

SPECIFICATION FIBER OPTIC SPLICE CLOSURE

Model	YX-4000
Spec. No.	YX-4000-01A
Distribution Depts.	<input type="checkbox"/> Manufacturing Division <input type="checkbox"/> Sales Division <input type="checkbox"/> Management Division
Revision	11.08 (Rev.3)

1. INTRODUCTION

1.1. General

This specification covers the design requirements and characteristics required of fiber optic splice closures to be used on fiber optic cables for branch joint in various installation conditions such as aerial, manholes, ducts, wall and direct buried applications. It is specially designed for specific FTTx network environment, developed for multi-branch and multipurpose, and which is suit able for 8-branching or multi-branching installation by using multi-branching gasket in case of FTTx network installation. Besides, it provides easy and reliable installation and high mechanical strength against any environmental conditions. With VSOFF-K806, you can improve your network system to the higher level

1.2. Description

Fiber Optic Splice closure for fiber optic cable may be exposed to severe environmental conditions. The splice closure for fiber optic cable shall provide excellent durability and long-term reliability in those severe conditions.

1.3. Reliability

The quality of a fiber optic splice closure is critical to reliable optical transmission performance. The product shall be produced with ISO-9001 certified production facilities and quality control system is applied the process from product design to packaging.

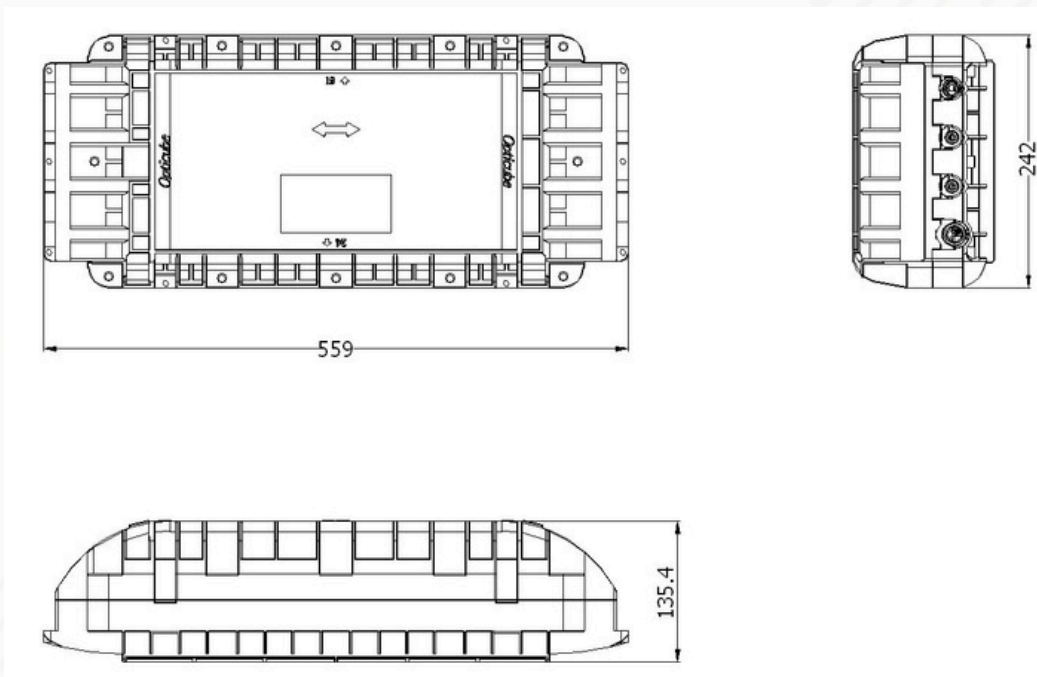
2. FIBER OPTIC SPLICE CLOSURE

2.1. General

The closure consists of outer cases, gaskets, trays, inner kits, etc. The closures have four main entry ports on each end. The outer case consists of the upper and lower body and constructed of highly chemical resistant material and attached a pressure valve on the upper body. The trays are able to accommodate 24 individual fiber fusion splices

2.2. Configuration

- 2.2.1. The ribbed body has high mechanical strength against impact and compression.
- 2.2.2. 100% water-proof using silicon gasket.
- 2.2.3. Fix the cable firmly for work efficiency by cable sheath holder
- 2.2.4. No additional cost for fiber maintenance.
- 2.2.5. Capability of multi-core management.
- 2.2.6. The cable inlet consists of 8 ports four by four on both sides and designed for subscriber's cable to be able to supply 10 ports by transforming the sheath gasket's shape
- 2.2.7. Use of various cable diameter, Various branching and multi environments
(Aerial, Duct. Manhole, Etc)



