Fiber Optical Splice Closure

MTGJSM5-JF

Installation Manual

NOTES:

1. Please read this instruction manual carefully before installation.\
2. Please pay special attention to the notes listed, especially when the operator seal the cable ports, as seal performance of the closure might be affected if operation is not appropriate.

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1. General Introduction

This section contains the following contents

Brief introduction

Product theory chart

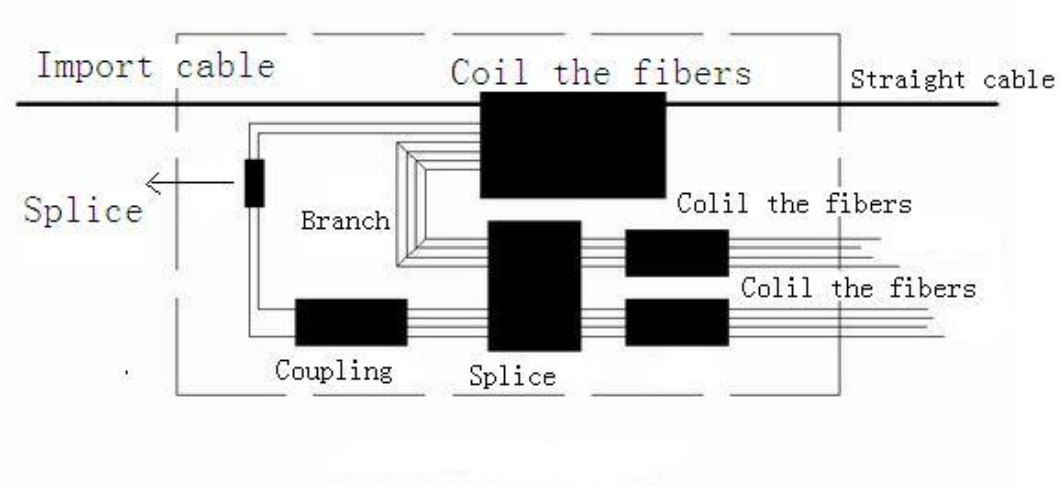
Products pictures

Main components

1.1 Brief introduction

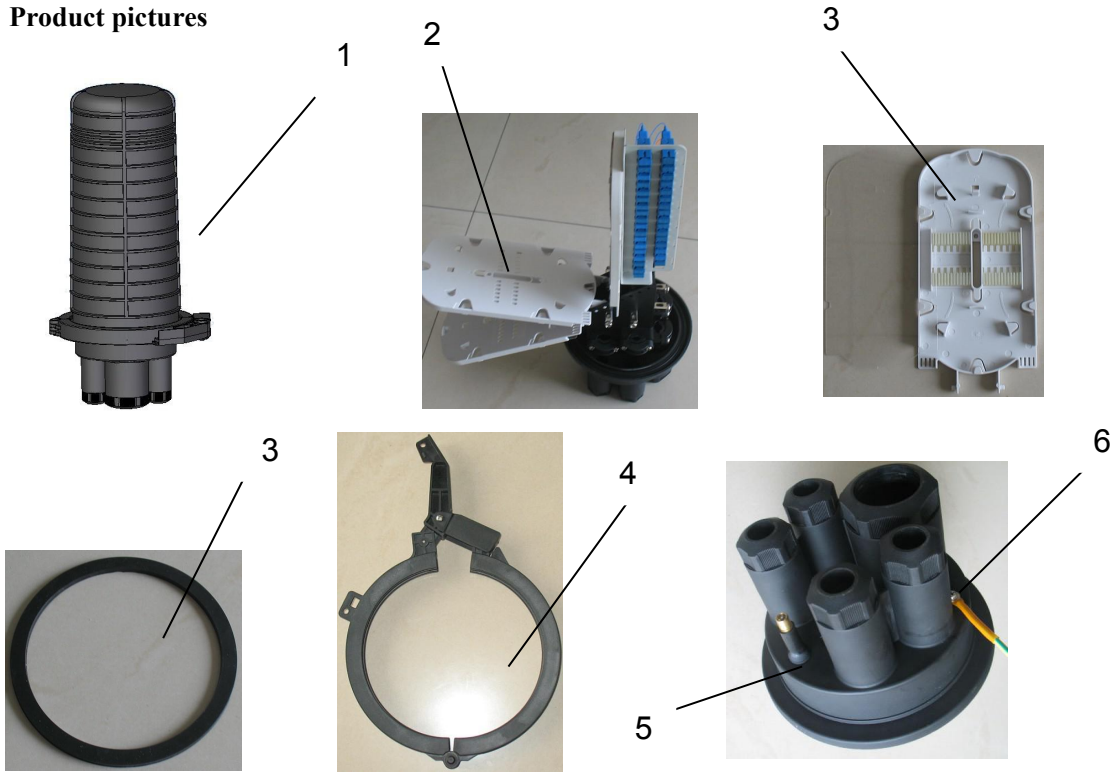
MTGJSM5-JF type of Fiber Optic Splice Closure (FOSC) is a member of dome series. The function of the product is in the optical transmission link, to provide various types of fiber optic cable through, branching, and related connecting protection, IP safety rate is IP68. It can be installed 1x2: 32 PLC splitter or 2x2: 16 PLC splitter. This model has four small round ports and one large round port. The sealing component is made from vulcanized rubber. The sealing method adopts screw pressure. This model is suitable for different methods of branch connection, including branching of uncut cables. It could be used for aerial, pole-mounting, wall-mounting and underground application. This model is excellent in sealing performance, easy for installation, wide application and is prior choice of fiber connection equipment.

