KSDT-222

Dome Optic Splice Closure

Installation Guide

NOTES:

1. Please read the user’s guide before installation.
2. Please pay attention while sealing the cable ports, the inappropriate installation would affect the performance.

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1. General Introduction

KSDT-222 is designed as a multi-functional equipment for optical cable splice, distribution and protection. The specialty of this closure is for high fiber counts requirement and up to 864F splice capability, It can be used for access or branch between optical cables with 7 cable entry/outlet, capable for wide application, excellent sealing performance and easy for installation, and can be deployed for direct buried, wall mount and areal environments. The selected high strength engineering plastic material to assure superior protection capability from harsh environment such like aging, corrosion, temperature and superior of mechanical strength.

2. Basic structure and configuration

2.1 Dimension and capacity

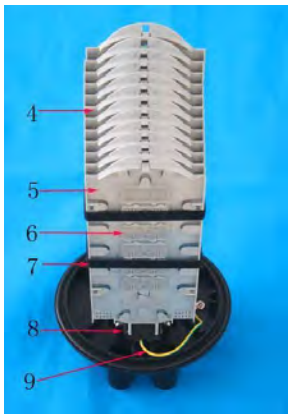
Outside dimension (Height x diameter, mm)	566x285
Sealing type	Heat shrinkage
Number of inlet ports	7 optical entrance ports
Diameter of optical loop cable (mm)	Φ30
Splicing capacity per splice tray	72
Max. number of trays	12
Max. splice capacity (single fusion)	864
Working temperature (℃)	-40 to +65℃
Insulation resistance	≥2X104MΩ

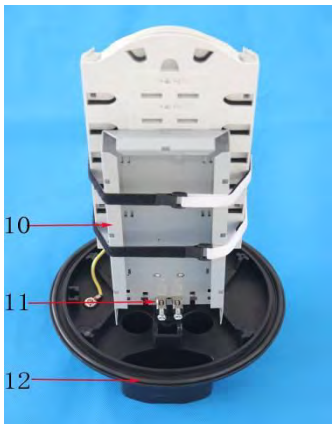
Notice:

In case the diameter of cable is bigger, please press the cable down and tighten screws. In case it is less than 10mm, the sealing tape should be used to enlarge the external diameter of fiber cable or use our optional accessories to fix it.

2.2 Product and accessories illustration

2.2.1 Product illustration





2.2.2 Main components

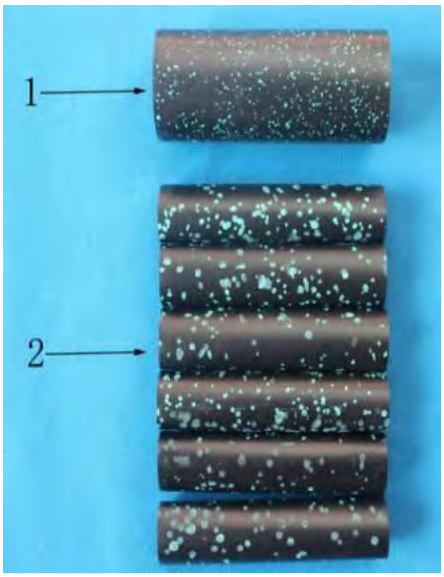
No.	Name	Quantity	Marks
1	Cover	1	Fiber storage, splice and protection
2	Plastic hoop	1	Fixation dome clover and base
3	Base	1	Entrance for optical cable and fixing internal part
4	Splice tray	12	Fiber splice and protection
5	Splice tray transparent cover	12	Protect splice protection sleeve
6	Slot for splice protective sleeve	12	Holder for splice protective sleeve

7	Velcro	1	Fixation of splice tray
8	Splice tray holder	1	
9	Grounding device (optional)	1	Grounding
10	Fiber storage plate	1	Storage of coiled fiber
11	CSM fastener	2	CSM fastener
12	Seal fitting	1	Waterproof and sealing part

2.2.3 Main accessories

No.	Name
1	Insulation tape
2	Branching clip
3	Desiccant
4	Buffering Tube
5	Fiber splice protection sleeve
6	Nylon cable tie
7	Abrasive paper
8	Foil paper

