



KSDT-206

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	Page 3
2. Basic structure and configuration	Page 3
3. Necessary tools for installation	Page 5
4. Preparation for installation	Page 5
5. Installation flow Chart	Page 6
6. The process of Splice closure installation	Page 7
7. Splice closure inspecting and testing items	Page 10
8. Service	Page 11

1. General Introduction

HTSC-206 is designed as a multi-functional equipment for optical cable splice, distribution and protection, the special flat design of appearance provides the advantage of decrease the space requirement of installation. 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 (LxWxH, mm)	452x220x208
Sealing type	Heat shrinkage
Number of inlet ports	7 optical entrance ports
Diameter of optical loop cable (mm)	Φ25, Φ20.5
Splicing capacity per splice tray	48
Max. number of trays	6
Max. splice capacity (single fiber)	288
IP Rank	IP68
Working temperature (°C)	-40 to +65°C
Insulation resistance	≥2X104MΩ

Notice:

In case of slightly bigger diameter of optical cable, can apply proper force to squeeze cable into grommet, and for smaller than 15mm diameter cable, using insulation tape to increase the diameter.

2.2 Product and accessories illustration

2.2.1 Product illustration



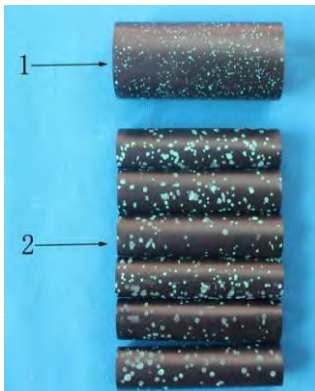
2.2.2 Main components

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	6	Fiber splice and protection
5	Slot for splice protective sleeve	12	Holder for splice protective sleeve
6	Splice tray transparent cover	6	Protect splice protection sleeve

7	Splice tray cover	1	
8	Fiber storage plate	1	Storage of coiled fiber
9	Grounding device	1	Grounding
10	CSM holder	1	
11	Seal fitting	1	Waterproof and sealing part
12	Metal connect plate	1	Grounding plate
13	CSM fastener	2	CSM fastener

2.2.3 Main accessories

No.	Name
1	Nylon cable tie
2	Fiber protective sleeve
3	Foil paper
4	Abrasive paper
5	Branching clip
6	Key
7	Insulation tape
8	Buffering tube



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

2.2.4 Optional Accessories

No.	Name	Quantity	Application
1	Pressure testing valve	1	Testing after closure was sealed
2	Grounding device	1	Grounding