1.2 Product theory chart



Internal theory chart of Outdoor optical splitter modules

1.3 Product pictures



1. Cover; 2. Fiber splice tray; 3. Sealing ring; 4. Plastic hoop; 5. Base; 6. Earthling device

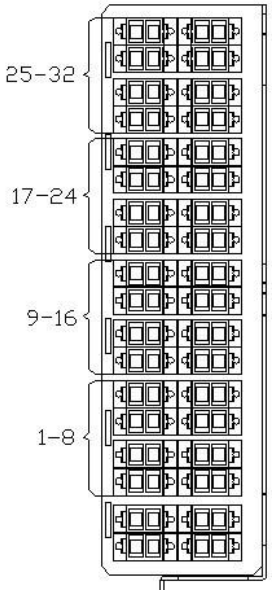
1.4 Main components

Item	Name	Quantity	Application	Remark
1	Cover	1 pc	Integrated protection of closure	
2	Fiber splice tray	required	Fix the fiber, protect heat shrink tube, storage fiber and splitter	
3	PLC splitter(2:32 in max)	2:32(1 pc) 2:16(2 pc)	Light splitting	Optional part
4	SC adapter	36 pcs	Connection	Optional part
5	SC-1.5m pigtail	32 pcs	Fusion with inlet cable	Optional part
6	Base	1 set	Fix the internal and external structure	
7	Plastic hoop	1 set	Fix the base and cover	
8	Sealing ring	1 set	Big sealing part for sealing cover and base, different small sealing parts for fiber sealing	
9	Plastic plug	4 pcs	For non cable entry sealing	
10	Valve	1 set	Gas-filled test air pressure and the sealing performance	Optional part
11	Earthling device	1 set	Leading the internal mental components to grounding	Optional part

Note:

When customers choose to install splitter by themselves, please refer to the below contents to configure the pigtail length of splitter input port and output port.

Pigtail length of splitting output port (±2 cm)	Pigtail length of splitting output port (+2 cm)			
	1-8	9-16	17-24	25-32
135 cm	85 cm	90 cm	95 cm	100 cm



The installation arrangement of pigtail for splitter input port and output port.

2. Installation Instructions

This section contains the following contents
Preparation
Installation flow
Laying installation of closure

2.1 Preparation

2.1.1 Please check the type and accessories of optic fiber closure and fiber cable.
2.1.2 Keep dry and clean of all accessories.
2.1.3 Keep work environment clean (dry and non dust) for easy installation.
2.1.4 Use the specified and standard instrument during the peeling and installation.
2.1.5 No over bend fiber cable while coiling.
2.1.6 Application tool.

