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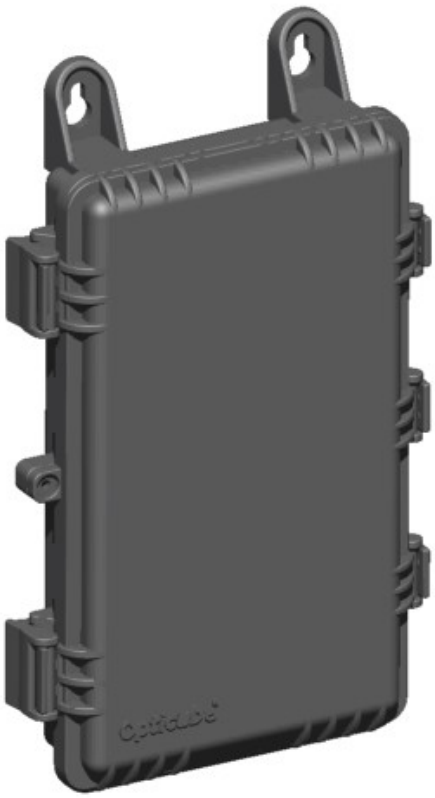
Optical Networks Solutions

SPECIFICATION
OPTICAL TERMINATION BOX
VSOF-OTB-PH

Spec No : VSS-1504-OTB-PH(Rev.0)



VISSEM ELECTRONICS

1. Introduction

1.1 General

This specification covers the minimum standards and requirements for the construction, properties, testing and packing of the optical termination box intended for installation internally in customers premises, wall mounted in telecommunications network and hung in the building.
With VSOF-OTB-PB, you can improve your network system to the higher level.

1.2 Description

The optical termination box will be used to connect between distribution cables for medium and low density fiber count installation to drop individual cable into customer premise in fiber optic network. The optical termination box should include the plastic casing, fiber connectors, inner panel and other necessary materials for the termination of optical fiber cable.

1.3 Reliability

The quality of Optical Termination Box is critical to reliable optical transmission performance. The product shall be produced with ISO-9001 certified production facilities and quality control system is applied the process from product design to packaging.

1.4 Reference

SKB Hybrid Tap Technical specifications_v1.0

Korea industrial standard KS A 0101	Mathematical Symbols
Korea industrial standard KS A 0102	Quantity Symbols, Unit Symbols and chemical Symbols
Korea industrial standard KS A 0105	SI units and recommendations for the use of their multiples and of certain other units
Korea industrial standard KS A 0108	Pictorial Marking for Handling of Goods
Korea industrial standard KS C IEC 60529	Degrees of protection provided by enclosures (IP Code)
Korea industrial standard KS D 9502	Methods of neutral salt spray testing

2. OPTICAL TERMINATION BOX for FTTx

2.1 General

OTB-PH has designed a cost effective solution for a protecting the passive demarcation of premise fiber. The OTB-PH is injection molded with an integral fiber retention system allowing for quick installation and a positive lock strain relief for most premise fiber cable.

