SSC2133T-16
iODNCP V100R001C05
Product Description

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Contents

1 Positioning

Mounted to a steel wire rope, the SSC2133T-16 free breathing closure (closure for short) is mainly used in the drop section of the fiber to the home-optical distribution network (FTTH-ODN) for optical cable splitting and distribution, branching and re-connection, and straight-through storage. The closure can also support cable distribution when configured with an extension function module. Figure 1-1 and Figure 1-2 show the position and typical application scenario of the closure in a network, respectively.
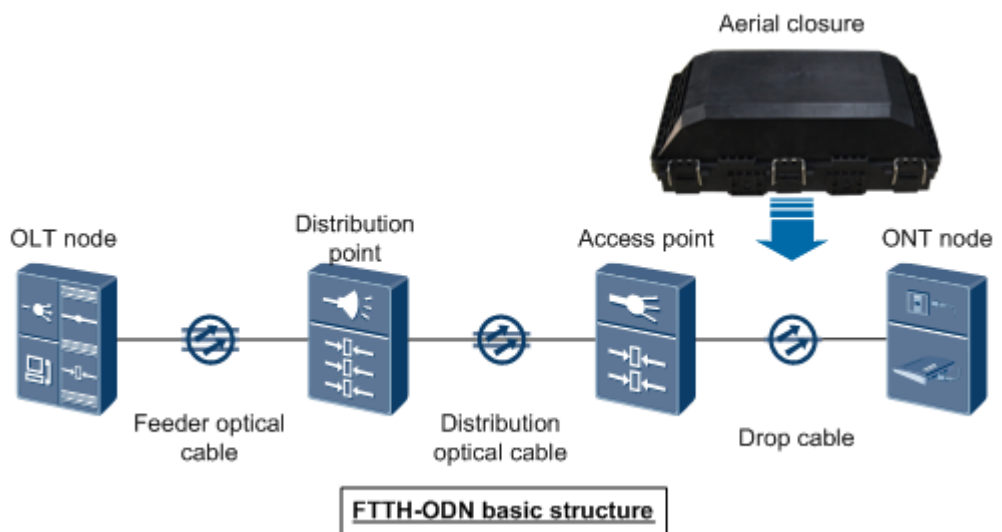
Figure 1-1 Position of the closure

Figure 1-2 Typical application scenario of the closure
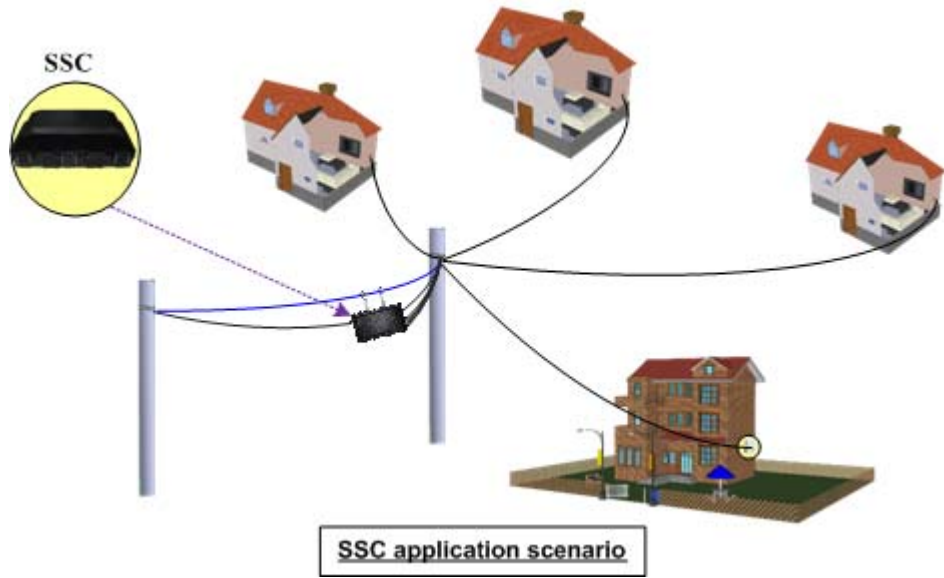
2 Features

Compact and Practical

- Small size, saving installation space
- Mounted to a steel wire rope, facilitating installation and maintenance
- Multiple functions supported, such as splicing, and optical splitting and distribution

Flexible Configuration

- Various bracket-mounted optical splitters
- Common optical cables with diameters ranging from 7 mm to 20 mm
- Flat drop cable: a maximum of 16 cores
- Extended distribution function

Convenient Construction

- Toolless closure opening or closing
- Combination of pre-terminated aerial drop cables (PDCs), or flat drop cables with FMCs, for easy installation and maintenance
- Toolless drop cable securing and maintenance
- Large operation space

Clear Routing

- Separated straight-through area, splicing area, optical splitting and distribution area

Reliable Protection

- Free-breathing holes, balancing internal and external atmospheric pressure and preventing condensation
- IP54 protection rating
- Anti-ultraviolet (UV), anti-corrosion, and anti-mildew material for the closure housing

3 Product Overview

About This Chapter

3.1 Appearance

Figure 3-1 shows the appearance of the SSC2133T-16 closure.