No	Name	Quantity
1	Heat shrink tube (large)	1
2	Heat shrink tube (small)	6



3 Necessary tools for installation

3.1 Supplementary materials (to be provided by operator)

Name of materials	Usage
Scotch tape	Labeling, temporarily fixing
Ethyl alcohol	Cleaning
Gauze	Cleaning

3.2 Special tools (to be provided by operator)

Name of tools	Usage
Fiber cutter	Cutting off fiber cable
Fiber stripper	Strip off protective coat of fiber cable
Combo tools	Assembling Splice closure

3.3 Universal tools (to be provided by operator)

Name of tools	Usage and specification
Band tape	Measuring fiber cable
Pipe cutter	Cutting fiber cable
Electrical cutter	Take off protective coat of fiber cable
Combination pliers	Cutting off reinforced core
Screwdriver	Crossing/Paralleling screwdriver
Saws	
Waterproof cover	Waterproof, dustproof
Metal wrench	Tightening nut of reinforced core

3.4 Splicing and testing instruments (to be provided by operator)

Name of instruments	Usage and specification
Fusion Splicing Machine	Fiber splicing
OT DR	Splicing testing
Provisional splicing tools	Provisional testing

Notice:

The above-mentioned tools and testing instruments should be provided by the operators themselves.

4 Preparation for installation

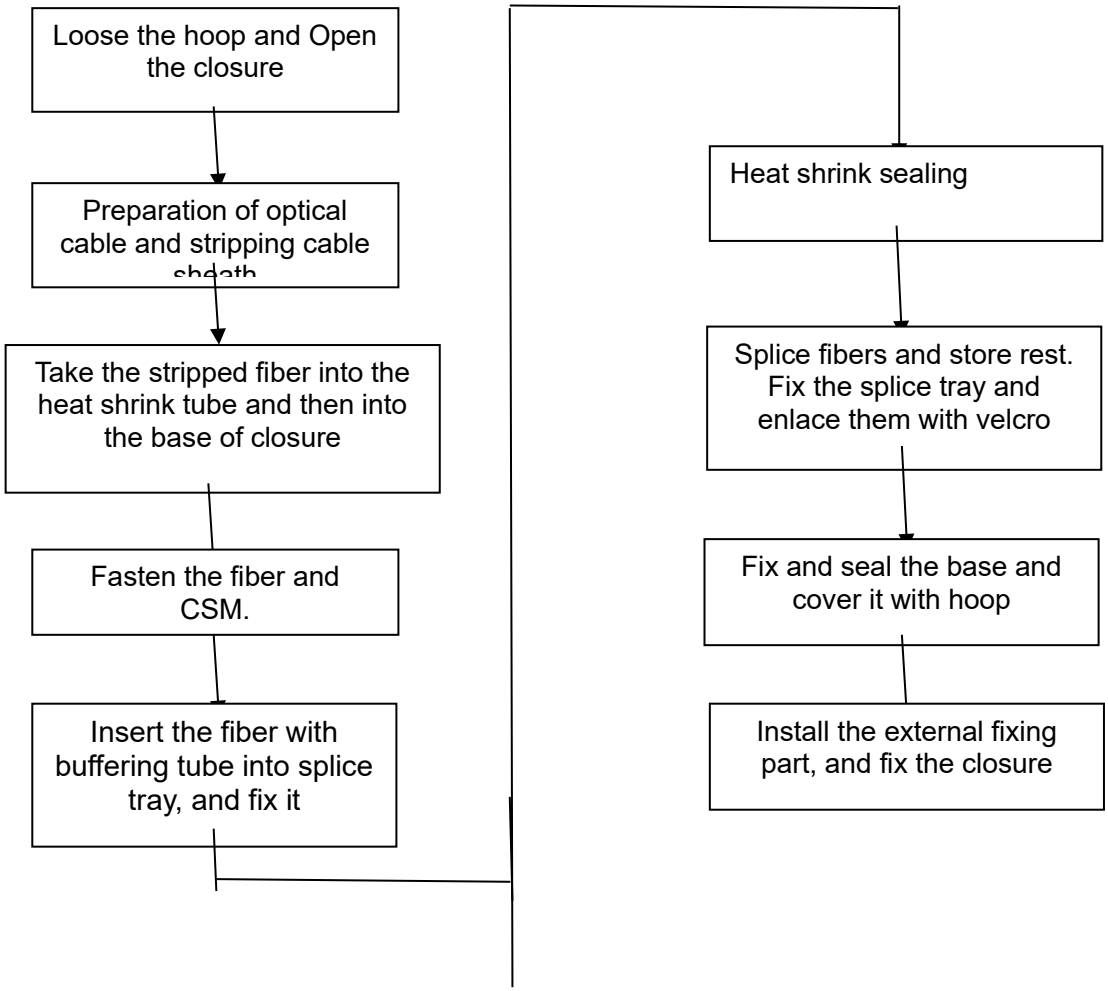
4.1 Check the splice closure type, cable item, and all components before installation

