OUTDOOR FIBER DISTRIPUTION CABINET

22U

1- OVERVIEW

Fiber Distribution Cabinet enables telecom Operator & Service Providers to maintain and manage the distribution of connection in disciplined manner for FTTX network

The Cabinets are specially designed and fabricated for outdoor operations provided to bear extreme weather conditions and provide well organized and centralized distribution of the connections

Fiber Distribution Cabinet is mainly used for connection, distribution and dispatching of communication optical fiber cable from offices to optical distribution nodes, providing a safe, reliable but fixable optical fiber/cable management system for communication networks, especially for access networks

2- GENERAL REQUIERMENTS

2.1 APPERANCE & STRUCTURE

2.1.1 CABINET STRUCTURE

a. The door is connected by hinge structure, and the door can be opened and closed 5000 times without damage

   The door lock is an anti-theft structure with good resistance to damage

b. The cable enters and exists from the cable holes at the base of the Cabinet

c. The Cabinet has relatively independent inlet and outlet holes and the numbers of holes meet the requirements of full configuration

d. The fiber distribution cabinet is fitted with a sealing putty to facilitate sealing of the cable entry holes and prevent water and rodents from entering the chassis

   The sealing putty will not follow at high temperature or solidify at low temperature.

   Will expand when it encounters moisture, which can really meet the sealing requirements

e. The cabinet can be operated on both sides, and the device for laying and winding the fiber patch cord is designed reasonably

After the cable is introduced, it is protected by a loose tube, and there is enough area for the fiber patch cords

2.1.2 MECHANICAL MOVING PARTS

The mechanical moving parts are flexible in rotation, moderate in insertion and removal, reliable in locking, convenient in construction and maintenance

The opening angel of the door is no less than 120° and the gap is no more than 3 mm

The structure is firm, the assembly is consistent and interchangeable, and the fasteners are not loose

The sharp edges of the exposed and operated areas are rounded

2.1.3 INLET CABLE BENDING RADIUS

When the optical cable enters the cabinet, the bending radius is not less than 15 times of the cable diameter

2.1.4 PIGTAIL BENDING RADIUS

The bending radius of the pigtails should be no less than 30mm no matter where it is located in the cabinet

2.1.5 CABINET SURFACE

The gloss and texture is uniform

No defects such as nodulation, shrinkage, blistering, pinhole, cracking, peeling, chalking, granules sagging, exposed bottom, and dirt.

No fasteners are exposed on the surface of the cabinet

After the assembly of the cabinet, the metal parts has no burrs

The structural parts are not twisted.

The surface of the cabinet is smooth and even, with uniform color and no mechanical scratches.

2.1.6 TEXT, GRAPHICS, SYMBOLS & SIGNS ON STRUCTURAL DEVICES

The text, graphics, symbols and signs on the structural devices are clear, complete and error-free

2.2 SPECIFICATIONS

2.2.1 CABINET COLOR

The surface color and the spray coating color of the internal metal frames are RAL7035 (Fine Sand Textured)

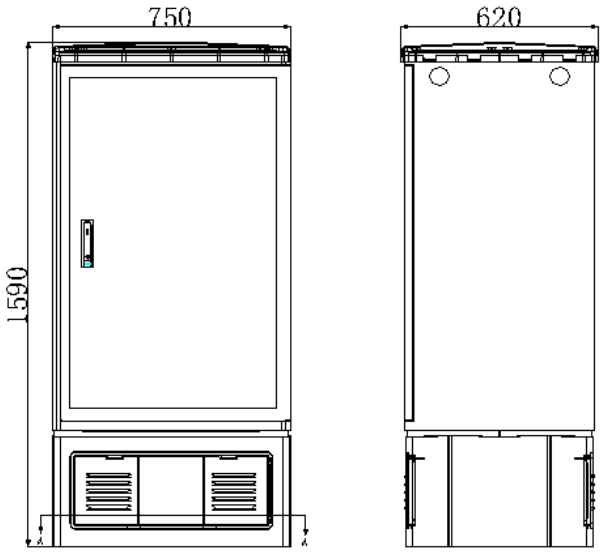
The material of cable stripping plate is SUS304 Stainless Steel with Surface Passivation Treatment

2.2.2 MARK & LOGO

TE Telecom Egypt Logo is in the upper middle part of the cabinet door, on both Front and Rear sides

Silk Screen Printing, or Metal Engraved Badges are available

2.2.3 CABINET DIMENTIONS



3- TECHNICAL PARAMETERS

3.1 CABLE GROUNDING

The cabinet is electrically conductive and has complete grounding system

3.2 HIGH VOLTAGE PROTECTIVE GROUNDING DEVICE

3.2.1 The high-voltage protective device is connected with metal strength member and metal moisture-proof layer

3.2.2 The armor layer in the optical cable, and the cross-sectional are of the ground wire is not less than 6mm

3.2.3 The cross-sectional area of the connecting terminal of the high-voltage protective grounding device connected to the ground shall be not less than 35 mm^2

3.2.4 The high-voltage protective grounding device is insulated from the cabinet, and the insulation resistance is not less than 2×104MΩ/500V (DC).

3.2.5 The withstand voltage between the high-voltage protective grounding device and the cabinet are not less than 3000V (DC), and there is no breakdown or arcing in 1 min.

