

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

COMMSCOPE TECHNOLOGIES LLC,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. _____
)	
BELDEN INC., OPTERNA AM, INC., and)	JURY TRIAL DEMANDED
PPC BROADBAND, INC.)	
)	
Defendants.)	

COMPLAINT

Plaintiff CommScope Technologies LLC (“CommScope”) files this action for patent infringement against Defendants Belden Inc., Opterna AM, Inc. (“Opterna”), and PPC Broadband, Inc (“PPC”). CommScope states and alleges as follows:

The Parties

1. CommScope is a Delaware company, headquartered in Claremont, NC. Together with its affiliated companies, CommScope designs, manufactures, and sells telecommunications products and equipment around the world. CommScope’s innovative products are used to build network infrastructures that enable wired and wireless communications. For example, CommScope’s products can be found in large buildings, venues and outdoor spaces; in data centers and buildings of all shapes, sizes and complexity; at wireless cell sites; in telecom central offices and cable headends; and in FTTx deployments. CommScope protects its investment in research and development of innovative high-density fiber optic products by filing and obtaining patents on its innovations, including the patents-in-suit.

2. Upon information and belief, Defendant Belden Inc. is a corporation organized and existing under the laws of the State of Delaware. Upon information and belief, Defendant Belden Inc. has its principal place of business in St. Louis, Missouri.

3. Upon information and belief, Defendant PPC is a corporation organized and existing under the laws of the State of Delaware. Upon information and belief, Defendant PPC has its principal place of business in East Syracuse, New York.

4. Belden acquired PPC in approximately 2012.

5. Upon information and belief, Defendant PPC is a subsidiary of Defendant Belden. Upon information and belief, Defendant Belden, directly or indirectly, owns 100% of Defendant PPC. “PPC” is Belden brand. See <https://www.ppc-online.com/>.

6. Upon information and belief, Defendant Opterna is a corporation organized and existing under the laws of the State of Delaware. Upon information and belief, Defendant Opterna has its principal place of business in Syracuse, New York.

7. Belden acquired Opterna in approximately 2019.

8. Upon information and belief, Defendant Opterna is a subsidiary of Defendant Belden. Upon information and belief, Defendant Belden, directly or indirectly, owns 100% of Defendant Opterna. “Opterna” is a Belden brand. See <https://www.opterna.com/>.

9. Upon information and belief, Defendant Belden dominates and controls the activities of PPC and Opterna. As alleged above, Belden owns Opterna and PPC. Further, Belden treats “PPC” and “Opterna” as Belden brands. <https://www.ppc-online.com/ppc-story> (“Belden’s PPC brand...”); <https://www.opterna.com/corporate> (“OPTERNA A BELDEN BRAND... PPC Broadband, a Belden brand”). Opterna’s and PPC’s websites are dual branded with Belden such as by using the following graphics:



See, e.g., <https://www.ppc-online.com/>; <https://www.opterna.com/index.php>.

Further, there is an overlap between the officers/directors of Belden and Opterna and PPC.

Further, upon information and belief, Belden together with PPC and Opterna operate as a single economic entity. See, e.g., <https://www.belden.com/About/our-history> (“Belden acquires

Opterna, an international fiber optics solutions business that is managed alongside PPC

Broadband.”); Belden’s 2021 Annual Report at 24 (“We are integrating our recent acquisitions

such as OTN Systems, SPC, and Opterna with our existing businesses”); Belden’s 2014 Annual

Report at 61 (“The results of PPC have been included in our Consolidated Financial

Statements...”); Belden’s 2019 Annual Report at 55 (“The results of Opterna have been included

in our Consolidated Financial Statements ... Certain subsidiaries of Opterna include

noncontrolling interests. Because Opterna has a controlling financial interest in these

subsidiaries, they are consolidated into our financial statements...”). Both PPC and Opterna sell

Belden’s TurnOpt series of products. See, e.g., [https://www.ppc-online.com/product-](https://www.ppc-online.com/product-search/cabinet-turnopt-1000-fdh)

[search/cabinet-turnopt-1000-fdh](https://www.opterna.com/sub_category_grid/180); https://www.opterna.com/sub_category_grid/180. PPC’s and

Opterna’s website both direct to the same “Terms and Conditions” involving Belden that state:

“Belden Inc., a Delaware corporation, is the worldwide parent company and is the predominant

selling entity for Belden sales made in the United States.” See, e.g., <https://www.ppc-online.com/terms>. Opterna’s website directs “contact” to PPC’s website, which in turn lists a Belden contact. See, e.g., <https://www.opterna.com/index.php> (“Contact Us” option); <https://www.ppc-online.com/locations/north-america> (listing: “Email: bbs.cs@belden.com”). Therefore, Defendant Belden Inc. is liable for the accused activities of Defendants Opterna and PPC.

10. As used below, this complaint refers to Defendants, collectively, as “Belden.”

Jurisdiction

11. This action arises under the Patent Act, 35 U.S.C. § 271 et seq.

12. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

13. This Court has personal jurisdiction over each Defendant. Upon information and belief, each Defendant is incorporated in Delaware.

14. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b).

Patents-in-Suit

15. This is an action for patent infringement of the following patents: (1) U.S. Patent No. 10,996,417, (2) U.S. Patent No. 7,715,679, (3) U.S. Patent No. 10,606,017, and (4) U.S. Patent No. 10,627,592. Collectively, the asserted patents are referred to herein as “the patents-in-suit”.

16. CommScope is the owner of the entire right, title, and interest in and to the ’417 patent, which duly and legally issued on May 4, 2021. The ’417 patent is entitled “Fiber optic enclosure with internal cable spool and movable cover.” A copy of the ’417 patent is attached as Exhibit A.

17. CommScope is the owner of the entire right, title, and interest in and to the '679 patent, which duly and legally issued on May 11, 2010. The '679 patent is entitled "Fiber optic enclosure with external cable spool." A copy of the '679 patent is attached as Exhibit B.

18. CommScope is the owner of the entire right, title, and interest in and to the '017 patent, which duly and legally issued on March 31, 2020. The '017 patent is entitled "Fiber optic payout assembly including cable spool." A copy of the '017 patent is attached as Exhibit C.

19. CommScope is the owner of the entire right, title, and interest in and to the '592 patent, which duly and legally issued on April 21, 2020. The '592 patent is entitled "Fiber optic assembly with cable spool." A copy of the '592 patent is attached as Exhibit D.

Belden's Infringing Products

20. Belden has committed acts of patent infringement by making, using, selling, offering for sale, and/or importing into the United States fiber optic enclosures and surface mounted terminals, including for example the products shown in the exhibits including the FlexPON® enclosure, Mini Terminal™, Micro Terminal™, and related components.

21. Exhibit E is a true and correct copy of a datasheet for the FlexPON® Demarcation Enclosure that is available through <https://www.ppc-online.com/product-search/enclosures-flexpon>.

22. Exhibit F is a true and correct copy of an install guide for the FlexPON® Demarcation Enclosure that is available through <https://www.ppc-online.com/product-search/enclosures-flexpon>.

23. Exhibit G is a true and correct copy of a data sheet for the Mini Terminal™ that is available through <https://www.opterna.com/>.

24. Exhibit H is a true and correct copy of a data sheet for the Micro Terminal™ that is available through <https://www.opterna.com/>.

25. Exhibit I is a true and correct copy of an instruction manual and installation guide for the Mini Terminal™ that is available through <https://www.opterna.com/>.

Knowledge of the Patents-in-Suit

26. At least as of the filing and/or service of this complaint, Belden has knowledge of the patents-in-suit.

27. Upon information and belief, Belden has had knowledge of the patents-in-suit prior to the filing of this complaint. Belden and CommScope entities have been in multiple patent litigations against each other dating back more than 10 years. Like the present suit, this history of litigation also related to fiber optic telecommunications equipment patents. Belden has reviewed and analyzed CommScope patents relating to fiber optic telecommunications equipment. In addition, in its own patent prosecution filings, Belden has been repeatedly citing multiple patents in the same patent family as asserted patents. For example, Belden has cited patents related to asserted patents in at least seven of its own patents. Further, Belden has extensive knowledge of CommScope because the products at issue are in the same market. Further, upon information and belief, Belden acquired sample CommScope products as part of the various litigations between the parties and would have seen patent markings for those products, including marking either listing the patents-in-suit or directing Belden to a website listing the patents-in-suit. Therefore, upon information and belief, Belden has had knowledge of the asserted patents or remained willfully blind to the existence of the patents-in-suit prior to the filing of this complaint.

First Cause of Action
(Patent Infringement Under 35 U.S.C. §271 of Patent No. 10,996,417)

28. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

29. Belden has directly infringed and continues to directly infringe one or more claims, including at least Claim 22, of the '417 Patent, within the meaning of 35 U.S.C. § 271(a) either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing its fiber optic enclosures in the United States, without license or authorization by CommScope.

30. As non-limiting examples, Belden has infringed claim 22 of the '417 Patent by making, using, selling, offering for sale, and/or importing into the United States Belden's FlexPON® Demarcation Enclosure (hereinafter "the FlexPON Enclosure") and the FlexPON House Box Fiber NID. As set forth below, for example, the FlexPON Enclosure satisfies each and every limitation of claim 22.

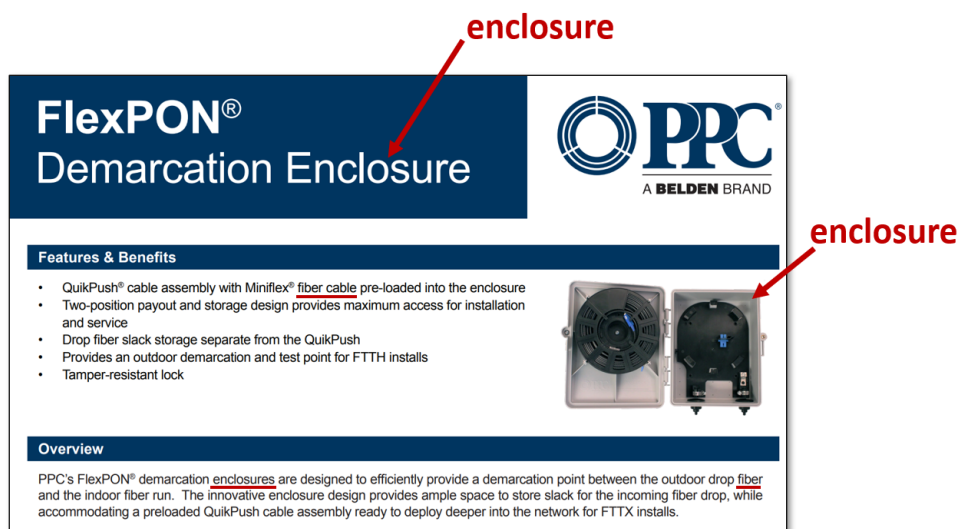
31. Claim 22 of the '417 is set forth below with element designations added for ease of reference:

	Claim 22 of U.S. Patent No. 10,996,417
Preamble	22. A fiber optic enclosure comprising:
Element 22A	a wall mountable enclosure arrangement including a base, sidewalls that project forwardly from the base, and a cover, front portions of the sidewalls defining a front access opening, the enclosure arrangement defining a cable opening, the cover being pivotal relative to the base about a pivot axis between a closed position covering the front access opening and an open position providing access to the front access opening, the cover contacting the front portions of the sidewalls when disposed in the closed position;
Element 22B	a cable spool mounted to the enclosure arrangement so that the cable spool is rotatable relative to the enclosure arrangement about a rotation axis that is transverse to the pivot axis, the cable spool including a spooling portion;

Claim 22 of U.S. Patent No. 10,996,417	
Element 22C	a fiber optic cable spooled about the spooling portion of the cable spool, the fiber optic cable including at least one optical fiber;
Element 22D	a fiber optic connector terminating the at least one optical fiber of the fiber optic cable, the fiber optic connector rotating in unison with the cable spool when the cable spool rotates about the rotation axis; and
Element 22E	a fiber optic adapter mounted to the enclosure arrangement, the fiber optic adapter including a first connector port for receiving the fiber optic connector and also including an opposite second connector port;
Element 22F	the cover extending across the fiber optic adapter when disposed in the closed position.

