

SUMITOMO RECOMMENDED PROCEDURE**SRP SP-F04-046****FIELD TERMINATION PROCEDURE FOR
FP72PVS FIBER BUNDLES
WITH FT72FBK-12SU BREAKOUT KIT**

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1.0 General

1.1 This procedure describes the standard techniques for installing the Sumitomo Electric Lightwave (SEL) *FutureFLEX* Air-Blown Fiber (ABF) bundles containing Freeform Ribbon™ into a FT72FBK-12SU Field Termination Kit.

1.2 The Field Termination Kits are used at locations where fiber bundles containing Freeform Ribbon™ are to be terminated to Multi-fiber-Push-On (MPO) Splice-On-Connectors (SOC), standard or pliable, cassettes terminations.

2.0 Safety Precautions

2.1 Wear safety glasses when working with bare optical fibers / fiber ribbons.

2.2 Handle cutting tools with care.

3.0 Reference Documents

3.1 Sumitomo Recommended Procedure, *FutureFLEX 72 Fiber Bundle Stripping Procedure*, SRP SP-F04-045.

4.0 Equipment / Tools Required

The following equipment, tools, and materials are required to complete this procedure:

4.1 Freeform Ribbon™ 72 fiber bundle.

4.2 FT72FBK-12SU Field Termination Kit (Base Unit with Cover, six 3.8mm OD Breakout Assemblies each with two color-coded marker tubes, one 3.8mm Bushing, two blanks. **See Figure 1.**

4.3 Adhesive Tape.

4.4 Measuring Tape.

4.5 Clean Work Surface / Table.

4.6 Kevlar Cutting Tool (scissors or shears).

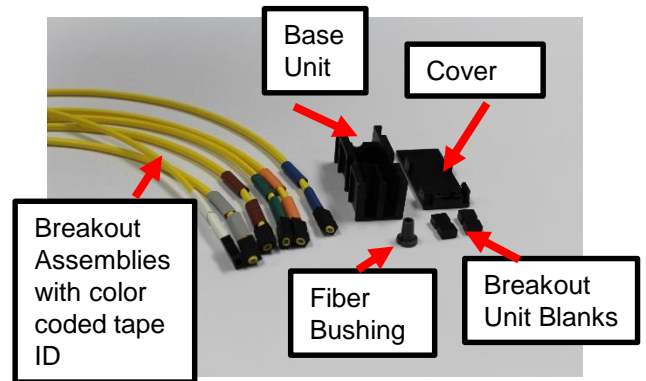


Figure 1

72 Fiber Breakout Kit Assembly Items (Only yellow Singlemode shown)

5.0 Prepare the Freeform Ribbon™ Fiber Bundle

5.1 Freeform Ribbon™ 72 fiber bundle stripping.

5.1.1 The 72 fiber Freeform Ribbon™ fiber bundles consist of 6 X 12f-count Freeform Ribbon™ ribbons all enclosed in a PVDF jacket with a ripcord.

5.1.2 Each of the six(6) Freeform Ribbon™ ribbons contain twelve 250µm color coded (Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose and Aqua) buffered fibers.

5.1.3 Expose at least 40" of PVDF jacket from the the 6 Freeform Ribbon™ ribbons.

5.1.4 Each assembly tubing is 35.5" for the ribbon breakout kits 12SU. Since there are multiple applications for this kit, the length of fiber may vary.

Note: Refer to **SRP SP-F04-045** for detailed techniques on PVDF jacket removal.

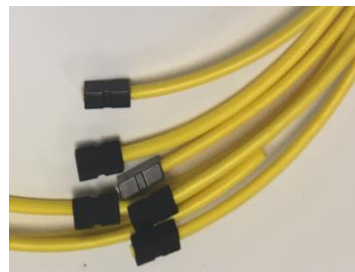


Figure 2

Yellow Furcation Tube for Singlemode

5.0 Prepare the Fiber Bundle (Continued)

5.2 Install the 3.8 bushing on to the fiber bundle allowing it completely overlap the PVDF jack. The bushing has a slit for this purpose as to not slide over bare fiber. See **Figure 4**

