



# Fiber drop cable solutions

Flexible solutions for the evolving networks of tomorrow  
North America Region

COMMScope®

# Navigating the road to broadband for all

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 build out fiber networks quickly and easily in the race to bring high-speed broadband to everyone everywhere.

Many providers would agree that only a true fiber-to-the-home (FTTH) solution will meet their customers' demand for bandwidth and next-generation services. What isn't 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 isn't 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.

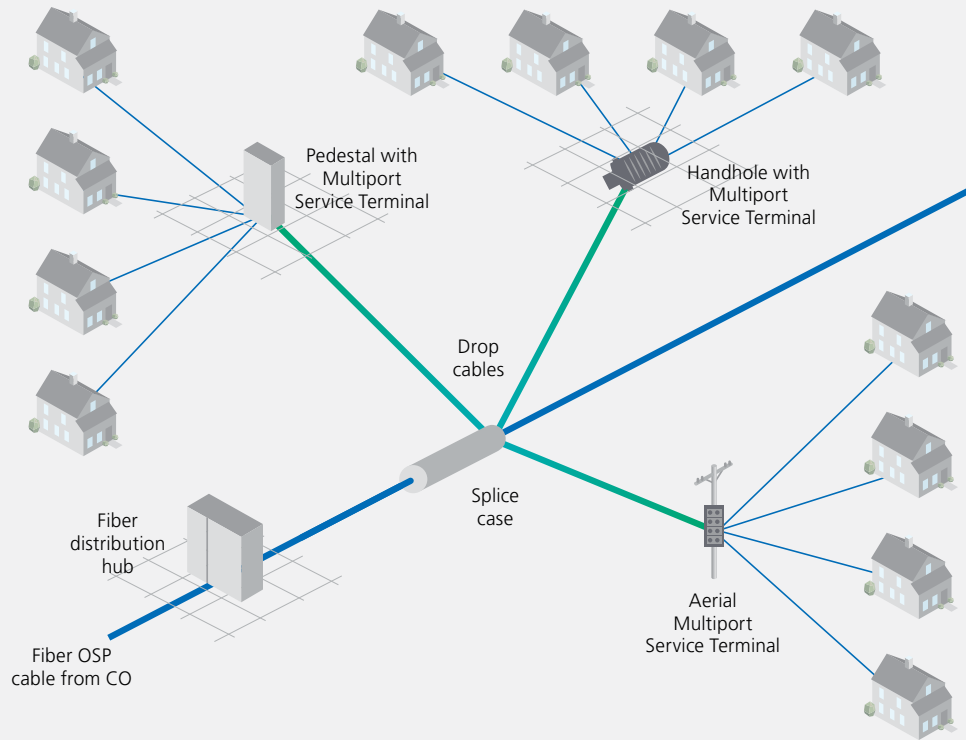
## Providers need solutions that allow for flexibility and speed

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 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 a wide range of flexible connections.

Another important consideration for providers: speed of deployment. Quickly connecting subscribers is critical. Many network providers are turning to flexible "plug-and-play" solutions that eliminate the need for fiber cable splicing in the field and accelerate deployments.



# 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.

Prodigy®, CommScope's breakthrough hardened connector system, is a universal solution that provides interoperability across different fiber terminals and cable assemblies. Prodigy fiber-optic connectors and adapters are easy and fast to deploy and eliminate the need for fiber splicing.

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 multifiber cables.

Connector	Minimum hole size for connector*	Physical contact	Maximum Insertion Loss**	Typical Insertion Loss	Reflection	Retention force
<b>Prodigy Connector</b>	0.6 (15.2mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.4 dB	≤ 0.12 dB	≤ -65 dB	100 lbs (444.8 N)
<b>Full Size Converter</b>	13/16 in (20.6mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.4 dB	≤ 0.12 dB	≤ -65 dB	100 lbs (444.8 N)
<b>DLX Converter</b>	2/3 in (16.9mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.4 dB	≤ 0.12 dB	≤ -65 dB	100 lbs (444.8 N)
<b>HMFOC</b>	3/4 in (19.mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.45 dB	≤ 0.12 dB	≤ -65 dB	100 lbs (444.8 N)
<b>SC/APC</b>	1/2 in (12.7 mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.4 dB	≤ 0.12 dB	≤ -65 dB	15 lbs (66.7 N)
<b>SC/APC Converter</b>	1/2 in (12.7 mm)	Angled polished contact (APC), standard 8 deg. angle	≤ 0.4 dB	≤ 0.12 dB	≤ -65 dB	15 lbs (66.7 N)

\* The minimum hole size for inserting a connector. This does not reference conduit size.

