openreach

ISIS Practice
For Openreach & our Partners

EPT/OHP/B039

Issue 4, 07-Dec-2021
Use until 07-Dec-2023

Published by Openreach Overhead Polcy Team

Privacy- None

SST Cable with Pre-Terminated CBT

Information and Installation guide

About this document ...

Author

The author of this document may be contacted at:

Wesley Grantham
Electrical Protection & Overhead Professional
Openreach (BOI)
Post Point BY2Grimsby Pyewipe TEC
Estate Road No. 2
South Humberside Ind Est
Grimsby
LINCS
DN31 2TJ

Telephone: +447736637011
Fax:
Email: wesley.grantham@openreach.co.uk

Content approval

This is the Issue 4 of this document.
The information contained in this document was approved on 07-Dec-2021 by Glen Barford, Overhead Network Policy and Standards Specialist

Version History

Version No.	Date	Author	Comments
Issue 4	07-Dec-2021	Wesley Grantham	Updated item codes in table 1
Issue 3	01-Oct-2021	Wesley Grantham	Added section 4.2 - Telenco Hypoclamp
Issue 2	11-Apr-2019	Martin Nottage	Up Issue
Issue 1	25-May-2018	ISIS Coordinator AE&I Doc Control	New Document

Table of Content

1 *Introduction*

This document provides information and installation guidance for the use of Corning SST / CBT Cable in the Overhead Network. The cable was previously restricted to underground installation.

Guidance for Planners can also be found in briefing document 587, which is available from the Planning Policy briefings site. See link below:

Planning Policy Briefing 587

2 *Cable Information*

SST is a flat profile cable, with two outer strength members and a single central tube containing the Fibres.

Fig 1 – SST cable

This cable does not require a Fibre locking Bollard to be installed.

It is supplied on a reel, with a pre-terminated CBT attached. See below.

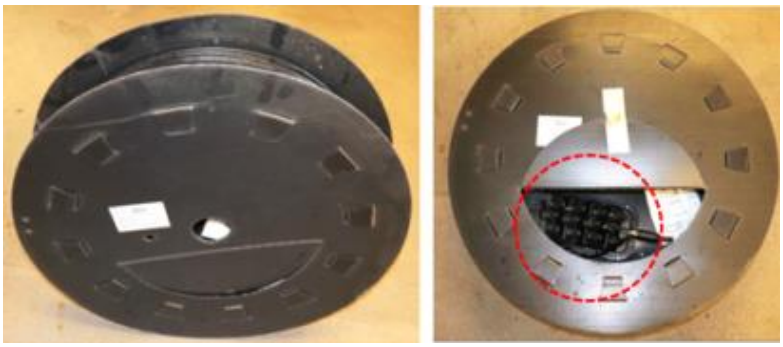


Fig 2 – SST Reel

A variety of different CBT and tail options are available. See Table below for details.

Information contained in this document is relevant to all CBT's manufactured with an SST tail cable.

Item Code	Description
087419	FTTP Connector UG 12way 350m
109011	FTTP CBT UG 12 Port 300m
109010	FTTP CBT UG 12 Port 250m
Obsolescent	FTTP Connector UG 12way 200m
110988	FTTP CONN UG 12WAY 150m BOX
110987	FTTP CONN UG 12WAY 100M BOX
087413	FTTP Connector UG 12way 50m
088083,	FTTP Connector UG 12way 20m
088082,	FTTP Connector UG 12way 10m
Obselescent	FTTP Connector UG 8way 350m
110985	FTTP CONN UG 8Way 300 BOX
110984	FTTP CONN UG 8WAY 250M BOX
Obsolescent	FTTP Connector UG 8way 200m
109009	FTTP CBT UG 8 Port 150m
109008	CBT UG 8 Port 100m
109007	FTTP CBT UG 8 Port 50m
Obsolescent	FTTP Connector UG 8way 20m
109021	FTTP CBT UG 8 Port 10m
109019	FTTP CBT UG 4 Port 350m
109018	FTTP CBT UG 4 Port 300m
109015	FTTP CBT UG 4 Port 250m
109014	FTTP CBT UG 4 Port 200m
087401	FTTP Connector UG 4way 150m
087400	FTTP Connector UG 4way 100m
087399	FTTP Connector UG 4way 50m
088079	FTTP Connector UG 4way 20m
088078	FTTP Connector UG 4way 10m

Table 1 – SST/CBT Tail options

3 *Overhead Installation*

3.1 Erection of SST cable

Broadly speaking, the Cable uses Dropwire installation practices. However, unlike Dropwire, two people are required for its installation, particularly over Carriageways, where a revised method is to be used.