2.1.6.1 Accessories tools (self supply)

Material	Application
Tape	Mark and temp fixation
Alcohol	Purity
Gauze	Purity

2.1.6.2 Application tools (self supply)

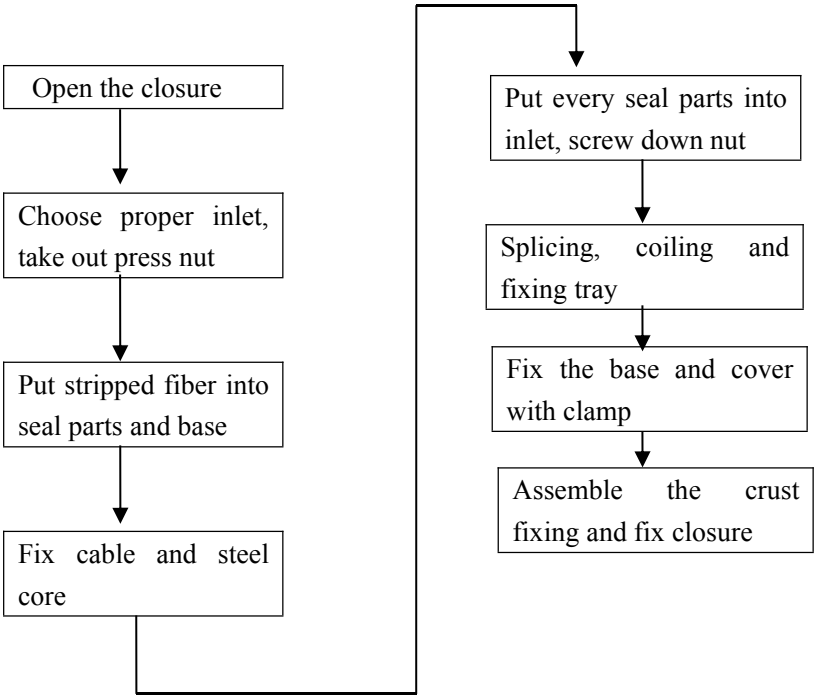
Tools	Application
Optical cable radial wire stripper	Ring peeling cable skin
Optical cable portrait wire stripper	Straight portrait peeling cable skin
Beam wire stripper	Peeling beam wire skin
Bare wire stripper	Peeling cable coating
Tapeline	Measure length
Tube cutting knife	Beam wire peeling
Electrician′ knife	
Wire-cutter	Cut metal core
Cross screw driver	Screw down belts
Scissors	
Splice operations	Place products or tools

2.1.6.3 Connection and test instrument （self-supply）

Instrument	Application
Heat sealing machine	Fiber connection
Optical time domain reflect meter(OTDR)	Test for connection result

2.2 Installation flow

2.2.1 Installation flow chart



2.2.2 Cable installation

2.2.1 Mark the cutting point on the cable, the length of stripping being about 180cm or as per the requirement.



Uncut cable (Straight cable)



