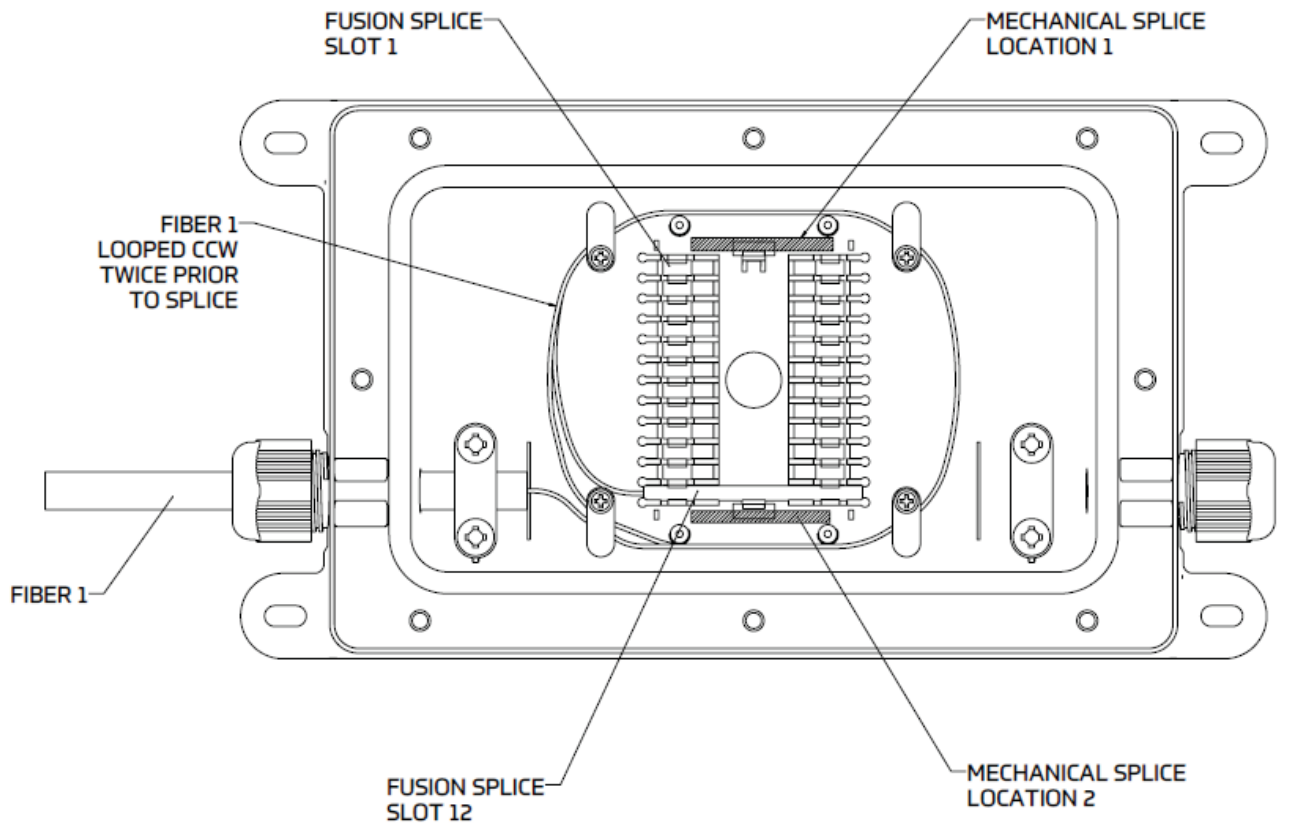
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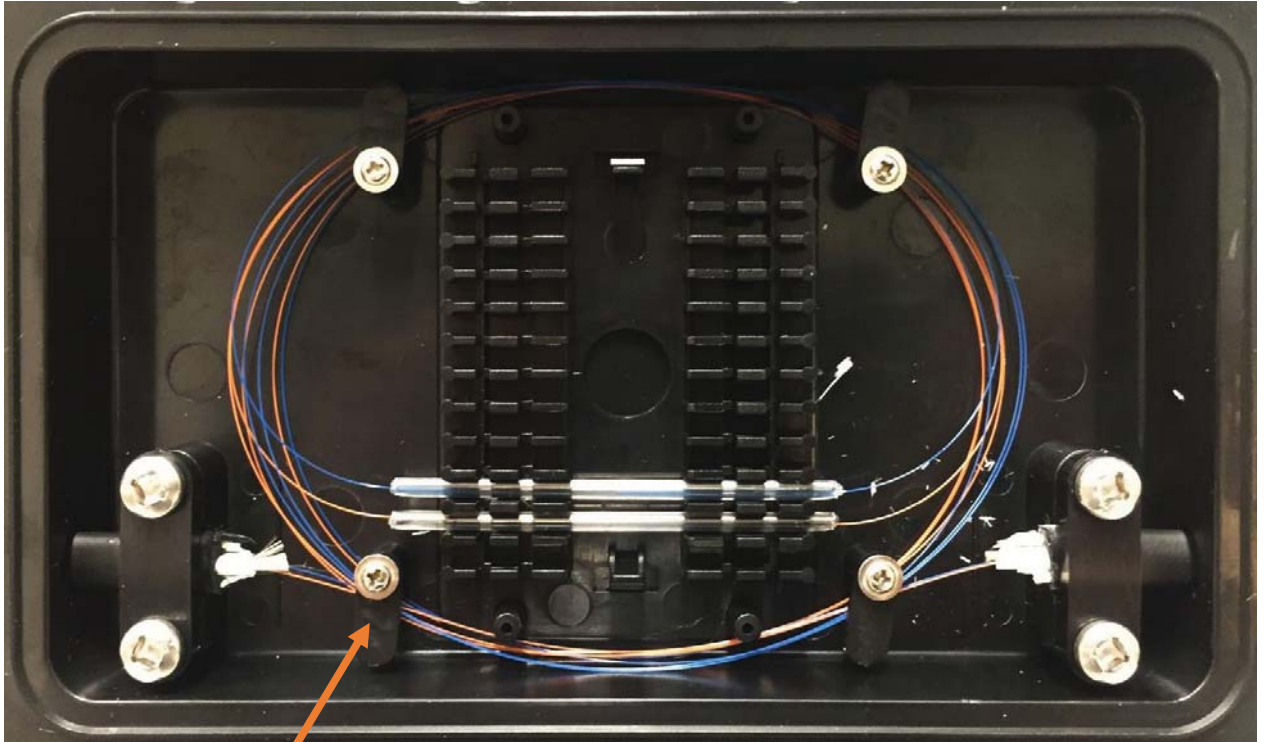
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The picture below shows the DFR100 with two fibers loaded into the splice tray as would be typical with a FTTH drop fiber repair. The orange fiber on the left-hand side routed counterclockwise and the orange fiber on the right-hand side routes clockwise so that the splice protector mounts in splice #11 position.



The four fiber retention wings are positioned to keep the fibers captive to the base of the DFR100 so the fibers do not fall or spring out of position.

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