Figure 3-1 Appearance of the closure

1. Closure housing   2. Buckle

- The closure housing is made of anti-UV, anti-corrosion, and anti-mildew high-performance plastic, meeting outdoor application requirements.
- The closure housing is buckled and can be opened or closed without any tools, facilitating construction.
- The closure housing supports an opening angle over 180 degrees, providing a large operation space.

The closure has three buckles at the front and two breathing holes at the rear. Figure 3-2 shows the breathing holes.

Figure 3-2 Breathing holes and grounding port

1. Grounding port   2. Breathing hole

- The breathing holes are covered with metal grids inside, with a piece of sponge outside. This design prevents dust from entering the closure.
- After the closure is installed, its breathing holes are located at the bottom of the closure, which effectively prevents condensation.

3.2 Structure

Function

With its modular design, the closure can be configured with different function modules to achieve different functions. Table 3-1 lists the functions of the closure.

Table 3-1 Functions of the closure

Model	SSC2133T-16
Function Module Configured	• Bracket-mounted optical splitter
Function	• Optical splitting and distribution • Straight-through

Structure

Figure 3-3 shows the structure of the SSC2133T-16 closure.

Figure 3-3 Structure of the SSC2133T-16 closure

1. Laser safety class label	2. Flap	3. Installation position of the bracket-mounted optical splitter
4. Sealing gasket	5. Pressure plate for the feeder optical cable	6. Splicing tray
7. Fitting for securing the straight-through optical cable	8. Straight-through area	9. Fitting for securing the hose clamp
10. Fixing plate for the strength member		

3.3 Optical Splitter

The closure supports the SPL2803 bracket-mounted optical splitter. Figure 3-4 shows the appearance of the optical splitter.

Figure 3-4 Appearance of the SPL2803 optical splitter

◫ NOTE

The SPL2803 optical splitter supports SC/APC and SC/UPC adapters. The adapters shown in the preceding figure are SC/APC adapters.

Table 3-2 describes the configuration principles of the optical splitter.

Table 3-2 Configuration principles of the optical splitter

Optical splitter model	SPL2803		
Split ratio	1:4	1:8	1:16
Maximum number of optical splitters	2	2	1

3.4 Splicing Tray

Figure 3-5 shows the appearance of the splicing tray.

Figure 3-5 Appearance of the splicing tray

- Each splicing tray supports a maximum of 24 cores.
- The splicing tray supports a large storage space for optical fibers.

3.5 Fittings for Sealing and Securing Optical Cables

Aperture for the Feeder Optical Cable

There are two apertures on either side of the closure, through which four optical cables can be led in or out. Each aperture is sealed using a sealing gasket. Figure 3-6 shows the appearance of a cable aperture.

Figure 3-6 Aperture for the feeder optical cable
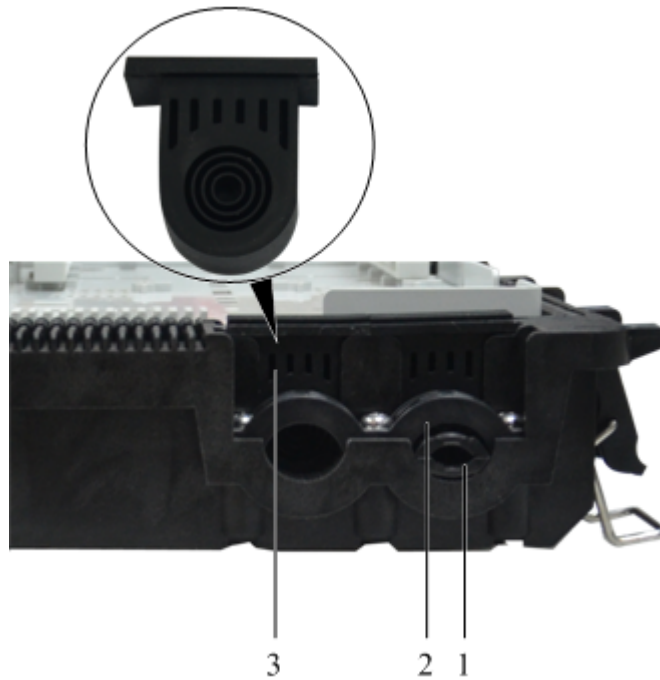
1. Washer   2. Pressure plate for the feeder optical cable   3. Sealing gasket

- Each sealing gasket provides silkscreens indicating cable diameters. Cut the corresponding plate from the sealing gasket according to the diameter of the cable to be led in.
- The cable diameters supported range from 7 mm to 20 mm.