Cable (tube) cutter

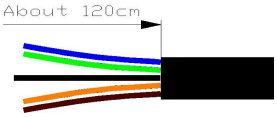


Cable sheath cutter



Steel core cut clamp

2.2.2.2 Using optical fiber cable stripper peel the layer of cable without useful from marker.

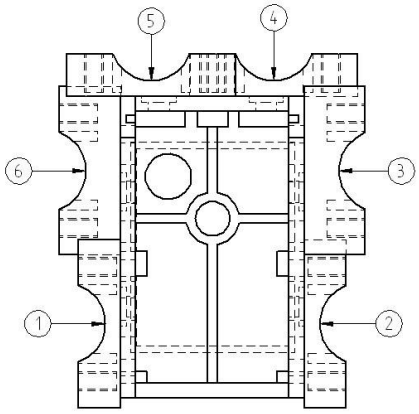


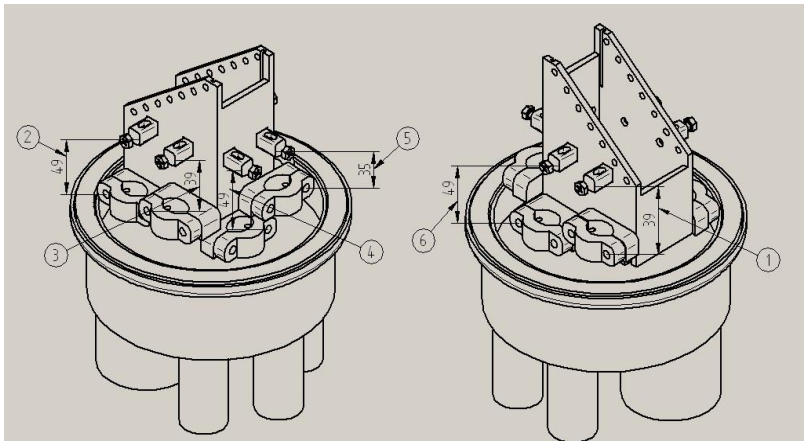
2.2.2.3 Introduce cable(2 fibers) and other branch fiber cables, peel the top 120 cm coat, maintain the integrity of the internal soft cable.

Note: ① To ensure not to damage the optical fiber

② Do not use a damaged optical fiber cable

2.2.2.4 Cut off the redundant steel core from 3-4 cm of stripped point. Size as follows: The first point needs reserve 3.5 cm, the second point needs reserve 4.5 cm, the third point needs reserve 3.5 cm, the forth point needs reserve 4.5 cm, the fifth point needs reserve 3.5 cm, the sixth point needs reserve 4.5 cm. (The forth and fifth points are used for uncut cable)





2.2.3Cable into closure

2..2.3.1 Open the closure

Unlade the locked device on the plastic hoop, open the plastic hoop to separate the cover and base.

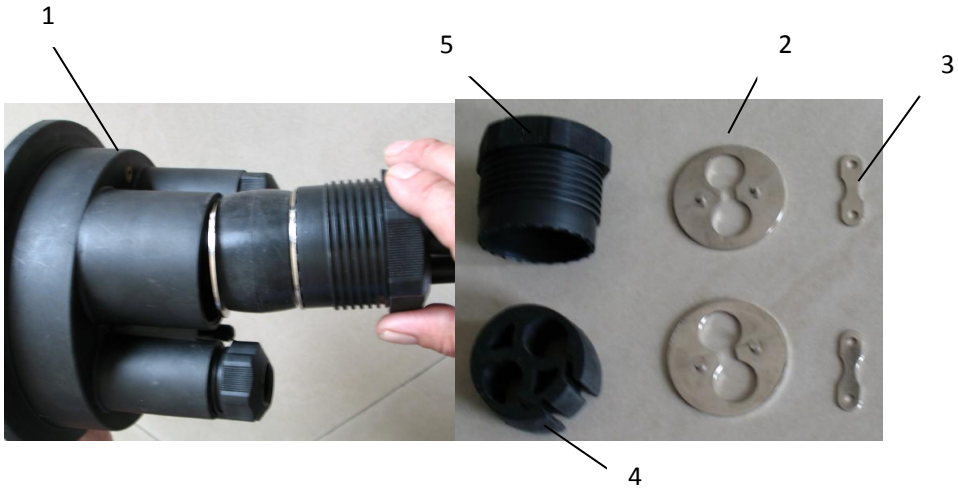


① Pull the holder up ② Put the buckle to the screw lock block ③ Open hoop

Note: For the good sealing performance of the box, please be care when separate the box

2.2.3.2 Lead cable of large port into closure. Make the striped cable through components in order and then enter into closure according to following pictures.

2.2.3.2.1 The pictures of components used for large cable port



2.2.3.2.2 Components list used for large cable port

No.	Name	Qty	Material	Application
1	Base	1 set	MPP	Fixing internal and external structure
2	52 washer	2 pcs	Stainless steel	Used for sealing uncut cable (diameter of cable>10)
3	Connective blocker	2 pcs	Stainless steel	
4	52 seal gasket	1 pc	Silica gel	
5	M55 compressed bolt	1 pc	MPP	

2.2.3.2.3 Large cable port installation procedure (①-⑥)

① Screw down the plastic bolt of the big port, thread the stripped cables through the M55 hexangular compressed bolt (plastic), ∮ 52 washer, connective blocker, ∮ 52 rubber seal gasket, connective blocker, ∮ 52 washer.