The revised method uses much of the same equipment and techniques deployed when erecting normal Dropwire over carriageway.

However, as the SST Reel is too large to fit the Dispenser 2B, that cannot be used to provide back tension and instead, tension is provided manually by a 2nd person, with the Cable reel mounted on a Dispenser A Frame Universal (see pic below).

The Dispenser is available via i-buy from Comtec, product code: 993471.

Fig 3 – Dispenser A Frame

During the pulling operation, the role of the 2nd person at the feed end, is totally dedicated to maintaining the back tension, necessary to keep the sash line / cable safely aloft over the carriageway

The person at the feed end is only released from this dedicated task when the line has either been temporarily secured or terminated at that position.

Effective Visual / Audio contact is required between Point A and Point B. Where this is not possible, two way radios may offer an alternative.

Where communication between Point A and Point B is not possible, this method should not be used. In such cases, BAU practices used for other Wires & cables (i.e. Temp road closure) would be required.

A briefing deck describing the method in detail is available to download below.

SST Cable install over Carriageway.pp

Note: Managers should ensure that their people have been supplied and are fully conversant with this installation process before undertaking the task.

3.2 Training requirements

Any person/s required to install SST cable over carriageways, **must**:

- Already be fully trained and familiar with the long standing installation practice for Dropwire over Carriageways (Pulley & Sash line method).
- Be provided with, read and be familiar with, the above mentioned guide before undertaking the task.

4 *Clamps*

4.1 Cable Suspension Clamps (obsolescent)

The SST Clamp has a closed Eye, so also requires a Link to form attachment between the Clamp and the Pole Ring.

The Corning SST Cable Clamp is now obsolescent and has been replaced with the Telenco Hypoclamp.

Fig4 SST cable clamp (obsolescent)