2.2. Configuration

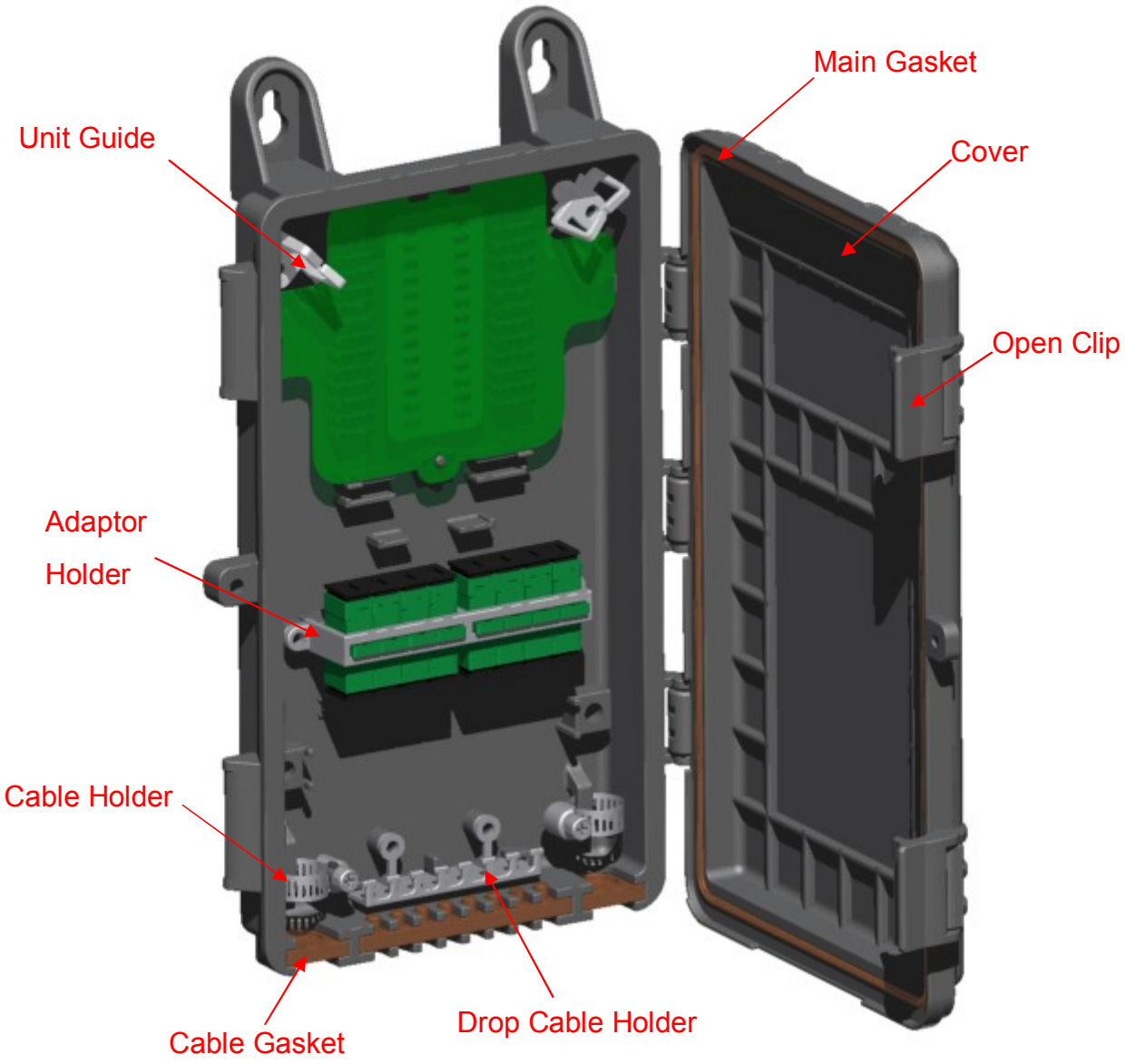
2.2.1. Compact size takes up less wall space for installation