32. The FlexPON Enclosure satisfies the Preamble of claim 22 of the '417 patent.

33. The FlexPON Enclosure is a fiber optic enclosure.



FlexPON Demarcation Enclosure Spec. Sheet at 1 (https://www.ppc-online.com/hubfs/2057289/Downloadable_docs/Spec_sheets/Fiber/Enclosures/FlexPON%20De

[marc%20Spec%20Sheet.pdf?hsCtaTracking=942f2e5e-01b9-4461-a45f-c0a43793b6cc%7Cbe0e6fc7-3268-4ea9-9bd6-26b334f1c825](#)) (Ex. E).

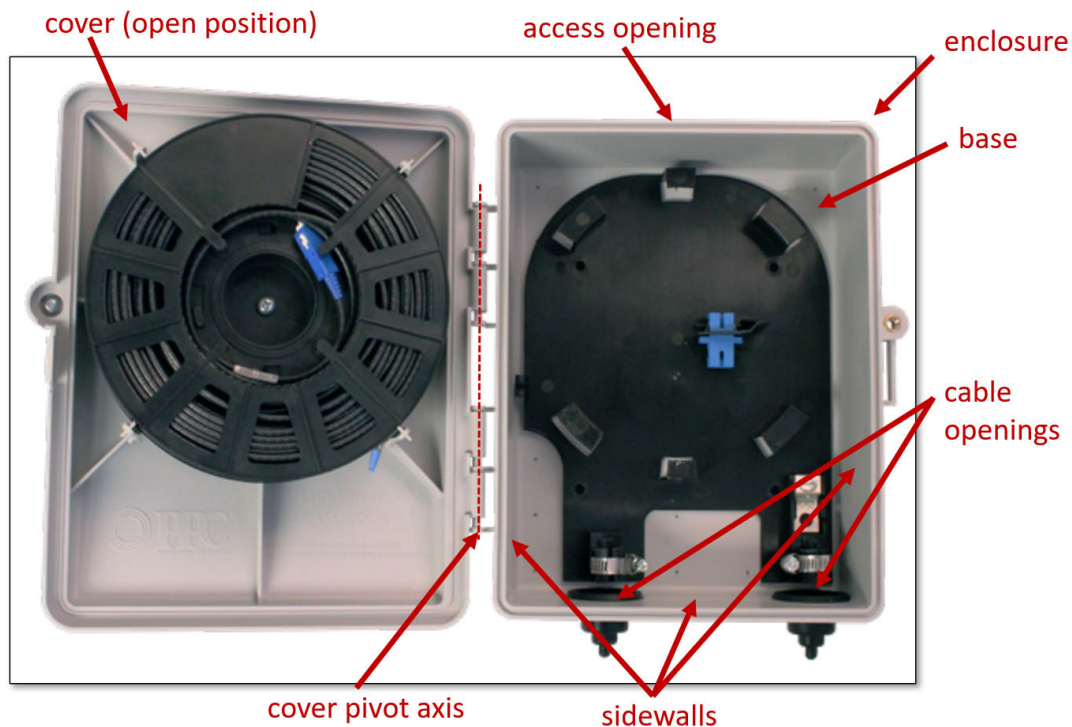
34. The FlexPON Enclosure satisfies Element 22A of claim 22 of the '417 patent.
35. The FlexPON Enclosure is a wall mountable enclosure arrangement.

wall mountable



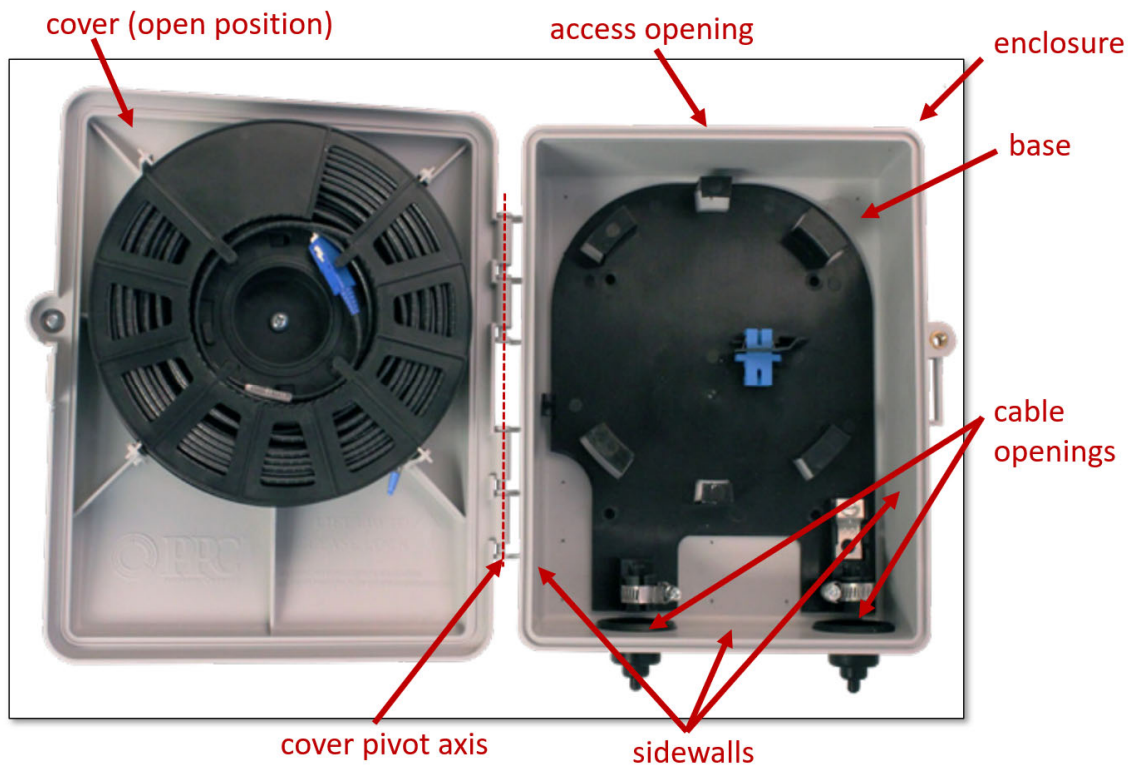
FlexPON Demarcation Enclosure Installation Instructions at 3 (https://www.ppc-online.com/hubfs/Downloadable_docs/Spec_sheets/Fiber/Enclosures/flexpon-demarcation-enclosure_install-instructions_rev2_09182020.pdf?hsCtaTracking=26ae9314-7a95-40d3-a0e3-7bbf15cb5a8d%7Cbc98a54-2b89-4e2e-bfd5-bd906de0fa32) (Ex. F).

36. The FlexPON Enclosure includes a base, sidewalls that project forwardly from the base, and a cover. The sidewalls of the FlexPON Enclosure include front portions that define a front access opening, and the lower sidewall defines cable openings separate from the access opening.

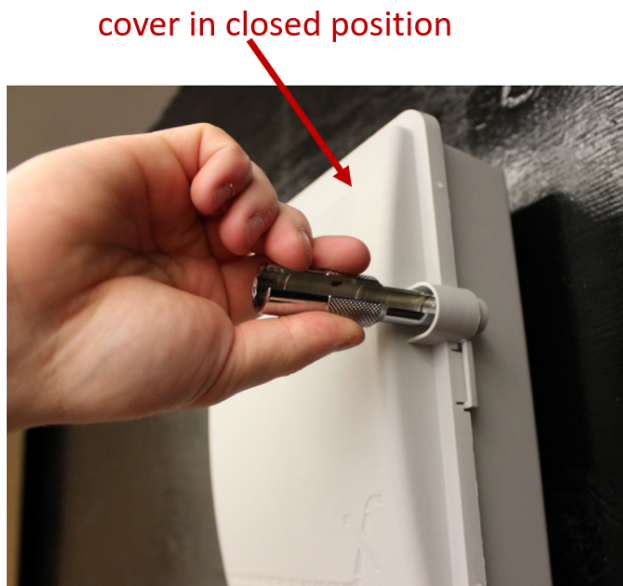


FlexPON Demarcation Enclosure Spec. Sheet at 1 (Ex. E).

37. The cover of the FlexPON Enclosure is pivotal relative to the base about a pivot axis between a closed position covering the front access opening and an open position providing access to the front access opening, the cover contacting the front portions of the sidewalls when disposed in the closed position.



FlexPON Demarcation Enclosure Spec. Sheet at 1 (Ex. E).



FlexPON Demarcation Enclosure Installation Instructions at 3 (Ex. F).

Overview

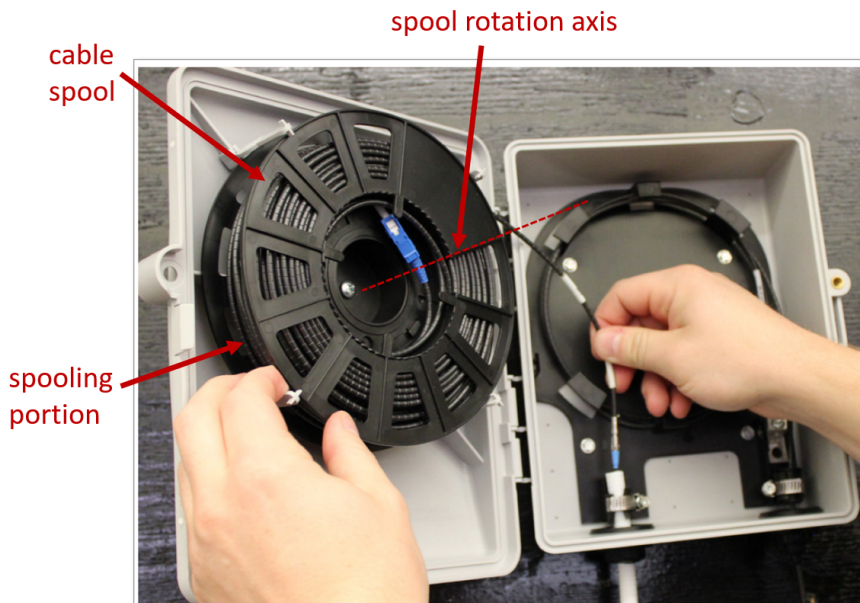
PPC's FlexPON® demarcation enclosures are designed to efficiently provide a demarcation point between the outdoor drop fiber and the indoor fiber run. The innovative enclosure design provides ample space to store slack for the incoming fiber drop, while accommodating a preloaded QuikPush cable assembly ready to deploy deeper into the network for FTTX installs.

The unique door hinge self-locks open into the optimum position, for paying out the cable assembly. When closed, the QuikPush reel self-locks into position, preventing unwanted payout of fiber. The fiber entry ports are configured to provide secure mounting of a variety of fibers, ducts, drop cables and conduit up to 1-inch. A can wrench bolt provides standard access security.

FlexPON Demarcation Enclosure Spec. Sheet at 1 (Ex. E).