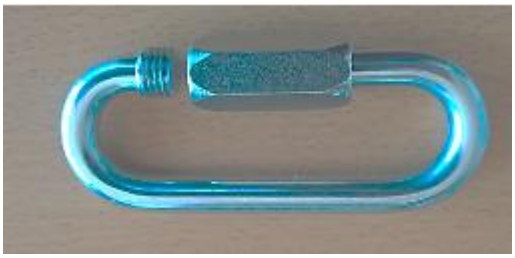


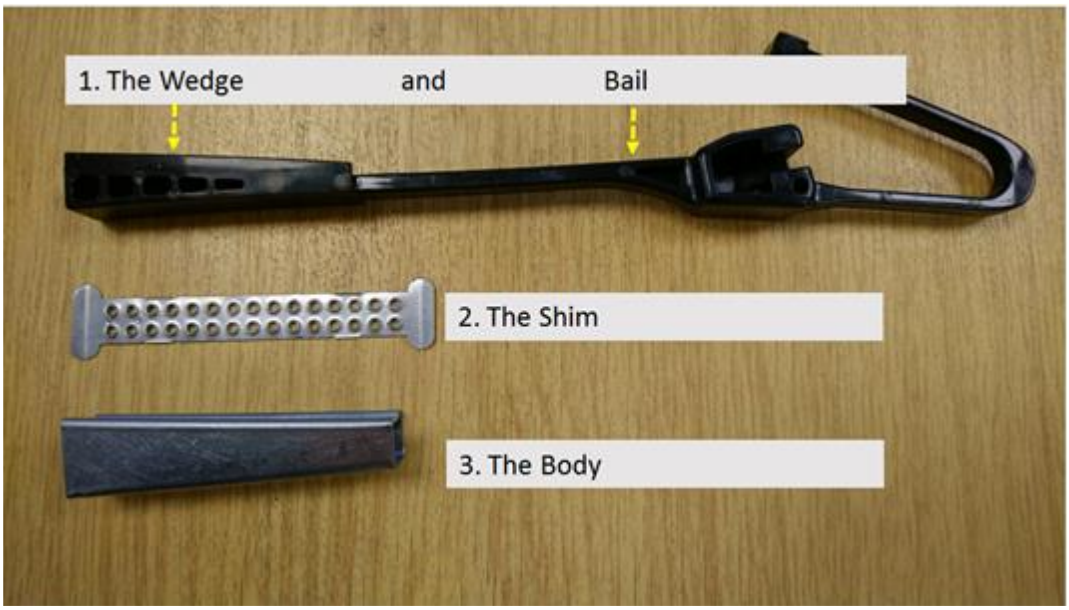
Fig5 Link cabling 1

Fig6 SST pole top link

4.2 Telenco Hypoclamp

The 3 part clamp is composed of a metallic body, a metallic shim and plastic wedge with an integrant opening bail.

The key difference is that this clamp does not require a Pole Top Link to form an attachment between the clamp and the Pole Ring.



4.2.1 Fitting the 3 Part Clamp

The pictures shown below are taken from the manufacturer's installation guide and as such, the bracket shown is not something that Openreach use. The attachments will be to a Pole Ring or Universal Pole Bracket, etc.

Step 1

Fit Hybrid Cable Grip (Come Along), item code: 069586 onto the pole or ring head ensuring there is enough length for the clamp to be fitted to the cable without interference.

Step 2

Fix the cable into Come Along ensuring correct tension is on the cable.

Due to its flat profile, this cable requires twists to be inserted into each Span during installation.

Insert a minimum of 1 twist per 10 metres – preferably 10 twists per span. As this cable is very light, the twists can be inserted by hand, by simply rotating the Cable using both hands.

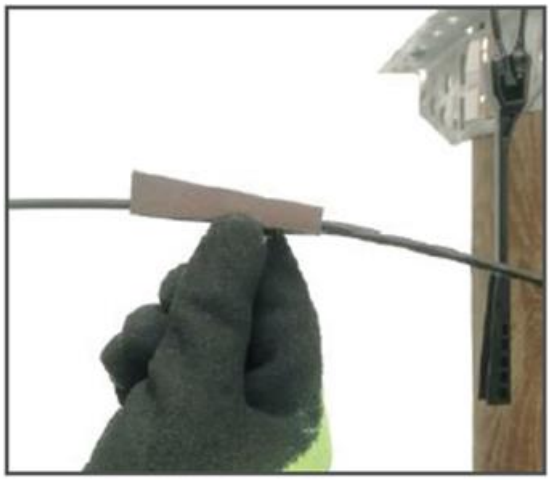
Caution: Inserting twists is very important. Failure to do so will result in the cable galloping in windy conditions and becoming damaged!

Fit cable in come along

Step 3

Attach the Wedge and bail onto the fixing locking off the bale.

Step 4



Place the cable into the body of the clamp.

Note: The thick end of the body needs to be facing out to span.

Step 5

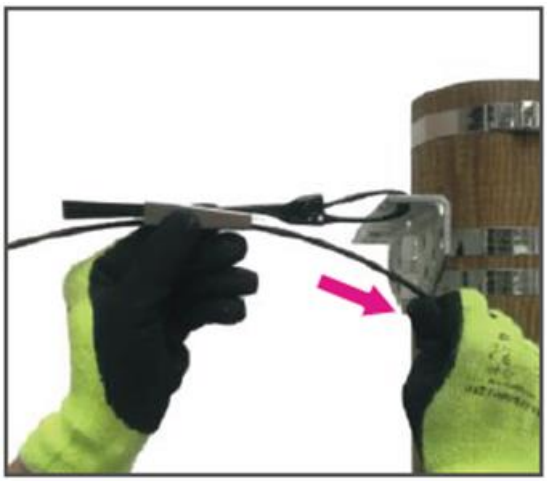
Position the shim onto the cable into the clamp body, with the gripping bumps facing the cable.