Fitting for Securing the Feeder Optical Cable

Each optical cable fitting is able to secure an optical cable and a strength member. Figure 3-7 shows the appearance of a fitting for securing the feeder optical cable.

Figure 3-7 Fitting for securing the feeder optical cable
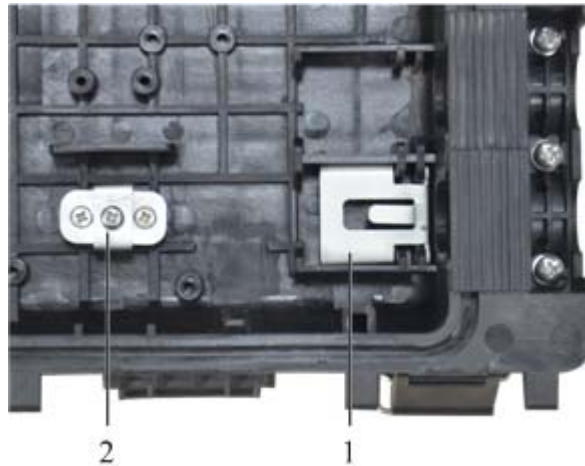
| 1. Fitting for securing the hose clamp | 2. Fitting for securing the strength member |

- The optical cable and hose clamp can be secured outside the closure. After securing them, clamp the optical cable together with the fitting into the closure.
- The number of fittings is determined by the number of optical cables required.
- The fitting is compact and space-saving.

📖 **NOTE**

Two sets of fittings for feeder optical cables are used in standard configuration and a maximum of four sets are supported.

Fittings for Securing Drop Cables

Fittings for securing drop cables in the closure includes the fixing troughs for flat drop cables on the flap and those on the shell, and the sealing material. A maximum of 16 drop cables can be led in. Figure 3-8 shows the appearance of the fittings for securing drop cables.

Figure 3-8 Fittings for securing drop cables

| 1. Fixing trough for the flat drop cable (on the shell) | 2. Sealing material | 3. Fixing trough for the flat drop cable (on the flap) |

- Flat drop cables with fixed dimensions of 2 mm x 3 mm can be led in and secured.
- Fittings for securing drop cables have sealing material, so the closure can be well sealed.
- The drop cables are secured in a clamping fashion, and drop cables can be led in and secured without tools, facilitating the working at heights when new users are added.

3.6 Aerial Hanging Bracket

The aerial hanging brackets can be mounted on steel wire ropes with diameters ranging from 5 mm to 10 mm. Figure 3-9shows the appearance of the aerial hanging brackets.

Figure 3-9 Aerial hanging brackets

- Two W-shaped holes (a large one and a small one) are provided on each bracket. Select a proper one based on the diameter of the steel wire rope.
- Select the small W-shaped holes for steel wire ropes with diameters ranging from 5 mm to 8 mm; select the large W-shaped holes for steel wire ropes with diameters ranging from 8 mm to 10 mm.
- The height (H) of the aerial hanging brackets can be adjusted from 100 mm to 160 mm.

# 4 Application Scenarios and Configurations

About This Chapter

4.1 Overview

Figure 4-1 shows the typical application scenario of the closure.

⚠ **CAUTION**

● Use the closure only in the aerial application scenario to ensure the performance of the closure.

● Install the closure with the guidance provided in the *SSC2133 Free Breathing Closure Quick Installation Guide*.

Figure 4-1 Typical application scenario of the closure
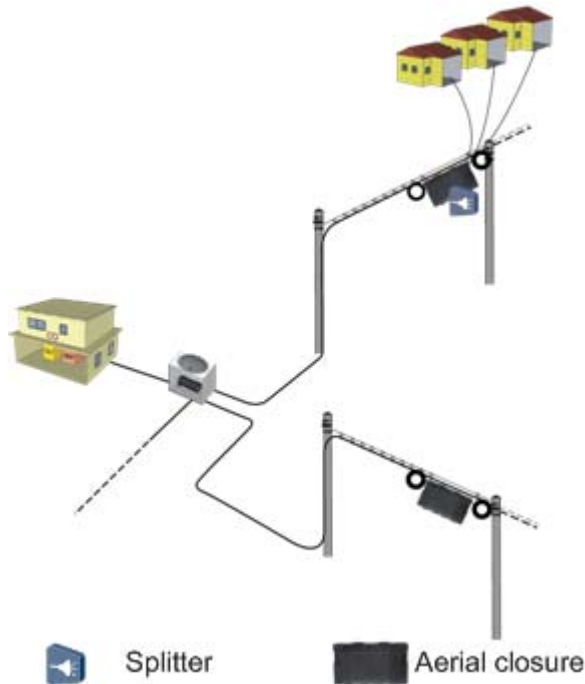
4.2 Configurations and Routing

