KSDT-218

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.

List of Contents

1. General Introduction

KSDT-218 is designed as a multi-functional equipment for optical cable splice, distribution and protection. It can be used for access or branch between optical cables with 5 cable entry/outlet including 1 large round port and 4 small round ports, 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

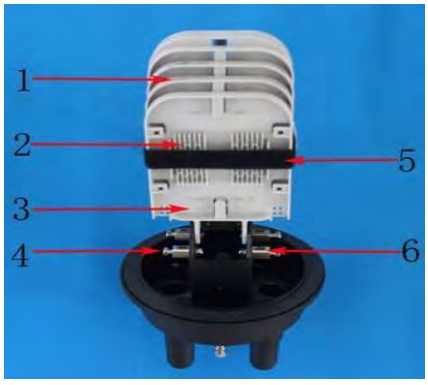
Outside dimension (Height x diameter, mm)	345x230
Sealing type	Heat shrinkage
Number of inlet ports	5 optical entrance ports
Diameter of optical loop cable (mm)	Φ8-Φ20
Splicing capacity per splice tray	24
Max. number of trays	4
Max. splice capacity (single fusion)	96
Working temperature (℃)	-40 to +65℃
Insulation resistance	≥2X10 ^ 4MΩ

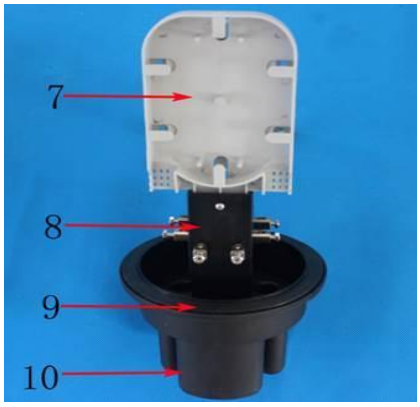
Notice:

In case the diameter of cable is bigger, please press the cable down and tighten screws. In case it is less than 15mm, 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



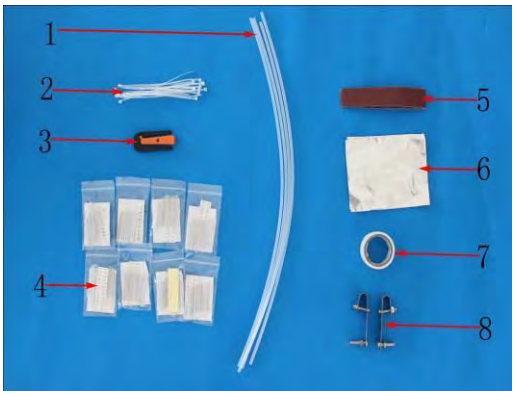


2.2.2 Main components

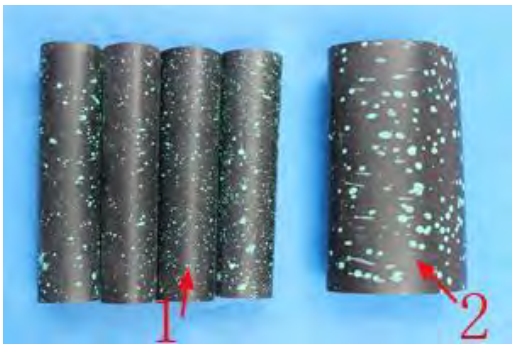
No	Name	No	Name
1	Splice tray	6	CSM fastener
2	Splice protective sleeve slot	7	Fiber storage plate
3	Clear splice tray cover	8	CSM holder
4	Hexagon screw	9	Seal fitting
5	Velcro	10	Base

2.2.3 Main accessories

No.	Name
1	Buffering tube
2	Nylon cable tie
3	Branching clip
4	Fiber splice protection sleeve
5	Abrasive paper
6	Foil paper
7	Insulation tape
8	Hanging hook(optional)



