

Fiber Sealed Drop Closures (FSDC)

Versatile and easy-to-use fiber access closures for FTTH networks

Charles fiber optic sealed drop closures provide a versatile, functional and cost-effective solution for FTTH network connections to the subscriber. FSDC series closures are fully-sealed units which can be strand, pole or pedestal mounted; or placed in below ground vaults and enclosures to meet any installation topology. In addition to an express main feed cable, the closure can accommodate up to two branch cables. The closure has built-in adapters to support up to 16 drop cables. FSDC closures feature a compact size for easy handling, yet provide ample room for express fiber storage.



Product Features

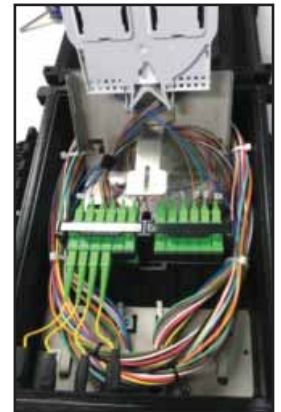
- Robust glass filled polypropylene housing to withstand acidic and alkaline environments
- Up to 48 single splices provides adequate splice capacity in a compact size
- Supports two branch cables in addition to feed cable
- Internal adapters to plug in up to 16 connectorized drops for quick subscriber adds
- Spacious loose tube fiber storage in a compact size can express 144 fibers
- Mechanical compression technology provides cost-effective reliable cable sealing
- Hinged snap cover allows easy access for installation, maintenance, and upgrades
- Sealed IP68 rated for use in aerial, pole, pedestal, or below grade applications
- Splitters and optical taps available to support a variety of fiber access architectures