38. The FlexPON Enclosure satisfies Element 22B of claim 22 of the '417 patent.

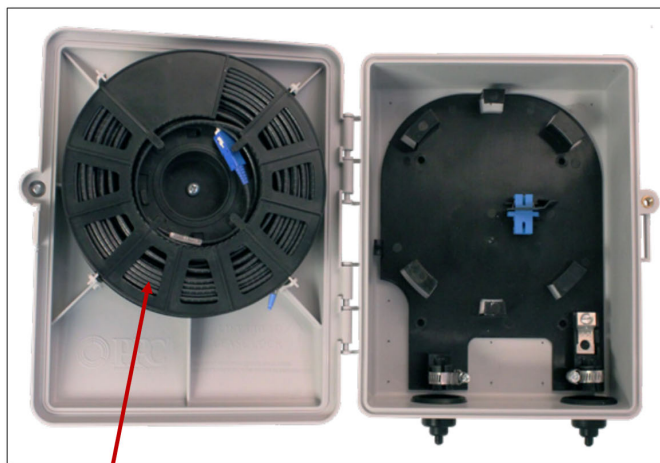
39. The FlexPON Enclosure includes a cable spool mounted to the enclosure arrangement so that the cable spool is rotatable relative to the enclosure arrangement about a rotation axis that is transverse to the pivot axis, and the cable spool includes a spooling portion.



FlexPON Demarcation Enclosure Installation Instructions at 2 (Ex. F).

40. The FlexPON Enclosure satisfies Element 22C of claim 22 of the '417 patent.

41. The FlexPON Enclosure includes fiber optic cable spooled about the spooling portion of the cable spool, the fiber optic cable including at least one optical fiber.



spooled fiber optic cable

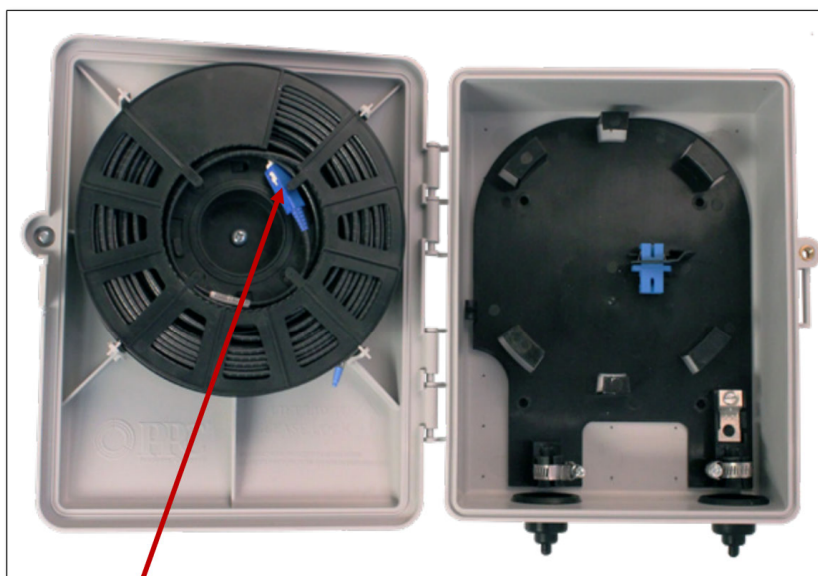
FlexPON Enclosure	Cable Type
XPNX-	221 = 2mm 250u 657.A1
	392 = 3mm 900u 657.A2

fiber cable

FlexPON Demarcation Enclosure Spec. Sheet at 1 (Ex. E).

42. The FlexPON Enclosure satisfies Element 22D of claim 22 of the '417 patent.

43. The FlexPON Enclosure includes a fiber optic connector that terminates the at least one optical fiber of the fiber optic cable, the fiber optic connector rotating in unison with the cable spool when the cable spool rotates about the rotation axis.

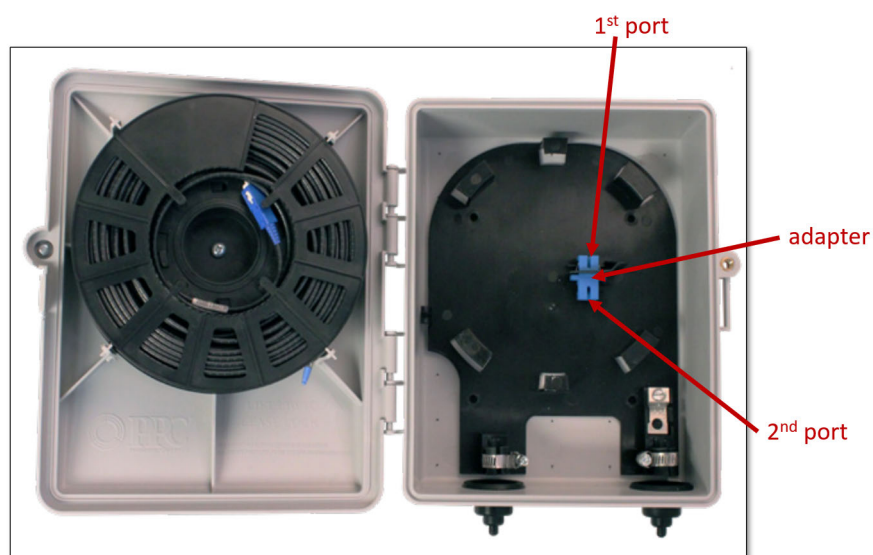


connector terminates fiber of cable and rotates in unison with spool

FlexPON Demarcation Enclosure Spec. Sheet at 1 (Ex. E).

44. The FlexPON Enclosure satisfies Element 22E of claim 22 of the '417 patent.

45. The FlexPON Enclosure includes a fiber optic adapter carried by the base of the enclosure arrangement, the fiber optic adapter including a first connector port for receiving the fiber optic connector and also including an opposite second connector port.



46. The FlexPON Enclosure satisfies Element 22F of claim 22 of the '417 patent.

47. The cover of the FlexPON Enclosure extends across the fiber optic adapter when disposed in the closed position.



cover in closed position

FlexPON Demarcation Enclosure Installation Instructions at 3 (Ex. F).

48. Belden also indirectly infringes the '417 patent, including, for example and without limitation, claim 22. Operators of Belden's fiber optic enclosures including as a non-limiting example, Belden's FlexPON Demarcation Enclosures, directly infringe at least some claims of the '417 patent, including claim 22. Upon information and belief, Belden knows its products are especially made or especially adapted for use in an infringing manner. Belden actively induces infringement because it directly encourages its customers to use the FlexPON Demarcation Enclosures in a way that results in infringement of the '417 patent by, among other things, displaying and distributing marketing materials and product brochures and specifications. For example, Belden provides instructions for installing the FlexPON Demarcation Enclosures and configuring that system as recited in claim 22 of the '417 patent. Belden also contributes to infringement because its fiber distribution hubs include features that are not staple articles of commerce suitable for substantial non-infringing uses. For example, there is no substantial use for the spool within the FlexPON Demarcation Enclosure other than to include fiber cable

spooled thereon. The intended, normal use of the FlexPON Demarcation Enclosure results in infringement. Belden's products are a material part of the invention of the '417 patent.

49. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

50. Belden's infringement has caused CommScope irreparable harm and damages in an amount to be proven at trial.

51. Upon information and belief, Belden's unlawful infringing activity was and is willful, deliberate, and intentional, entitling CommScope to recover, among other things, treble damages, attorney's fees, and costs.

Second Cause of Action
(Patent Infringement Under 35 U.S.C. §271 of Patent No. 7,715,679)

52. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

53. Belden has directly infringed and continues to directly infringe one or more claims, including at least Claim 1, of the '679 Patent, within the meaning of 35 U.S.C. § 271(a) either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing its surface mounted terminals in the United States, without license or authorization by CommScope.

54. As a non-limiting example, Belden has infringed claim 1 of the '679 Patent by making, using, selling, offering for sale, and/or importing into the United States the Opterna Fiber Optic, Surface Mounted, Mini Terminal™ (hereinafter "the Mini Terminal").

55. Upon information and belief, Opterna has sold and offered for sale the Mini Terminal product within the United States. Opterna advertises the Mini Terminal product on its website. See, e.g., https://www.opterna.com/resources/DSFO09017AR_Mini_Terminal.pdf.

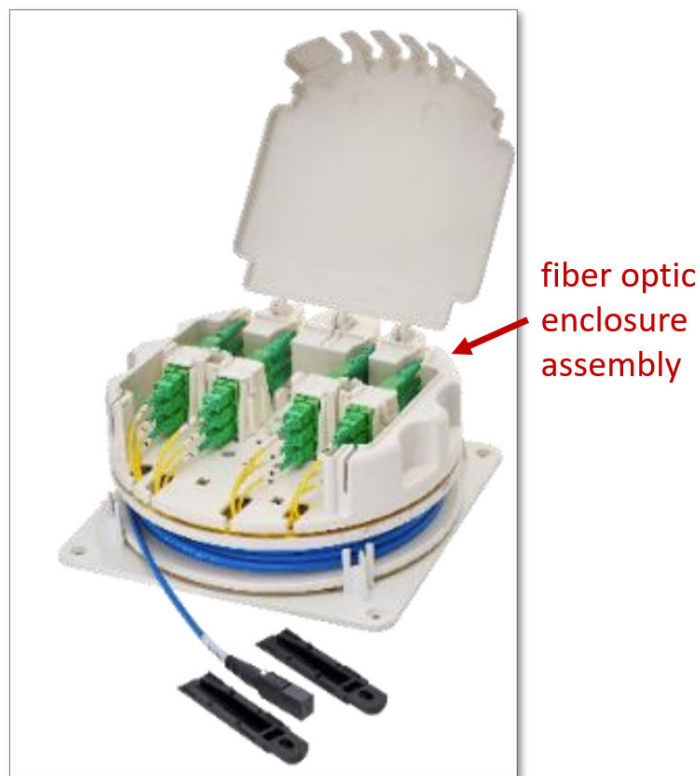
56. As set forth below, the Mini Terminal satisfies each and every limitation of claim 1 of the '679 Patent.

57. Claim 1 of the '679 Patent is set forth below with element designations added for ease of reference:

	Claim 1 of U.S. Patent No. 7,715,679
Preamble	1. A fiber optic enclosure assembly comprising:
Element 1A	an enclosure including: a housing having a base and a plurality of sidewalls, the housing defining an interior region, the base defining a cable passage; a cover engaged to the housing;
Element 1B	a plurality of adapters disposed at least partially in the interior region of the housing, the plurality of adapters being adapted to optically connect incoming fibers to outgoing fibers;
Element 1C	a cable spool connected to an exterior of the enclosure;
Element 1D	a mounting plate configured for mounting to a vertical surface, the mounting plate being rotationally engaged with the cable spool such that the cable spool and the enclosure selectively rotate about an axis of the mounting plate;
Element 1E	a first cable disposed about the cable spool, the first cable having a first end that is routed to the plurality of adapters through the cable passage.