Configurations

Table 4-1 provides the typical configurations of the closure.

Table 4-1 Typical configurations of the closure

Model	SSC2133T-16	
Function Module and Quantity	● Bracket-mounted optical splitter ● Split ratio: 1:8	Quantity: 2
Number of Splitter Output Ports	16	
Splicing Capacity (Cores)	24	

📖 NOTE

This table provides only the quantity of function modules. For details about different models of closures, see the *Packing List*.

Routing of the Closure with a Bracket-mounted Optical Splitter

Figure 4-2 and Figure 4-3 respectively show the schematic routing diagram and actual routing diagram when the closure is configured with bracket-mounted optical splitters.
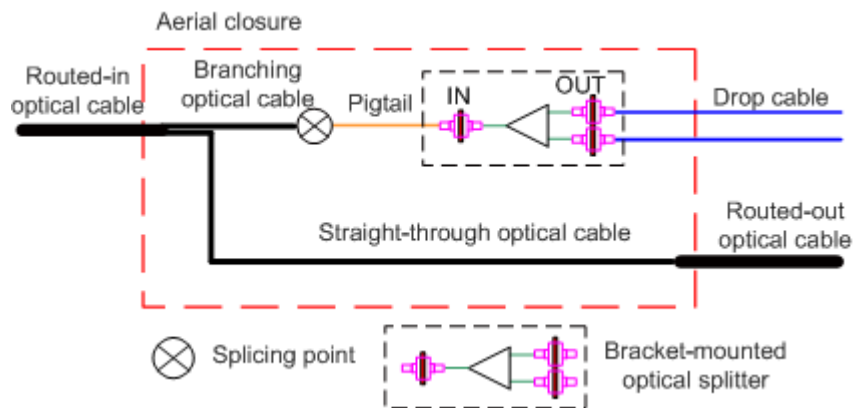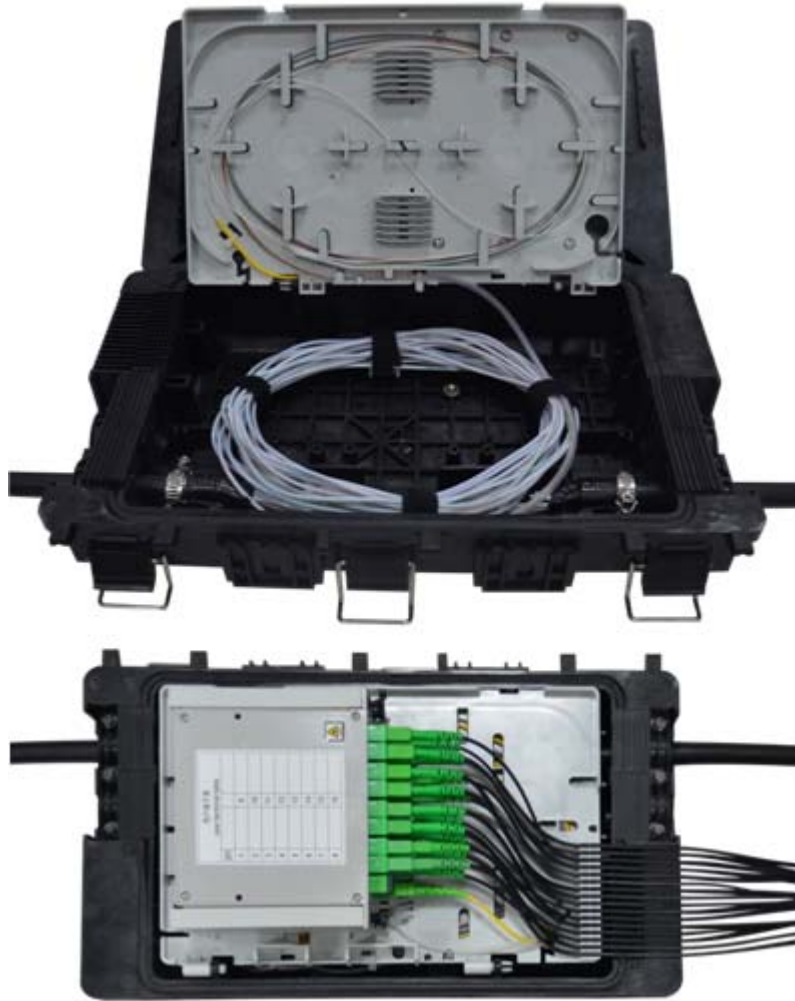
Figure 4-2 Schematic routing diagram