> **Warning:** The Shim part of the clamp has a rough and smooth side. For the clamp to work, it is critical that the rough side of the Shim faces down onto the cable. Installing the Shim with the smooth side onto the cable will result in slippage.

Figure shows the rough side

Figure shows smooth side

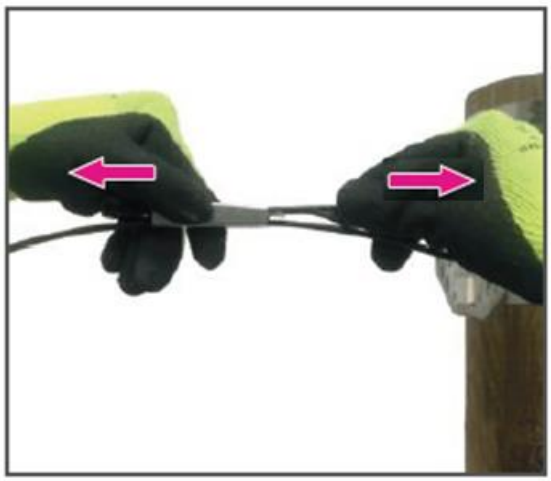
Step 6



Slide the wedge into the body of the clamp, such that it sits on top of the Shim and the raised sides of the wedge run in the grooves of the body. Adjust the span by pulling on the cable while holding the body.

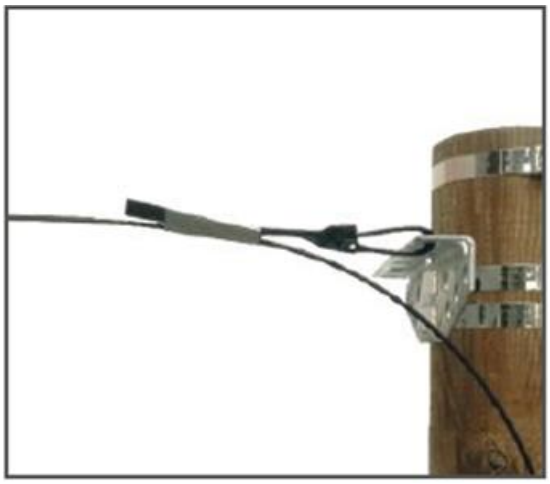
Note: The Hypoclamp must be tensioned when adjusting the cable tension.

Step 7



Lock the clamp by pulling the body of the clamp and the Bail end in opposite directions.

Step 8



The clamp installation is now complete.

4.3 Attachment to Poles with no Ring Head

Where no Ring head currently exists, the preference is to fit one.

Virtually all poles will have the correct hole drilled through at 200mm down from the tip. It is highly unlikely (but not impossible) that the pole will not have the correct pre-drilled hole.

If there isn't a hole, then the options are, in preference order:-

- Drill the pole, using an auger bit, to fit a Ring head (I/C 121240)
- Wires may be attached to the Pole using a Bracket 22, or a UPB, but follow the guidance shown in AEI/AEC/ B248

Fig 18 - Bracket 22

Fig 19 - UPB

Bracket 22, is secured to Pole using 3 Screw Steel Zinc Plated CSK Pozidrive 1½ x 12 item code 211467.

UPB – Is secured by using either Bolt Hex Head 16mm x 300mm Item code 016977, or Bolt Hex Head 16mm x 350mm. Item code 016978.

Note: The Clamp installation on a bracket 22 or UPB is the same as that used when attaching to a Pole Ring head.

4.4 Route Stability requirements

SST Cable can be treated as Dropwire. No requirement for Route Stability provision.

4.5 Power Crossings

This cable can be deployed:

- Above or below Low Voltage (LV) overhead power
- Below HV overhead power lines, of voltages up to and including 11kV

The required separation distances for both of the above are shown in ISIS EPT/PPS/B026 and in the Glove Box Guide.

5 *Cable Stripping*

The practices detailed in appendix A of EPT/COF/C005 should be followed for stripping the SST cable

The practices detailed in Isis EPT/COF/D945 should be followed for the installation of the SST cable into a TM series node.

6 *TM Port Kits*

Use TM Circular Port Kit for COF 250 Cable (SST Cable) Item Code 088363

END OF DOCUMENT