58. The Mini Terminal satisfies the Preamble of claim 1 of the '679 patent.

59. The Mini Terminal is a fiber optic enclosure assembly.



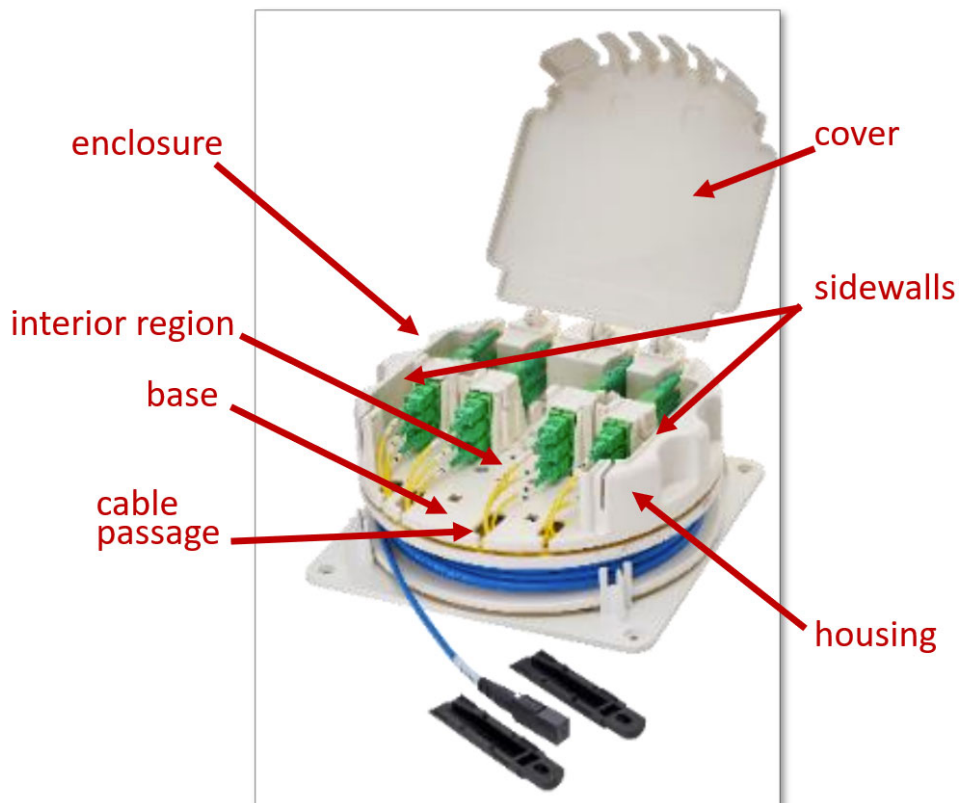
Description

The Mini Terminal is a miniature, all-plastic version of Opterna's patented BuildOpt™ Terminal Plate Assembly. It's a small but versatile plug-and-play fiber distribution solution, optimized for accepting drop cables from living units or commercial units in smaller Multiple Tenant Unit (MTU), Multiple Dwelling Unit (MDU), or generic FTTx applications.

Opterna Data Sheet DSFO09017AR entitled, "Fiber Optic, Surface Mounted Terminal, Mini Terminal™" at 1 (Ex. G).

60. The Mini Terminal satisfies Element 1A of claim 1 of the '679 Patent.

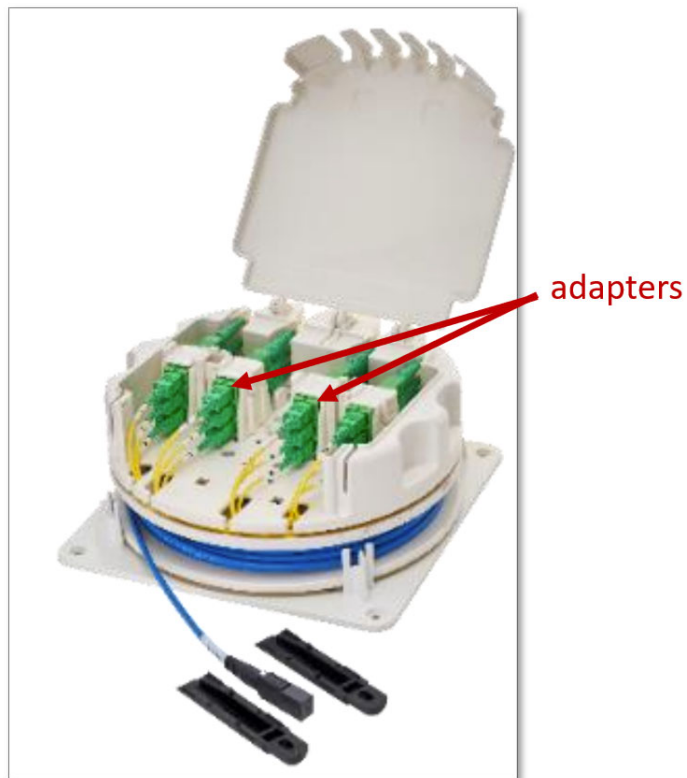
61. The Mini Terminal defines an enclosure including a housing having a base and a plurality of sidewalls, the housing defining an interior region, the base defining a cable passage, and the Mini Terminal also includes a cover engaged to the housing.



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

62. The Mini Terminal satisfies Element 1B of claim 1 of the ‘679 Patent.

63. The Mini Terminal includes a plurality of adapters disposed at least partially in the interior region of the housing, the plurality of adapters being adapted to optically connect incoming fibers to outgoing fibers.



Features and benefits

- All-plastic design for mounting onto any flat surface
- Innovative rotating spool for easy cable pay out and reel in
- Simple docking mechanism to lock the cable spool in place
- Removable cover (and adapters) for easy access to all ports
- 1F, 2F, or 12F pre-terminated tails for 8 or 12 drops
- Riser, Plenum, Miniflex® Riser or Miniflex® LSZH cable
- 2011/65/EU RoHS compliant and halogen free



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

64. The Mini Terminal satisfies Element 1C of claim 1 of the ‘679 Patent.

65. The Mini Terminal includes a cable spool connected to an exterior of the enclosure.



Features and benefits

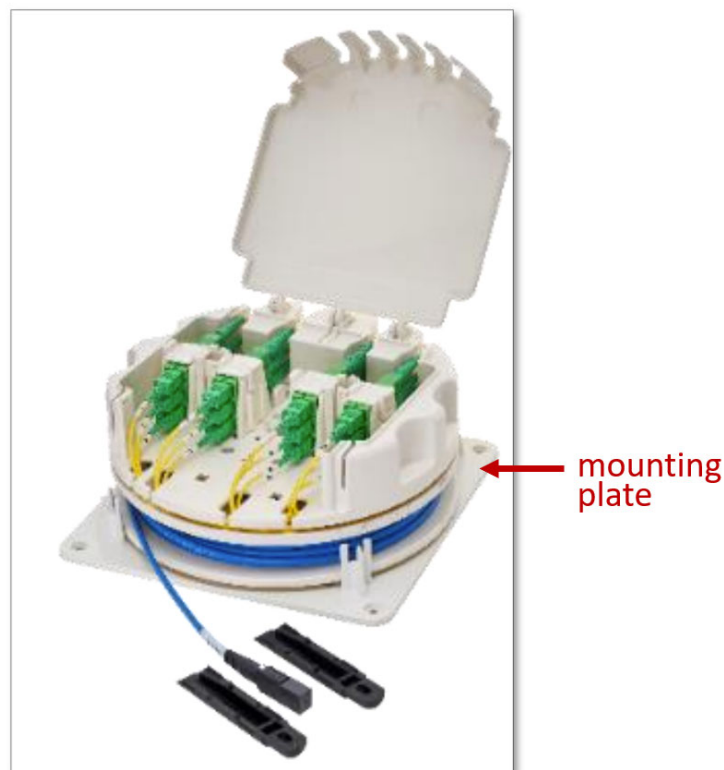
- All-plastic design for mounting onto any flat surface
- Innovative rotating spool for easy cable pay out and reel in
- Simple docking mechanism to lock the cable spool in place
- Removable cover (and adapters) for easy access to all ports
- 1F, 2F, or 12F pre-terminated tails for 8 or 12 drops
- Riser, Plenum, Miniflex® Riser or Miniflex® LSZH cable
- 2011/65/EU RoHS compliant and halogen free



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

66. The Mini Terminal satisfies Element 1D of claim 1 of the '679 Patent.

67. The Mini Terminal includes a mounting plate configured for mounting to a vertical surface, the mounting plate being rotationally engaged with the cable spool such that the cable spool and the enclosure selectively rotate about an axis of the mounting plate. The base of the Mini Terminal includes anchor holes for securing with screws the base of the Mini Terminal to a flat surface such as a wall.

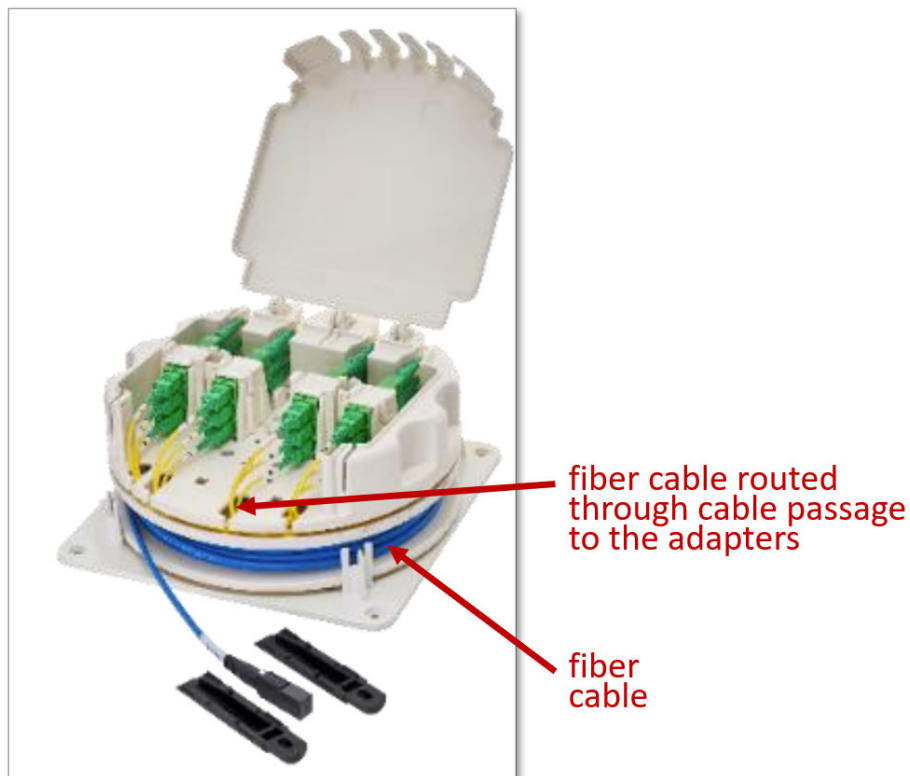


The Mini Terminal base mounts onto any flat surface. Its rotating spool pays out the desired length of fiber and stores the excess fiber – 88 feet (27m) of 12F ribbon or 200 feet (61m) of 2F round cable slack can be stored on the spool, which locks onto the base to prevent additional rotation.

Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

68. The Mini Terminal satisfies Element 1E of claim 1 of the '679 Patent.

69. The Mini Terminal includes a first cable disposed about the cable spool, the first cable having a first end that is routed to the plurality of adapters through the cable passage.



70. Belden also indirectly infringes the '679 Patent, including, for example and without limitation, claim 1. Operators of Belden's surface mounted terminals including as a non-limiting example, Belden's Opterna Mini Terminal, directly infringe at least some claims of the '679 Patent, including claim 1. Upon information and belief, Belden knows its products are especially made or especially adapted for use in an infringing manner. Belden actively induces infringement because it directly encourages its customers to use the Mini Terminals that results in infringement of the '679 Patent by, among other things, displaying and distributing marketing materials and product brochures and specifications. For example, Belden specification sheets

encourage using the Mini Terminal as recited in claim 1 of the '679 Patent. Belden also contributes to infringement because its surface mounted terminals include features that are not staple articles of commerce suitable for substantial non-infringing uses. For example, there is no substantial use for the fiber coiled around the spool of the Mini Terminal except to be routed through the cable passage to the adapters. The intended, normal use of the Mini Terminal results in infringement. Belden's products are a material part of the invention of the '679 Patent.

71. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

72. Belden's infringement has caused CommScope irreparable harm and damages in an amount to be proven at trial.

73. Upon information and belief, Belden's unlawful infringing activity was and is willful, deliberate, and intentional, entitling CommScope to recover, among other things, treble damages, attorney's fees, and costs.

Third Cause of Action
(Patent Infringement Under 35 U.S.C. §271 of Patent No. 10,606,017)

74. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

75. Belden has directly infringed and continues to directly infringe one or more claims, including at least Claim 1, of the '017 Patent, within the meaning of 35 U.S.C. § 271(a) either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing its surface mounted terminals in the United States, without license or authorization by CommScope.

76. As a non-limiting example, Belden has infringed Claim 1 of the '017 Patent by making, using, selling, offering for sale, and/or importing into the United States Belden's Micro

Terminal™ Fiber Optic, Surface Mounted Terminal. As set forth below, the Micro Terminal satisfies each and every limitation of Claim 1.

77. Claim 1 of the '017 is set forth below with element designations added for ease of reference:

	Claim 1 of U.S. Patent No. 10,606,017
Preamble	1. A fiber optic assembly comprising:
Element 1A	a wall mountable enclosure arrangement defining a front access opening;
Element 1B	a cable spool mounted within the enclosure arrangement so that the cable spool rotates relative to the enclosure arrangement about an axis, the cable spool having a spooling portion, a first end facing the front access opening, and a second end facing away from the front access opening;
Element 1C	a cable management structure disposed at the first end of the cable spool, the cable management structure defining a cable routing path and providing fiber bend radius protection;
Element 1D	a fiber optic cable wrapped around the spooling portion of the cable spool, the fiber optic cable having an optical fiber having a connectorized end, the connectorized end being held at the first end of the cable spool to rotate in unison with the cable spool relative to the enclosure arrangement when the fiber optic cable is paid out from the cable spool;
Element 1E	a fiber optic adapter for receiving the connectorized end of the optical fiber; and
Element 1F	a front cover for selectively covering the front access opening, the front access opening being defined at least in part by opposite sidewalls, the front cover engaging the sidewalls and extending directly in front of the fiber optic adapter when positioned to cover the front access opening.

78. The Micro Terminal satisfies the Preamble of Claim 1 of the '017 patent.

79. The Micro Terminal is a fiber optic assembly.

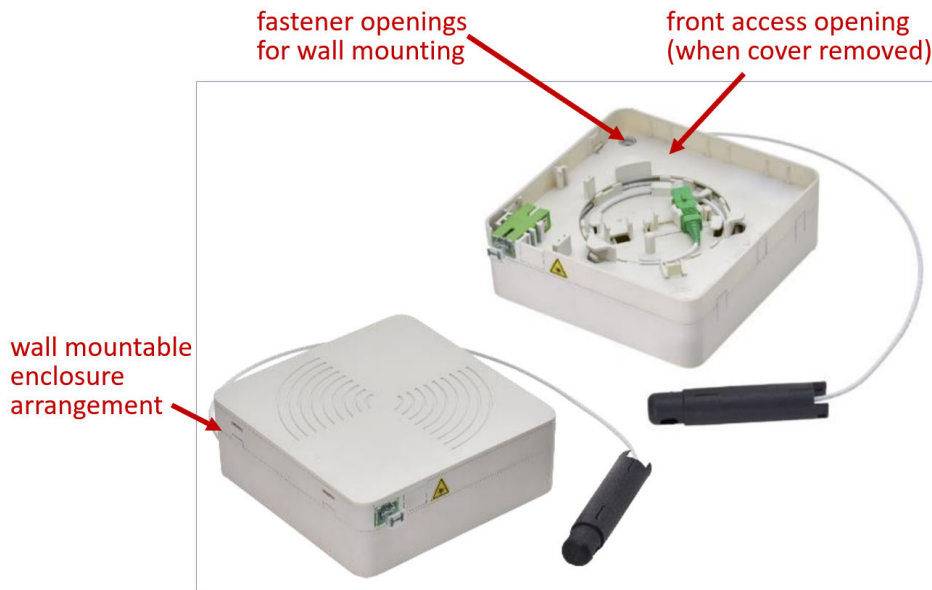


Optical data	Value
→ Fiber count	1, 2 or 4 fibers
Fiber category	OS2 single mode (9/125um) bend insensitive
Insertion loss	≤ 0.30 dB single mode for SC/UPC ≤ 0.30 dB single mode for SC/APC
Return loss	≥ -55.0 dB single mode for SC/UPC ≥ -65.0 dB single mode for SC/APC

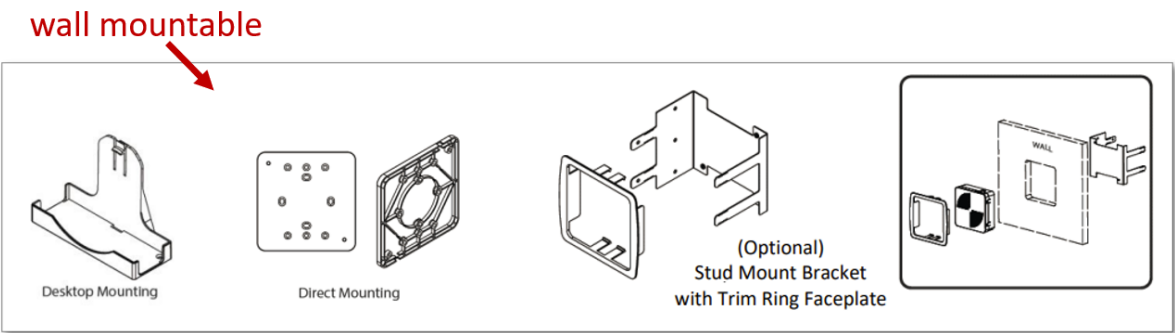
Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal™” at 1; see https://www.opterna.com/resources/DSFO09016AR_Micro_Terminal.pdf (Ex.H).

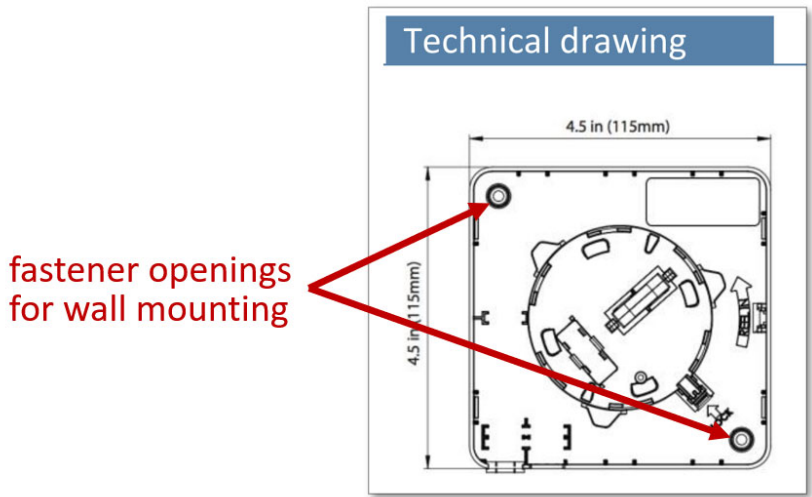
80. The Micro Terminal satisfies Element 1A of Claim 1 of the ‘017 patent.

81. The Micro Terminal includes a wall mountable enclosure arrangement defining a front access opening.



- Features and benefits**
- Extremely compact, all-plastic design
 - Up to 65 feet (20m) of cable storage inside the terminal
 - 2 port capacity (2x SC simplex or 2x LC duplex adapters)
 - Supplied with universal mounting brackets (desktop or wall)
 - Fiber routing kit and stud mounting bracket sold separately
 - Riser, Plenum, Miniflex® Riser or Miniflex® LSZH cable

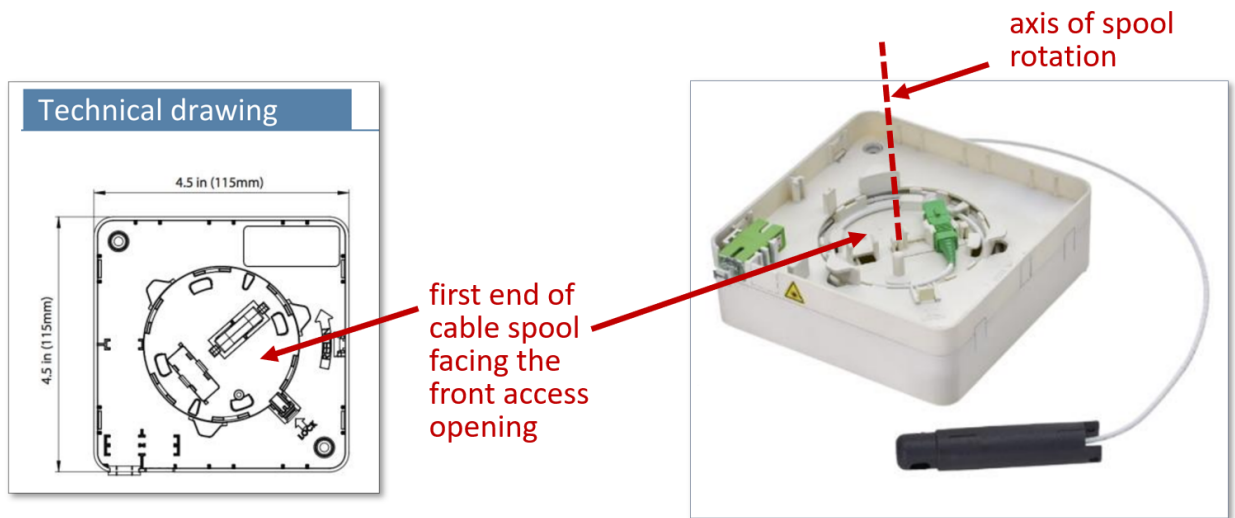




Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal” at 1-2 (Ex. H).

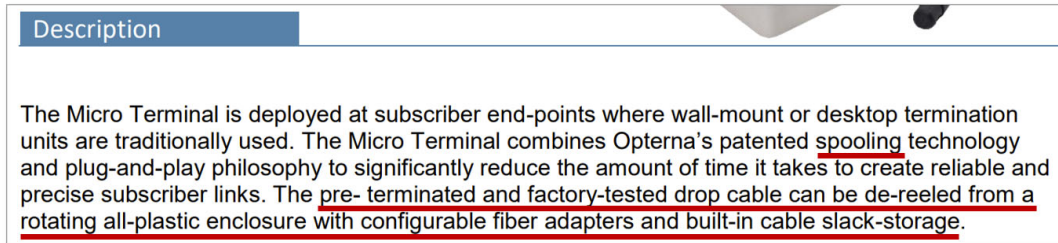
82. The Micro Terminal satisfies Element 1B of Claim 1 of the ‘017 patent.

83. The Micro Terminal includes a cable spool mounted within the enclosure arrangement so that the cable spool rotates relative to the enclosure arrangement about an axis, the cable spool having a spooling portion, a first end facing the front access opening, and a second end facing away from the front access opening.



Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal™” at 1-2 (Ex. H).

