

24F SCA Splice Cassette



24F Thru-Splice Cassette with 12 3.5mm Glands



24F Splice Tube to Tube

IFDF Splicing Cassette

These instructions cover three methods of splice termination of loose tube fibre within an IFDF splice cassette. These three methods are:

Pigtail Splicing

Splicing the loose tube fibres to pigtails and presenting them in through adapters in the splice cassette's front face.

Thru-Splicing

Splicing the loose tube fibres directly to the fibres of output cables. These cables are routed through glands in the splice cassette's front face.

Tube to Tube Splicing

Incoming and outgoing loose tube fibres are brought into the splice cassette. These are spliced to each other.

These instructions apply to splice cassette being installed into any position within the frame.

1. Preparing the Loose Tube Cable

- Allow a minimum of 6 metres of cable from point of entry into the top or bottom of the frame. Additional cable slack stored elsewhere is recommended, as cable slack cannot be stored inside the frame.
- Select the point of entry where the incoming cable will enter the frame. Cables can enter in all 4 corners.
- Knockout the blanking plug at this entry point and fasten a suitable gland to the hole. Cables entering from the bottom of the frame are fed through the opening and fastened to the gland plate.
- Push the cable into the gland, until it is in the required location and mark the cable jacket at point A shown in **Figure 1**. This is 50mm below the gland.
- Remove the cable from the gland and measure the cable to a distance of 6 metres. Cut the excess cable off at this point. Shown as point B in **Figure 1**.
- Remove any sheath material, e.g. nylon, polyethylene, PVC etc up to point A. Use the appropriate cable sheath stripper (AFL part number EGE1890) for the removal of nylon and polyethylene sheaths.
- Remove all binding tapes and wrappers.
- Cut away any interstitial fillers and Kevlar (aramid yarn).
- Leave 140mm of central strength member from cable breakout point.
- The use of rubber vulcanising or electrical tape at the cable breakout point is recommended to prevent tube kinking as shown in **Figure 2**.

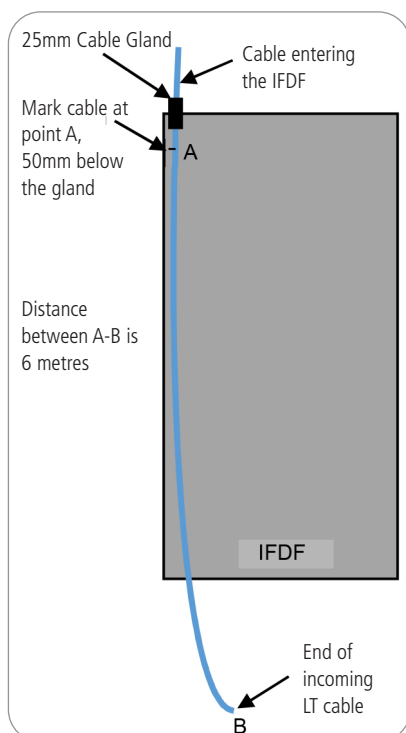


Figure 1.

Measuring the Incoming Cable

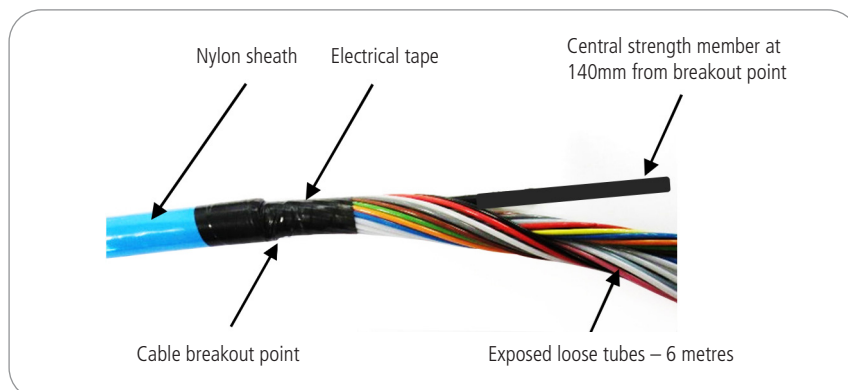


Figure 2.

Preparing a Loose Tube Cable

IFDF Splicing Cassette

2. Installation of Sub-frame modules

- Mount the sub-frame modules into the required locations within the frame.
The frame will need to be prepared prior to being fitted to the frame. The preparation is determined by the location and application of the sub-frame. Please refer to the IFDF Sub-frame Installation Instructions found in the document holder.

