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#### Introduction

GE has been manufacturing Telecommunication Hardware products for over 20 years and has become a leader in providing custom solutions in surge and filter protection and fiber closure systems.

Note: Technical support is available. Call (800) 637-1738



### Section 17

## Telecommunication Hardware Fiber Closure Hardware

#### **Splice Accessories and Enclosures**

#### 100A - Protective Fusion Splice Sleeves

- -Available in 1 5/8", 2 3/8" or 3" lengths
- Provide both mechanical and environmental protection for fibers that have been stripped, cleaved, and fused into a continuous length
- Composed of an outer heat-shrink tube, an inner hot melt adhesive tube, and stainless steel strength member
- —The inner hot-melt adhesive tube hermetically seals around the splice preventing ingress of moisture into the sleeve
- May be used with both single and multi-mode fibers and are compatible with other leading brand trays
- -Excellent reinforcement of Fusion Spliced Fiber
- —No end crimping or micro-bending of fibers
- —May be installed using a standard heat shrink oven or with a heat gun

#### 200, 201, 205 and 206 Series Splice Trays

Holds any GE Fusion Splice Sleeves or other industry-standard fusion splices:

- -Tray sizes available: 4" W x 12" L, 4.5" W x 12" L or 4.5" W x 6.5" L
- -Accommodates 1-36 m splices
- —Some trays available with a fabric liner. The fabric liner provides a cushion to keep glass fibers from vibrating in the trays.
- —GE customizes trays to OEM requirements and manufactures trays in a variety of materials including aluminum, plastic and Lexan

#### **Organizer Boxes**

FEATURES COMMON TO ALL

- Entrance can be drilled for buffered fibers and various types of outdoor plant cable.
- -Split compression seal available.
- -Utilized in butt configurations.
- -Used to protect fiber & splices when using encapsulants.

#### 227-02

- —Accommodates up to six 200 or 205 Series Splice Trays for 1-72 mechanical or 1-144 fusion fiber splices
- —E/W two slots for fiber cable entrance and four holes for ground wire entrance
- —Designed for use with GE's 720 Closure System
- -Dimensions: 18" L x 4.75" W x 3.5" H (457 mm L x 120 mm W x 89 mm H)

#### 227-04

- Accommodates up to twelve 200 or 205 Series Splice Trays for 1-144 mechanical or 1-288 fusion fiber splices
- —E/W two slots for fiber cable entrance and four holes for ground wire entrance
- -Designed for use with GE's 730 Closure System
- —Dimensions: 18" L  $\times$  4.75" W  $\times$  5" H (457 mm L  $\times$  120 mm W  $\times$  127 mm H)

#### 227-05

- Accommodates up to six splice trays for 1-72 mechanical or 1-144 fusion fiber splices
- —E/W with slot for cable and ground wire entrance
- —Specially designed organizer box equipped with a file type splice tray holder and side mounting lid
- Provides individual tray slots which create easy accessibility to a particular splice tray without disturbing other trays in the organizer
- -Designed for use with GE's 720 Closure System
- -Dimensions: 18" L x 4.75" W x 3.5" H (457 mm L x 120 mm W x 89 mm H)

#### Splice Sleeve



**Splice Tray** 



17-2

## **Telecommunication Hardware** Fiber Closure Hardware

#### **Splice Accessories and Enclosures**

#### **Specifications**

710 - 4" (102mm) x 21" (533mm)

711 - 4" (102mm) x 25" (635mm)

- -Hold 2 splice trays
- -Accommodate 1-30 spliced fibers
- -Accept cables up to 7/8" in diameter

720 - 6" (152mm) x 28" (711mm)

725 - 6" (152mm) x 32" (813mm)

- -Hold 6 or 8 splice trays
- -Accommodate 1-216 spliced fibers
- -Accept cables up to 1" in diameter

**730/732**- 8" (203mm) x 32" (813mm)

- -Hold up to 12 splice trays
- -Accommodate 1-432 spliced fibers
- -Accept cables up to 1 1/4" in diameter

Cylindrical Housing - Rigid, non-corrosive, high impact extruded plastic.

#### **Inner Parts**

Non corrosive metallic materials. Each splice closure comes equipped with cable pull brackets.

#### **Shipping Weight:**

710 8lbs. (3.6kg) 17lbs. (7.7kg) 720 34lbs. (15.4kg)

## 732 **OPGW Closures**

The GE Fiber 705-XXX OPGW frame is designed for splicing and terminating OPGW fiber cables. The frame provides an interface between the standard GE fiber optic splice closure and the OPGW cable. Aluminum clamping plates mounted to the frame provide the pull-out strength required for the heavy cables, isolating the stress away from the closure. The splice closures mount to the frame with a standard pole mount bracket, allowing easy assembly and quick re-entry to the closure.

