

# Amphenol Charles Fiber Drop Repair Closure

## FDRCV2

### General Description and Installation

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**Figure 1    FDRC**

## 1. GENERAL INTRODUCTION

### 1.1. Document Purpose

This document provides installation instructions for the FDRCV2 Series second generation Amphenol Charles Industries Fiber Drop Repair Closure. The unit is shown in Figure 1.

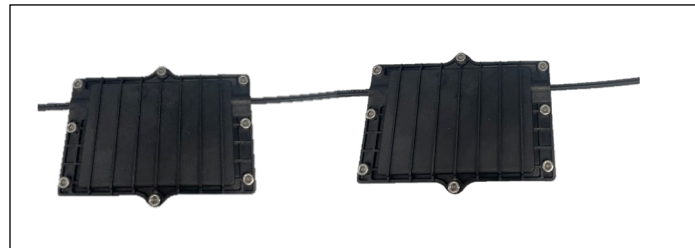
-NOTE-

*Hereafter the Fiber Drop Repair Closure FDRCV2 Series will be referred to as the “FDRC” or “closure.”*

### 1.2. Product Purpose

The FDRC is a compact splice closure with two inline cable ports. It has six splice slots and can accommodate twelve single-fusion double-stacked fusion splices.

It is generally used to splice and repair a broken drop cable. In most applications, a broken cable likely does not have enough fiber slack to splice both ends within a single closure. For the repair, use two FDRC units with a section of drop cable running between them (Figure 2).



**Figure 2    Two FDRC Units for Repair**

### 1.3. Product Mounting and Location

The FDRC is a fully sealed IP68 rated unit designed to meet Telcordia GR-771 requirements.

It is installed below grade, in a hand hole or direct buried. Aerial mounting on a strand is also possible.

## 2. PRODUCT DESCRIPTION

The FDRC has two inline cable ports that can accommodate up to 7.5mm round drop cables as well as 8x4.5mm or 5x3mm flat drop cables. Microduct up to 7mm can also be used.

The FDRC dimensions are shown in Figure 3. The FDRC ships with several tools and accessories, listed below:

- Splice sleeves for splicing
- Sealing tape for smaller cables
- 5mm (3/16") Allen wrench
- Mounting clips for strand and wall mounting
- Plugs for unused ports

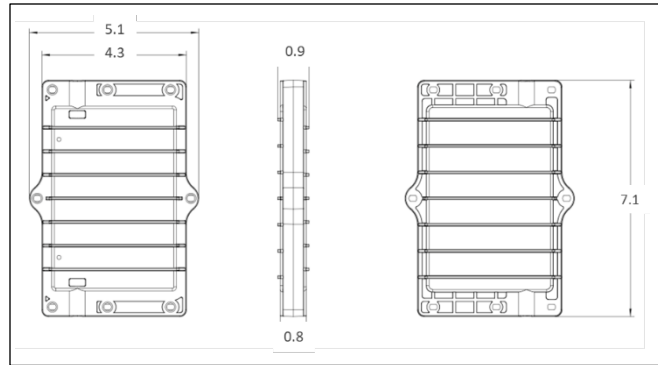


Figure 3 FDRC Dimensions in inches(mm)

## 3. SAFETY PRECAUTIONS



— WARNING —

**Risk of serious eye damage! Never look into the end of a fiber optic line or use a magnifier in the presence of laser light or radiation. Exercise caution when installing, testing or maintaining live circuits. If eyes are exposed to laser light or radiation occurs, immediately seek treatment by a medical professional.**



— WARNING —

**Cable and fiber cleaning solvents may contain hazardous or harmful materials. Maintain good housekeeping practices and refer to the SDS when working with cleaning solvents or similar products.**

**Shards and cleaved glass fibers are very sharp and can easily pierce the skin. Use tweezers to pick up cut glass fibers and place them in a specifically designated container. Do not consume any food products near the cable installation site.**

**Corrugated metal or armor in feed cables is very sharp when cut or exposed. Exercise extreme caution to prevent personal injury. Use protective work gloves when handling armored cable.**



— CAUTION —

**Perform all bonding and grounding prior to making any electrical and communications connections.**



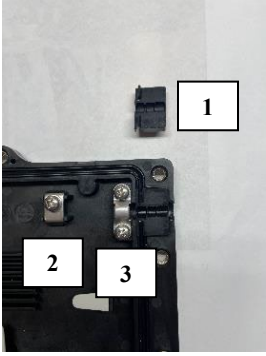
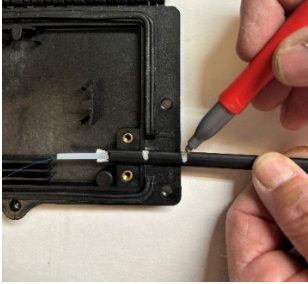
**Be careful not to damage any buried cables or service wires while digging either to expose cables or to prepare a hole or trench, or while driving stakes. Buffer tubes and fibers are sensitive to excessive bending, pulling, and crushing forces. To avoid kinking of buffer tubes and fiber damage or breakage, exercise great care when working with fiber, and do not exceed or violate minimum bend radius requirements for fibers, buffer tubes, and cables.**

## 4. INSTALLATION

Gather the following equipment to perform the FDRC installation.