3. Cable Installation

- For cable entering the top of the frame, feed the prepared cable through the 25mm gland and fasten to the panel with the gland nut. For cables entering through the base of the frame, feed the prepared cable through the opening and fasten to the gland as shown in **Figure 4**.
Ensure the central strength member is positioned into the post before fastening the gland nut, then secure the locking screw. See **Figure 3**. For cables entering from the bottom of the frame, bottom fibre spool can be removed and mounted in the top position.
- At this point, separate all the tubes so they can be accessed individually for splicing.
- Feed all the fibre tubes into the outer row of white clips, then around the bottom spool, and up to a point where the cassettes will be terminated. See **Figure 5**.

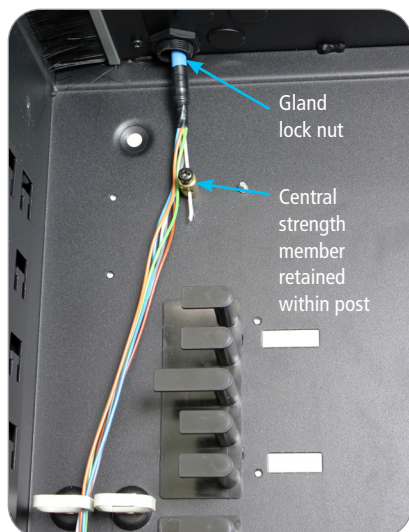


Figure 3.
Securing the Incoming Cable to the
Top of the Frame

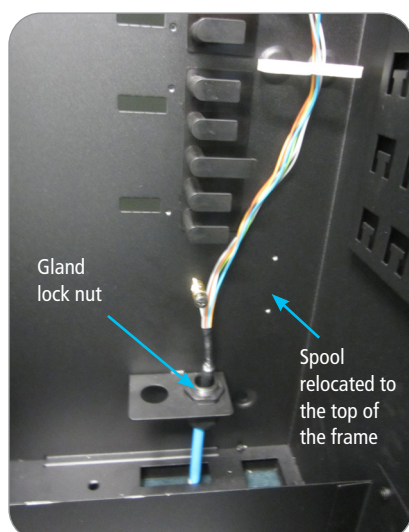


Figure 4.
Securing the Incoming Cable to the
Bottom of the Frame

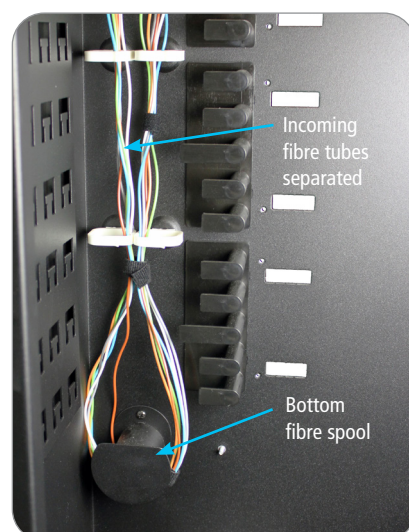


Figure 5.
Separating the Fibre Tubes

4. Fibre Preparation

- Carefully separate the required tubes from the bundle, to a minimum distance of 2 metres.
- Run these separated tubes through the fibre comb opening where splicing is required.
- Mark the tubes at a distance of 300mm from the fibre management comb. See **Figure 6**.
Once they are marked, remove the entire tube length from the management comb and the rack. This will make it easier to complete the tube preparation and splicing process.
- Carefully remove the tubing to this mark using a loose tube stripper (AFL part number IDE5163) exposing the 250µm fibres and wipe each fibre clean with alcohol and lint free wipes.
- Slide the corrugated fibre protection tubing over the exposed fibres and tube, until they are level with the end of the tubes.
The corrugated tubing is provided in 500mm lengths to protect and prevent the fibre tubes from being kinked.
Remove the tab at the rear (LHS or RHS) of the cassette to allow the protective tubing to be fitted to the cassette.
- Fasten the tubes to the splice cassette as shown in **Figure 7** using 2 cable ties.