\*\* Maximum in random mating at the end of life



# Prodigy<sup>®</sup> small form hardened connector solution

Prodigy, CommScope's newest innovation in hardened connectivity, unlocks the potential of fiber-to-the-home (FTTH) networks with comprehensive solutions that install faster and simpler than ever. Prodigy is a small form hardened connector system for fiber terminals and cable assemblies and is the preferred choice for future-ready networks. Prodigy is universally compatible with multiple hardened fiber connectors—making it a game-changer in plug-and-play FTTH solutions.

With Prodigy, installers don't need a patchwork of cable assemblies and components. The Prodigy connector is compatible in applications that require different styles of hardened fiber connectors—simplifying ordering and improving compatibility between network elements. Customers need only one cable assembly that will include the required different lengths. An installer can simply run a drop cable assembly and convert the Prodigy connector to the required connector in the connection box.

Prodigy enables smaller terminal footprints, is easier to mate and delivers exceptional performance. Designed to withstand rugged outside plant environments, Prodigy meets the speed, density, reliability, flexibility, ease of installation and performance needs of today and tomorrow.



## Features and benefits

- Small footprint for high-density environments
- Compatible with multiple hardened connectors
- Converter kit preassembled with the option of preinstallation
- Self-guided automatic alignment minimizes the chance of connection errors
- Cable assemblies with Prodigy are available with Flat, Universal flat and EZ Axs for both dielectric and toneable options
- Built-in sustainability:
  - Reusable core connectors
  - Improved density
  - Fully recyclable
  - Electronic documentation with unique QR code

Cable Type	A-Flat Dielectric	B-Flat Locatable/Toneable	C-Universal Flat Dielectric	D-Universal Flat Locatable/Toneable	V-EZ Axs Dielectric	X-EZ Axs Toneable
<b>Construction type</b>	Non-armored, gel-filled	Non-armored, gel-filled	Non-armored, gel-free	Non-armored, gel-free	Non-armored, gel-free	Non-armored, gel-free
<b>Dimensions</b>	4.3mm x 8.0mm	4.30mm x 10.00mm	4.6mm x 8.00mm	4.6mm x 8.00mm	3.0mm x 6mm	3.0mm x 7.7mm
<b>Jacket Material</b>	PE	PE	PE (PVC inner subunit)	PE (PVC inner subunit)	PE	PE
<b>Jacket Color</b>	Black	Black	Black	Black	Black	Black
<b>UV Resistant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Minimum Bend Radius</b>	8.6 cm	8.6 cm	9.2 cm	9.2 cm	6cm	6cm
<b>Operating Temperature</b>	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C

\*Single fiber only

## MHD drop cable series

Another innovation in drop cable technology that's 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 adapter 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
- Available in breakout assemblies



Figure 1: HMFOC plug/non-pinned/female



Figure 2: HMFOC jack/pinned/male

# RealFlex 3 Drop Cables

CommScope's RealFlex 3 drop cables are ruggedly designed for maximum flexibility, handling and performance to meet the rigors of inside or outside plant FTTX deployments. RealFlex 3 drop cables are available in Indoor/ Outdoor, Riser and Plenum cable types for use in residential, business or multiple dwelling unit (MDU) structures.

RealFlex 3 drop cables allow for a fiber bend radius as small as 7.5 mm without changing attenuation characteristics of the cable and improve insertion loss (IL) performance for 90 degree bend locations. With the average MDU installation including as many as seven 90 degree turns, this new fiber greatly reduces the risk to bend induced IL during installation. In addition to the improved bend radius performance, the rugged 3mm cable construction provides the flexibility and durability to withstand the most demanding applications.