84. The cable spool of the Micro Terminal includes a spooling portion where optical fiber cable is stored.



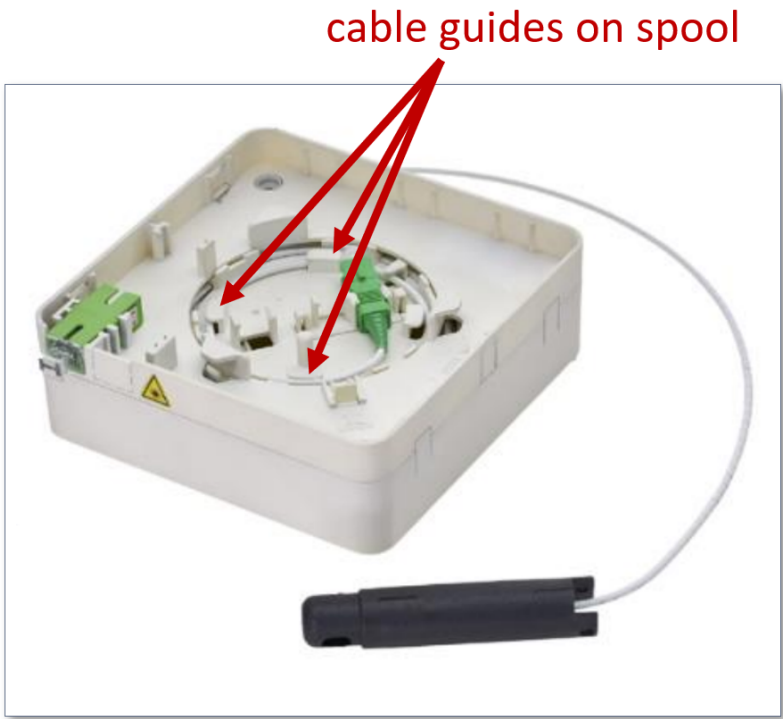
Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal™” at 1 (Ex. H).

85. The end of the Micro Terminal cable spool that is opposite from the first end (shown above) is a second end of the cable spool that faces away from the front access opening.

86. The Micro Terminal satisfies Element 1C of Claim 1 of the '017 patent.

87. The Micro Terminal includes a cable management structure disposed at the first end of the cable spool, the cable management structure defining a cable routing path and providing fiber bend radius protection.

88. The first end of the Micro Terminal cable spool includes multiple cable guides.



Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal™” at 1 (Ex. H).

89. The Micro Terminal cable guides are cable management structures that define a cable routing path and provide fiber bend radius protection.

90. The Micro Terminal satisfies Element 1D of Claim 1 of the ‘017 patent.

91. The Micro Terminal includes a fiber optic cable wrapped around the spooling portion of the cable spool, the fiber optic cable having an optical fiber having a connectorized end, the connectorized end being held at the first end of the cable spool to rotate in unison with the cable spool relative to the enclosure arrangement when the fiber optic cable is paid out from the cable spool.



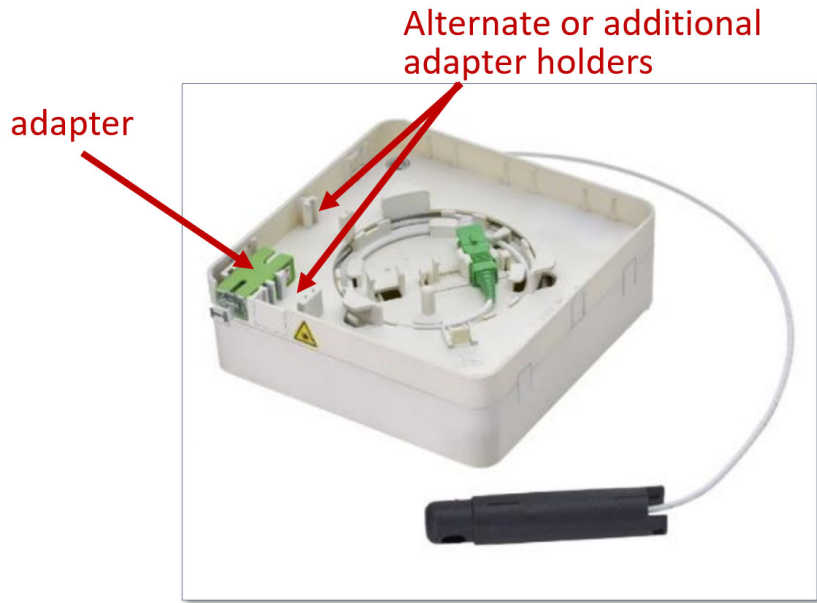
connectorized end of optical fiber, held at first end of spool, that rotates in unison with the spool relative to the enclosure arrangement when paying out cable from spool

Description

The Micro Terminal is deployed at subscriber end-points where wall-mount or desktop termination units are traditionally used. The Micro Terminal combines Opterna's patented spooling technology and plug-and-play philosophy to significantly reduce the amount of time it takes to create reliable and precise subscriber links. The pre-terminated and factory-tested drop cable can be de-reeled from a rotating all-plastic enclosure with configurable fiber adapters and built-in cable slack-storage.

Opterna Data Sheet DSFO09016AR entitled "Fiber Optic, Surface Mounted, Micro Terminal™" at 1 (Ex. H).

92. The Micro Terminal satisfies Element 1E of Claim 1 of the '017 patent.
93. The Micro Terminal includes a fiber optic adapter for receiving the connectorized end of the optical fiber.



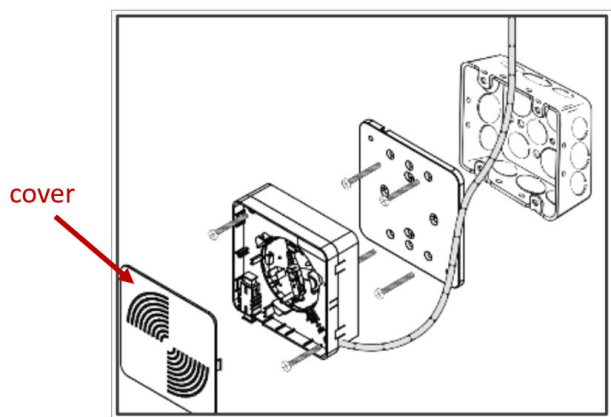
Features and benefits

- Extremely compact, all-plastic design
- Up to 65 feet (20m) of cable storage inside the terminal
- 2 port capacity (2x SC simplex or 2x LC duplex adapters)
- Supplied with universal mounting brackets (desktop or wall)
- Fiber routing kit and stud mounting bracket sold separately
- Riser, Plenum, Miniflex® Riser or Miniflex® LSZH cable

Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal™” at 1 (Ex. H).

94. The Micro Terminal satisfies Element 1F of Claim 1 of the ‘017 patent.

95. The Micro Terminal includes a front cover for selectively covering the front access opening, the front access opening being defined at least in part by opposite sidewalls, the front cover engaging the sidewalls and extending directly in front of the fiber optic adapter when positioned to cover the front access opening.



Opterna Data Sheet DSFO09016AR entitled “Fiber Optic, Surface Mounted, Micro Terminal” at 1-2 (Ex. H).

96. Belden also indirectly infringes the '017 patent, including, for example and without limitation, Claim 1. Operators of Belden's fiber optic enclosures including as a non-limiting example, Belden's Micro Terminal, directly infringe at least some claims of the '017 patent, including Claim 1. Upon information and belief, Belden knows its products are especially made or especially adapted for use in an infringing manner. Belden actively induces infringement because it directly encourages its customers to use the Micro Terminal in a way

that results in infringement of the '017 patent by, among other things, displaying and distributing marketing materials and product brochures and specifications. For example, Belden provides literature describing installing and configuring the Micro Terminal as recited in Claim 1 of the '017 patent. Belden also contributes to infringement because its Micro Terminals include features that are not staple articles of commerce suitable for substantial non-infringing uses. For example, there is no substantial use for the connector holders and adapter holders within the Micro Terminal other than to include connectors and adapters therein respectively, nor is there any substantial non-infringing use for the cable spool within the Micro Terminal other than to store fiber cable wrapped around the spool and to pay out cable during installation. The intended, normal use of the Micro Terminal results in infringement. Belden's products are a material part of the invention of the '017 patent.

97. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

98. Belden's infringement has caused CommScope irreparable harm and damages in an amount to be proven at trial.

99. Upon information and belief, Belden's unlawful infringing activity was and is willful, deliberate, and intentional, entitling CommScope to recover, among other things, treble damages, attorney's fees, and costs.

Fourth Cause of Action
(Patent Infringement Under 35 U.S.C. §271 of Patent No. 10,627,592)

100. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

101. Belden has directly infringed and continues to directly infringe one or more claims, including at least Claim 1, of the '592 Patent, within the meaning of 35 U.S.C. § 271(a)

either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing its surface mounted terminals in the United States, without license or authorization by CommScope.

102. As a non-limiting example, Belden has infringed Claim 1 of the ‘592 Patent by making, using, selling, offering for sale, and/or importing into the United States the Opterna Fiber Optic, Surface Mounted, Mini Terminal™ (hereinafter “the Mini Terminal”).

103. Upon information and belief, Opterna has sold and offered for sale the Mini Terminal product within the United States. Opterna advertises the Mini Terminal product on its website. See, e.g., https://www.opterna.com/resources/DSFO09017AR_Mini_Terminal.pdf.

104. As set forth below, the Mini Terminal satisfies each and every limitation of claim 1 of the ‘592 Patent.

105. Claim 1 of the ‘592 is set forth below with element designations added for ease of reference:

	Claim 1 of U.S. Patent No. 10,627,592
Preamble	1. A fiber optic assembly comprising:
Element 1A	a mounting plate adapted to be connected to a wall;
Element 1B	a spool mounted in front of the mounting plate, the spool being rotatable relative to the mounting plate about a rotation axis that extends in a rear-to-front orientation, the spool including a front axial end defined by a front spool flange and a rear axial end defined by a rear spool flange, the spool also including a spooling portion disposed between the front and rear axial ends;
Element 1C	a base mounted at the front axial end of the spool, the base defining a base passage that extends through the base in the rear-to-front orientation;
Element 1D	opposite sidewalls that project forwardly from the base;

	Claim 1 of U.S. Patent No. 10,627,592
Element 1E	an optical connection location positioned between the opposite sidewalls;
Element 1F	a fiber optic cable including at least one optical fiber, the fiber optic cable being coiled about the spooling portion of the spool so as to be capable of being paid out from the spool, wherein the spool is configured to rotate about the rotation axis relative to the mounting plate as the fiber optic cable is paid out from the spool, and
Element 1G	wherein the base, the sidewalls and the optical connection location are configured to rotate in unison with the spool relative to the mounting plate as the fiber optic cable is paid out from the spool; and
Element 1H	the at least one optical fiber of the fiber optic cable being routed through the base passage.

106. The Mini Terminal satisfies the Preamble of Claim 1 of the '592 patent.

107. The Mini Terminal is a fiber optic assembly. The Mini Terminal is an assembly that provides a connection point for optical fibers as can be seen in the photograph below. The Mini Terminal stores optic fiber cable.



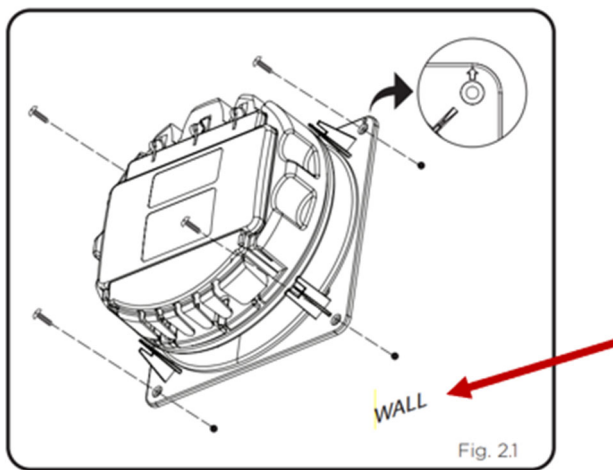
Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

- 108. The Mini Terminal satisfies Element 1A of Claim 1 of the ‘592 patent.
- 109. The Mini Terminal includes a mounting plate adapted to be connected to a wall.