4.2 Keep all components dry and clean for installation.

4.3 Keep working environment clean (dry and no dust) and flat for installation.

4.4 Standard instruments and tools should be used during installing.

5 Installation flow chart

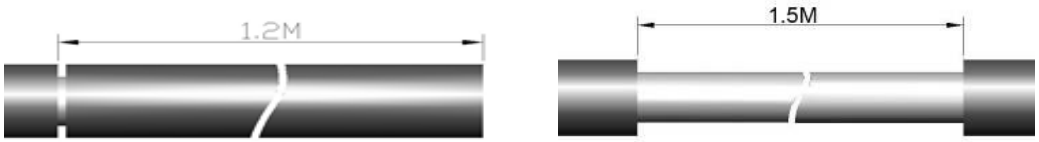


6. The process of Splice closure installation

6.1 Operation of Optical Cable

6.1.1 Stripping optical cable jacket length 1.2 meters and uncut cable 1.5 meters..

6.1.2 Trimming the CSM (reinforced core) to length 5cm.



Precaution：① Optical fiber should not be damaged.

② Cut the damaged fiber, and re-strip new fiber if there's an accident

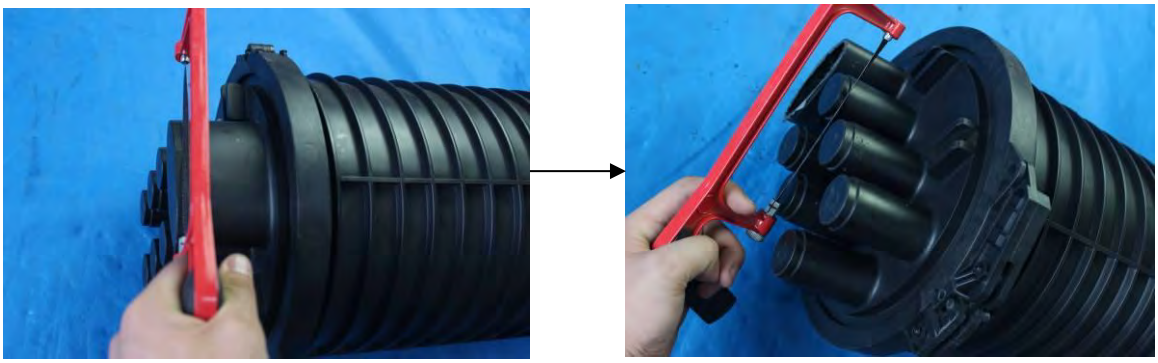
6.2 The process of Splice closure installation