The GE OPGW frame accommodates the 4" diameter 710-03, the 6" diameter 720-08, and the 8" diameter 730-05 fiber optic splice closures. This provides the installer the option to purchase a smaller, more economical closure when installing low fiber count OPGW cables. The large 730-05 closure can be used when installing high fiber count OPGW cables. Each of the above closures will accommodate splicing OPGW cables to OPGW cables or OPGW cables to dielectric cables. The larger closures (720-08 and 730-05) will each accept up to four OPGW cables and two dielectric cables at a time. Cable clamps are available to accommodate OPGW cables with outside diameters ranging from .465" to .646".

For special applications, the GE OPGW frame can be mounted inside the 705002008 galvanized steel canister. This canister provides a bullet resistant shell to protect the fiber optic splice closure.



**OGPW Closure** 





720-08







730/732 Cylindrical Housing

Closures equipped with Surge Protectors - Patent#: 5,652,820 By integrating the Fiber Cable Protector with the Fiber Closure System, the installation of a Fiber Cable Locating System is simplified. The cable protector is preinstalled and tested with the fiber closure, splice trays, ground lugs and ground wires. Each system is also equipped with mounting brackets for both manhole and aerial installations. This system saves many installation hours and minimizes installation errors in the field.

The unique feature of this product is its capability to protect multiple fiber optic cables while allowing the cables to be remotely located from one source.

- -Cable locating and surge protection integrated into closure system.
- -Multiple cable capability. (backbone plus 4 branch)
- -Initial cost savings.
- -Cut installation time.
- -Eliminate extra hand hold.
- -Convenient access.
- -Available with 6" or 8" closures.



Closure with Surge Protector



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# Telecommunication Hardware Cable Location Surge Protectors

#### **GE 44X Family of Products**

#### **GE 440**

The GE 440 Cable Locating Switching Device is a manually operated switch, normally **mounted on a pedestal**, which provides two basic functions. When the switch is closed, the GE 440 provides cable sheath continuity. When the switch is open, it provides isolation between the East and West cable sheath so that portable cable location transmitters may be connected.

#### GE 442

The GE 442 Cable Locating Protection Device is an intelligent surge protection switching system **installed between the cable sheath and earth ground**. Its primary function is to increase the cable locating tone range and efficiency and protect buried cable from high energy surges. The GE 442 is normally mounted in a pedestal to allow easy field access.\*

#### **GE 444**

The GE 444 Cable Locating Protection Device is an indoor/outdoor intelligent switching system **installed between the cable sheath and earth ground**. Its primary function is to increase the cable locating tone range and efficiency and protect buried cable from high energy surges. The GE 444 may be installed either underground or above ground because of its weather-proof enclosure. The GE 444 may also be bracket-mounted on the Fiber Closures. This method reduces installation time by several hours.\*

#### **GE 445**

The GE 445 Cable Locating Protection Device is a remote switching device controlled by a link monitoring system/Long Line Transmitter System (LMS/LLTS). In addition, the GE 445 unit is built with a high energy surge protector. The surge protector provides a low impedance path for high energy signals (lightning, power cross, etc.) and a high impedance path for low energy signals cable locating tones). A heavy duty relay is installed in this unit, allowing the cable sheath to remain grounded while de-energized. When a 48 volt DC signal is applied from the LMS/LLTS, earth ground is removed from the cable and connected to the LMS/LLTS to the cable sheath. Available in 1, 2, 4 and 16 way switches.\*

#### **GE 446**

The GE 446 Dual Cable Locating Protection Device is a **dual protection unit** designed to protect against high energy surges while providing isolation between the East and West cable sheath. By isolating the East and West cable sheath, allowing individual cable section testing in the field.\*

#### **GE 447**

The GE 447 Band Reject Filtering System is a **two stage protection system installed between the cable sheath and earth ground**. The GE 447 increases cable locating or cable monitoring range while protecting buried cable from high energy surges and 60 Hz induced voltage. The first stage uses GE's standard cable protection technology and the second stage utilizes a 60 Hz band reject filter. The GE 447 increases cable locating efficiency and allows more than 40 miles of cable to be located with one transmitter.\*

\*U.S. Patent No. 5,721,662



# Telecommunication Hardware Cable Location Surge Protectors

# **City Ring** 444 (end) 444 (intermediate) LMS & 445X (switch) Thru splice w/GRD 444 **Point to Point** GE 442 Thru splice w/GRD LMS & 445X 446 **GE 444** ППП **GE 445X** 444 444 Note: Technical support is available. GE 446 Call (800) 637-1738



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