No	Name	Quantity
1	Heat shrink tube (small)	4
2	Heat shrink tube (large)	1



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

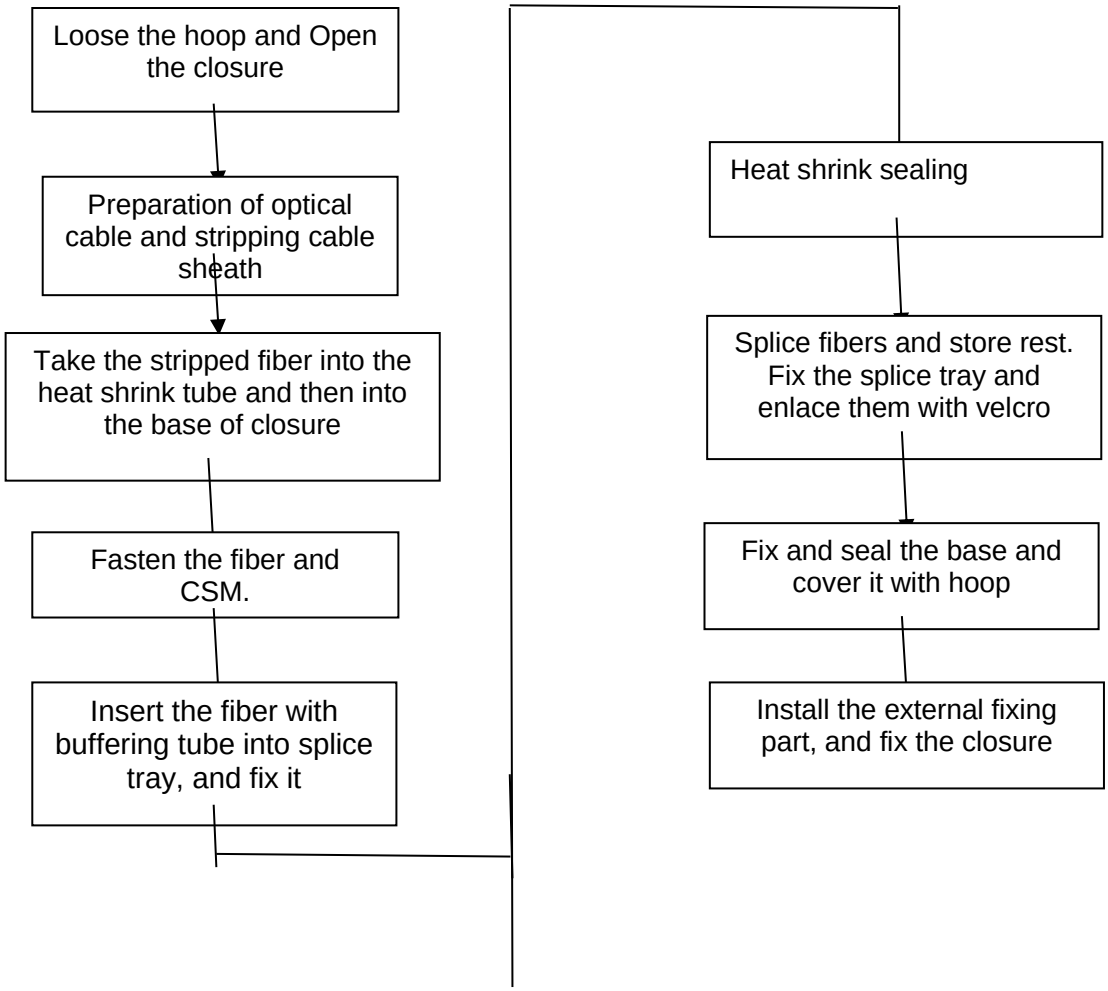
3.4 **Splicing and testing instruments (to be provided by operator)**