6.2.1 Open the fiber closure

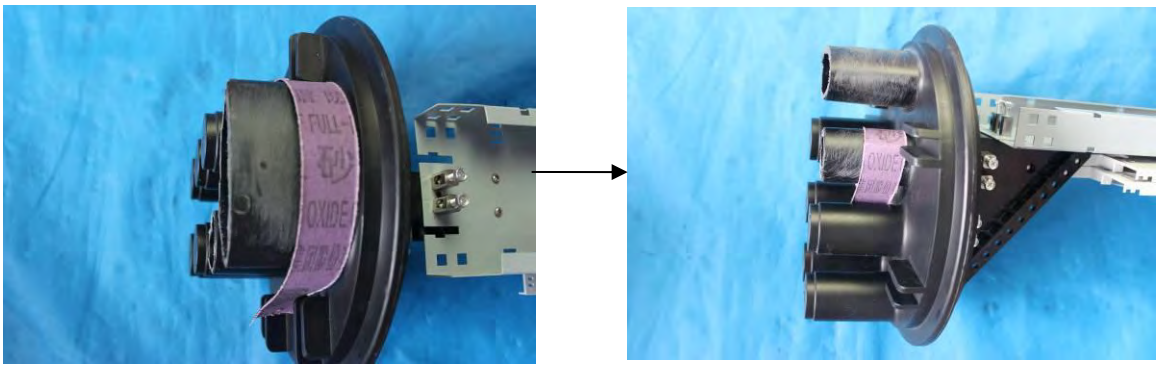
Loose the locked device on plastic hoop, open plastic hoop in order to separate the cover and bottom.

Note. Because the sealing performance is predominant, please be careful when separating the cover and bottom so as not to damage the case.

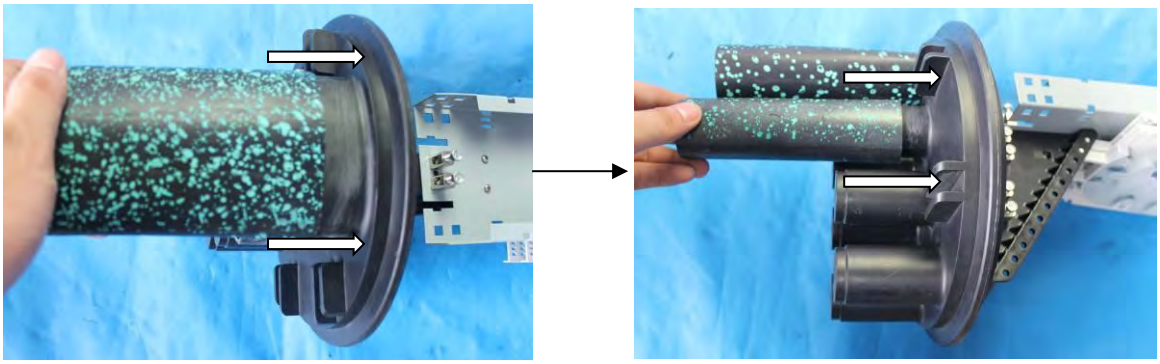
6.2.2 Open the oval and round cable port by saw



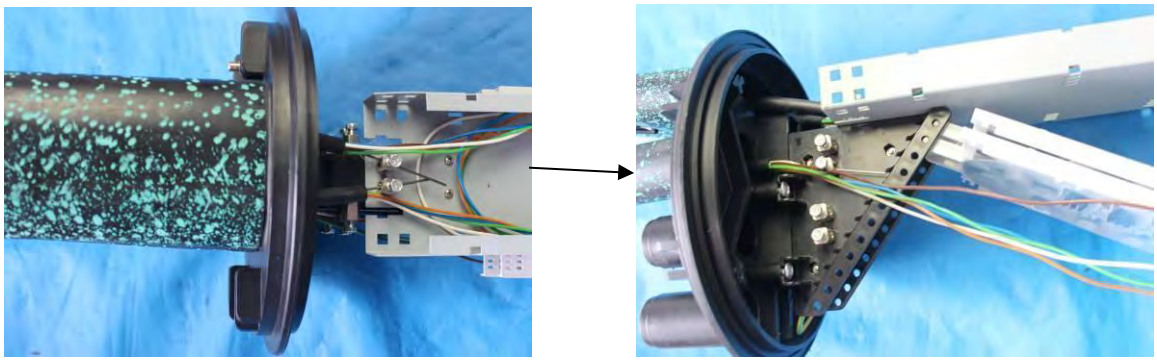
6.2.3 Rub and clean the inlet ports with a piece of abrasive paper to ensure the heat shrink and sealing performance.



