



Fiber drop cable solutions

Flexible solutions for the evolving networks of tomorrow

COMMScope®

Welcome to the Broadband Age, where your network must continually evolve to keep pace with your customers

At CommScope, we know network solutions aren't one-size-fits-all. Each network has its own unique challenges. Today, most network providers are constantly seeking solutions that allow them to react quickly to changes in their technology environment, because the speed at which providers can deploy new equipment and services is critical in maintaining customer satisfaction and sustaining competitive advantage. Of course, this is because network traffic is growing at unprecedented rates, and will continue to do so for the foreseeable future. For providers, this creates some big unknowns, and brings us to the question network providers face every day: how to best deploy the resources that will allow their networks to keep pace with customer demand in the most cost-effective manner?

Many providers would agree that only a true fiber-to-the-home (FTTH) solution will meet their customers' future demand for bandwidth and next-generation services. What is not clear to most is how to get to that point. Some providers are extending fiber-optic cables all the way to customers' homes and businesses—replacing the old networks entirely. For other providers, the path is not clear, and many must employ a number of intermediate steps to get to their final goal. Whatever their path to FTTH, to stay abreast of the demand for bandwidth, providers need speed and flexibility in their equipment solutions more than ever.



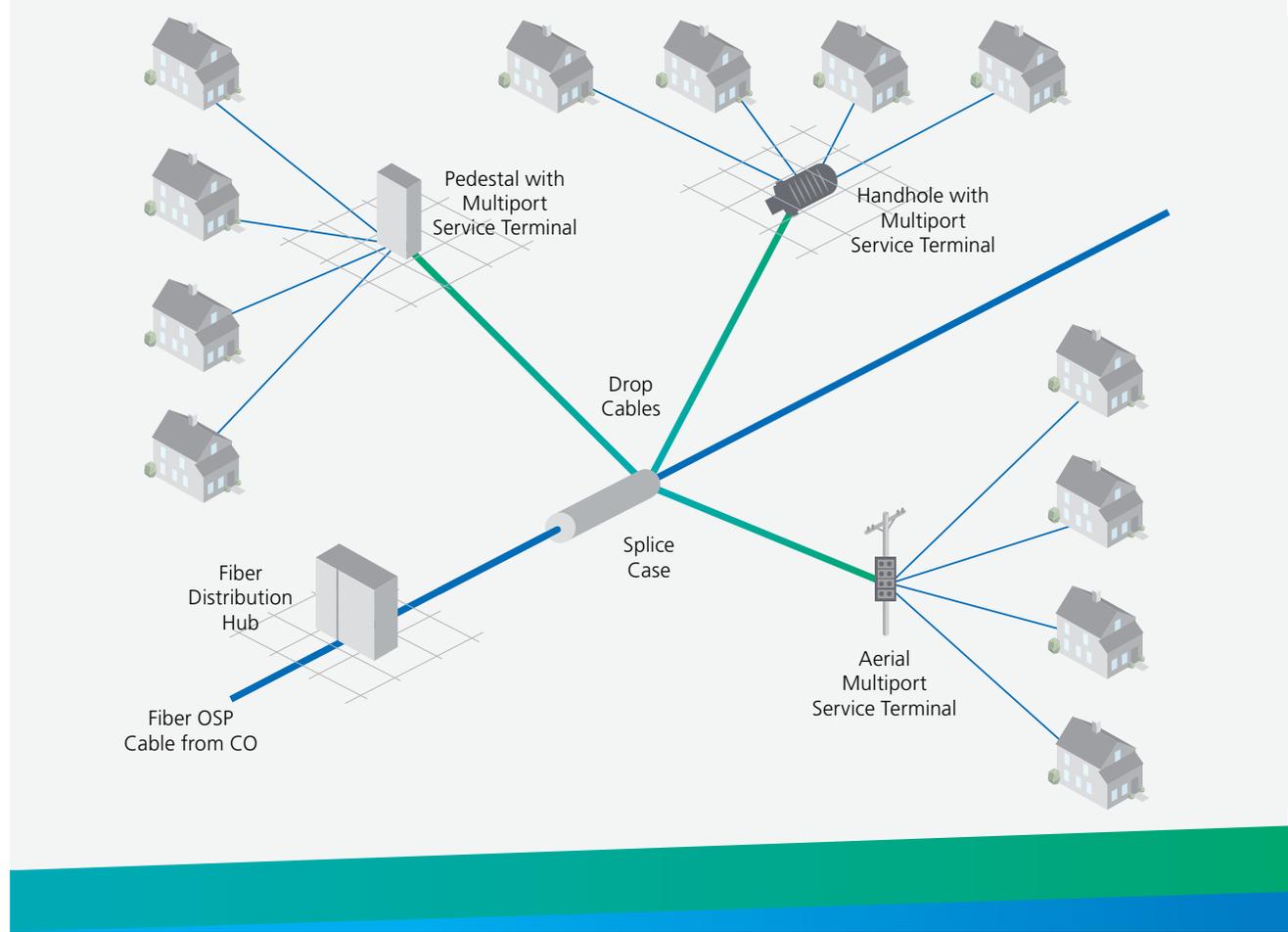
Providers need equipment solutions that allow for flexibility and speed as they upgrade their networks