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 Installation flow chart



5. The process of Splice closure installation

5.1 Preparation of Pre-operation

5.1.1 Check the terminal box type, cable item, and all components before installation

5.1.2 Keep all components dry and clean for installation.

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

5.1.4 Standard instruments and tools should be used during installing.

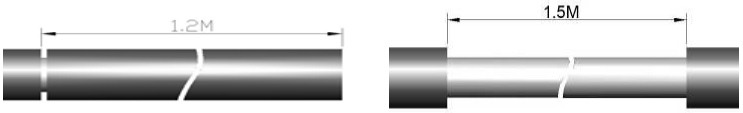
5.2 Operation of Optical Cable

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

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

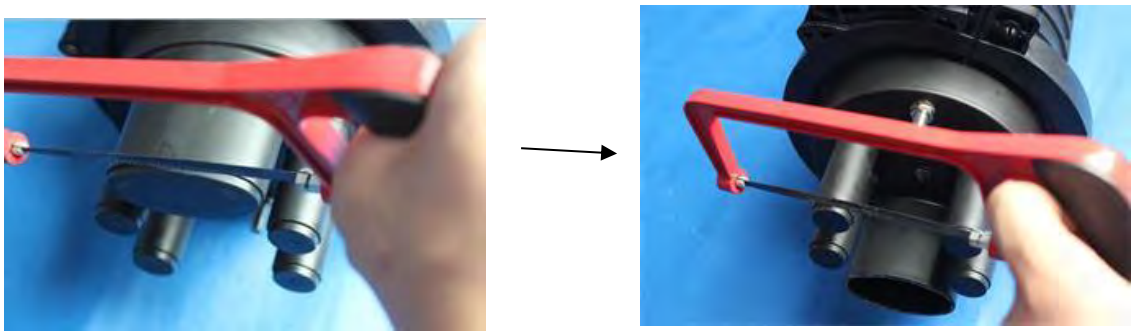
Precaution：① Optical fiber should not be damaged.

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



5.3 The process of Splice closure installation

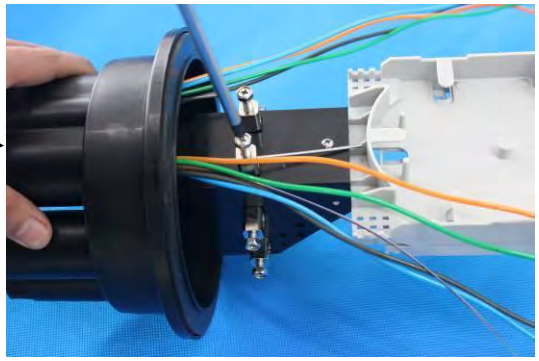
5.3.1 Open the oval and round cable port by saw



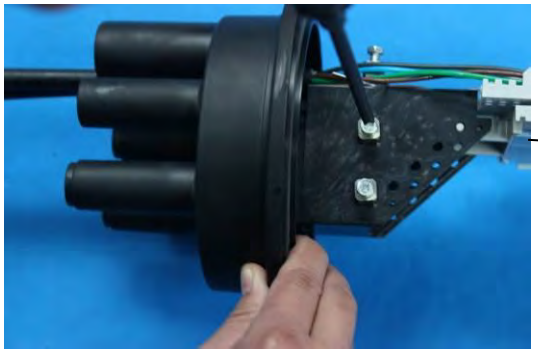
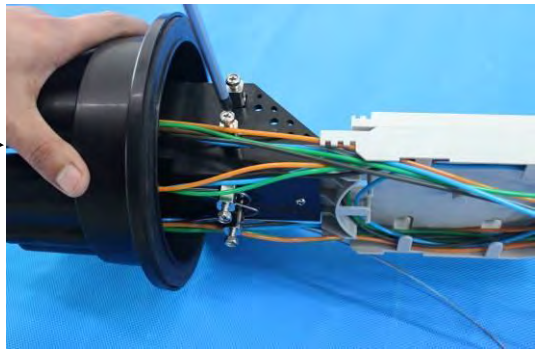
5.3.2 Loose the locked device on closure and open the buckle block.