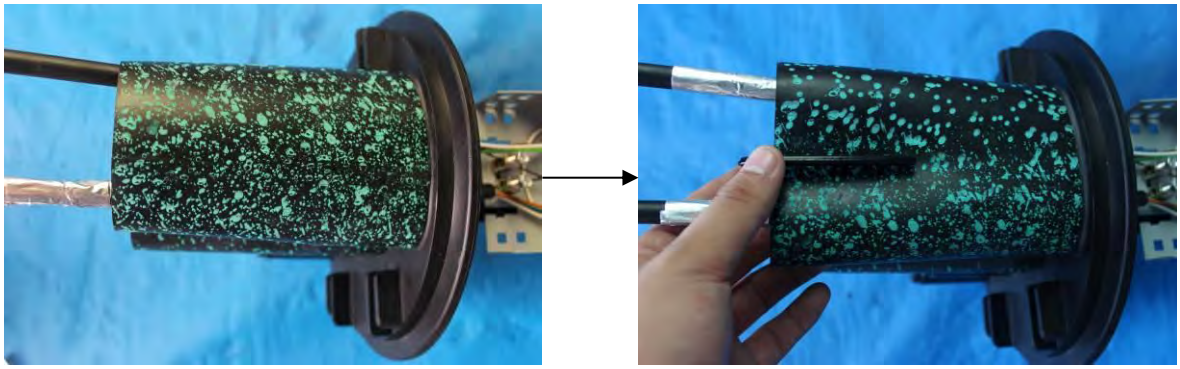
6.2.4 Wrap oval port and round port with heat shrink tube.



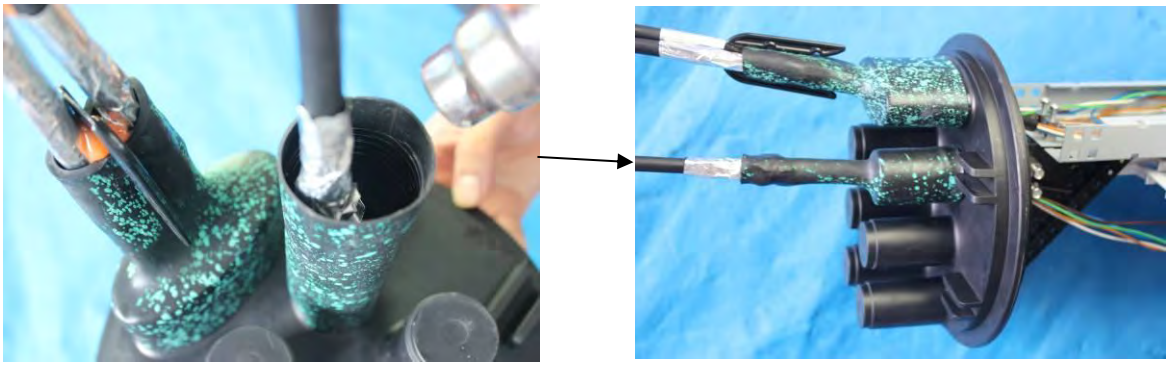
6.2.5 Inlet uncut cable and cut cable to inside of closure through oval and round ports.



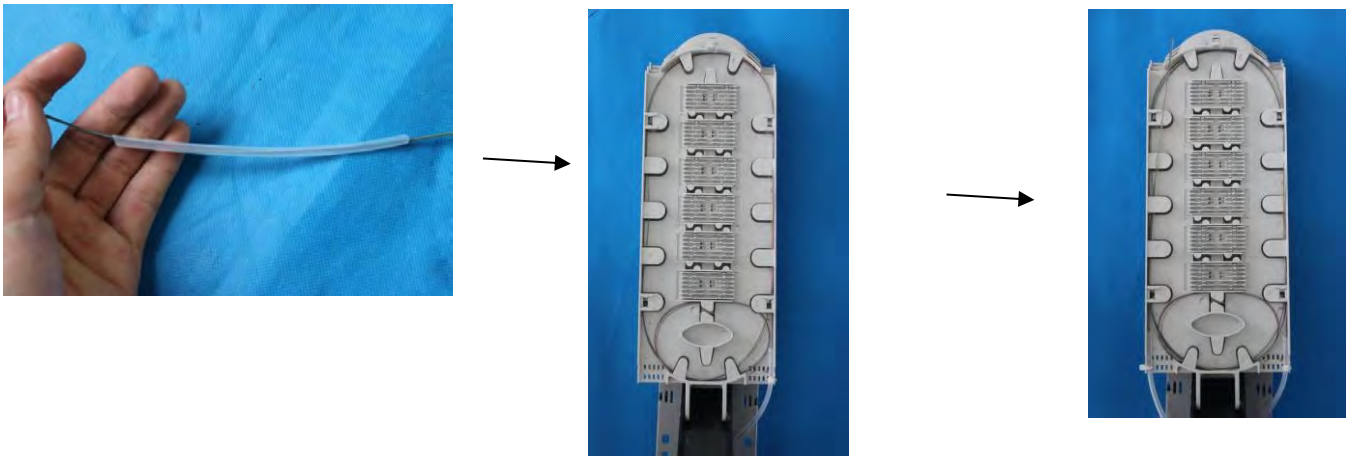
6.2.6 Wrap cable with foil paper properly to protect optical cable from heat and use the branching clip in the middle of cable and heat shrink tube.