The Mini Terminal base mounts onto any flat surface, fiber and stores the excess fiber – 88 feet (27m) of 12F can be stored on the spool, which locks onto the base

Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).



Opterna Mini Terminal Instruction Manual and Installation Guide at 8 (Ex. I).

	Part No	Description	Drawing No.
1	MIT-605-2-3	Cover	MIT-605-2-3-B
2	MIT-605-2-2	Adaptor Plate	MIT-605-2-2-B
3	MIT-605-2-1	Spool	MIT-605-2-1-B
4		Pre-terminated cable	
5	MIT-605-1	<u>Wall Mount Base</u>	MIT-605-1-B
6	MIT-605-3-2	Adaptor Holder Lock SC	MIT-605-3-2-B
7		SC/APC Adaptors	
8	MIT-605-3-1	Adaptor Holder SC	MIT-605-3-1-B

Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I).

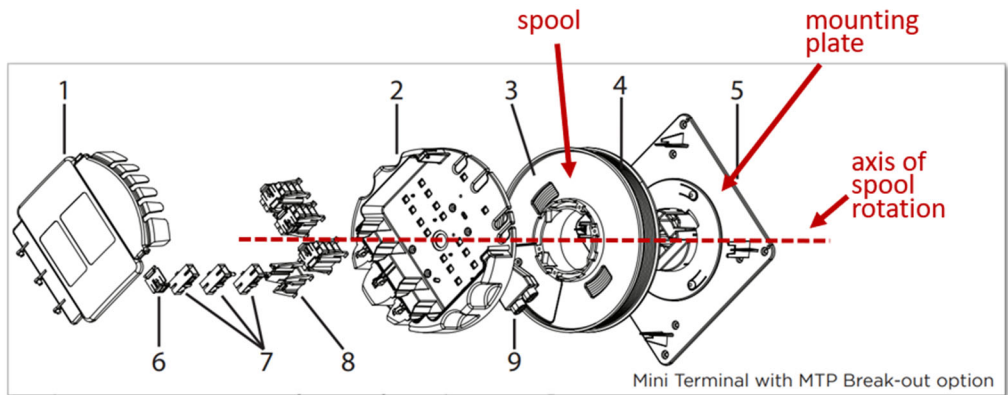
- 110. The Mini Terminal satisfies Element 1B of Claim 1 of the ‘592 patent.
- 111. The Mini Terminal includes a spool mounted in front of the mounting plate.



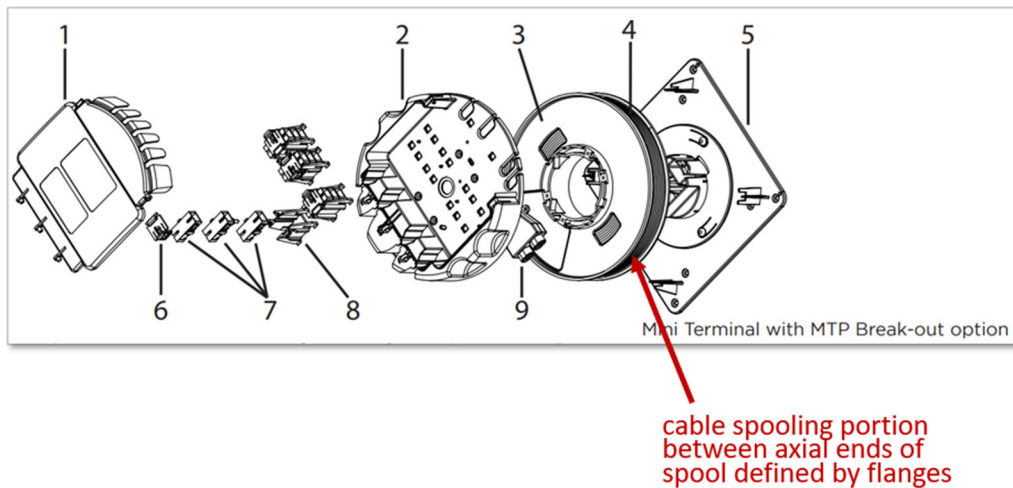
Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

	Part No	Description	Drawing No.
1	MIT-605-2-3	Cover	MIT-605-2-3-B
2	MIT-605-2-2	Adaptor Plate	MIT-605-2-2-B
3	MIT-605-2-1	<u>Spool</u>	MIT-605-2-1-B
4		Pre-terminated cable	
5	MIT-605-1	Wall Mount Base	MIT-605-1-B
6	MIT-605-3-2	Adaptor Holder Lock SC	MIT-605-3-2-B
7		SC/APC Adaptors	
8	MIT-605-3-1	Adaptor Holder SC	MIT-605-3-1-B

Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I). The spool is rotatable relative to the mounting plate about a rotation axis that extends in a rear-to-front orientation.



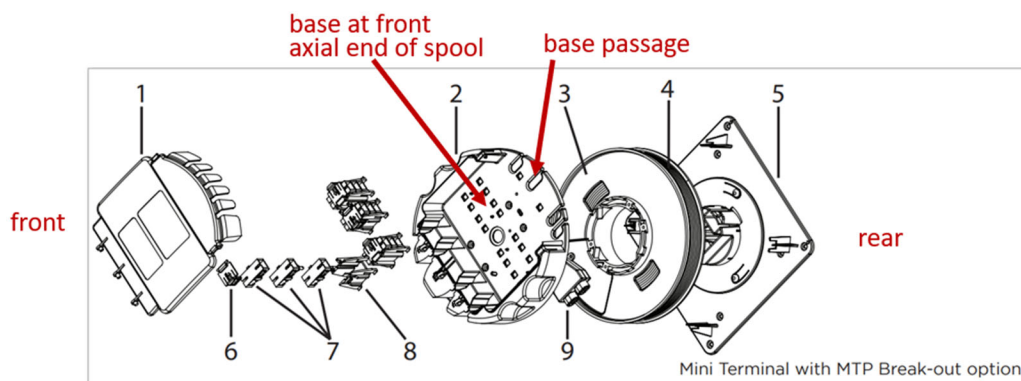
Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I); see also Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (“...rotating spool for easy cable pay out and reel in”) (Ex. G). The spool includes a front axial end defined by a front spool flange and a rear axial end defined by a rear spool flange with a spooling portion therebetween.



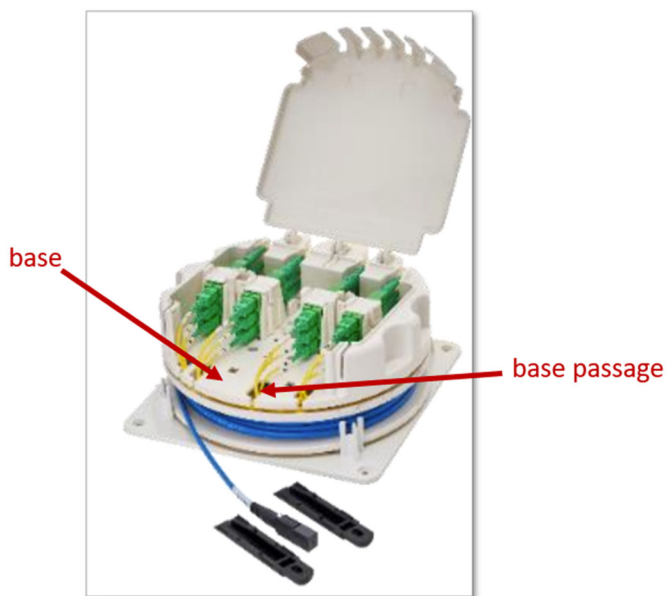
Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I).

112. The Mini Terminal satisfies Element 1C of Claim 1 of the ‘592 patent.

113. The Mini Terminal includes a base mounted at the front axial end of the spool, the base defining a base passage that extends through the base in the rear-to-front orientation.



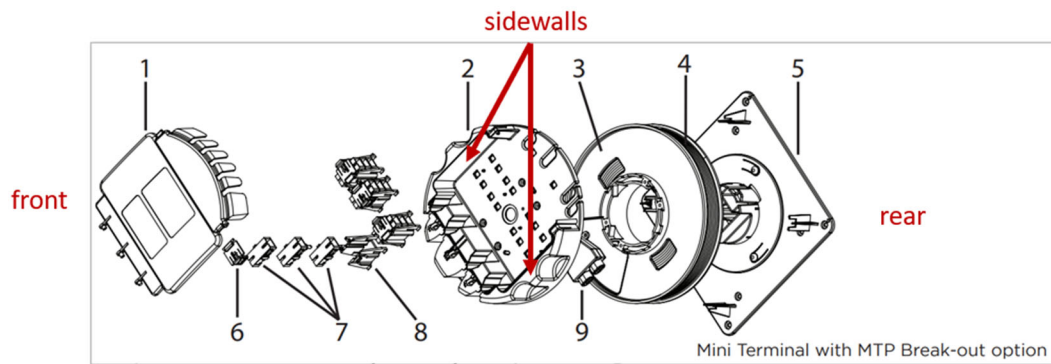
Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I).



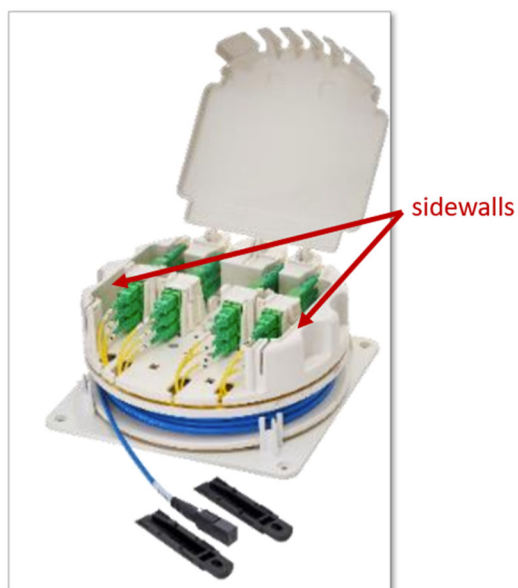
Opterna Data Sheet DSFO09017AR entitled, "Fiber Optic, Surface Mounted Terminal, Mini Terminal™" at 1 (Ex. G).

114. The Mini Terminal satisfies Element 1D of Claim 1 of the '592 patent.

115. The Mini Terminal includes opposite sidewalls that project forwardly from the base.



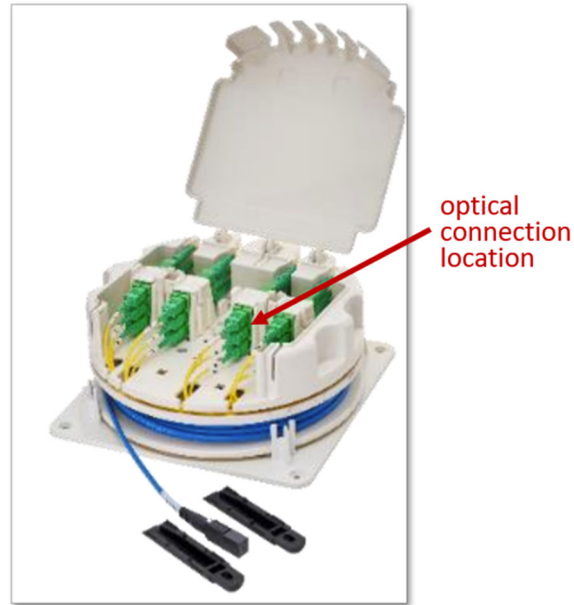
Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I).