Feed Port, 2 Branch Ports,
16 Drop Ports



Internal SC Adapter Frame
with 16 SC/APC Adapters



144 Fiber Loop
Storage



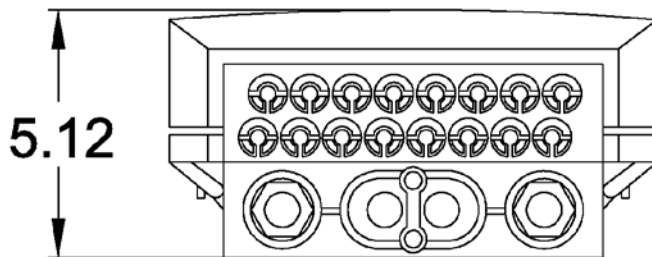
Optional
Grounding
Version



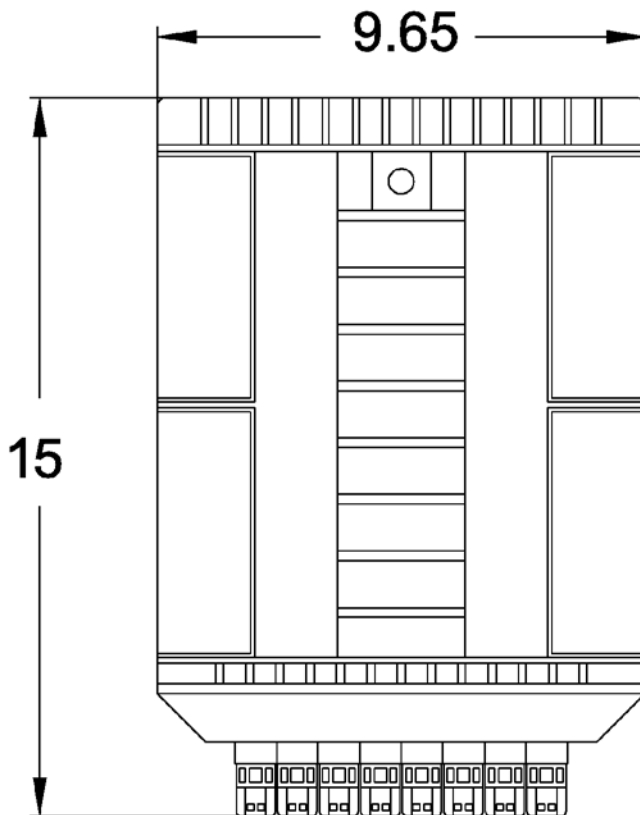
Product Specifications

| | |
|--------------------------------|--|
| Dimensions (L x W x H) | 15" x 9.65" x 5.7" (380mm x 245mm x 145mm) |
| Weight: | 10lb. (4.5kg) |
| Ambient Temperature: | -40°F to 149°F (-40°C to 65°C) |
| Feed Cable Accommodation: | Oval port: 0.393–0.689 inch (10mm–17.5mm) |
| Branch Cable Accommodation: | 2 ports: 0.315–0.689 inch (8mm–17.5mm) |
| Drop Port Cable Accommodation: | 16 drop ports available. Standard closure is equipped with 8 ports for medium grommets for 4.5mm–6mm round drop cables plus 8 ports with large grommets for flat drop cables; other configurations available |
| SC Adapters: | 16 SC APC adapters included. UPC available as an option |
| Splice Trays: | Holds 2 hinged 24 single fusion splice trays |
| Splitters/Optional Taps: | Optional splitter trays and optical tap trays are available. Contact Charles for ordering information |
| Cable Sealing Method: | Mechanical (compression grommets) |
| Grounding: | Available with optional grounding stud and bonding straps |
| Mounting: | Aerial, pole, pedestal, or below grade Optional aerial or pole mount brackets available |

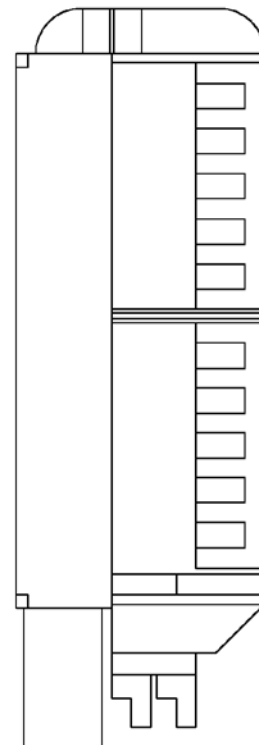
Product Dimensions



Note: Height with air pressure valve is approximately 5.7"



All dimensions in inches.



Configuration Options

Drop Ports

The standard FSDC configuration includes 16 SC/APC adapters, 8 medium drop port grommets suitable for 5-6mm round drop cable and 8 large drop port grommets suitable for flat drop cables. This configuration will work for a majority of use cases. If the topology has requirement for more than 8 drops, retrofit grommet kits can be ordered. The drop port grommet kits have 4 grommets of a given size. Alternatively the FSDC can be ordered fully configured with 16 drop port grommets with one of the three grommet sizes, small for 3mm round cables, medium for 5-6 mm cables, or large for flat drop cables.



Small Grommet

Medium Grommet

Large Grommet

Splice Trays

The FSDC can house two Charles hinged splice trays. Each tray can be used for 24 splices. The unit can accommodate two 4"x6" trays or one each of the 4"x6" and 4"x9" inch trays. The long 4"x9" tray must go into the top position.

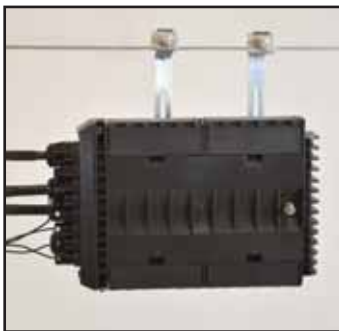


FSDC with two 4"x6" Charles Splice Trays in both positions



FSDC with one Charles 4"x9" Tray in top position and one 4"x6" Tray in lower position

Mounting Options



Aerial Strand Mounted (97-FSDCAMKT)



Pole Mounted with pole bands (97-FSDCPLKTA)



Pole Mounted for lag bolts (97-FSDCPLKTB)