The rugged 3 mm indoor/outdoor cable can be stapled\*, allowing for fast and easy securing of cables to most surfaces. The reduced bend radius glass allows the technician to staple around tight corners without compromising insertion loss performance.

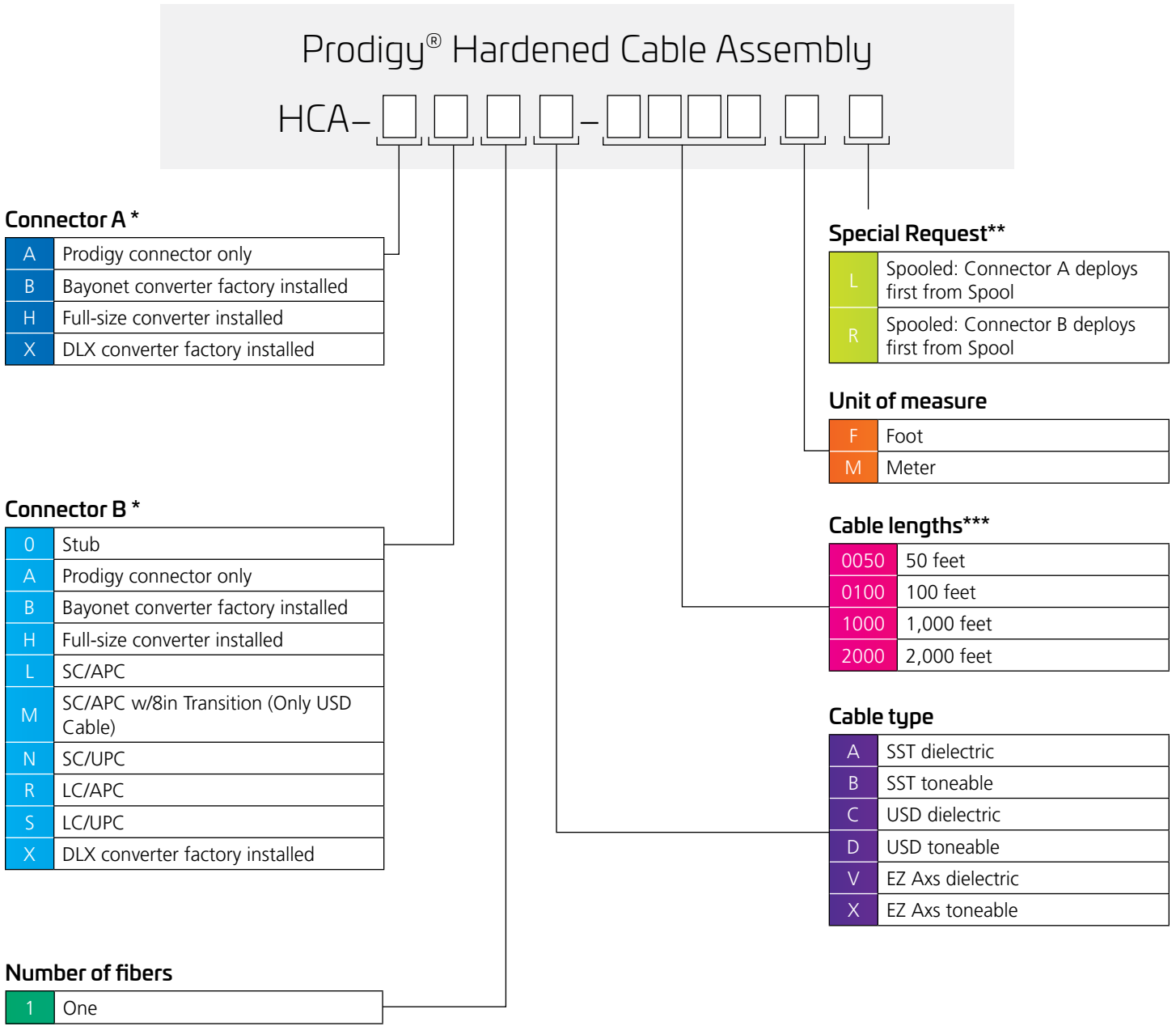
CommScope's RealFlex 3 drop cables provide for quick and easy deployments with increased reliability which allow for fast service turn-up, improved network reach and lower overall network operating and maintenance costs.