Opterna Data Sheet DSFO09017AR entitled, "Fiber Optic, Surface Mounted Terminal, Mini Terminal™" at 1 (Ex. G).

116. The Mini Terminal satisfies Element 1E of Claim 1 of the '592 patent.

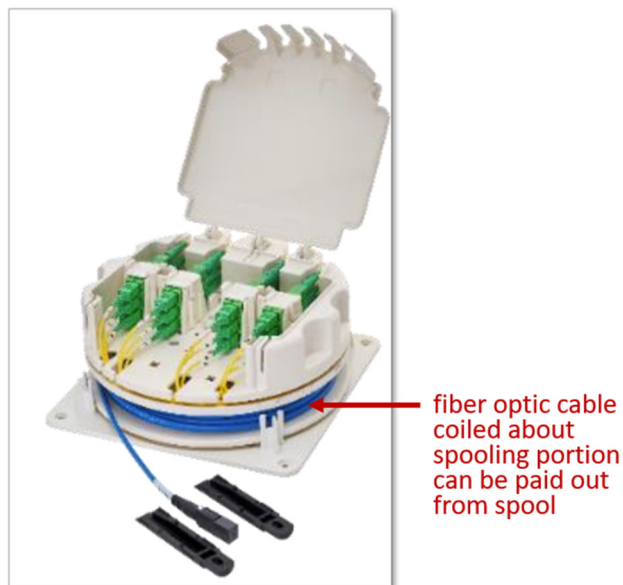
117. The Mini Terminal includes an optical connection location positioned between the opposite sidewalls.



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

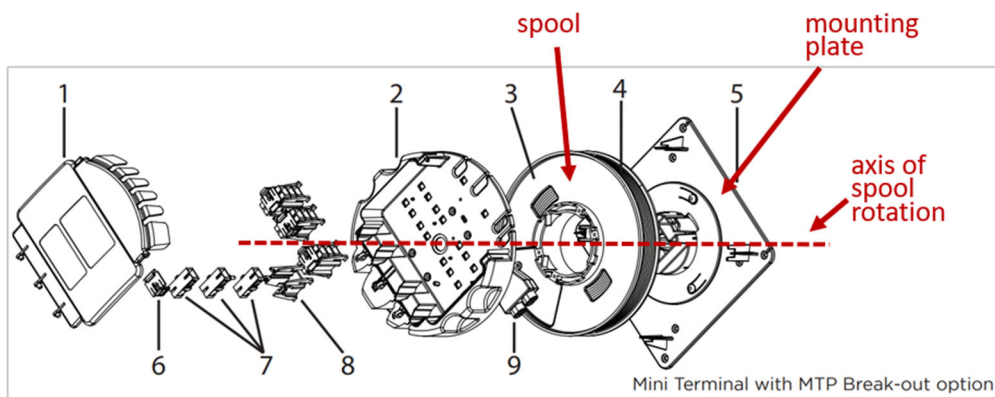
118. The Mini Terminal satisfies Element 1F of Claim 1 of the ‘592 patent.

119. The Mini Terminal includes a fiber optic cable including at least one optical fiber, the fiber optic cable being coiled about the spooling portion of the spool so as to be capable of being paid out from the spool.



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

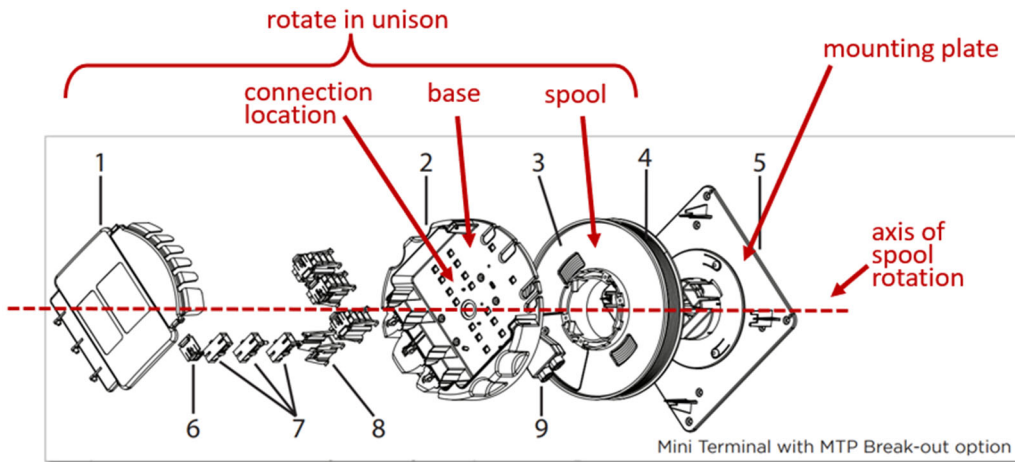
120. The spool of the Mini Terminal is configured to rotate about the rotation axis relative to the mounting plate as the fiber optic cable is paid out from the spool.



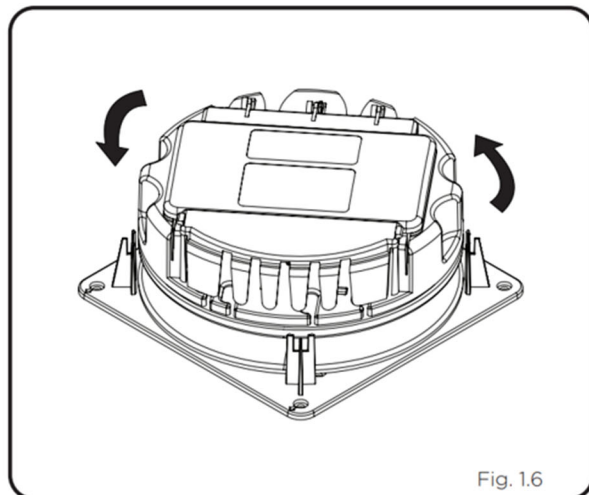
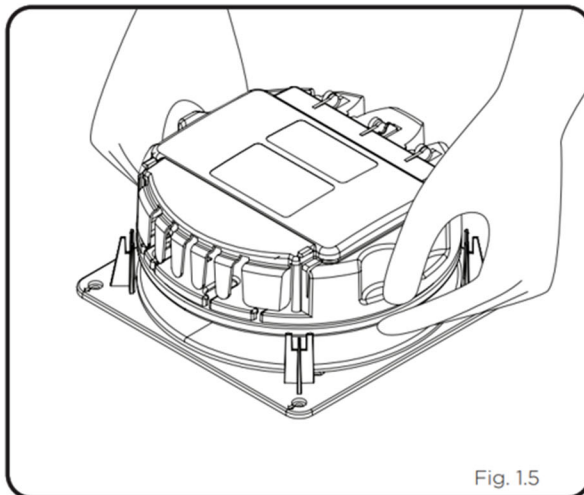
Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I); see also Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (“...rotating spool for easy cable pay out and reel in”) (Ex. G).

121. The Mini Terminal satisfies Element 1G of Claim 1 of the '592 patent.

122. In the Mini Terminal, the base, the sidewalls and the optical connection location are configured to rotate in unison with the spool relative to the mounting plate as the fiber optic cable is paid out from the spool.



Opterna Mini Terminal Instruction Manual and Installation Guide at 4 (Ex. I).

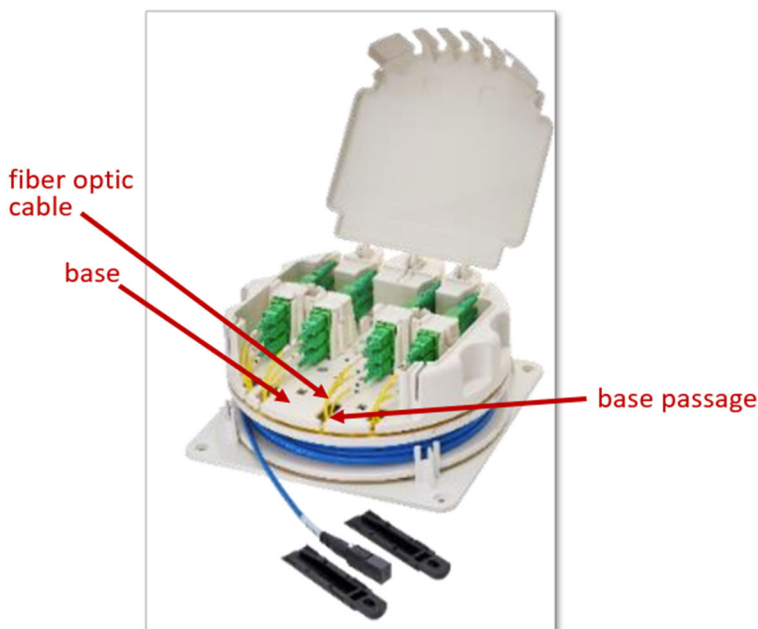


The base, connection location, cover, and spool rotation in unison relative to the mounting plate.

Opterna Mini Terminal Instruction Manual and Installation Guide at 7 (Ex. I).

123. The Mini Terminal satisfies Element 1H of Claim 1 of the '592 patent.

124. The Mini Terminal includes at least one optical fiber of the fiber optic cable being routed through the base passage.



Opterna Data Sheet DSFO09017AR entitled, “Fiber Optic, Surface Mounted Terminal, Mini Terminal™” at 1 (Ex. G).

125. Belden also indirectly infringes the '592 patent, including, for example and without limitation, Claim 1. Operators of Belden's fiber optic enclosures including as a non-limiting example, Belden's Mini Terminal, directly infringe at least some claims of the '592 patent, including Claim 1. Upon information and belief, Belden knows its products are especially made or especially adapted for use in an infringing manner. Belden actively induces infringement because it directly encourages its customers to use the Mini Terminal in a way that results in infringement of the '592 patent by, among other things, displaying and distributing marketing materials and product brochures and specifications. For example, Belden provides

literature describing installing and configuring the Mini Terminal as recited in Claim 1 of the '592 patent. Belden also contributes to infringement because its Mini Terminals include features that are not staple articles of commerce suitable for substantial non-infringing uses. For example, there is no substantial use for the adapter holders within the Mini Terminal other than to include define fiber optic connection locations, nor is there any substantial non-infringing use for the cable spool within the Mini Terminal other than to store fiber cable wrapped around the spool and to pay out cable during installation. The intended, normal use of the Mini Terminal results in infringement. Belden's products are a material part of the invention of the '592 patent.

126. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

127. Belden's infringement has caused CommScope irreparable harm and damages in an amount to be proven at trial.

128. Upon information and belief, Belden's unlawful infringing activity was and is willful, deliberate, and intentional, entitling CommScope to recover, among other things, treble damages, attorney's fees, and costs.

Prayer for Relief

CommScope respectfully requests the following relief:

- A. A judgment that Defendants have infringed the patents-in-suit;
- B. An injunction enjoining and restraining Defendants, their officers, directors, agents, servants, employees, attorneys and all persons in active concert or participation with them from infringing the patents-in-suit.

C. A judgment and order requiring Defendants to pay all appropriate damages under 35 U.S.C. § 284, including prejudgment and post-judgment interest, and including increased damages for its willful infringement;

D. A judgment and order requiring Defendants to pay all costs of this action, including all disbursements and attorney fees, if this case is found to be exceptional as provided by 35 U.S.C. § 285; and

E. Such other and further relief that this Court may deem just and equitable.

Demand for a Jury Trial

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, CommScope demands a trial by jury of all issues so triable.

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Dated: April 8, 2024