The fiber drop cable connecting the network to the customer's home or business is a critical link. During a typical deployment, a provider might need solutions that work with a wide variety of connections and applications: aerial installations, underground conduit installations, or even in-ground burial. Fiber drop cables must be engineered to withstand the most demanding environmental conditions and mechanical stresses. And, since the drop cable may potentially enter many building types—a single-family home, a multiple tenant unit (MTU) or multiple dwelling unit (MDU), or an office building—providers are well served by flexible equipment solutions that offer a wide range of connections.

Another important consideration for providers—speed of deployment. Quickly connecting subscribers is critical. Many network providers are turning to equipment solutions that offer a flexible “plug-and-play” architecture, a connection scheme that minimizes or even eliminates the need for fiber cable splicing in the field. By minimizing splicing, a plug-and-play architecture will maximize speed of deployment and reduce labor costs.

Any deployment brings many potential variables, so providers are always looking for options to ensure configuration challenges can be easily resolved. Will new equipment have the design superiority and features to perform flawlessly year after year? Will vendor partners offer the technical support to maintain the flexibility providers need to face the inevitable changes coming down the road?

Proven solutions for faster connections with your customers



CommScope's fiber drop cable assembly solutions are designed to bring speed and flexibility to network deployments. Each factory-connectorized cable is designed to eliminate time-consuming field splices. Our plug-and-play architecture speeds connections and service turn-up throughout the network.

Designed and tested to perform in rugged outside plant environments, our fiber drop cable assemblies perform under extreme conditions, including sun, heat, cold, moisture, and heavy RF interference. We also offer cables that resist corrosion and meet critical riser and plenum standards for indoor installations.

Since every network is different, our equipment solutions aren't one-size-fits-all. The fiber drop cable portfolio gives providers a wide array of connection possibilities, for nearly every type of installation.

For providers who need to maximize speed of deployment and reduce labor costs, our plug-and-play architecture provides flexibility when it's time to add new subscribers or services. Designed for quick installation, built for long life, CommScope's fiber drop cables portfolio delivers the options providers need to meet their network challenges—today and in the future.

Along with hardened full-size connectors, CommScope uniquely offers the DLX® miniaturized hardened connector system. Only two-thirds as large as full-size, this patented connector saves space and is ideal on poles and handholes. It fits into tight locations and allows technicians to make smaller holes when passing drops and conduit through walls and other structures. In addition, the HMFOC is available for multi-fiber cables.