Figure 4-3 Actual routing diagram

5 Technical Specifications

About This Chapter

5.1 Technical Specifications

Table 5-1 lists the technical specifications of the SSC2133T-16 closure.

Table 5-1 Technical specifications of the closure

Model	SSC2133T-16
Dimensions (H x W x D) (unit: mm)	337 x 208 x 120
Packaging dimensions (H x W x D) (unit: mm)	450 x 265 x 220
Net weight (unit: kg)	2.35
Gross weight (unit: kg)	3.04
Splitter output ports	16
Splicing capacity (cores)	24
Number of cable apertures	• Number of apertures for common cables: 4 • Number of apertures for drop cables: 16
Optical cable dimensions	• Common optical cables with diameters ranging from 7 mm to 20 mm • Flat drop cables with the dimensions of 2 mm x 3 mm

Model	SSC2133T-16
Installation mode	Aerial-mounted
Material	Plastic, complying with RoHS
Color	Black
Protection rating	IP54
Flame retardant rating	UL94–HB

📖 NOTE

- The number of optical splitting output ports, cable distribution capacity, and splicing capacity vary with the number of function modules configured. The values provided in the table are the upper limits of related parameters when the closure is fully configured with function modules.
- By default, optical splitting and splicing are supported. The cable distribution function is an extended function.

5.2 Technical Specifications of the Products Configured

Table 5-2 lists the technical specifications of the products configured for the SSC2133T-16 closure.

Table 5-2 Technical specifications of the products configured for the closure

Item	Specifications			
Bracket-mounted optical splitter	Model	SPL2803		
	Split ratio	1:4	1:8	1:16
	Dimensions (H x W x D) (unit: mm)	130 x 100 x 25	130 x 100 x 25	130 x 100 x 50
	Type	Bracket-mounted		
	Adapter type	SC/APC, SC/UPC		
Splicing tray	Dimensions (H x W x D) (unit: mm)	245 x 155 x 22		
	Capacity (cores)	24		

5.3 Environment Specifications

Table 5-3 lists the environment specifications of the closure.

Table 5-3 Environment specifications

Item	Value
Operating temperature	-40℃ to +65℃
Storage temperature	-40℃ to +70℃
Atmospheric pressure	70 kPa to 106 kPa
Humidity	≤ 93% (+40℃)

5.4 Standards Compliance

Table 5-4 lists the international standards that the closure complies with.

Table 5-4 International standards

Name	Description
ITU-T L.13	Performance requirements for passive optical nodes: Sealed closures for outdoor environments
IEC 62134-1-2002	Fibre optic enclosures – Part 1: Generic specification
ITU.T L.51	Passive node elements for fibre optic networks – General principles and definitions for characterization and performance evaluation
Bellcore GR-771core.002	Generic Requirements for Fiber Optic Splice Closures: Aerial-Mounted Products.
EN 60950-1	Information Technology Equipment - safety - Part 1: General Requirements
IEC 60529	Degrees of protection provided by enclosures (IP Code)
UL94	Test for flammability of Plastic Materials for parts in Devices and Appliances
ETS 3000 19-2-2	Environmental conditions and environmental test for telecommunications equipment; Part 2-2: Specification of environmental tests Transportation CLASS 2.3 (Public Transportation)
Bellcore GR-1209-CORE	Generic Requirements for Passive Optical Components
Bellcore GR-1221-CORE	Generic Reliability Assurance Requirements for Passive Optical Components
Q/CT 2295-2010	Technical Requirements for Passive Optical Splitter of China Telecom

Table 5-5 provides the standard in China that the closure complies with.

Table 5-5 Standard in China

Name	Description
YD/T 814.1	Closure for optical fiber cables Part 1: Closure for outdoor optical fiber cables

6 Acronyms and Abbreviations

Acronym/Abbreviation	Full Name
UV	ultraviolet
UPC	ultra physical contact
SC	square connector
ONT	optical network terminal
OLT	optical line terminal
ODN	optical distribution network
FTTH	fiber to the home
FMC	field-mountable optical connector
APC	angle physical contact