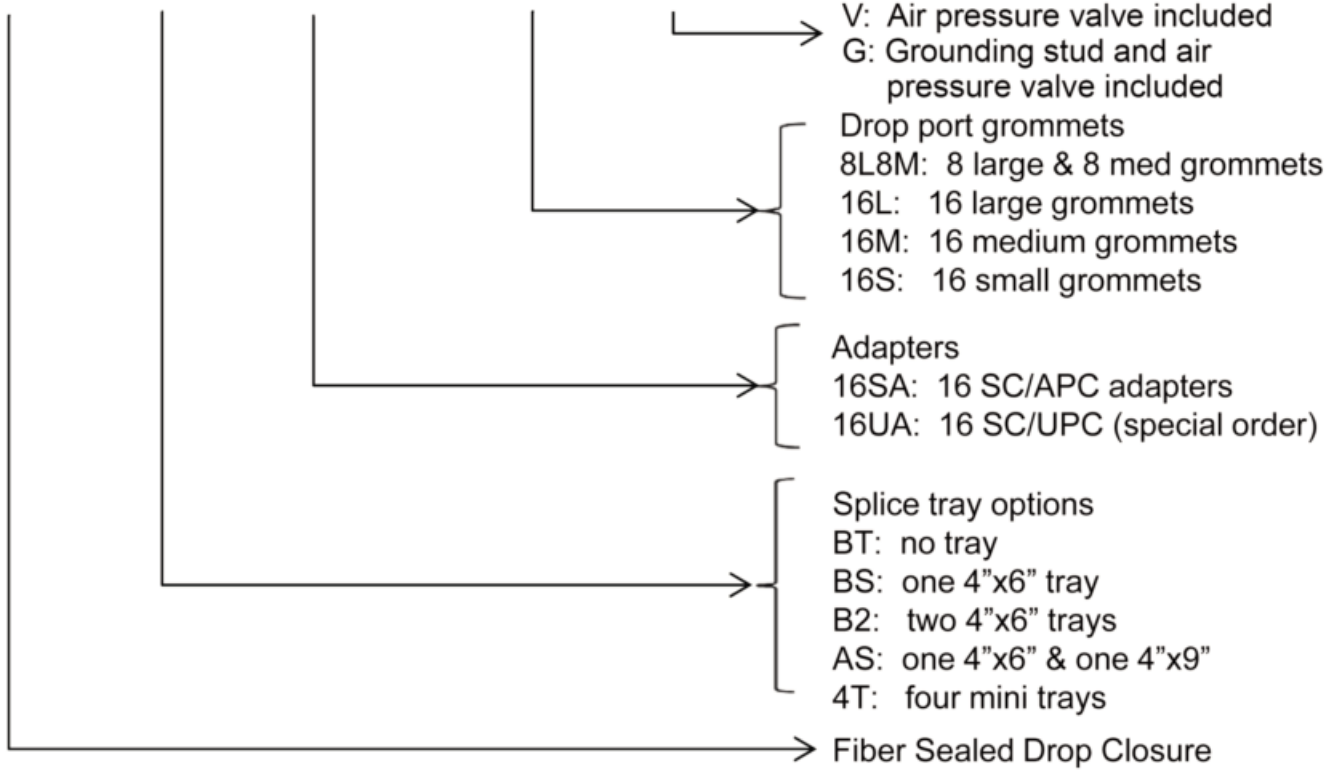


Pedestal Mounted in LVP106 (106SS07-4000200)

Note: For vertical wall mounting use 97-FSDCPLKTB brackets; for horizontal wall mounting use 97-FSDCPLKTA brackets.

Part Number Matrix

FSDC BT XXSA NDND V



Standard Configurations Ordering Guide

| Part Number | Description |
|-----------------|---|
| FSDCBS16SA8L8MV | Fiber Sealed Drop Closure, 16 SP/APC adapters, 8 large, 8 med drop port grommets, pressure valve, includes one 4"x6" tray |
| FSDCBS16SA8L8MG | Fiber Sealed Drop Closure, 16 SC/APC adapters, 8 large, 8 med drop port grommets, pressure valve, includes one 4"x6" splice tray, integrated grounding stud, internal ground cables |
| FSDCBS16SA16LV | Fiber Sealed Drop Closure, 16 SC/APC adapters, 16 large drop port grommets, pressure valve, includes one 4"x6" splice tray |
| FSDCBT16SA8L8MV | Fiber Sealed Drop Closure with bracket for hinged trays, 16 SC/APC, 8 large, 8 med drop port grommets, pressure valve (no trays) |