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

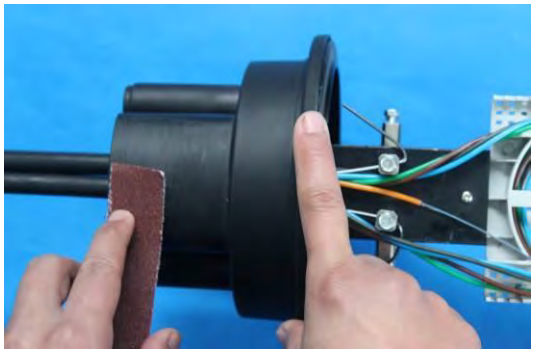
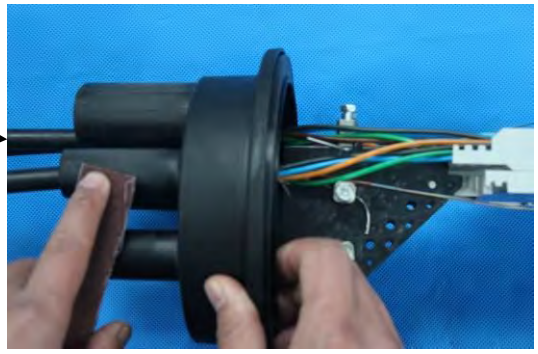
5.3.3 Unfasten the screws on CSM over the oval ports, inlet uncut cable to inside of closure through oval ports and fix it.

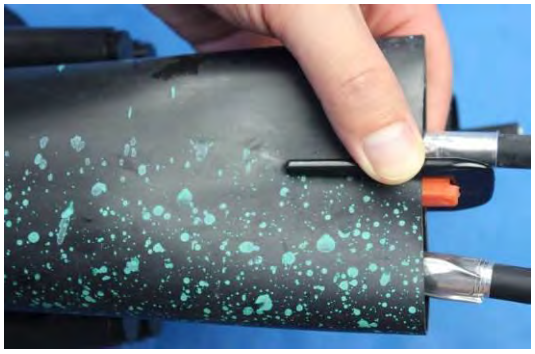
5.3.4 Unfasten the screws on CSM over the round ports, inlet cut cable to inside of closure through round ports and fix it.

5.3.5 Rub and clean the oval and round ports with a piece of abrasive paper to ensure the heat shrink and sealing performance.

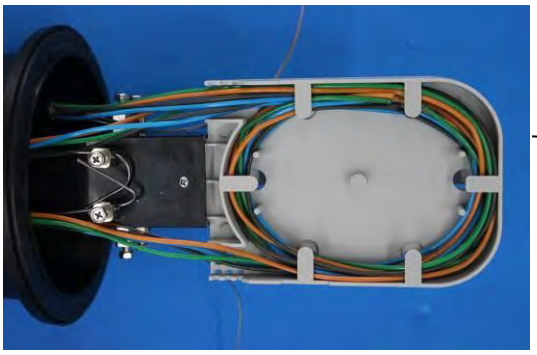



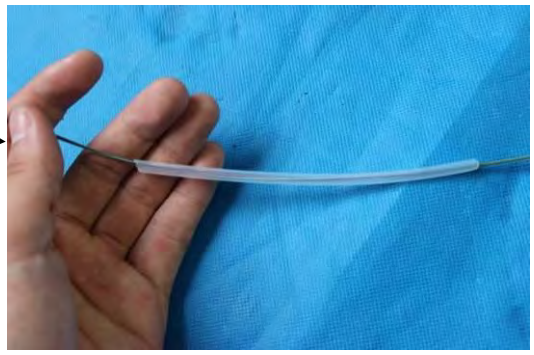
5.3.6 Wrap cable with foil paper properly to protect optical cable from heat and use the branching clip in the middle of cable and heat shrink tube.