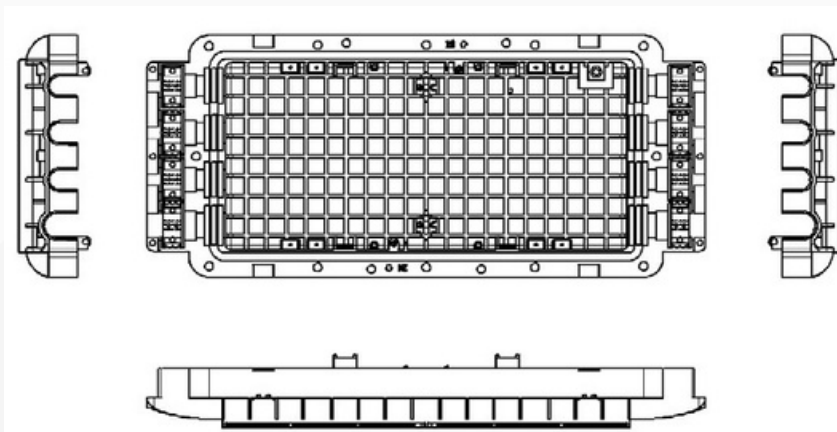
2.3. Specification

Item	YX-4000
Size (L*W*H)	559*242*135mm
Weight (kg) Inlet	4.5
ports(Max) Cable	8 (Max. 10)
Dia. (mm) No. of	Φ3.5~ Φ24
splice tray Tray	6
capacity Splice	24F (Max. 48F)
capacity Splice	144F (Max. 288F)
method Splice	Fusion, Mechanical, Connector
protector Tension	Heat shrinkable sleeve, Ribbon protection sleeve, Mechanical splice
member	Galvanized steel wire, FRP

2.4. Feature

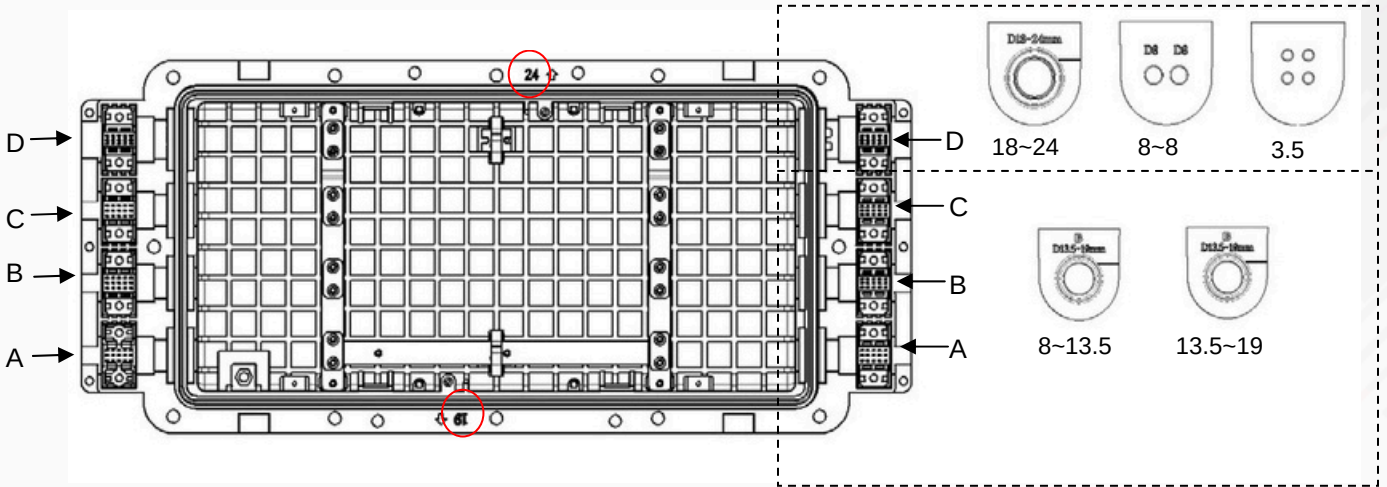
2.4.1. Body

- (1) Ribbed cover for greater impact and compressive strength
- (2) Air valve for air tightness test.
- (3) Hanger connecting part for easy installation.