Configurations with Splitters

| Part Number | Description |
|-----------------|---|
| FSDCBS16LMP104A | FSDC with 8 large and 8 med drop port grommets, one 4"x6" splice tray. Kitted with CFST-S11040A, 1x4 PLC splitter in 4"x6" tray. |
| FSDCBS16LMP108A | FSDC with 8 large and 8 med drop port grommets, one 4"x6" splice tray. Kitted with CFST-S11080A, 1x8 PLC splitter in 4"x6" tray. |
| FSDCBS16LMP104G | FSDC with 8 large and 8 med drop port grommets, one 4"x6" splice tray, includes grounding stud. Kitted with CFST-S11040A, 1x4 PLC splitter in 4"x6" tray. |
| FSDCBS16LMP108G | FSDC with 8 large and 9 med drop port grommets, one 4"x6" splice tray, includes grounding stud. Kitted with CFST-S11080A, 1x8 splitter in 4"x6" tray. |

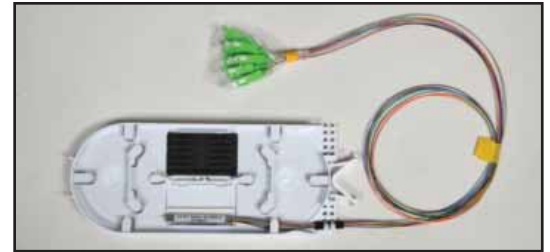
For other configuration requests, please contact Charles Industries for availability.

Optics Tray Support

To support most customer architectures, the FSDC accommodates Charles splitter trays and optical tap trays. PLC splitters are available in either 4"x6" or 4"x9" trays. Optical taps come in 4"x9" trays. These trays can be ordered separately or together as a kit under one part number for customer convenience.

Charles Optical Splitter Trays

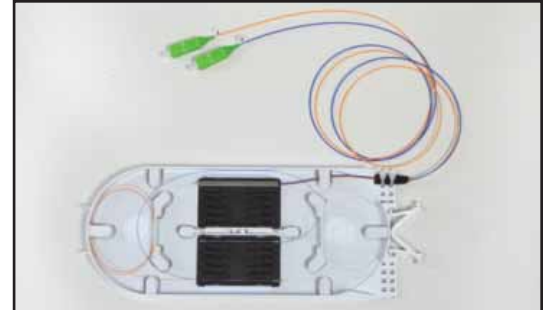
Charles optical splitter trays are used in a FTTH distributed split architecture and can be field installed into FSDC closures. The splitters are Telcordia GR-1209-CORE and GR-1221-CORE compliant. Fiber is ITU-T G.657 Class A type bend insensitive fibers. Input is 900 um fiber stub and outputs are 22" pigtailed with SC/APC connectors. See "Charles Fiber Splitter Trays (CFST)" datasheet.



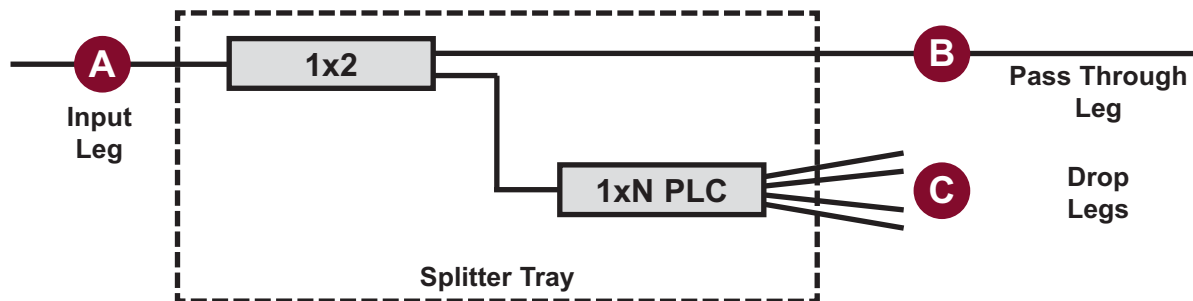
| Split Ratio | | 1x2 | 1x4 | 1x8 | 1x16 |
|------------------------|----|-------------|-----|------|------|
| Operating Wavelength | nm | 1260 - 1650 | | | |
| Maximum Insertion Loss | dB | 4.0 | 8.0 | 11.5 | 13.5 |
| Uniformity | dB | 0.5 | 0.6 | 0.8 | 1.2 |
| Return Loss | dB | >55 | | | |
| Directivity | dB | >55 | | | |
| PDL | dB | 0.2 | 0.2 | 0.3 | 0.3 |
| Return Loss (SC/APC) | dB | >65 | | | |