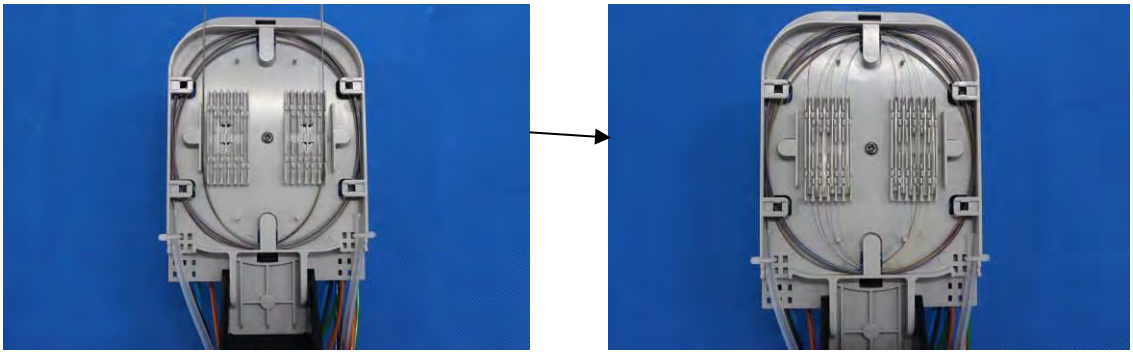
5.3.7 Proceed the heat shrink process for the cable and heat shrink tube, not let the fire close to the bottom of closure and the cable with foil paper.

5.3.8 Coil the remaining fibers into the fiber storage plate and cover the buffering tube on the extracted fibers.

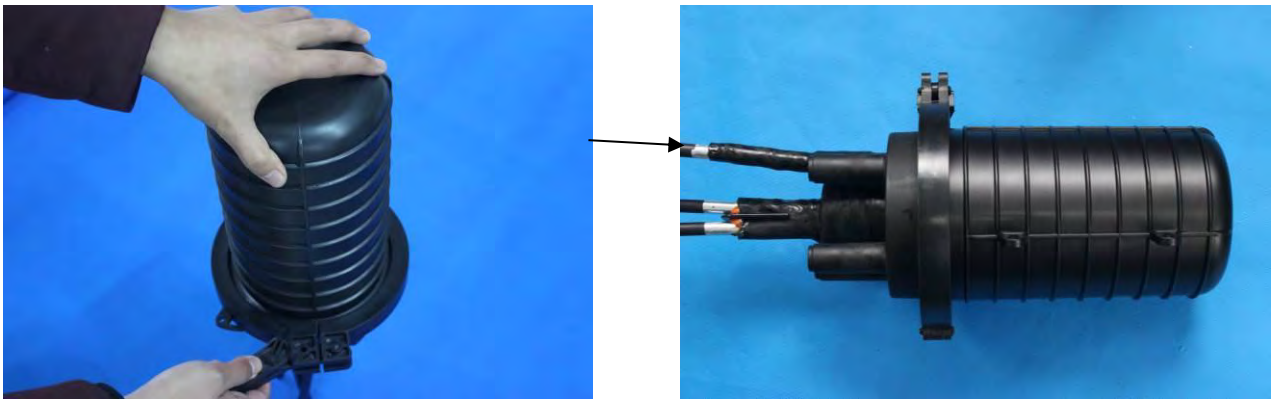




5.3.9 Inlet the fibers inside the buffering tube by the oval and round ports to the fiber splice trays.



5.3.10 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 buckle block . Installation completed.



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

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

5.4.2 Check whether the internal parts are well tightened.

5.4.3 Check whether seal fitting is installed neatly and smoothly.

6. **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$\pm 90^{0,}$ 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 ≧ 2×10^4MΩ.		

7. 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.

is the registered trademark of OPTOKON, a.s. Other names and trademarks mentioned herein may be the trademarks of their respective owners

OPTOKON, a.s.
Červený Kříž 250
586 01 Jihlava

tel.: +420 564 040 111
OPTOKON@OPTOKON.COM
WWW.OPTOKON.COM