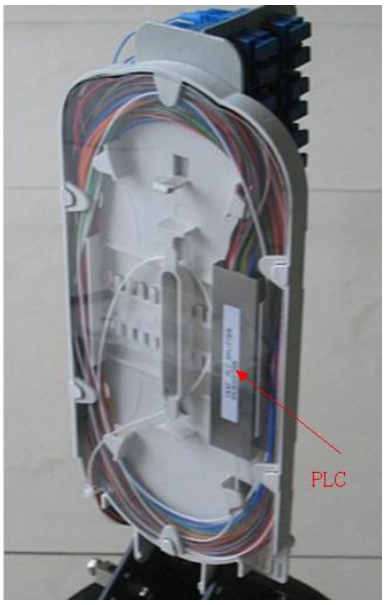



② Make cable thread large cable entrance in base

③ Loosen the button on the top of steel core fixed pole and thread the steel core into the retained hole of the steel core fixed pole; and then tighten the bolts, fix the cable to bracket with press button;

Note: When the diameter of cable is more than 14mm, take down liner of cable pressed button.

④ Lead the fiber which need optical spilt to splicing tray with splitter(The end try), like the pictures



⑤ Cable sealing

Connect two metal blocks and two ∮52 washers (thread the two holes on the connective blocker through two protruded poles on the ∮52 washers) and subsequently press ∮52 washers and ∮52 rubber seal ring into the big round cable inlet, then tighten the M55 hexangular pressed bolts using a screwdriver.

Note: Due to the limitation of space, make sure to tighten the hexangular bolts subsequently according to numbers in the following picture.



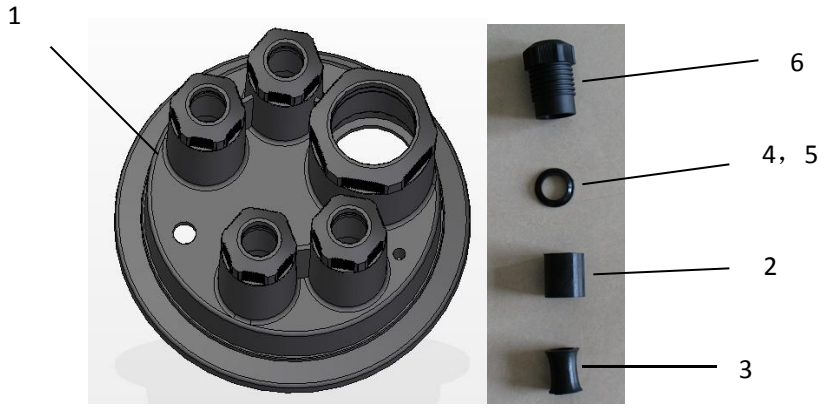
2.3.3.3 Lead small inlet cable(branch cable) into closure

There are 4 small ports for cut cable.

2.2.3.3.1 Components list for small cable port(branch cable)

Item	Name	Qty	Material	Application	
1	base	1 set	MPP	Fix the in and outside part	
2	09L4 sealing ring	4 pcs	Silica gel		For the sealing of closure
3	09L4 sealing ring inside lining(∮ 8-12mm)	4 pcs	Silica gel	Dia of Cable< ∮ 12	
4	Plastic gasket- Ⅰ	4 pcs	ABS		
5	Plastic gasket- Ⅱ	4 pcs	ABS	Dia of Cable< ∮ 10	
6	M31 nut	4 pcs	MPP		

2.2.3.3.2 The Small Port components(Branch cable port)



2.2.3.3.3 The setup steps for small port(branch cable) (①-⑧)



① Screw out the nut, take the seal parts, and screw down the press button with tool

② Through the stripped cable into M31 Nut(plastic), plastic washer and seal gasket.



Note: When diameter of cable < ∮ 10, please use seal gasket Ⅱ and seal liner for guarantee the sealing performance.

③ Through the cable into small port to closure;

④ Loose the steel core fixing pole, through the steel core to hole of pole, and screw down the bolt.