2.4.2. Multi-Branch Type Sheath Gasket

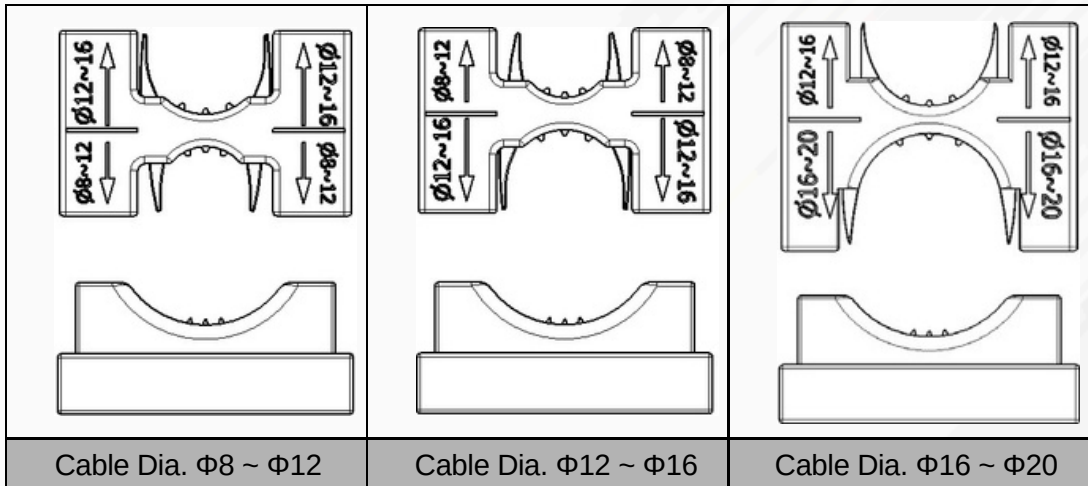
- (1) sheath gasket made of silicon for proven water tightness, fitting any cable diameter
- (2) Sheath gasket is also designed for mid span branching by simple cutting



Port	Gasket		
	Mono	Di	Tetra
A(mm)	8~13.5 13~19	-	-
B(mm)	8~13.5 13~19	-	-
C(mm)	8~13.5 13~19	-	-
D(mm)	18~24	8-8	3.5

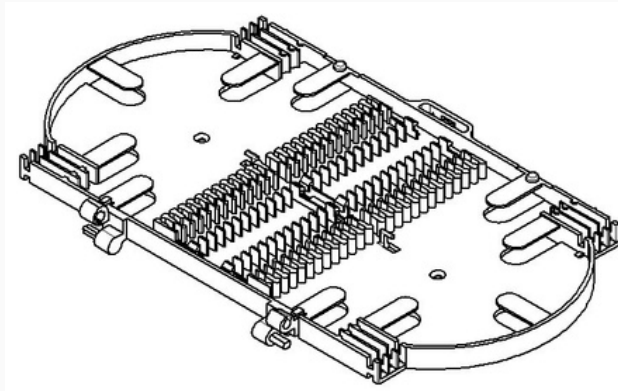
2.4.3. Cable Clamping

- (1) Mechanical cable clamping.
- (2) Firm cable gripping by using the same size Unit Protection Gasket
- (3) Convenient installation and maintenance by Wrapping Sheath Holder
- (4) Nothing any loss of optical fiber cable by using Wrapping Sheath Holder
- (5) Various diameter cable can be accommodated
- (6) Structure by covering up the cable



2.4.4. Splicing Part

- (1) 4 inlet parts in the tray, available to meet the requirements for FTTH network
- (2) Double layered storage (maximum 48 fibers by inserting two sleeves in one slit)
- (3) Loose tube, ribbon fiber and mechanical splice are applicable.



2.4.5. Tension member gripping

- (1) Tension member gripping supporter connected by grounding bolt.
- (2) No interference with splice tray and cable routing and storage
- (3) Tight and stable fastening of Tension Member
- (4) By using just 2 screws, you can easily fix Tension Member.

3. TEST PROCEDURE

3.1. General

3.1.1. This section specifies the Fiber Optic Splice Closure and its material physical, chemical environmental and mechanical requirements and the tests to be applied for the determination of compliance to these requirements.