2.2.2. Protects fiber connection from accidental contamination

2.2.3. Structure accommodating SC/LC type Adaptor of maximum 8 line for drop cable.

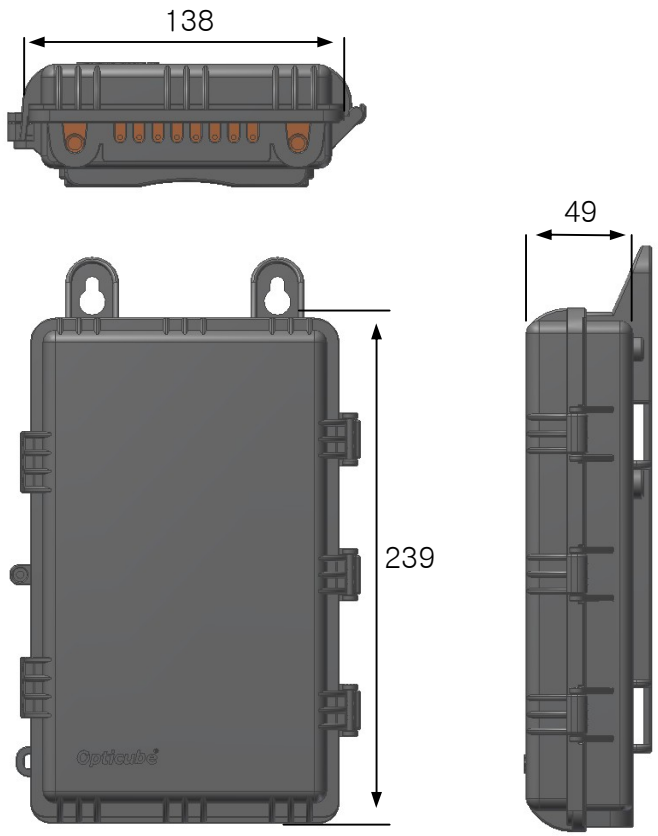
2.2.4. movement allowing long term

2.2.5. Enough space to arrange surplus units



2.3. Specifications

ITEM.	OTB-PH
Size (L*W*H)	239 x 138 x 49
Weight (kg)	0.4kg
Inlet Ports	Main 2ports , Drop 8ports
Cable Dia.	Ø7 ~ Ø13
Splice Capacity	12C
Adapter Type	SC, LC
Patching Capacity	8 EA
Splice Method	Fusion
Splice Protector	Heat shrinkable sleeve
Tension Member	Galvanized steel wire, FRP

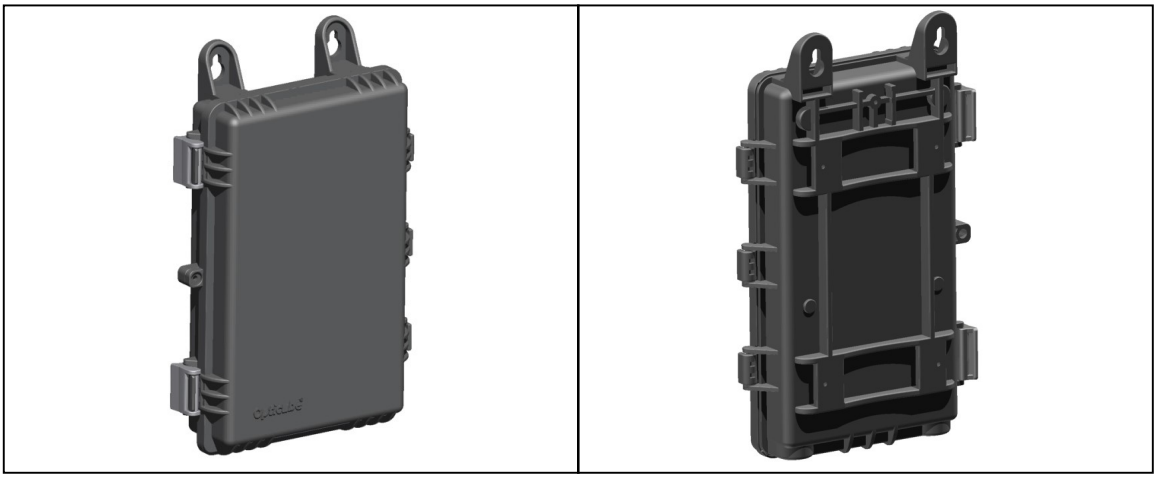


2.4. Feature

2.4.1. Outer case

(1) Outer case of the closure is made of engineering plastics for mechanical strength, chemical resistance, salt water resistance and insulation resistance

(2) Enhanced durability for high chemical resistance against HCL, NaOH, IGEPAL CO-630, etc