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

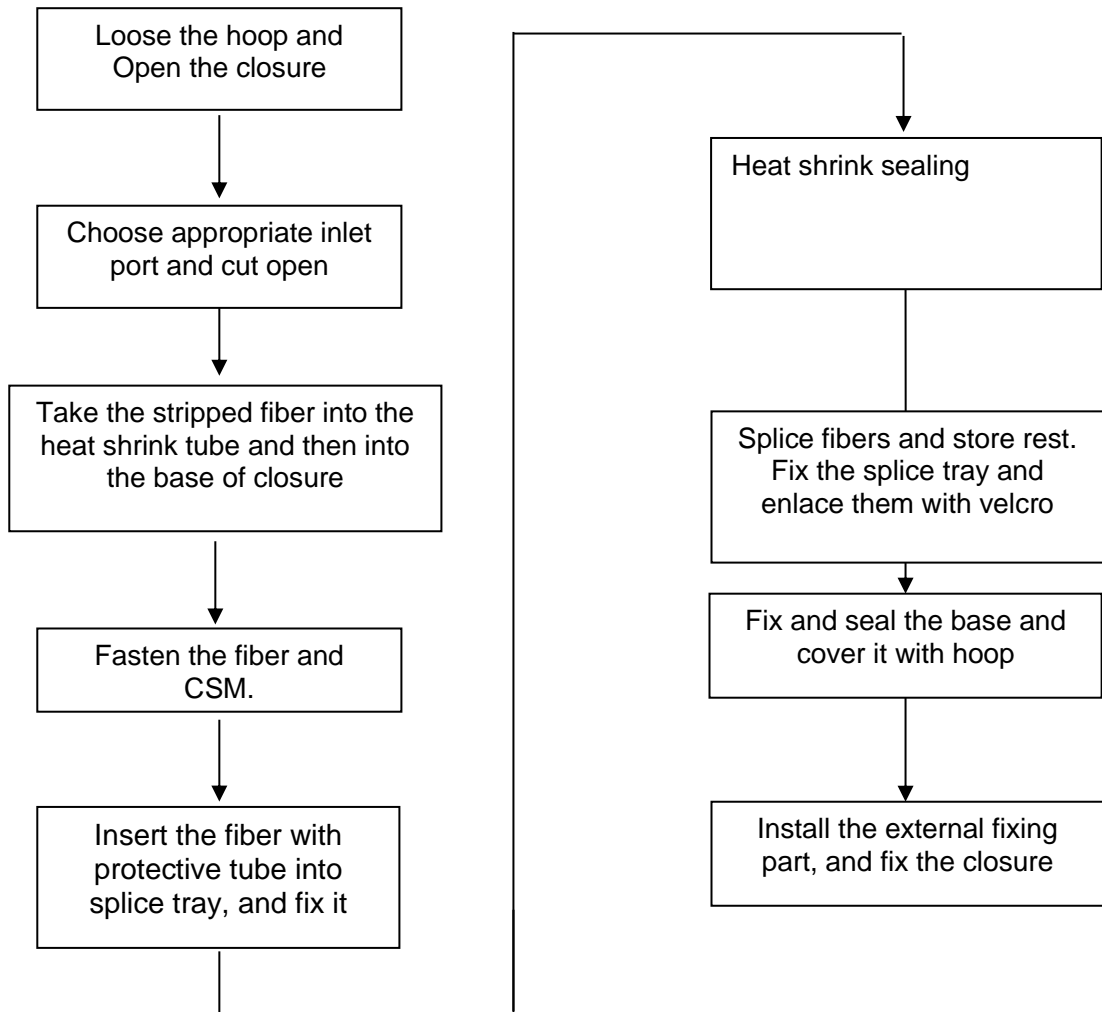
Notice:

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 Step One - Open the closure

5.1.1 Cleaning the locale and determine where to install the Splice closure and then place fiber cables required.

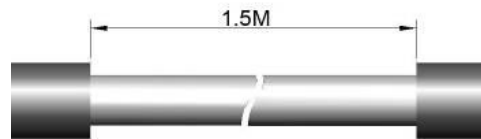
5.1.2 Check whether the main components and accessories have been well prepared inside the package.

Important issues:

If the weather condition is not good enough, then a tent must be pitched for waterproof and dustproof.

6.2 Cable installation

6.2.1 Mark the cutting point on the cable, generally, the length of stripping is about 120cm for cut cable and 150cm for uncut cable..



6.2.2 Remove the unnecessary cable sheath from the marked point with a sheath stripper

Note1. Be sure not to damage the fiber.

Note2. Do not use any damaged cable.

Note3. While remove the cable sheath, please do not cut, twist or damage fiber coat. Cut the damaged fiber cable and strip the sheath again in case an accident happened.

6.2.3 Cut off the extra reinforced core about 3-4cm from the removing point on the sheath. The length depends on the distance from fiber fixed press button to steel core fixing pole.

