

Amphenol Charles Fiber Drop Repair Closure

FDRC

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 Amphenol Charles Industries Fiber Drop Repair Closure. The unit is shown in Figure 1.

-NOTE-

Hereafter the Fiber Drop Repair Closure 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 is generally used to splice and repair a broken drop cable. Since a broken cable likely does not have enough fiber slack, use two FDRC units with a section of drop cable running between them to complete the repair (Figure 2).

1.3. Product Mounting and Location

The FDRC is a fully sealed IP68 rated unit that is installed below grade, such as in a hand hole or direct buried. Aerial mounting on a strand is also possible. The FDRC includes two fixed strand clamps. An adjustable hanger bracket kit is also available (purchased separately, need a separate kit for each FDRC in use).

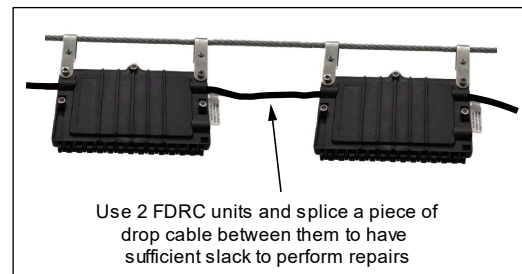


Figure 2 Use Two FDRC Units

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 flat drop cables. Smaller drop cables 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
- Allen wrench
- Mounting clips
- Plugs for unused ports

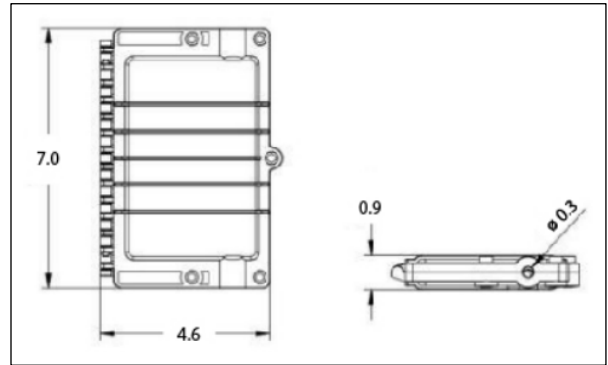


Figure 3 FDRC Dimensions in inches(mm)

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.


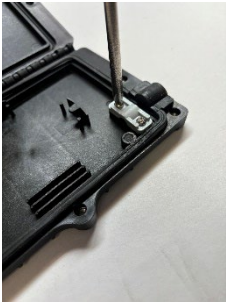

Be careful not to damage any buried cables or service wires while digging either to expose cables or to prepare a hole or trench, or while driving stakes. Buffer tubes and fibers are sensitive to excessive bending, pulling, and crushing forces. To avoid kinking of buffer tubes and fiber damage or breakage, 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.

- Allen wrench (5mm or 3/16")
- 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 five bolts with the included 5mm Allen wrench or using 5mm (3/16") t-handle wrench. Use of a power tool is not recommended as this might over-torque and damage the nuts.	
3	Remove the cable entry clamps by removing the two screws that hold each clamp in place. Save clamps and screws.	
4	Lift off the two cable entry grommets. Save the grommets.	

<p>5</p>	<p>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>	
<p>6</p>	<p>Depending on the cable size, sealing tape may be needed to provide optimized sealing. Place the tape between the two marks made in the previous step. 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. 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. A length of spare drop cable is needed to go between the two FDRC units used for the repair. Suggestion: an inventory of drop cables repair units with one end spliced can be kept on hand to save time at the repair site.</p>	
<p>8</p>	<p>Attach the spare drop cable to the other side of the FDRC. Then splice following company practice. Use the included splice sleeves. Place the spliced fiber in the splice slots and route the fiber around the unit. Close the unit and tighten the bolts.</p>	
<p>9</p>	<p>If toneable cable was used, attach the tone wire ends together 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 with the included strand clamps (Figure 4) or use the optional 97-FSDCAMKT adjustable bracket kit (Figure 5, one kit needed per FDRC).

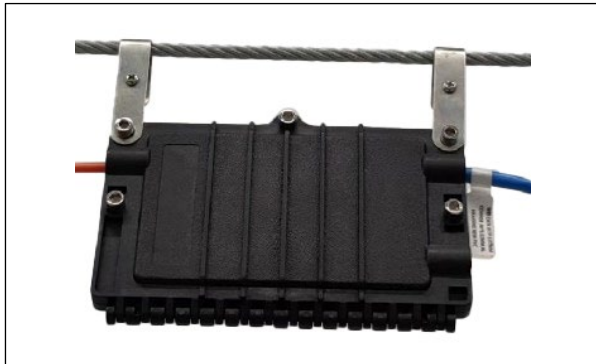


Figure 4 FDRC with Included Strand Clamps



Figure 5 FDRC with Adjustable Hanger Brackets

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 (email)

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

6. PART NUMBER INFORMATION

Model	Description
FDRC2P2S	Fiber Drop Repair Closure with 2 inline cable ports, splice slots, 4 splice sleeves
Optional Equipment	
97-FSDCAMKT	Aerial mounting kit: 2 adjustable hanger brackets (must order one kit for each FDRC in use)
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