| Connector | Min hole size for connector* | Physical contact | Insertion loss** | Reflection | Retention Force |
|-----------|------------------------------|--|------------------|------------|-------------------|
| Full-Size | 13/16" (20.6mm) | Angled polished contact (APC), standard 8 deg. angle | ≤ 0.5 dB | ≤ -65 dB | 100 lbs (444.8 N) |
| DLX | 5/8" (15.9mm) | Angled polished contact (APC), standard 8 deg. angle | ≤ 0.5 dB | ≤ -65 dB | 100 lbs (444.8 N) |
| HMFOC | 3/4" (19.1mm) | Angled polished contact (APC), standard 8 deg. angle | ≤ 0.6 dB | ≤ -65 dB | 100 lbs (444.8 N) |
| SC/APC | 1/2" (12.7mm) | Angled polished contact (APC), standard 8 deg. angle | ≤ 0.5 dB | ≤ -65 dB | 15 lbs (66.7 N) |

* The minimum hole size for inserting a connector.

** Maximum in random mating at the end of life

FHD drop cable series

FHD drop cables are ruggedly designed and hardened to protect from extreme outside plant temperatures, moisture, and chemicals. Backward-compatible with older generations of hardened and nonhardened connector systems, FHD drop cable integrates seamlessly into existing fiber-optic networks.

This series offers a large variety of cable types and innovative configurations.

To efficiently manage both indoor and outdoor fiber drop applications, CommScope offers all-in-one cable solutions. For example, the universal drop cable is composed of exterior sheathing, which is hardened to withstand harsh outdoor conditions, and an inner 3-millimeter simplex cable, which is UL listed and approved for indoor use. Transitioning from outdoor to indoor use is as simple as stripping the exterior sheathing from the drop assembly. Another benefit—with the universal drop cable, the need to precisely measure cable lengths is no longer required. Technicians simply choose the next-higher standard length and then store any slack. The FHD series is available with standard cable as well.



Features and Benefits

- The ultimate plug-and-play solution for durable and reliable service connections
- Technician friendly to greatly simplify installation and maintenance by minimizing splicing
- Cost-effective solutions that contribute to lower overall costs
- Available with one or both ends connectorized
- Available in standard lengths, from 50 to 2,000 feet (15 to 610 meter)
- Available in dielectric and toneable hardened cable

| Cable type | A - Flat Dielectric | B - Flat Locatable/ Toneable | C - Universal Flat Dielectric | D - Universal Flat Locatable/Toneable | K - Round Dielectric |
|------------------------------|-------------------------|---------------------------------|----------------------------------|--|-------------------------|
| Construction Type* | Non-Armored, Gel-Filled | Non-Armored, Gel-Filled | Non-Armored, Gel-Free | Non-Armored, Gel-Free | Non-Armored, Gel-Filled |
| Dimensions | 4.30mm x 8.00mm | 4.30mm x 10.00mm | 4.6mm x 8.00mm | 4.6mm x 8.00mm | 5.05mm |
| Jacket Material | PE | PE | PE (PVC Inner Subunit) | PE (PVC Inner Subunit) | LSZH |
| Jacket Color | Black | Black | Black | Black | Black |
| UV Resistant | Yes | Yes | Yes | Yes | Yes |
| Min Bend Radius | 86 mm | 86 mm | 92 mm | 92 mm | 75 mm |
| Operating Temperature | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C | -20°C to +60°C |

* Single Fiber Only

MHD drop cable series

Another innovation in drop cable technology that is changing the outside plant landscape is our MHD multifiber hardened drop cable. This multifiber cable incorporates 12 optical fibers in a single hardened design, and is terminated with a factory-sealed hardened multifiber fiber-optic connector (HMFOC). This assembly has a 12-fiber MT (mobile terminated) ferrule enclosed in a water-sealed connector housing for outside plant applications.

As with standard MT connectors, the alignment of the two MT ferrules is governed by two high-precision pins. Unlike the standard MPO (multifiber push-on) connector, the style of the connector is not dictated by the pins but determined by the assembly. One connector body, which has the MT ferrule offset deep inside, is referred to as the "jack." The other connector body, which has the MT ferrule positioned on the surface, is referred to as the "plug." Unlike a standard MT connector, jack and plug can be mated directly without an adaptor by aligning the two connectors and screwing the coupling nut on the plug to the jack body.