6.3 Installation of fiber closure

6.3.1 Check the specified type and all the accessories of the fiber closure

6.3.2 Open the cable port by saw



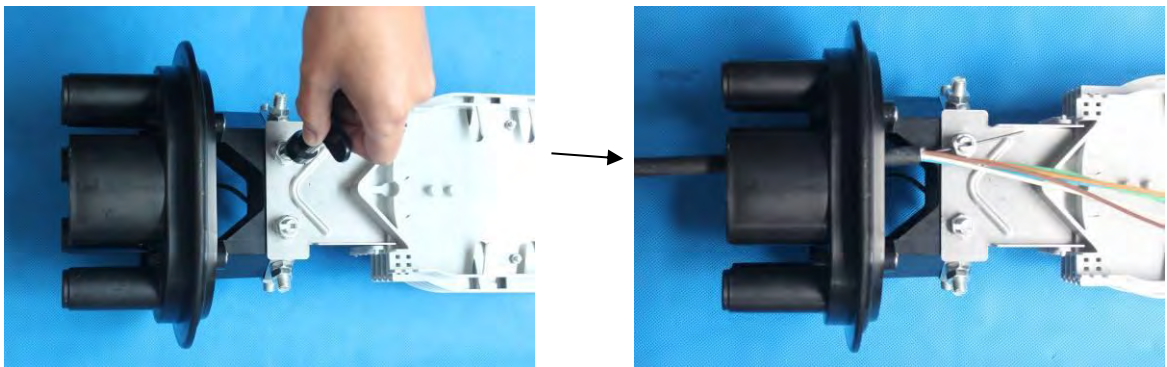
6.3.3 Open the fiber closure

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

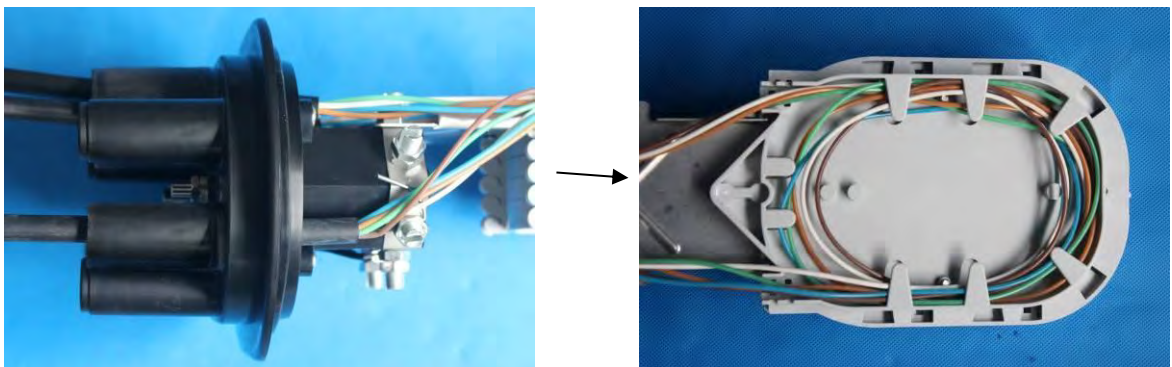
Note. Because the sealing performance is predominant, please be careful when separating the cover and bottom so as not to damage the case.



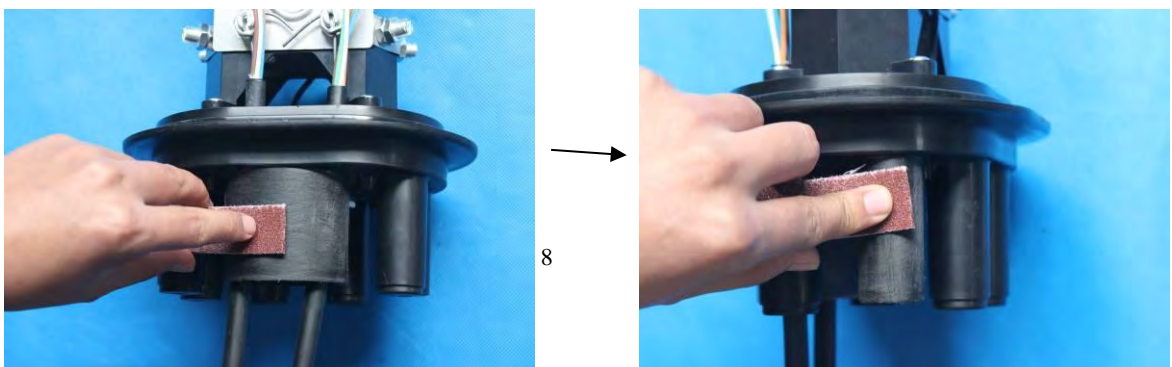
6.3.4 Release the screw of CSM fastener by special made key, insert uncut cable into heat shrink tube and oval port, position the optical cable in cable clamp and CSM in CSM fastener, then tight up the cable clamp for optical cable and CSM fastener for CSM