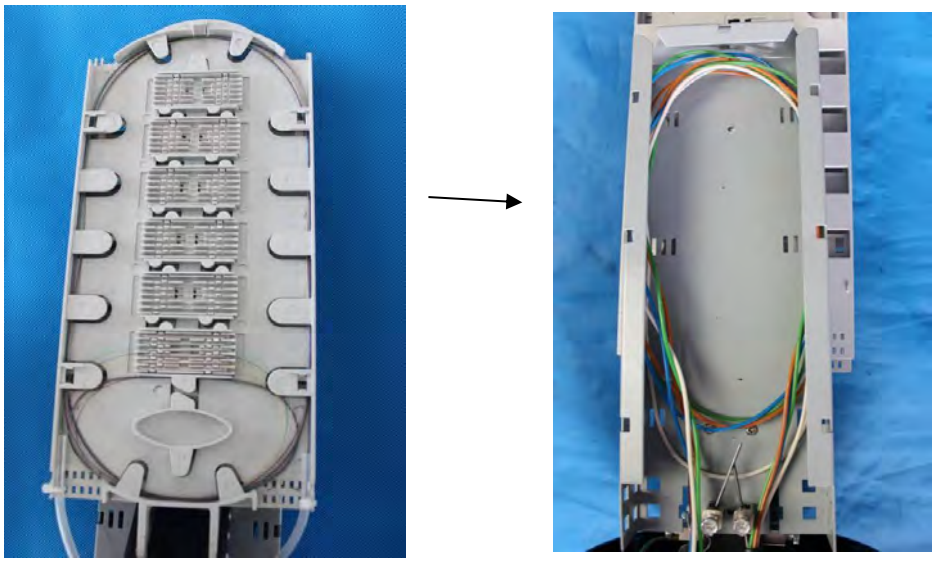
6.3.7 Proceed the heat shrink process for the cable and heat shrink tube, not let the fire close to the bottom of closure and the cable with foil paper.



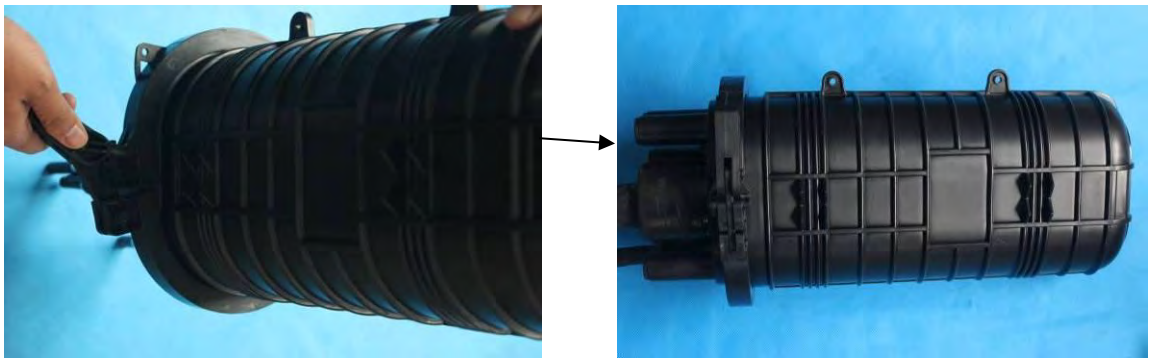
6.3.8 Insert the fibers into the buffering tube and lead into the cable storage plate and fasten with cable tie.