3.2.6 The high-voltage protective grounding device should be able to be grounded reliably, and there is an obvious grounding labelling at that position.

3.3 MECHANICAL & PHYSICAL PERFORMANCE

3.3.1 The top surface of the cabinet can withstand a vertical pressure no less than 1000N. After the door is opened, it can withstand a vertical pressure no less than 200N at the outermost end of the door. After the force is unloaded, the cabinet has no destructive marks or permanent deformation.

3.3.2 When the optical cable is led in, the optical cable should be able to withstand the axial tensile force of not less than 1000N after being fixed. After the tensile and torsion tests, check the fixing position of the optical cable, and the optical cable should be free from any looseness and damage.

3.4 SEALING PERFORMANCE

Cabinet Protection Level: IP65 According IEC60526

3.5 FLAME RETARDENT PERFORMANCE

The burning performance test of all non-metallic structural parts (including pigtails or fiber jumpers) shall be carried out in accordance with YD/T 694-2004.
After burned under the test flame with the continuous burning time, the test Sample meets the following requirements:

a) The continuous flame burning time of the test sample does not exceed 10s after leaving the fire;
b) The burning or scorching particles falling from the test sample do not spread the combustion to the underlay placed under the test sample.

3.6 ENVIROMENTAL REQUIERMENTS

3.6.1 Operation Environmental Conditions

- Operation Temperature: -40℃～＋60℃

- Relative Humidity: ≤95％（+40℃）
- Atmosphere pressure: 70kPa～106kPa

3.6.2 Storage Conditions

- The product should be stored in a well-ventilated, dry warehouse with no Corrosive gases around it
- The storage Temp. within -40℃~+60℃

4- FUNCTIONAL REQUIERMENTS

4.1 CABINET STRUCTURE LAYOUT

4.1.1 The Cabinet Main Constructions:

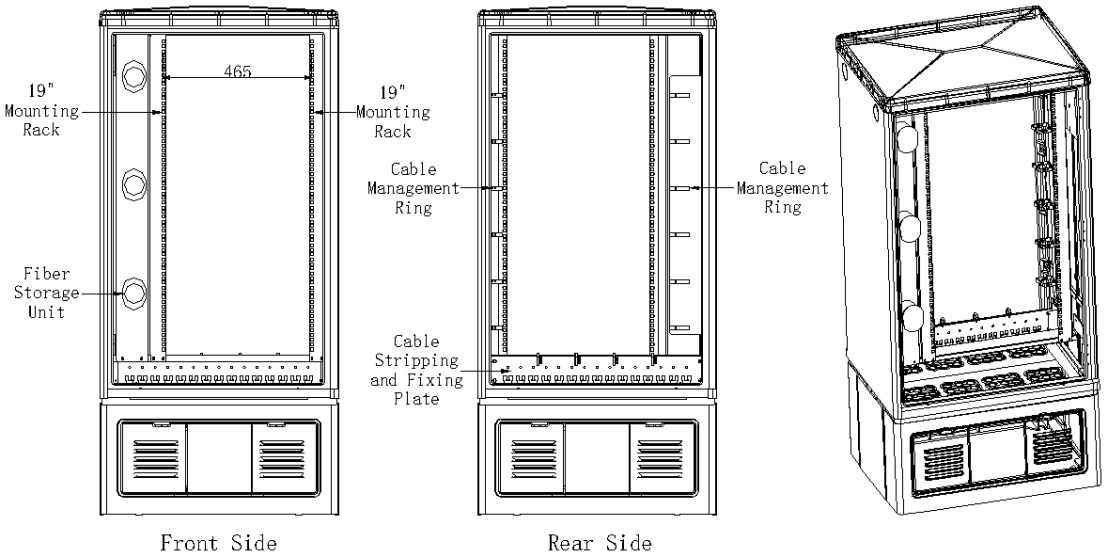
- SMC Casing which is preferable and the best for the outdoor using, for its higher properties of:
  - Thermo Conductivity
  - Corrosion Proof
  - Chemical Stability – Fat/Oil Spray
  - Bending Strength Remain
  - Chemical Stability – UV Light
  - Impact Strength Remain
  - Resistance for Tropical Conditions
  - Life Time which reach over 30 years
  - Fire Resistance (UL-94)
- Internal Metal Frames which include:
  - Upper Beam
  - Lower Beam
  - Upper & Lower Beams connecting parts
  - Fiber coiling post mounting plate
  - Fiber coiling Post
  - Left and right Pass way
  - Cable stripping plate and 19” mounting columns
  - Documents Holders per each door

4.1.2 The cabinet is suitable for 19” rack installation

The installation space is not less than 22U
The thickness of the mounting columns is not less than 2 mm
The thickness of the surface coating is not less than 85 um
The SMC cabinet can withstand 240 hrs. salt spray test and counter abrupt climate changes and extreme environments

4.1.3 The internal metal frames are made of SGCC galvanized steel sheet

The cable stripping plate is made of SUS304 stainless steel plate
All screw fasteners are made of SUS304
The coating and the substrate of internal coated metal frames shall have good adhesion which must not less than the level 2 requirement in table 1 of GB/T



4.2 SCHEMATIC FIBER ROUTING IN CABINET