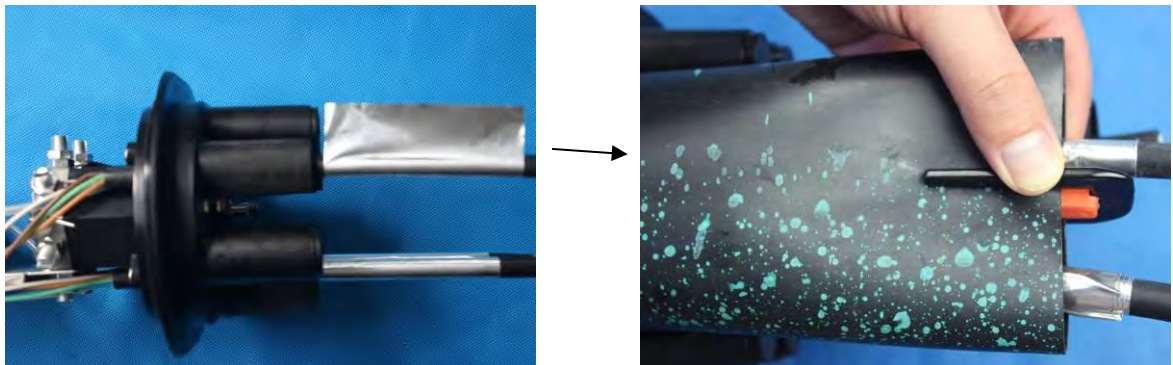
6.3.5 Insert the cut cable into round port and coil the cut cable and uncut cable in the fiber storage plate.



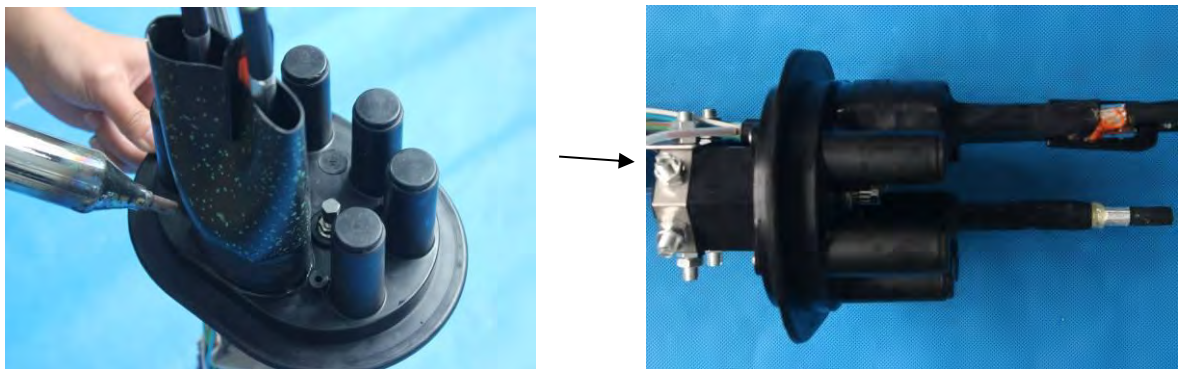
6.3.6 Rub and clean the inlet ports with a piece of abrasive paper to ensure the heat shrink and sealing performance.



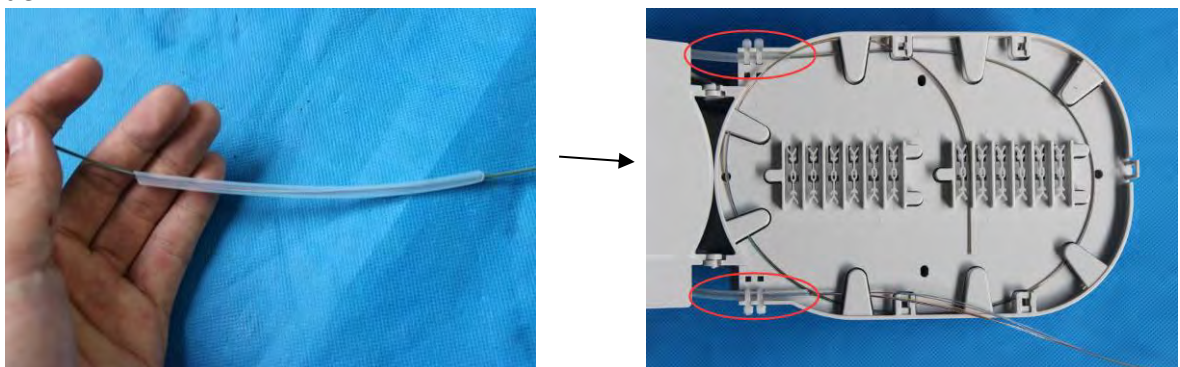
6.3.7 Wrap cable with foil paper properly to protect optical cable from heat and use the branching clip in the middle of cable and heat shrink tube.



