

Installation Guide

VITALink® Taped Splice Pigtail Crimp



2 Hour Fire-Rated Splice VITALink® 2 Hour Cables, UL FHIT.40A, UL FHITC.40A Installation Instructions May 2017

Description

The VITALink® Taped Splice Kit contains components and instructions for assembling a 2 hour fire-rated splice on VITALink® 2 Hour Fire Resistive Integrity Cables

Read instructions completely before starting.

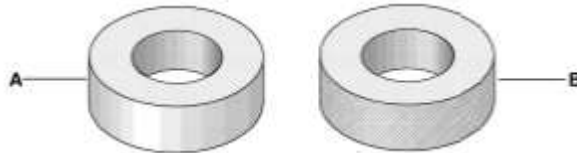
For technical support, call Comtran Cable LLC at 508-399-7004

Tools Required:

- Crimping Tool
- Needle Nose Pliers
- Utility Knife
- Cable Cutter
- Splice Caps

Materials Provided: (Comtran Cable part# 6047)

- 2 Rolls of Item A: Self Sealing Silicone Rubber Electrical Tape
- 1 Roll of Item B: Fiberglass Tape



Additional Materials Required & Not supplied:

- NEMA-1 Steel Enclosure with Screw Cover
- Copper compression splice caps

WARNING:

The VITALink® 2 Hour Splice Kit system must be installed by qualified personnel familiar with generally accepted construction techniques and safe electrical practices.

Take all appropriate precautions when installing splices, including following OSHA and other applicable regulations.

IMPORTANT: Installation Guidelines

- To ensure this kit is installed correctly, read and follow all the safety warnings and instructions contained in this document.
- Only steel enclosures may be used.
- The installation must comply with all national and local electrical codes and all the requirements of the UL Electrical Circuit Integrity System listing (UL Category FHIT System #40A and FHITC System #40A) requirements, and carefully follow the installation instructions.

- Ensure the cable is in good condition prior to commencing splice installation.
- Do not pull cables around corners that have sharp edges, such as corners in cable trays, or other obstructions.
- Support the cable in the manner and at the intervals described in the Electrical Circuit Integrity System listing.

GENERAL

The VITALink® CIC cable must be installed per the installation instructions for system 40A using the proper EMT and steel connectors. The splices shall be made in a painted steel enclosure with a minimum NEMA 1. The enclosure shall be sized in accordance with the National Electric Code (NEC) but in no case shall the width be greater than Table 1 below. **There shall be a maximum of 3 cables splices per enclosure.** The splices can be installed in both horizontal and vertical mounted enclosures. Do not introduce any materials into splice box that are not described within this installation guide.

EMT Size	Enclosure Size H X D X W
½" - 1"	4" x 4" x 12"
1 ¼" - 1 ½"	6" x 6" x 12"
2"	6" x 6" x 16"

TAPE SPLICE - Read Section Completely before Beginning Installation

1 Splice Preparation

- Make sure there are no sharp edges inside the enclosure and the enclosure is properly supported per the FHIT 40A Guidelines
- Allow approximately 6 inches of each cable to adequately perform the splice procedure.
- If there is more than one cable splice in the enclosure make sure you properly mark the cables so they will not be mixed up during splicing.

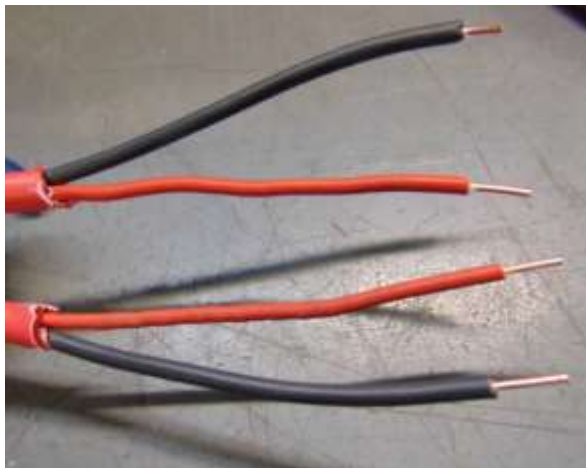


2 Remove Jacket

Taking care not to nick or cut the insulation, carefully remove approximately 3 to 4 inches of the jacket material to allow for the splice operation.

3 Splice Layout and Crimp

- Cut the ends of the cable square and carefully remove approximately ½ inch of insulation and tape wrap to expose conductors for length of splice cap.



- Connect the conductors together using the appropriate copper compression splice cap and crimping tool. Verify crimp is not loose.
- Trim ends of wire so they are flush with end of compression splice cap.
- Make sure there are no sharp edges or points on the end of the splice cap. Smooth or file the edges as necessary.



4 Silicone Tape

- The first tape to apply is the gray colored self-fusing silicone rubber (Item A) supplied in the splice kit. Take care to keep tape clean. Dirty tape shall be discarded. It is critical that the silicone tape stays clean.

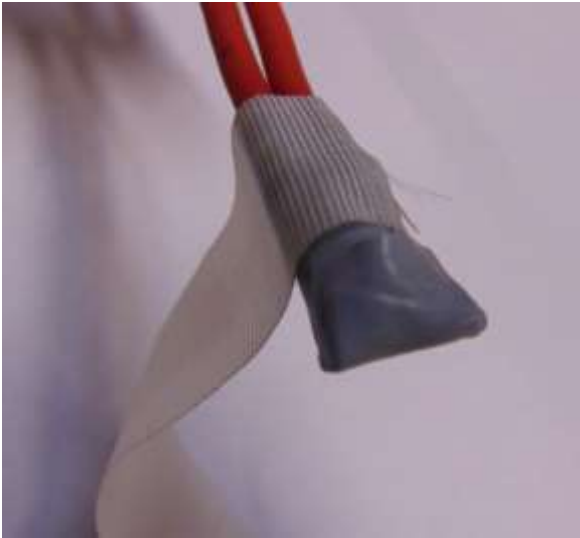


- Start the tape approximately $\frac{1}{2}$ inch back from the end of insulation and tape over the conductor insulation. Begin to wrap helically towards crimp.
- 50% overlap is required. Extend tape overlap $\frac{1}{4}$ inch past the end of the crimp. Be sure to cover the tip of the crimp by folding the tape over the end. Press down to avoid the tape end lifting before fusion takes place.



5 Glass Protective Tape

- The second tape to apply is the white fiberglass tape (Item B) supplied in the splice kit.
- The tape should be cut at a length sufficient to fully cover the silicone tape wrap and extend $\frac{1}{4}$ " beyond the end. Length will vary by cable size.



- Start taping $\frac{1}{2}$ inch past the end of the first layer of the silicone tape. Tape helically towards crimp. 50% overlap is required. Cover all surfaces of the silicone tape.
- Extend tape overlap $\frac{1}{4}$ inch past the end of the crimp. Be sure to cover the tip of the crimp by folding the tape over the end.
- Use hand and apply pressure around crimp to ensure tape is adhering well.

6 Second Layer of Tapes

- After applying the first layer of silicone and fiberglass tapes, apply a second layer of both tapes following the steps outlined in Sections 4 and 5.



7 Train Cables

- Train the cables neatly so that they are close to the center of the enclosure and not drooping or touching the enclosure. Avoid contact with the sides of the enclosure. Maintain at least a ½ inch spacing between the splices and any surface of the enclosure.



- Tape the splice along the cables to hold in a straight line as shown above.

8 Clean Up, Final Inspection, Close Box

- Remove any loose debris from inside the box.
- Inspect the box and cover for any damage and wipe clean if necessary.
- Fasten enclosure.



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