Features and Benefits

- Factory terminated and environmentally sealed for optical drop cable deployments
- Hardened connector technology designed to withstand rugged outside plant environments
- Simplifies installation and maintenance by reducing splicing requirements in the distribution network



Figure 1: HMFOC Plug
/Non-pinned/ Female



Figure 2: HMFOC Jack
/Pinned/ Male

RealFlex™ 3 series

The RealFlex 3 drop cables are available in outdoor and indoor configurations, with both riser and plenum cable types for use in residential, business, or MDU (multiple-dwelling unit) structures.

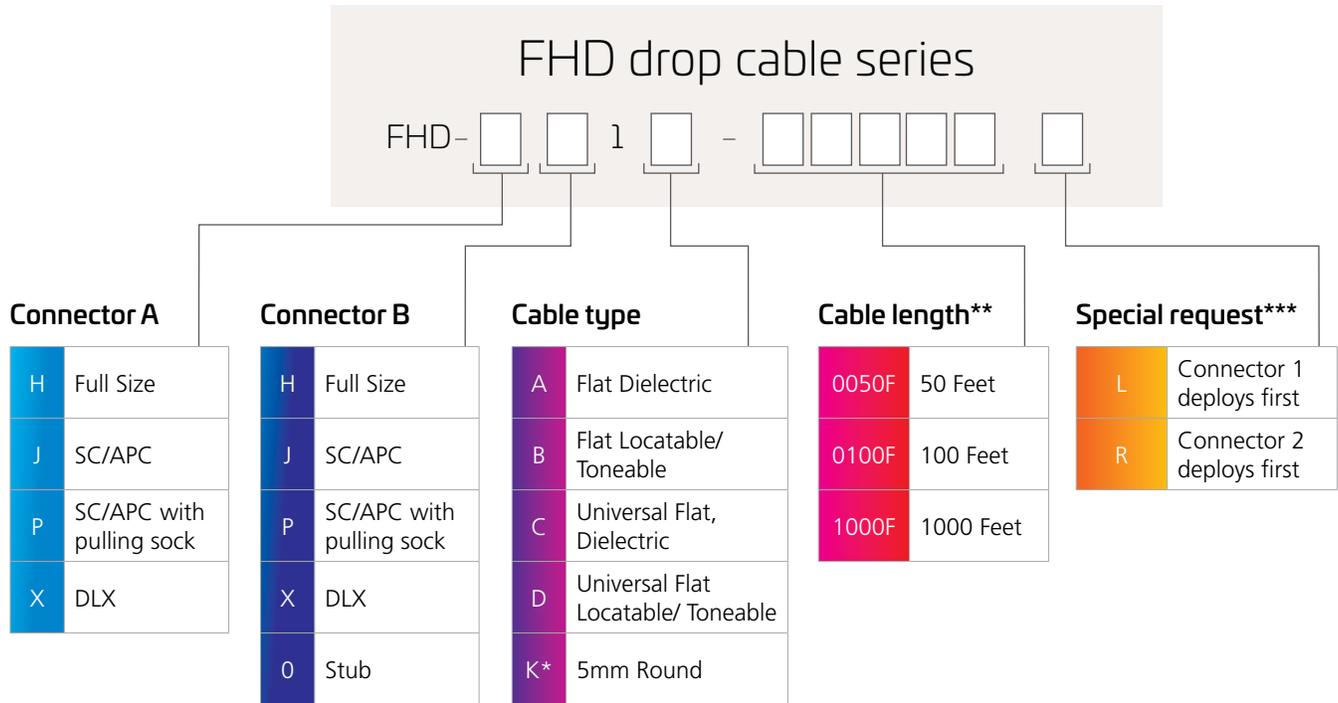
These drop cables allow for a fiber bend radius as small as 7.5 millimeters without changing attenuation characteristics, and improve the insertion loss performance for 90-degree bend locations. With the average MDU installation including as many as seven 90-degree turns, RealFlex 3 cables greatly reduce the risk to bend-induced IL during installation. These cables can also be stapled, (using CommScope-approved staplers and staples), allowing fast and easy securing of cables to most surfaces. Rugged 3-millimeter cable construction provides the flexibility and durability to withstand the most demanding applications.



