

OPTICAL JOINT CLOSURE

Introduction

The **Optical Joint Closure** has been developed to meet the special needs of Fibre Optic cable jointing and provides a full proof solution for the Fibre Optic cable jointing and branching applications.

Flexibility, modularity ease of installation and maintenance makes the closure an ideal solution for buried and aerial application.

Depending on the closure size it can accommodate a maximum of 72 Fibres in 6 splice trays which can be medially stacked.

Closure Body

The Closure body consists of a polyethylene cylinder. The high quality HDPE is resistant to acidic / alkaline earths, salt water, fungi and bacteria which cause rotting. The closure body is designed for protection against water and moisture ingress and is tested for pressure and impact resistance.

End cap

Basic optical joint closure :

End cap is made of HDPE and meets all of the above climatic condition. The end cap has 4 cable ports and has an effective and innovative closing mechanism. This is secured on to the closure body by means of two half shells and a stainless steel band (worm clip). An earthing stud is also provided for grounding the potential when used along with Armoured FO cables.

Universal optical joint closure :

The end cap has 4 cable entry ports and an additional oval port for looping / branching applications.

Optical Joint closure (TEC APPROVED) :

The end cap is secured on to the closure body by means of brass screws.

Basic Optical Joint Closure



Universal Optical Joint Closure



Features

- Easy opening and re-opening, no special tools required
- No sealants required
- Simple and fast installation
- Perfect cable clamping and adequate loose tube working reserve
- Provision for earthing
- Wall & Pole mounting accessories optional as per application.

FIBRE PRODUCTS

OPTICAL JOINT CLOSURE

Mechanical data

Material Characteristics of HDPE :

a) Tensile strength	: ≥ 17 N/mm ²
b) Elongation at breaking	: $\geq 350\%$ (velocity 25mm/min, + 25 $\pm 2^\circ$ C)
c) Resistance to chemical agents, effects of soil at any PH or by the micro organisms and insects or termite and rodents	: No Traces of grazing or cracking
d) Stability to UV radiation	: Tested as per ASTM G53 for 1000 Hours)
e) Thermal ageing	
i) Tensile strength	: ≥ 15 N/mm ²
ii) Elongation at breaking	: $\geq 300\%$

Gas :

Pressure at ambient temperature	: 1.5 Kg sq. cm.
Change in pressure after 24Hrs	: < 0.05 Kg/sq cm

Axial Tension (Sheath Retension)

Tension applied longitudinally on cables	: 50Kg
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Torsion Test :

Torque	: 10 X D (Nm)
	'D' is the external Diameter of the cable

Flexure Test :

Force	: Max. 500N or 30 degree bending force application 10XD from the end of cable seal sleeve (D is the Dia. of cable in mm).
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Environmental cycle :

Temperature	: -15° C - 60° C
Salt spray (Mist) Test	: As per QM – 333
Drop and Topple test	: As per QM – 333

Vibration Test :

Sweep for 2Hrs on each axis	: (10-300)Hz $\pm 2\%$ at 1 octave $\pm 10\%$ per minute
a) sine sweep (10-28) $\pm 1\%$ Hz 0.1" (2.5mm) double amplitude	
b) sine sweep (28-300) Hz $\pm 2\%$ max. 4 g acceleration	
It shall meet	: As per QM – 333

Water ingress Test :

Immersion tank	: 2 meter (water head)
Duration of immersion	: 7 days
Temperature	: Ambient

Impact Test :

Striking Force	: 5 Kg
Dropping height	: 500mm

Static Load Test :

Static load	: 250 Kg for 24 Hrs
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Product selection table

SL. NO	Description with No. of Fibre	External Dimension in mm (L x Dia)	Number of trays	Max. Fibre Capacity	Part Number
1	Basic optical joint closure 6F	428 X Ø184	1	12	1500-100-XX
2	Basic optical joint closure 12F	428 X Ø184	1	12	1500-101-XX
3	Basic optical joint closure 24F	428 X Ø184	2	24	1500-102-XX
4	Basic optical joint closure 36F	428 X Ø184	3	36	1500-103-XX
5	Basic optical joint closure 48F	428 X Ø184	4	48	1500-104-XX
6	Basic optical joint closure 60F	428 X Ø184	5	60	1500-105-XX
7	Basic optical joint closure 72F	428 X Ø184	6	72	1500-106-XX
8	Universal optical joint closure 6F	560 X Ø175	1	12	1500-T81-XX
9	Universal optical joint closure 12F	560 X Ø175	2	24	1500-T82-XX
10	Universal optical joint closure 24F	560 X Ø175	4	48	1500-T83-XX
11	Universal optical joint closure 48F	560 X Ø175	4	48	1500-T84-XX

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Accessories



FO Splice tray & cover

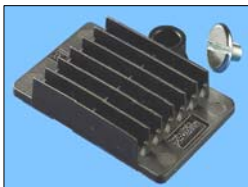
The Splice tray has been designed to achieve a high level of modularity. It provides excellent fiber core reserve management with convenience of operation during installation and maintenance. The stacking feature ensures optimum accessibility to the Splice trays underneath.

Features

- Storage of 12 splice connections
- Stackable with hinges
- Fibre reserve of min. 1.5 m per fibre core
- Cover fastened with hinges
- Provision for storing unspliced fibre
- Bending radius > 30mm
- Larger tray for more convenience
- Integrated Fiber management

Technical Data

Details	Tray	Cover
Dimensions	300 x 109 x 8.5mm	300 x 109 x 1.6mm
Material	ABS	ABS
Colour	Black	Black



Splice Holder

For positioning the Splice Protection sleeves securely

Dimensions	40 X 35 X 5.8mm
Material	PP
Colour	Black



Splice Protection Sleeve

For protecting the splice point of individual fibres from breakage

Dimensions	Ø3 X 45 / 61mm
Material	Shrinkdown tube with metal
Colour	Transparent



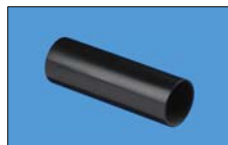
Aluminum - sheet

Protects the cable from temperature effects during Heat shrinking. One sheet of 100 x 75 is required for one cable.



Silica gel

Keeps the closure dry. Sufficient for one closure.



Shrink tube

It is a Black Polyolefin tube with a Shrink ratio of 4:1

Unshrunk	ø 32mm
Shrunk	ø 8mm
Length	75mm



Branching clip

For branching the fibre cables.