IFDF Splicing Cassette

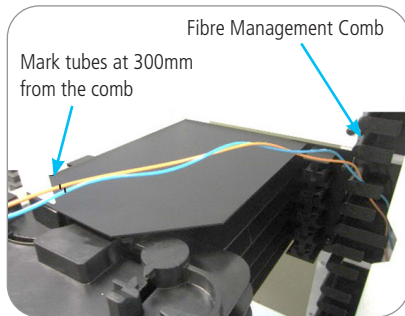


Figure 6.
Marking the Tubes

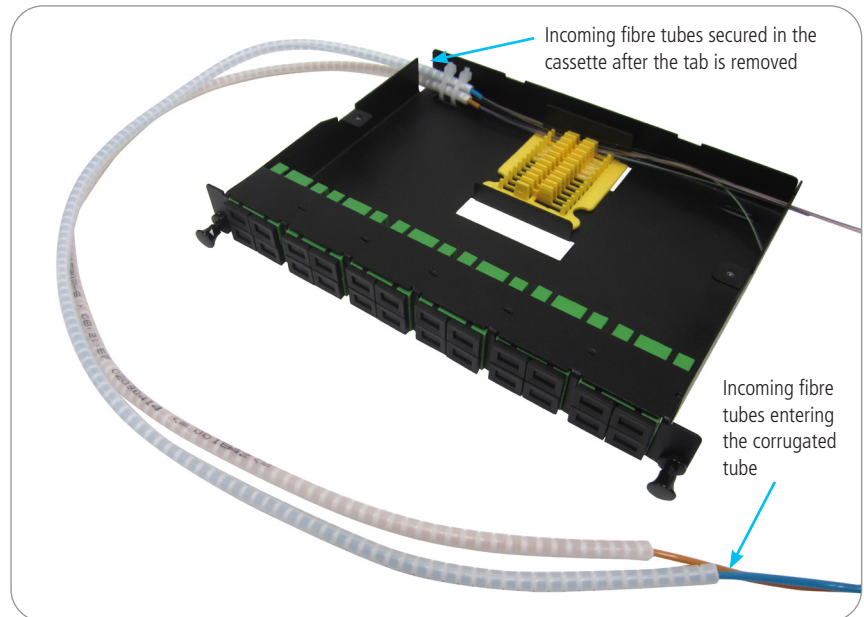


Figure 7.
Splice Cassette with Fibre Tubes Attached

5a. Pigtail Splicing

The following procedure demonstrates the correct method for preparing and splicing pigtails to the incoming loose tube cable. In the example below, there are 24 SCA pigtails being spliced to two incoming 12 fibre loose tubes. It is recommended to install and terminate one pack of pigtails at a time.

Ensure all cleaning and inspection practices are maintained during the splicing and testing process.

- Remove the pigtails from the pack and connect them to the lower row of adapters using the standard colour code sequence.
- Loom the connected pigtails around the cassette twice. A small piece of tape will help manage the fibres and keep them neatly routed. Cut the excess fibre near the centre of the splice comb. Repeat this process for the incoming loose tube fibres. See **Figure 8**.
- Splice all fibres in the bottom row of the comb.
- Repeat this process for the remaining packs of pigtails.
- Once all splicing and testing is complete, fasten the lid to the cassette.

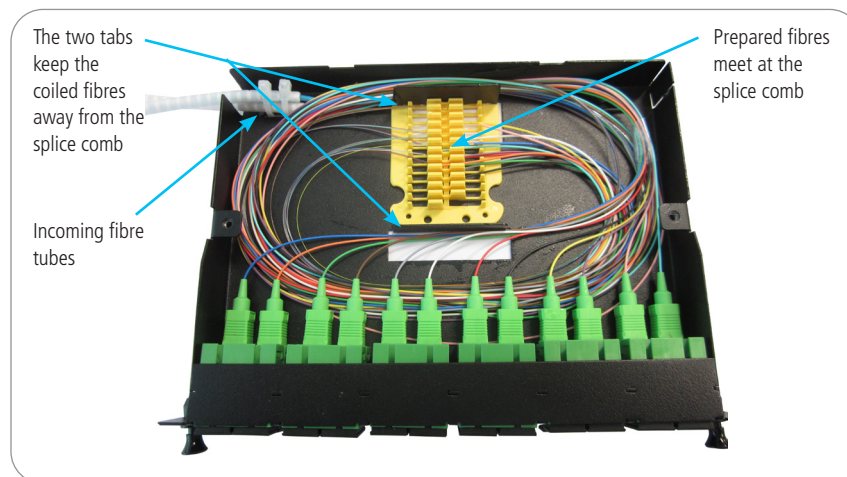


Figure 8.
Preparing the Pigtails

IFDF Splicing Cassette

5b. Thru-Splicing

The following procedure demonstrates the correct method for preparing and splicing incoming loose tube to mass, duplex or simplex cord. In **Figure 13** there are 12 two fibre 2mm zip cords being spliced to two incoming 12 fibre loose tubes. It is recommended to terminate one tube at a time.