- Measuring tape
- Cable marking tool
- Assorted cable ties
- Buffer tube stripper tool (score/cut buffer tubes)
- Fiber optic stripper tool
- Fiber splicing tools and equipment
- Safety glasses and work gloves

### 4.1. Installing Fiber

Step #	Instruction	
1	Prepare each end of the fiber to be spliced. It is recommended to have approximately 24 inches of fiber slack on each end.	
2	Open the unit by unscrewing the bolts with the included 5mm Allen wrench or a 5mm (3/16") t-handle wrench. Use of a power tool is not recommended as this might over-torque and damage the nuts or strip the bolt heads. <b>The bolts are captured. Do not remove the bolts from the cover.</b>	
3	Separate the cover and base of the unit.	
4	Remove the cable grommets (1) and cable entry clamps (2) by removing the two screws that hold each clamp in place. For cables that have a strength member, loosen the screw holding the strength member clamp (3).	
5	Place the cable on the cable entry port. Use a marking utensil to mark the two points at the beginning and end of the cable entry port. If using toneable cable, pull back the tone wires before entering the closure case.	

<p>6</p>	<p>Depending on the cable size, sealing tape (included) may be needed to provide optimized sealing. Place the tape between the two marks made in the previous step.</p> <p>If the cable is less than 7mm, then wrap a small piece of sealing tape around the cable jacket to build up to approximately 7mm diameter.</p> <p>For flat or oval cable, work the sealing tape around the cable to get close to a round shape.</p>	
<p>7</p>	<p>Place the cable in the port and tighten the cable under the strain relief clamp. Attach the cable clamp.</p>	
<p>8</p>	<p>Attach the spare drop cable to the other side of the FDRC. Then splice per company practice. Use the included splice sleeves. Place the spliced fiber in the splice slots and route the fiber around the unit.</p> <p>As a best practice for repair applications, keep a supply of FDRC with slack drop cable attached on one end.</p>	
<p>9</p>	<p>Add the silicone cable grommets on each end and close the unit by tightening the bolts. It is recommended to tighten the center bolts first, followed by the corner bolts</p>	
<p>9</p>	<p>Reattach the tone wires externally, if desired.</p>	

## 4.2. Mounting the FDRC

The FDRC can be mounted in a hand hole, direct buried, or on an aerial strand using an appropriate mounting kit.

### 4.2.1. Hand Hole

Place the FDRC units loose in a small hand-hole or flower pot, maintaining the proper bend radius of the drop cable. The hand hole can have an EMS marker installed as a locating feature if desired.

### 4.2.2. Direct Buried

Direct bury the FDRC units up to 10 feet.

### 4.2.3. Aerial Strand Mounting

Attach the FDRC to an aerial strand using the included strand clips (Figure 4). To add the clips, remove the captured bolt and reattach the bolt with the clip in place.



Figure 4 Aerial Mounting

### 4.2.4. Wall Mounting

Mount the FDRC on a wall using the included wall mount clips. Attach a clip to each side of the center bolt to allow the clip mounting hole flush with the wall (Figure 5).

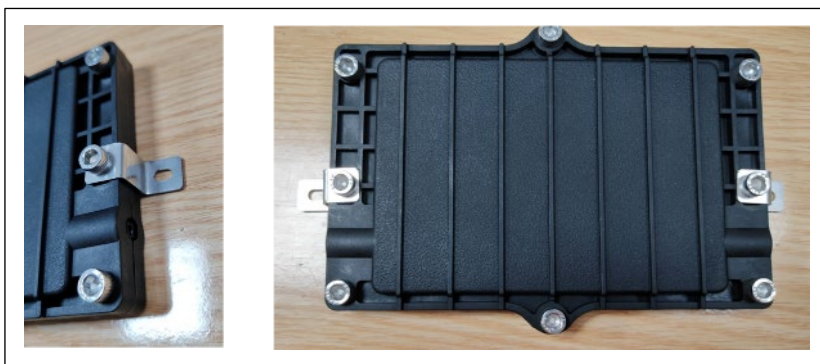


Figure 5 Wall Mounting

**5. TECHNICAL ASSISTANCE AND REPAIR SERVICE**

For questions on product repair or if technical assistance is required, contact Charles Technical Support.

847-806-8500

[techserv@charlesindustries.com](mailto:techserv@charlesindustries.com) (email)

<http://www.charlesindustries.com/techserv.htm>

**6. PART NUMBER INFORMATION**

Model	Description
FDRCV2P6S	Fiber Drop Repair Closure with 2 inline cable ports and 6 splice slots (12 splice capacity)
<b>Optional Equipment</b>	
P100010ABGTHXXX	10" round, 10" deep hand-hole, dark green cover, black base
P141912ABGTHXXX	14"x19"x12" hand-hole, dark green cover, black base

**Table 1 Part Numbers**