## Features and benefits

- Cable integrates seamlessly into ONT, wall splice cabinet, fiber splitter box or termination splice box
- Garden or horizontal dwelling units: indoor/outdoor cable used to transition from an outdoor fiber distribution terminal to each indoor living unit
- Mid or high-rise buildings: all three cable types can be used to transfer from an indoor fiber distribution terminal to each individual
- Indoor/outdoor and riser cables are suitable for all OFNR applications; OFNP applications will require plenum cable living unit within a building

# Ordering information

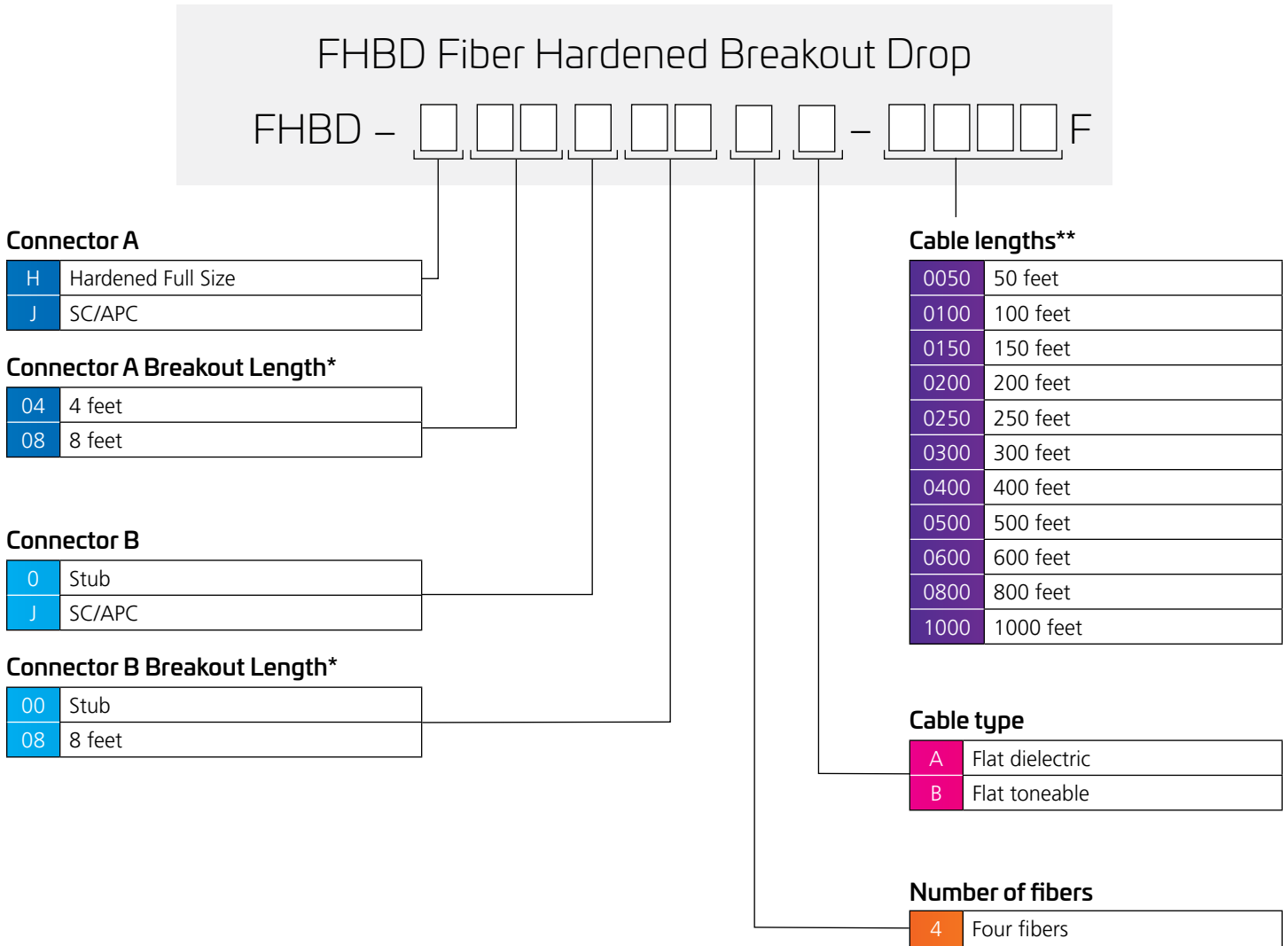


\*Additional connector options available upon request. Pulling sock included with non-hardened connectors-25lbs of pulling force.

\*\*Drops are automatically coiled 0 to 1000 ft unless "L" or "R" is specified for the range of length. Drops are automatically spooled at 1,001ft with connector B deploying first from spool. Add "L" to lengths over 1,001ft if Connector A needs to deploy first.

\*\*\*Cable length shown as an example; additional cable lengths available upon request up to 2,500