Ensure all cleaning and inspection practices are maintained during the splicing and testing process.

Thru-Splice Gland Kit options:

PART NUMBER	DESCRIPTION
CABGN-DDH-2.5-6KIT	Thru-Splice Gland Kit suit Cable 2.5mm Max.(6 Pack)
CABGN-DDH-3.5-6KIT	Thru-Splice Gland Kit suit Cable 3.5mm Max.(6 Pack)

AFL Thru-Splicing Cord options:

Cord Type / Gland	CABGN-DDH-2.5-6KIT	CABGN-DDH-3.5-6KIT
12F Microcore 3mm	Unsuitable	Suitable
2F Microcore 2mm (Round Duplex)	Suitable	Suitable
2F 2mm Zip	Unsuitable	Suitable

- Unscrew and remove the fibre reels from the cassette, these can be discarded.
- Mount all required gland bodies to the cassette and secure with nuts. See **Figure 10**.
- Populate all remaining ports with blanking plugs.
- Pass a gland boot over the incoming cord. Mark a minimum of 1.5m from the end of the cord. Strip and remove all jacket materials to the mark leaving 900µm or 250µm fibres. Trim aramid yarn to 25mm.
- The thru-splice glands come with two aramid retention caps, one larger, one smaller. Feed the appropriate cap over the fibres to the gland body. Use the cap to retain the aramid as shown in **Figures 11 and 12**.
- Route fibres around the cassette in two loops, bring fibres to the centre of the splice comb and cut the excess fibre as shown in **Figure 13**.
- Repeat for incoming thru-splice fibres corresponding to the first loose tube.
- Loom the loose tube fibres around the cassette, trim at the centre of the splice comb.
- Splice all fibres starting in the bottom row of the splice comb.
- Repeat this process for any additional loose tubes.
- Once all splicing and testing is complete, fasten the lid to the cassette.