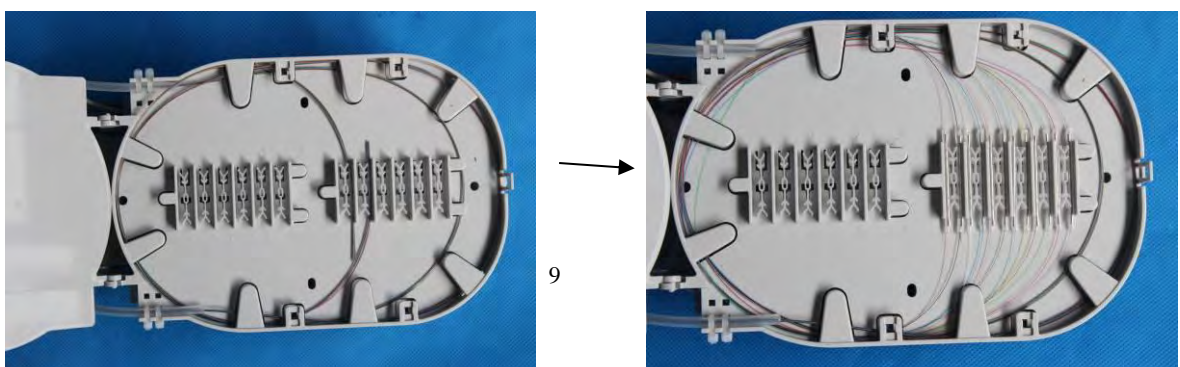
6.3.8 Proceed the heat shrink process for the cable and heat shrink tube, not let the fire close to the bottom of closure and the cable with foil paper.



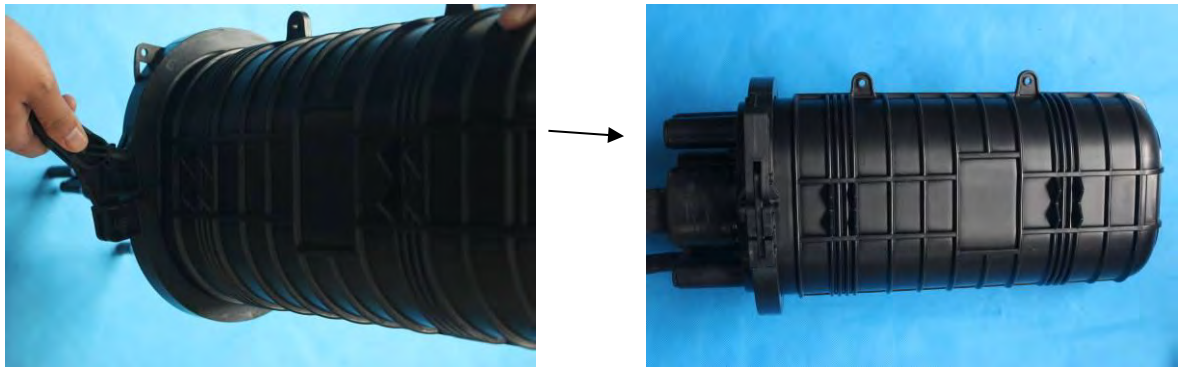
6.3.9 Insert the fibers into the buffering tube and lead into the cable storage plate and fasten with cable tie.



6.3.10 Coil the cut and uncut fibers into the fiber storage plate, get through fiber protective sleeve and proceed the splice process.



6.3.11 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.



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 neatly, 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 $\geq 800N$ 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 $\pm 45^\circ$ for 10 circles, there should be no breakage on the housing		
Torsion	Bearing torsion 50N•m, 10 circle at torsion angle $\pm 90^\circ$. There should be no breakage on the housing.		
Temperature circle	Injected air pressure of 60KPa \pm 5 KPa, the temperature circle ranging from -40°C~+65°C, 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 $\leq 5Kpa$, immerse the swatch in clean water of normal temperature for 15 minutes, there should be no air bubbles.	At least 3 sets sampled each time	At least 3 sets sampled each time
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 $\geq 2 \times 10^4 M\Omega$.		

8. Service

Should you have any questions or suggestions, please do not hesitate to 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

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping or information storage and retrieval systems - without the written permission of the publisher. Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks. While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

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

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