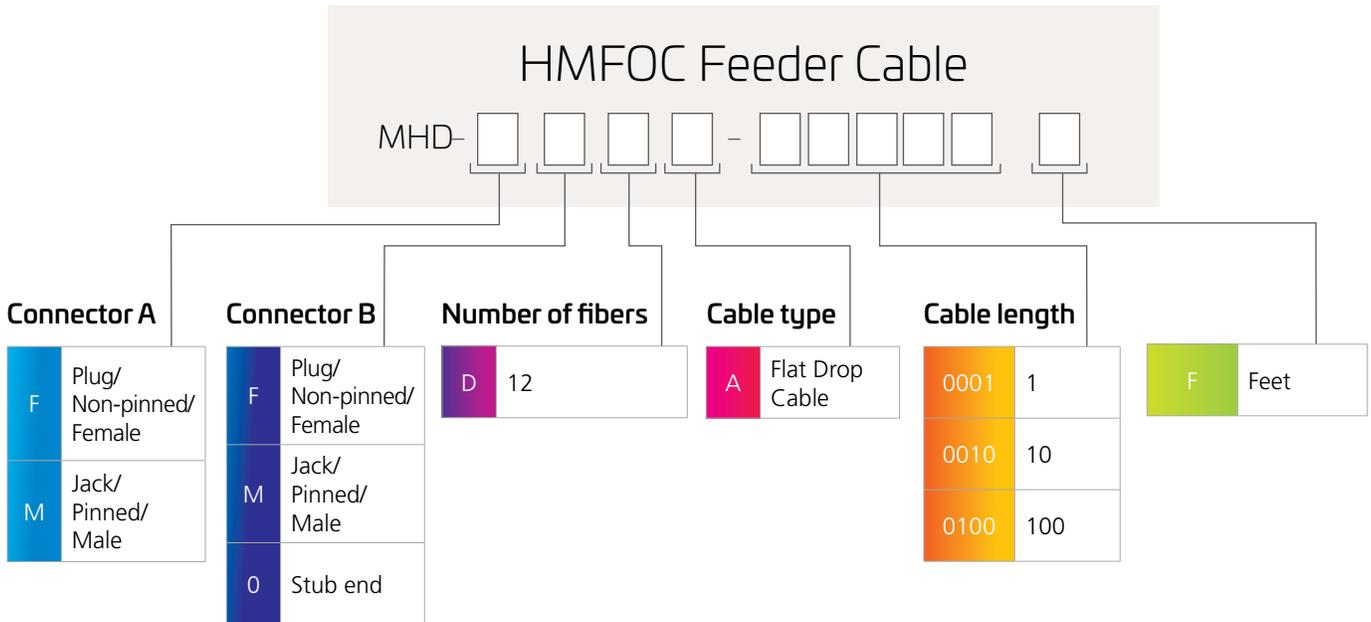
Features and Benefits

- Available in indoor/outdoor, plenum, and riser types
- Available with connectors on both ends or connector on one end
- Fiber bend radius as small as 7.5 millimeters without changing cable characteristics
- 900-micron buffer coating strips easily in one pass to save installation time
- Cable maintains flexibility even in extreme cold temperatures