6.3.9 Processing the fiber splice, fix on splice sleeve holder, and coil the remain fiber into the fiber storage plate.



6.3.10 Assembling the closure after installation of cables, put seal fitting on base, then place the dome cover onto the bottom portion. Fasten the dome cover and the bottom portion together with a plastic hoop and clamp by screw..



6.4 **To ensure the technical requirements, the following instructions must be followed:**

6.4.1 Splice tray should be installed and packed with Velcro neaty, all fibers meet the requirement of bending radius.

6.4.2 Check whether the internal parts are well tightened.

6.4.3 Check whether seal fitting is installed neatly and smoothly.

7. Fiber Optic Splice Closures (Splice closure) inspecting and testing items

Inspecting item	Technical Requirements	Inspecting type	
		Routine test (Before leaving factory)	Type test
Package	Each small package contains one fiber optic splice closure, together with its accessories, tools, installation manual and packing list.	Full	At least 3 sets sampled each time
Appearance	Intact in shape, no burrs, bubbles, chaps, pores, warps, impurities and other defects, all background colors should be even and continual.		
Sign	There is a clear sign on the housing, such as name and model of the product, etc.		
Fiber storage device	The fibers reserved are to be winded in fiber optic splice tray (Splice Tray), the length of fibers housed in Splice Tray is >1.6m, the curved radius is >30mm. During the installation and maintenance, there should be no attenuation on fibers.	At least 3 sets sampled each time	
Electrical jointing device	Inside Splice closure: metallic components of fiber cables has the functions of electrical putting through, earthing connection and disconnecting. It is possible to install earthing deriving device outside the housing		
Sealing performance	After sealing according to the stipulated operation procedures, the injected air pressure is 100KPa±5Kpa, when immersed in clean water of normal temperature for 15 minutes, there should be no air bubbles, then observed for 24 hours, there should be no change of air pressure.		
Re-sealing performance	After reopening and resealing according to the stipulated operation procedures, the injected air pressure is 100KPa±5Kpa, when immersed in clean water of normal temperature for 15 minutes, there should be no air bubbles, then observed for 24 hours, there should be no change of air pressure.		
Pull	Bearing pull is $\geqq$ 800N at axle orientation, there should be no breakage on the housing.		
Punching	Bearing pressure of 2000N/10cm for 1 minutes, there should be no breakage on the housing		
Impact	Bearing impact energy of 16N•m, 3 times of impacts there should be not breakage on the housing		
Bending	The spot between the Splice closure and seal fitting can bear bending tension of 150N at bending angle of $\pm 45^0$ for 10 circles, there should be no breakage on the housing	At least 3 sets sampled each time	At least 3 sets sampled each time

Torsion	Bearing torsion 50N•m, 10 circle at torsion angle±$90^{0,}$ There should be no breakage on the housing.		
Temperature circle	Injected air pressure of 60KPa±5 KPa, the temperature circle ranging from -40℃~+65℃, 10 times of the circular tests (one circular consists of high temperature for 2 hours + indoor temperature for 2 hours + low temperature for 2 hours + indoor temperature for 2 hours) when the pressure declines, the amplitude is ≦5Kpa, immerse the swatch in clean water of normal temperature for 15 minutes, there should be no air bubbles.		
Voltage resistance strength	After sealing the Splice closure according to the stipulated operation procedures, immerse it in clean water of normal temperature in 1.5m depth for 24 hours, there should be no breakdown or arc over between the metallic components of the Splice closure, between metallic components and the ground at DC 15KV for 1 minutes.		
Isolating resistance	After sealing the Splice closure according to stipulated operation procedure, immerse it in clean water in 1.5m depth for 24h, the isolating resistance between the metallic components of the Splice closure, between the metallic components and the ground should be ≧ 2×10^{4}MΩ.		

8. Service

Should you have any questions or suggestions, please do not hesitate to contact your local supplier or contact us. We will provide you with the best service in time.

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