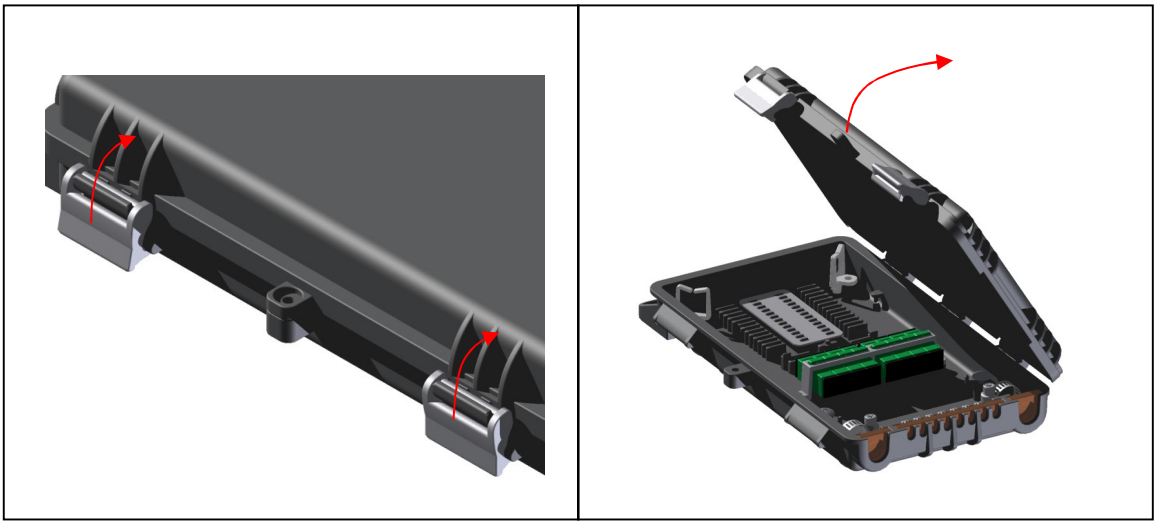


2.4.2. Opening & Closing

(1) Working convenience with one-touch system

(2) Designed to open and close without using specific tools

(3) One-touch combined in the form of robustness of the Body and Cover

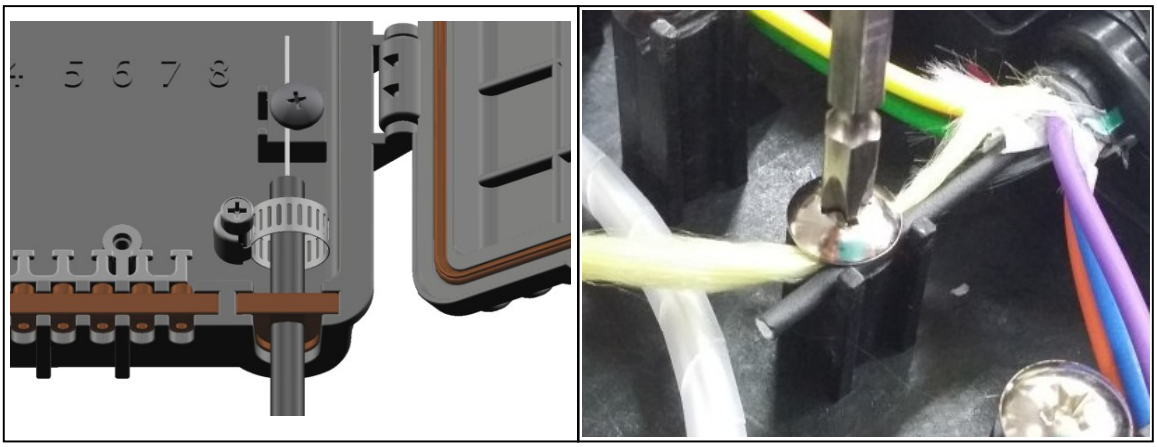


2.4. Feature

2.4.3. Fixing the Central Strength Member and Aramid Yarn

(1) Easy and efficient working by tightened bolt

(2) Tight and stable fastening of Central Strength member and Aramid Yarn

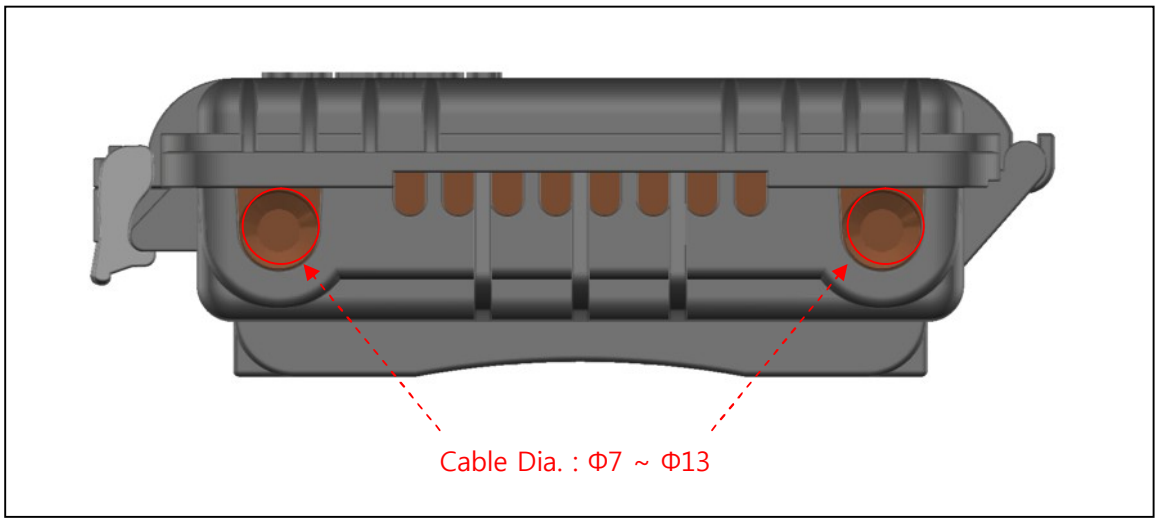


2.4. Feature

2.4.4. Inlet Port

(1) The cable inlet consists of 2 ports.