Charles Optical Tap Trays

Optical taps are used in Fiber-to-the-Home (FTTH) passive network architectures to divide a feed fiber into a pass-thru fiber leg and a drop leg connected to a 1x2, 1x4 or 1x8 Planar Lightwave Circuit (PLC) splitter for fiber distribution to subscribers. This reduces the number of distribution fibers required to provide service to subscribers and is particularly useful in low-density architectures with long fiber routes. There are 30 standard tap options. Please refer to the "Charles Optical Taps" datasheet for ordering information.



| Description | Diagram Reference | Splitter Tray Tap 4"x9" |
|---------------|-------------------|----------------------------------|
| Input Leg | A | Stub, 250µm, 54" length |
| Pass-Thru Leg | B | Stub, 250µm, 54" length |
| Drop Legs | C | SC/APC, 900µm buffer, 22" length |



Accessories Ordering Information

| Part Number | Description |
|-----------------|---|
| 97-FSDCAMKT | FSDC aerial mounting kits with 2 tap brackets for 1/4-3/8 inch aerial strand |
| 97-FSDCPLKTA | FSDC pole mounting kit with pole bands. Includes 2 brackets and 2 pole bands |
| 97-FSDCPLKTB | FSDC pole mounting kit for lag bolt mounting. Includes 2 brackets. Bottom bracket is extended length. (Lag bolts not included.) |
| BDO206-E300 | Charles 12" BDO Pedestal with universal backboard for mounting FSDC |
| 104SS07-21012BK | Charles NLVP104 Pedestal with universal backboard for mounting FSDC |
| 106SS07-4000200 | Charles LVP106 Pedestal with universal backboard for mounting FSDC |
| 97-SMHTRAY | Small 4"x6" Charles hinged splice tray, 12/24 splice capacity |
| 97-FIBR24HTRAY | Long 4"x9" Charles hinged splice tray, 12/24 splice capacity |
| 97-SCA12LF3M | 12 fiber fan-out kit: SC/APC loose tube 22" breakout, single-mode bend insensitive fiber, 900µ color-coded buffer, 3 meters |
| 97-SCA08FL3M | 8 fiber fan-out kit: SC/APC loose tube 22" breakout, single-mode bend insensitive fiber, 900µ color-coded buffer, 3 meters |
| 97-SCA06FL3M | 6 fiber fan-out kit: SC/APC loose tube 22" breakout, single-mode bend insensitive fiber, 900µ color-coded buffer, 3 meters |
| 97-SCBFM03-9AB | 12 fiber pigtail kit, SM bend-insensitive fiber, simplex, 900 µm color-coded buffer, 3 meters |
| 97-SCBFM03-9A8 | 8 fiber pigtail kit, SM bend-insensitive fiber, simplex, 900 µm color-coded buffer, 3 meters |
| 97-SCBFM03-9A6 | 6 fiber pigtail kit, SM bend-insensitive fiber, simplex, 900 µm color-coded buffer, 3 meters |
| CFST-S11040A | 1x4 PLC splitter tray with 900 µm input fiber and SC/APC 900 µm 22" output pigtails in 4"x6" hinged tray |
| CFST-S11080A | 1x8 PLC splitter tray with 900 µm input fiber and SC/APC 900 µm 22" output pigtails in 4"x6" hinged tray |
| CFST-S11160A | 1x16 PLC splitter tray with 900 µm input fiber and SC/APC 900 µm 22" output pigtails in 4"x6" hinged tray |



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Charles Industries, LLC

Voice: (847) 806-6300

Fax: (847) 806-6231

E-mail: mktserv@charlesindustries.com



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