DOME HEAT SHRINKABLE SEAL FIBER OPTIC SPLICE CLOSURE (FOSC)

AR-SC5P-96F-T

INSTALLATION MANUAL

1. Scope of application

This Installation Manual suits for the Fiber Optic Splice Closure (Hereafter abbreviated as FOSC), as the guidance of proper installation.
The scope of application is: aerial, underground, wall-mounting, duct-mounting and handhole- mounting. The ambient temperature ranges from –40ºC to +65ºC.

2. Basic structure and configuration

2.1 Dimension and capacity

Outside dimension (Height x Diameter)	460mm×205mm
Weight (excluding outside box)	2350 g— 3500g
Number of inlet/out ports	5 pieces in general
Diameter of fiber cable	Φ8mm～Φ25 mm
Capacity of FOSC	Bunchy: 24-96(cores), Ribbon: up to288(cores)

2.2 Main components

No.	Name of components	Quantity	Usage	Remarks
1	FOSC cover	1 piece	Protecting fiber cable splices inwhole	Height x Diameter 355mm x 150mm
2	Fiber optic splice tray (FOST)	Max. 4 trays (bunchy) Max. 4 trays(ribbon)	Fixing heat shrinkable protective sleeve and holding fibers	Suitable for: Bunchy:24(cores) Ribbon:12(pieces)
3	Base	1set	Fixing internal and external structure	
4	Plastic hoop	1set	Fixing between FOSC cover and base	
5	Seal fitting	1 piece	Sealing between FOSC cover and base	
6	Pressure testing valve	1set	After inject air, it is used for pressure testing and sealing testing	Configuration as per requirement
7	Earthing deriving device	1set	Deriving metal parts of fiber cables in FOSC for earthing connection	Configuration as per requirement

2.3 Main accessories and special tools

No.	Name of components	Quantity	Usage	Remarks
1	Heat shrinkable protective sleeve		Protecting fiber splices	Configuration as per capacity
2	Nylon tie		Fixing fiber with protective coat	Configuration as per capacity
3	Heat shrinkable fixing sleeve (single)		Fixing and sealing single fiber cable	Configuration as per requirement
4	Heat shrinkable fixing sleeve (mass)		Fixing and sealing mass of fiber cable	Configuration as per requirement
5	Branching clip		Branching fiber cables	Configuration as per requirement
6	Earthing wire	1 piece	Putting through between earthing devices	
7	Desiccant	1 bag	Put into FOSC before sealing for desiccating air	
8	Labeling paper	1 piece	Labeling fibers	
9	Special wrench	1 piece	Tightening nut of reinforced core	
10	Buffer tube	decided by customers	Hitched to fibers and fixed with FOST, managing buffer.	Configuration as per requirement
11	Aluminum-foil paper	1 piece	Protect the bottom of FOSC	

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 FOSC

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
Scissor	
Waterproof cover	Waterproof, dustproof
Metal wrench	Tightening nut of reinforced core

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

Name of tools	Usage and specification
Fusion Splicing Machine	Fiber splicing
OT DR	Splicing testing
Provisional splicing tools	Provisional testing
Fire sprayer	Sealing heat shrinkable fixing sleeve

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

6. Fiber Optic Splice Closures (FOSC) inspecting and testing items

5.9 Step Nine – Assemble FOSC housing and fix FOSC

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 (FOST), the length of fibers housed in FOST 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 FOSC: 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 ≧ 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.		

Inspecting item	Technical Requirements	Inspecting type	
		Routine test (Before leaving factory)	Type test
Bending	The spot between the FOSC and seal fitting can bear bending tension of 150N at bending angle of ±450 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±900, 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 FOSC 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 FOSC, between metallic components and the ground at DC 15KV for 1 minutes.		
Isolating resistance	After sealing the FOSC 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 FOSC, between the metallic components and the ground should be ≧ 2×104MΩ.		