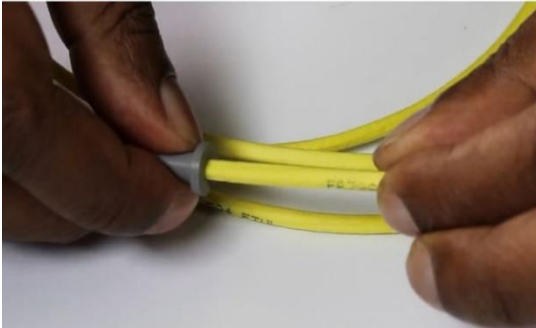


Figure 3
Fiber Bushing overlapping PVDF jacketing

5.2.1 Move the bushing towards the edge of the stripped portion of the PVDF jacket. The Bushing should be the division between the exposed ribbons and the PVDF jacket and helps protect fiber entering the breakout unit assembly.

5.2.2 Once the bushing is at the edge of the PVDF jacket, it should look similar to the image seen in figure 6. See **Figure 5**.

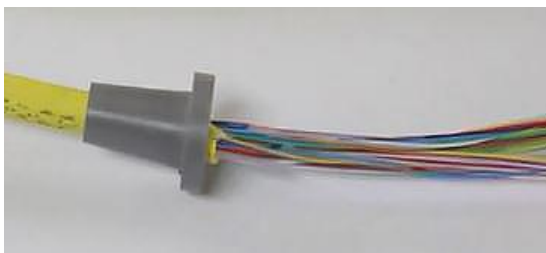


Figure 4
3.8 mm fiber bushing installed on edge of PVDF jacket before the bare fibers.

5.3 The six Freeform Ribbon™ ribbons are Individually numbered (block-coded Marking Pattern) 1-6. See **Figure 5, 6, and FT72FBK drawing for more detail.**

<i>Marking Pattern</i>			
Number	1	5	Visibility Block/ 10
Symbol	 <i>Bar</i>	■ <i>“Short” Block</i>	■ <i>“Long” Block</i>

Figure 5

Like Roman numerals, fiber bundle ribbons are labeled with 1 bar for the 1st ribbon, 2 bars for the 2nd ribbon, etc. **This identification is right after a long “visibility block.” with no value.**

5.3.1 Seen below are each possible marking that can be found for all pliable ribbons in a 72 fiber bundle. Higher count fiber bundles use the same marking system except long blocks after a visibility block is worth 10.

- 1 1 Long Block + 1 bar
- 2 1 Long Block + 2 bars
- 3 1 Long Block + 3 bars
- 4 1 Long Block + 4 bars
- 5 1 Long Block + 1 Short Block
- 6 1 Long Block + 1 Short Block + 1 bar

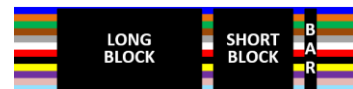


Figure 6

Easy Identification of each fiber ribbon using roman numeral bar and block system in addition to a visibility block. Pictured is a ribbon #6 marking.

5.3.2 Identify (by number) and separate each individual 12 fiber ribbon.

5.3.3 Identify (by color marker tube) and separate the 6 Breakout Assemblies.

6.0 Install the Freeform Ribbon™ into Field Termination Kit

Note: Ensure two same-colored marker tubes are on each Breakout Assembly.. See **Figure 1**.

6.1 Install each Freeform Ribbon™ ribbon in the appropriate Breakout assembly. See **Table in Figure 7**.

Freeform Ribbon™ and Field Termination Assembly Match	
Ribbon #	Assembly Color Code
1	Blue
2	Orange
3	Green
4	Brown
5	Slate
6	White

Figure 7

Assembly Breakout unit Color for each ribbon number to aid in organization

6.2 Bunch the ribbon and evenly stack the fiber ends in order to facilitate insertion of fiber ribbons into correctly color coded assembly breakout unit.. See **Figure 9**

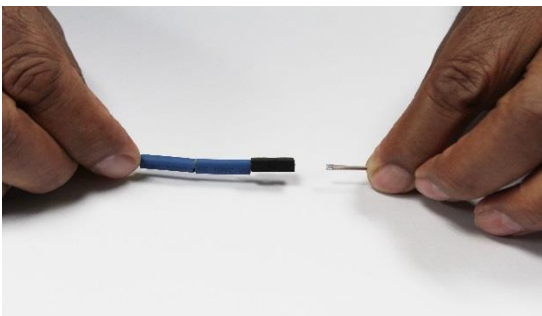


Figure 8

12 fiber ribbon #1 inserted in blue-taped assembly breakout unit

6.3 Feed the ribbon through the Breakout Assembly (from the block through the tubing) 3-4 inches past the ends of the tube.