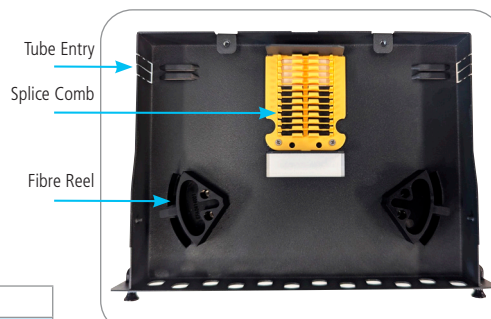


Figure 9. Thru-Splice Cassette, with Lid Removed

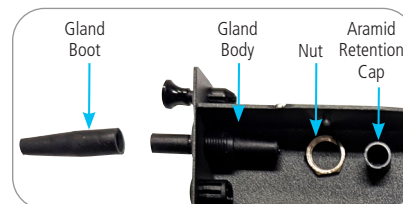


Figure 10. Thru-Splice Gland Components

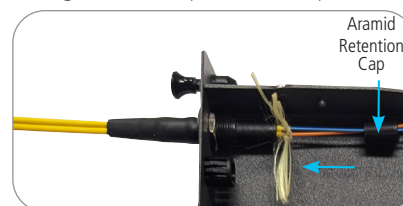


Figure 11. 2mm Zip Cord installed in Gland, aramid trimmed to 25mm



Figure 12. Cap installed over aramid, securing cord

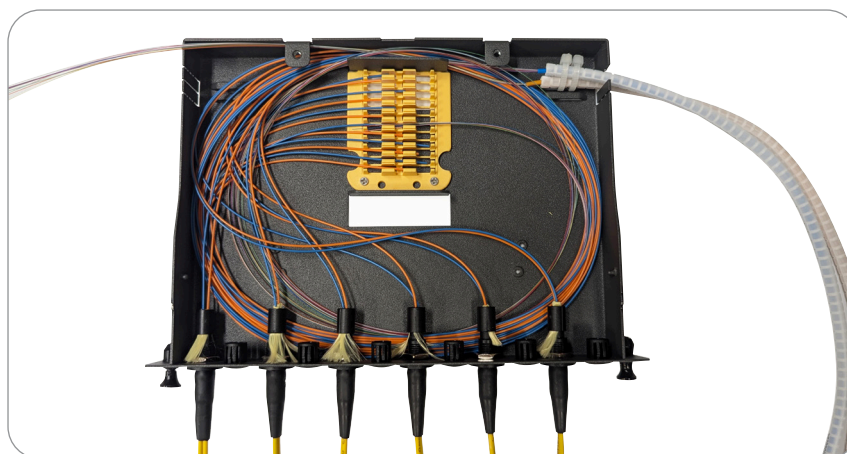


Figure 13. Six 2mm duplex cords passed through 3.5mm thru-splice glands and loomed to the splice comb. Loose tube fibre secured and loomed ready for splicing.

IFDF Splicing Cassette

5c. Tube to Tube Splicing

The following procedure demonstrates the correct method for preparing and splicing incoming loose tube cables to each other.

Ensure all cleaning and inspection practices are maintained during the splicing and testing process.

- Populate all ports with blanking plugs.
- Loom the incoming loose tube fibres around the cassette twice using the fibre reels and trim at the centre of the splice comb.
- Loom the outgoing loose tube fibres through the fibre reels to change the loom direction, loom around the cassette once in this direction and trim the fibres at the centre of the splice comb.
- Splice all fibres in the bottom row of the splice comb.
- Repeat this process for any additional loose tubes.

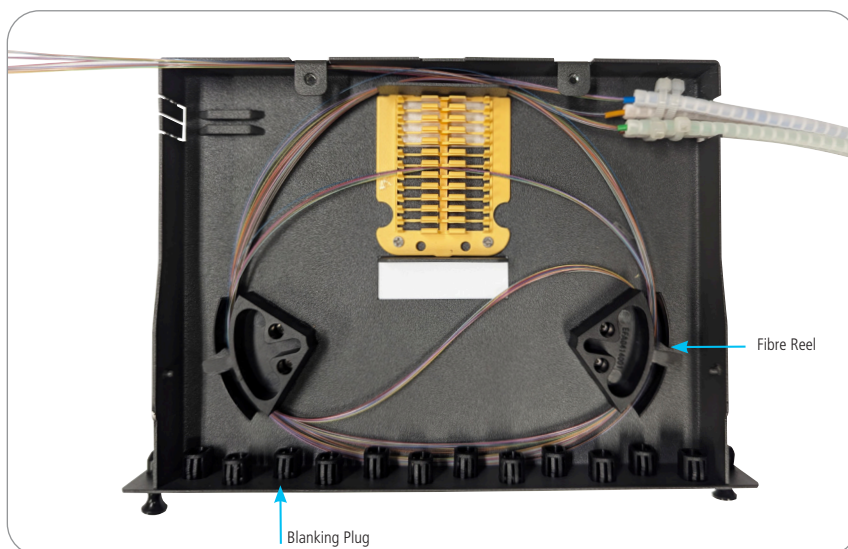


Figure 14. Fibres from two loose tubes routed to splice to each other.

6. Installing Cassette

- Open the required swing tray and carefully load the cassette into the sub-frame module and secure it using the 2 front push tabs.
- Route the corrugated tube through to the rear of the module and into the rear fibre management comb. See **Figure 15**.
- Load all excess fibre tubes into the white management clips as shown in **Figure 16**.

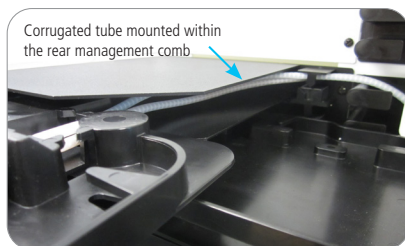


Figure 15.
Installing the Spliced Cassette

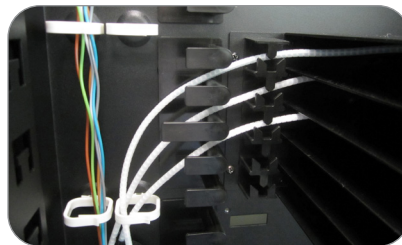


Figure 16.
Storing Terminated Fibre Tubes