3.1.2. Sample means all completed assembling closure that finished bonding, grounding and connecting equipments.

3.1.3. For all measures of optical attenuation need to splice and for the measures of just a mechanical performance test(no need for optical attenuation test), insert the cable into the splice closure.

3.1.4. Optical fiber shall be fusion spliced to minimize effect from test environment and shall be protected by heat shrinkable protection sleeve at the splice point

3.1.5. The samples of cable for a performance test shall be prepared with middle size of diameter which is available

3.1.6. The wavelength for measurement of optical attenuation shall be $1550\pm 30\text{nm}$ or $1310\pm 20\text{nm}$ and stability shall be under $\pm 0.01\text{dB}$

3.1.7. Test will be completed with temperature $20\pm 5^\circ\text{C}$ if there is no and special regulation

3.2. Mechanical characteristics.

Item	Test Conditions	Requirements
Cable clamping	<ul style="list-style-type: none"> • Measure the loss after 3 fiber splicing. • Assemble the closure • Measure and compare the loss variation 	No greater than $\pm 0.05\text{dB}$
Sheath Retention	<ul style="list-style-type: none"> • Mount the closure in a fixture and measure the initial loss • Apply an axial load of $D/45 \times 100\text{kg}$ • After 8hours compare the loss. 	No mechanical damage
Cable Flexing	<ul style="list-style-type: none"> • Inner pressure: 6PSI • Attach a 10kg weight to the cable 1m from the closure • Lower the cable 90° for 15min. 	No mechanical damage No greater than 1PSI

	<ul style="list-style-type: none"> Repeat the procedure while rotating the closure 90° → 720° 	
Cable Torsion	<ul style="list-style-type: none"> Mount the closure and condition the assembly at -20±2°C for 2 hours. Inner pressure: 6PSI Twist the cable at D*10mm point Cycle; CW90° → CCW180° → CW90° Repeat 10cycles. Repeat the above procedure at 40±2°C. 	<p>No mechanical damage No greater than 1PSI</p>
Vertical Drop	<ul style="list-style-type: none"> Condition the closure at -20±2°C for 2 hrs. Drop the closure onto a 1/2inch thick concrete floor from 75cm height. 	<p>No mechanical damage No greater than 1PSI</p>
Compression	<ul style="list-style-type: none"> Condition the closure at -20±2°C for 2 hr. Measure the diameter or vertical dimension. Apply a weight of 90kg on 5cm² area for 15minutes. Unload a weight and measure the dim. Repeat the above procedure at 40±2°C. 	<p>No mechanical damage No greater than 1PSI</p>
Impact	<ul style="list-style-type: none"> Condition the closure at -20±2°C for 2 hr. Impact a closure using a drop-tube from 1m Impact level: 2.4kg, &2.54cm 	<p>No mechanical damage No greater than 1PSI</p>
Vibration	<ul style="list-style-type: none"> Inner pressure: 6PSI Measure the loss after 2 fiber splicing. Amplitude : 1.0mm(peak to peak) Frequency : 10~55Hz Direction : X,Y(2 hours at each direction) 	<p>No greater than ±1.0dB(on test) No greater than ±0.1dB (after test) No mechanical damage No greater than 1PSI</p>

3.3. Environmental characteristics

Item	Test Conditions	Requirements
Temperature and Humidity	<ul style="list-style-type: none"> • Measure the loss after 3 fiber splicing. • Assemble the closure • Temp. cycle -30~60℃ • 20Cycle (1cycle is 7hours) 	No greater than ± 0.1 dB No air bubble in the water after test
Water resistance	<ul style="list-style-type: none"> • Put the closure into a 1.5m depth- water tank for 20days. 	No evidence of water intrusion.
Chemical resistance	<ul style="list-style-type: none"> • Inner pressure: 6PSI • solution: pH2 HCL, NaOH, 10% IGEPAL • Submerge for 120hours into the solution. • Impact/compression Test 	No mechanical damage No greater than 1PSI Shall be no change in mechanical integrity or sealing ability.

4. DELIVERY

4.1. Packing

The Closure shall be packed as a complete kit containing all components necessary for installation. Each item is to be covered with a protective material to prevent scratching or damage during shipping or storage. Complete assembly and installation instructions in English shall be provided with each packaged unit.

4.2. Marking

The details given below shall be distinctively marked in English with a weatherproof material on at least two sides of the shipping carton.

The company to be delivered

The product item

Country of origin

Manufacturer's name and/or trademark

Date of manufacture

Caution mark