6.4 Repeat steps 6.1-6.3 for all six Breakout Assemblies.

Note: It is optional to cut the ends of the fiber in a diagonal fashion in order to facilitate easier fiber insertion.

7.0 Assemble the Field Termination Breakout Kit

7.1 Seat the 3.8mm Bushing and Fiber Bundle PVDF as shown into the Breakout Base.

See **Figure 9**.

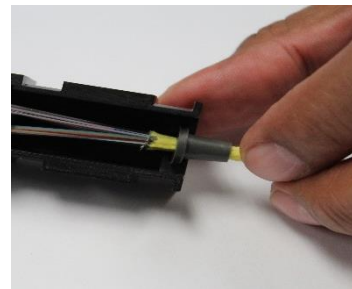


Figure 9

Bushing placed in Breakout Kit Base

7.2 Install each Breakout Assembly (one at a time) into the Breakout Assembly Base. The Order in which assemblies are placed into the Base Unit does not matter. Any order can be used as long as there are no bends.

7.3 Move the Breakout Assembly along the ribbon towards its seating position in the Breakout Assembly Base.

Note: Carefully move the Breakout Assembly while pulling the ribbon.

Note: Ensure that any slack ribbon found between the seated Breakout Assembly and the seated Bushing are removed. To remove any visible slack, carefully pull the ends of the fiber from the end of the tubes until the fibers become taut.

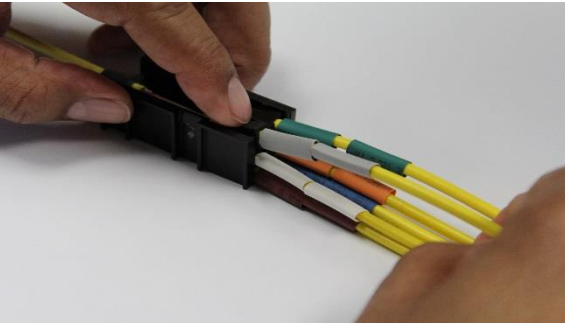


Figure 10

6- 12 fiber ribbon assemblies places in Base Unit

7.4 Repeat steps 7.2 for all Breakout Assemblies installation.

7.5 Install two Breakout Assembly Blanks into the Base Unit by placing each block on top of previously installed assemblies.

See Figure 12 and 13

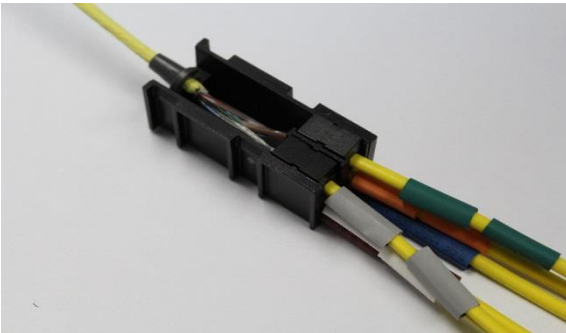


Figure 11

Blanks inserted in empty base Unit area

7.6 Snap the Breakout Assembly Cover in place. **See Figure 12**

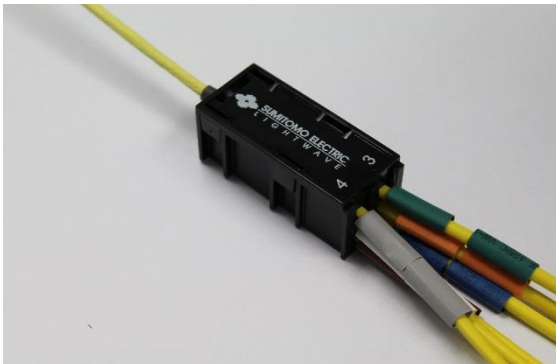


Figure 12

Completed 72 Fiber Breakout Kit