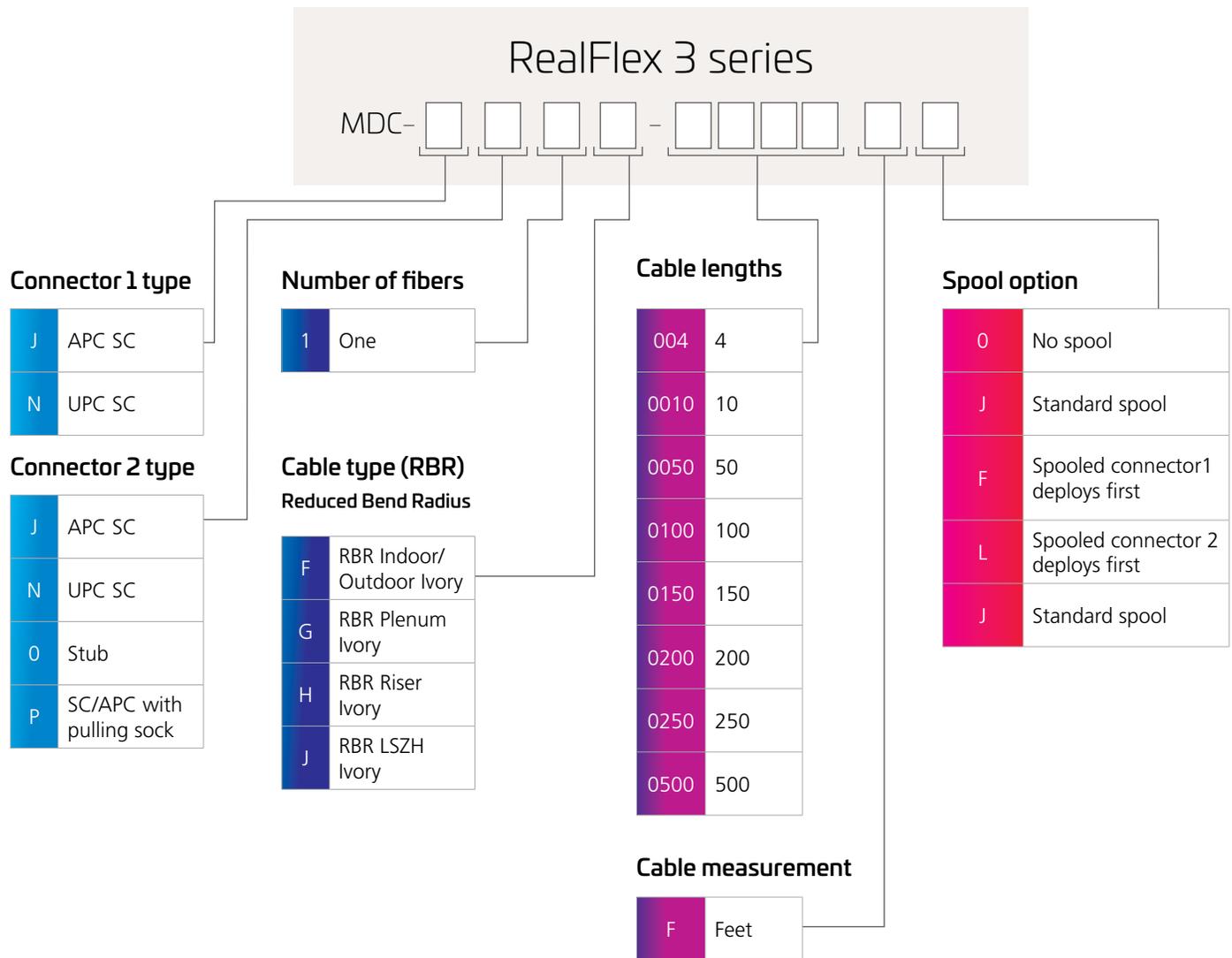
Ordering information



* Cable type K only offered with Full Size to Stub option (FH0-H01K-*)
 ** Cable length shown as an example, additional cable lengths available upon request.
 *** Special request feature not available with cable type K.
 DLX drops are automatically coiled 0 to 500 ft unless the "L" or "R" is specified.
 Full size drops are automatically coiled 0 to 1,000 ft unless the "L" or "R" is specified.



Ordering information



Available Accessories

- Converter kits
- Test cords: Hardened connectors to SC/APC or SC/UPC
- Cleaning accessories

Building partnerships that build the smartest networks

With a 40-year record of industry leadership and innovation, we're committed to providing our customers with the support they need to build their network fiber infrastructure on a solid foundation. Get prompt, expert support from a CommScope professional for design, installation, or troubleshooting questions at: www.commscope.com/SupportCenter/.

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