⑤ Fix the cable to bracket with press button.

⑥ Installation at the same time if grounding.

⑦ The seal for cable.

Press the seal gasket(liner only for necessary) and plastic washer to small port. Screw the M31 nut with spanner tightly for perfect seal.

⑧ Conduct the branch cable to tray

Measure the distance from cable fixing place to second or third tray port, strip the fiber tube, fix them to inlet of tray with nylon ties.



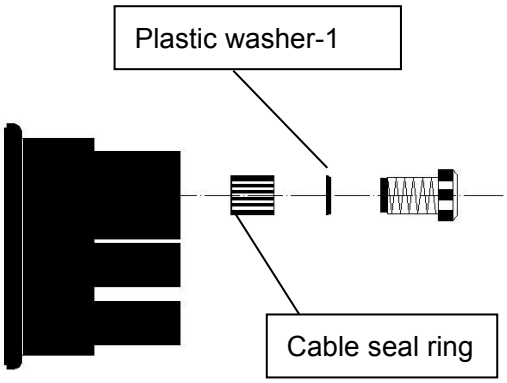
Note: ① If no cable in inlet, please put the plastic plug to inlet, crow down the M31 nut, all will be perfect seal.

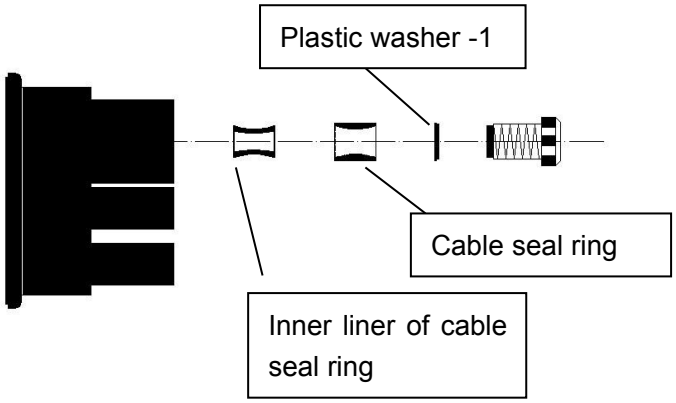
② If grounding, we will connect the steel core fixing device first before leaving factory.

Sealing of the cable entry ports

Important:

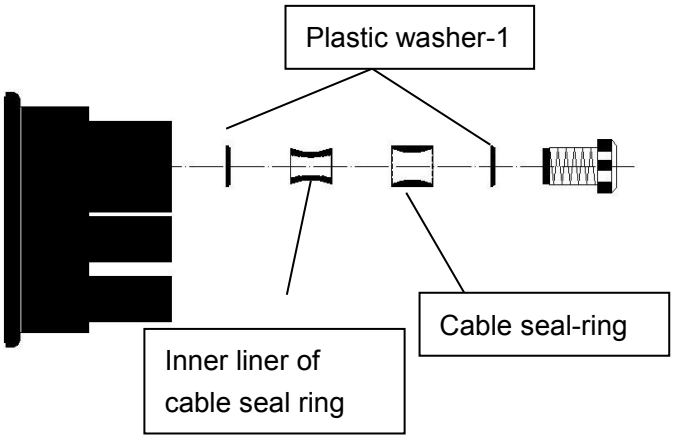
1. ***Take care while sealing the cable entry ports***
2. ***Please note the direction of the liners when plugged into the cable port.***

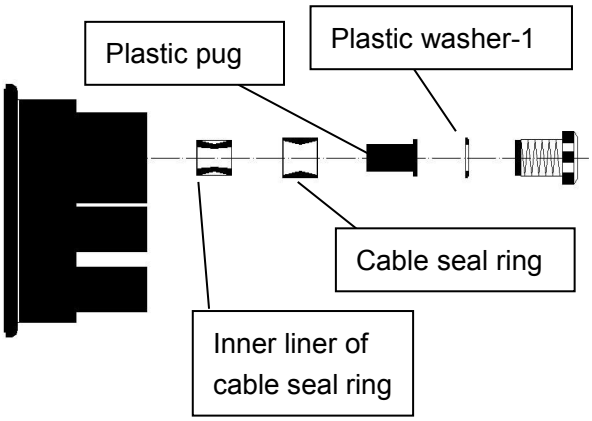




Cable diameter: ∮10-12

Cable diameter: ∮10-12





Cable diameter: ∮8-10 **Use plugs to seal if without installation of cable**

2.2.4 Fiber splicing, coiling and mark

2.2.4.1 Fiber splicing and mark

2.2.4.1.1 Remove the layer of the splicing fiber using the bare stripper, make it clean with gauze and alcohol. Then cut the fiber by cutter(Length according to the coiling). Devices in pictures are showed just as examples.