(2) The ability to accommodate the cable with diameter from Φ7 to Φ13 in all entrance

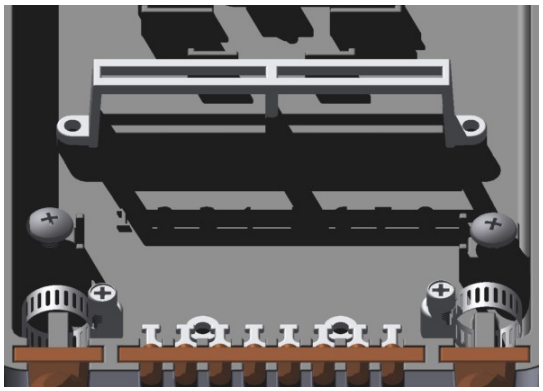


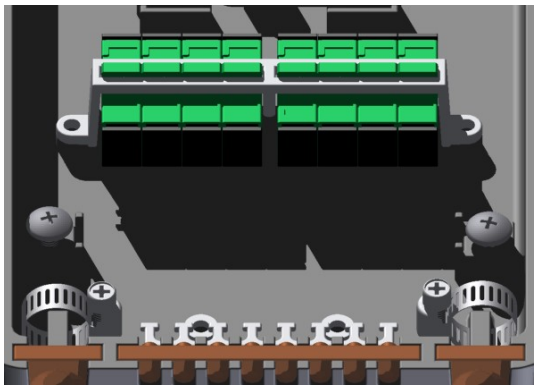
2.4. Feature

2.4.5. Adaptor part

(1) Maximum 8 adaptors can be accommodated (SC)

(2) Fixing adaptor with adaptor holder

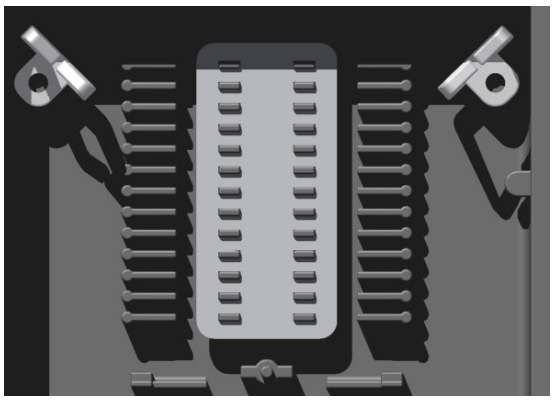


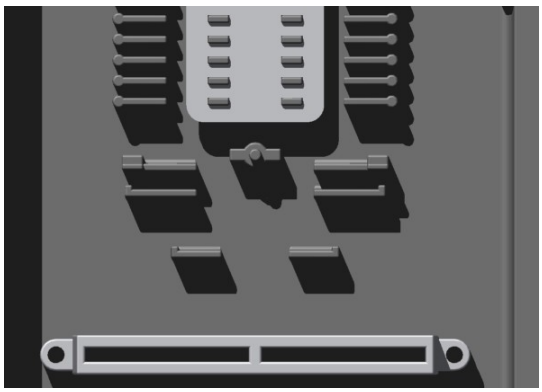


2.4.6. Splicing part

(1) Splicing Capacity of 12 Cores

(2) Various types of splitter & pan-out can be accommodated.





3. TEST PROCEDURE

3.1. General

3.1.1. This section specifies the aerial fiber optic closure and its material physical, chemical environmental and mechanical requirements and the tests to be applied for the determination of compliance to these requirements.

3.1.2. Sample means all completed assembling closure that finished bonding, grounding and connecting equipments.

3.1.3. For all measures of optical attenuation need to splice and for the measures of just a mechanical performance test (no need for optical attenuation test), insert the cable into the Splice closure.

3.1.4. Optical fiber shall be fusion spliced to minimize effect from test environment and shall be protected by heat shrinkable protection sleeve at the splice point

3.1.5. The samples of cable for a performance test shall be prepared with middle size of diameter which is available

3.1.6. The wavelength for measurement of optical attenuation shall be 1550±30nm or 1310 ±20nm and stability shall be under ±0.01dB

3.1.7. Test will be completed with temperature 23±5℃ if there is no and special regulation

3.2. Mechanical characteristics

ITEM	Test Conditions	Requirements
Installation and assembly test of optical fiber	• Splitter type : 1x8 • Installation cable : 6 type, 11EA • Splicing point : 14 cores • Check the insertion loss	• No greater than ± 0.1dB (After test)
Sheath Retention	• Apply a axial load of D/45*100kgf (D: cable diameter in mm) • Keep applying load for 30 minutes • Installation cable : 2type, 2EA • Check the insertion loss	• No mechanical damage • No cable pullout • No greater than ± 0.1dB (After test)
Tension Test of Drop-Cable	• Apply a axial load of 5kgf • Remove the load and wait for 1 hour. • Check the insertion loss	• No mechanical damage • No greater than ± 0.2dB (After test)
Vibration	• Amplitude : 1.0mm • Frequency : 10~55Hz / 10min(period) • Direction : X, Y, Z (20min at each direction) • Check the insertion loss	• No mechanical damage • No greater than ±0.5dB (During test) • No greater than ±0.1dB (After test)

ITEM	Test Conditions	Requirements
Vertical Drop	• Condition the closure at -20±2℃ for 2 hrs • Drop the closure in 1 min. according to the conditions below. - Drop to the concrete surface (Front, Side, Top) - Fall height : 1m • Repeat the test after aging at +40℃	• No mechanical damage
Cable Torsion	• Condition the closure at -20±2℃ for 2 hrs • Installation cable : 5 type • Twist cable at D*10mm point from the end of closure (D: cable diameter in mm) • 1Cycle: CW90˚ → CCW180˚ → CW90˚ • Repeat the cycle 10 times • Repeat the above procedure at +40±2℃.	• No mechanical damage
Insulation Resistance	• Apply 10 kV DC for a minute to the minimum thickness space of closure.	• No presence of insulation break

3.3. Environmental characteristics

ITEM	Test Conditions	Requirements
Temperature and Humidity	• Splicing point : 3 cores • Temp. cycle -40 ~ 70℃ • Humidity : 90% • 20Cycle (1cycle is 7.5 hours)	• No mechanical damage • The door should be moved smoothly • No greater than ±0.5dB (During test) • No greater than ±0.1dB (After test)
Water Spray	• Rainfall : 0.07L/min per nozzle • Rain distance : Maximum 200mm • Direction : ±60 degrees off the vertical • Period : 10min each • Refer to the “IP-X3 of KS C IEC 60529”	• No mechanical damage • No presence of water in the Closure
Chemical Resistance Test	• Solution - pH2 Hcl - pH12 NaOH, - 10% polyethylene glycol (IGEPAL, CO -630) • Submerge for 7 days into the solution.	• No mechanical damage • No presence of corrosion

4. DELIVERY

4.1. Packing

The Closure shall be packed as a complete kit containing all components necessary for installation. Each item is to be covered with a protective material to prevent scratching or damage during shipping or storage.
Complete assembly and installation instructions in English shall be provided with each packaged unit.

4.2. Marking

The details given below shall be distinctively marked in English with a weatherproof material on at least two sides of the shipping carton.

- The product item
- Date of Delivery
- Q'ty, Supplier
- Dimension, Gross wt
- Manufacturer's name and /or trademark, Phone
- Date of manufacture
- Caution mark

Each Closure shall be marked with the company, the month and year of manufacture and the trademark and/or name of manufacturer in legible color.

Ordering Information

A — B — C — D — E

NO	Title	Example	Descriptions
A	Product Name	CS603B	Product Model Name
B	Installation Condition	A or M	Aerial or Manhole type
		W or P	Wall or Poll type
C	No. of splice Tray	T2	Splice closure with 2-splice tray
D	Port Count	8C	Splice closure for 8 Adapter or Drop Cable
E	Adapter type	SC	Splice Closure for SC Adapter type

Outstanding Technology

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