Tube Stripper Naked Fiber Stripper Fiber Cutter

2.2.4.1.2 Making the regular fiber splicing, record the parameter and mark the cable for the maintenance later. Devices in pictures are showed just as examples.





Fiber Splicer OTDR

2.2.4.1.3 Fusion sequence

2.2.4.1.3.1 Please agglutinate the splitter in the tray

2.2.4.1.3.2 After coiling the splitter pigtail, please insert the adaptor into the port of tray fixing plate. Please refer as the picture.

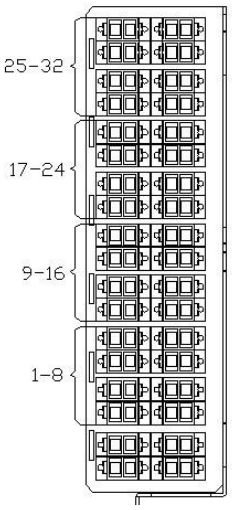
2.2.4.1.3.3 Please lead the pigtail of splitter input port into the tray(Splitter installation place) and make splicing with cable needed optical split

2.2.4.1.3.4 Please lead the pigtail of splitter output port into other trays and make splicing with output cable.

2.2.4.1.3.5 Please make coiling of the rest fiber after splicing, then cover the tray

Note: Mark must be clear for the convenience maintenance later

2.2.4.2 Coling



While coiling, please refer to following pictures. Please open the tray as following pictures.



Note: ① In coiling, the bend radius≥ 30mm. If radius too small, it will affect that fiber, even fiber break. With the long time, it may appear the broken fiber.

③ When coiling, watch out the distortion direction, usually it is “8” type, and twist out any fiber. Put out any fiber. Put the all fiber to under baffle to avoid damage fiber.

2.2.4.2 Close all tray, and fix all with tape.

2.2.5 Assembling

2.2.5.1 Put the seal tape and desiccant into body, install the cover of body, and fasten the cover and base with clamp.



Local construction(It depend on the user). The external ground wire must be safe. Then monitor the internal optical fibers, to be sure whether the optical fiber is damaged.



2.3 Laying installation of closure

Closure can be laid as follows



Pole mounted



Air mounted

3 Reopening and maintenance

This section contains the following connects

Reopening

Maintenance and expansion

Reassembling

3.1 Reopening

Open body as 2.2.3.3

Note: If there is protective air or other air in body, please release the air by valve firstly.

3.2 Maintenance and expansion

3.2.1 Choose the fiber need maintenance, open the tray as 2.2.4.2, find the splicing fiber in the cable needed maintenance to maintain them.

3.2.2 While expanding, choose the inlet no any cable, loose the nut with spanner, take out the plug and other seal components. If the plug is too tight, use the screw driver to

take out seal parts.

3.2.3 Introduce that cable need expanding, handle them as second section.

3.2.4 If need distribute optic cable in expanding, confirm the type and diameter of cable. Our regular small port can meet the cable of φ8-φ17.5mm, if introduce other type cables, please contact us to enclose some relative seal parts before expanding. Please refer to following sealing elements for small ports.

Optional cable sealing elements



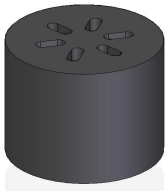
Suitable for 8 pieces of 2x3.1 indoor cable sealing



Suitable for 8 piece 8 soft cable sealing



Suitable for 4 piece φ7 soft cable sealing



Suitable for 6 pieces of 2x5 drop cable sealing

3.3 Reassembling

Check all parts, if ok, please assemble as 2.2.5