# Ordering information

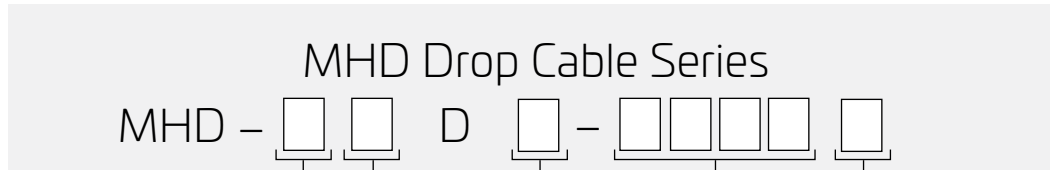


\*8ft breakout for SC/APC only

\*\*Standard cable lengths shown. All cable assemblies are coiled.



# Ordering information



### Connector A

F	HMFOC Plug/non-pinned/female
M	HMFOC Jack/pinned/male

### Connector B

0	Stub
F	HMFOC Plug/non-pinned/female
M	HMFOC Jack/pinned/male

\*Cable length shown as an example; additional cable lengths available in increments of 25 feet up to 3,000 feet. Drops are automatically coiled 0 to 300. Drops are automatically spooled at 301ft with connector B deploying first from the spool.

### Unit of measure

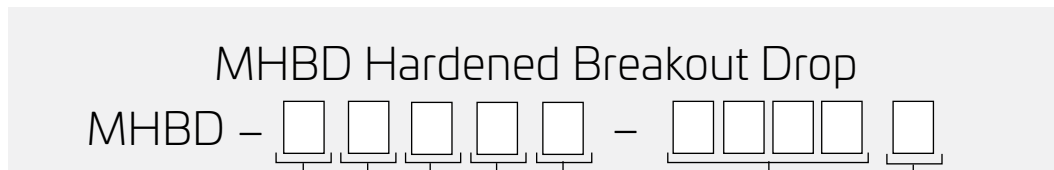
F	Feet
M	Meter

### Cable lengths\*

0025	25 feet
0100	100 feet
1000	1000 feet
3000	3000 feet

### Cable type

A	12F flat dielectric
B	12F flat toneable



### Connector A

F	HMFOC Plug/non-pinned/female
M	HMFOC Jack/pinned/male

### Connector A Breakout

0	N/A
1	36 inches

### Connector B

0	Stub
A	6 LC/UPC duplex
B	12 SC/APC
C	12 SC/UPC
K	12 LC/UPC
N	Female MPO (no pin)
P	Male MPO (pinned)

### Connector B Breakout

0	No breakout
1	28 inches
2	17 inches

### Unit of measure

F	Feet
M	Meter

### Cable lengths\*

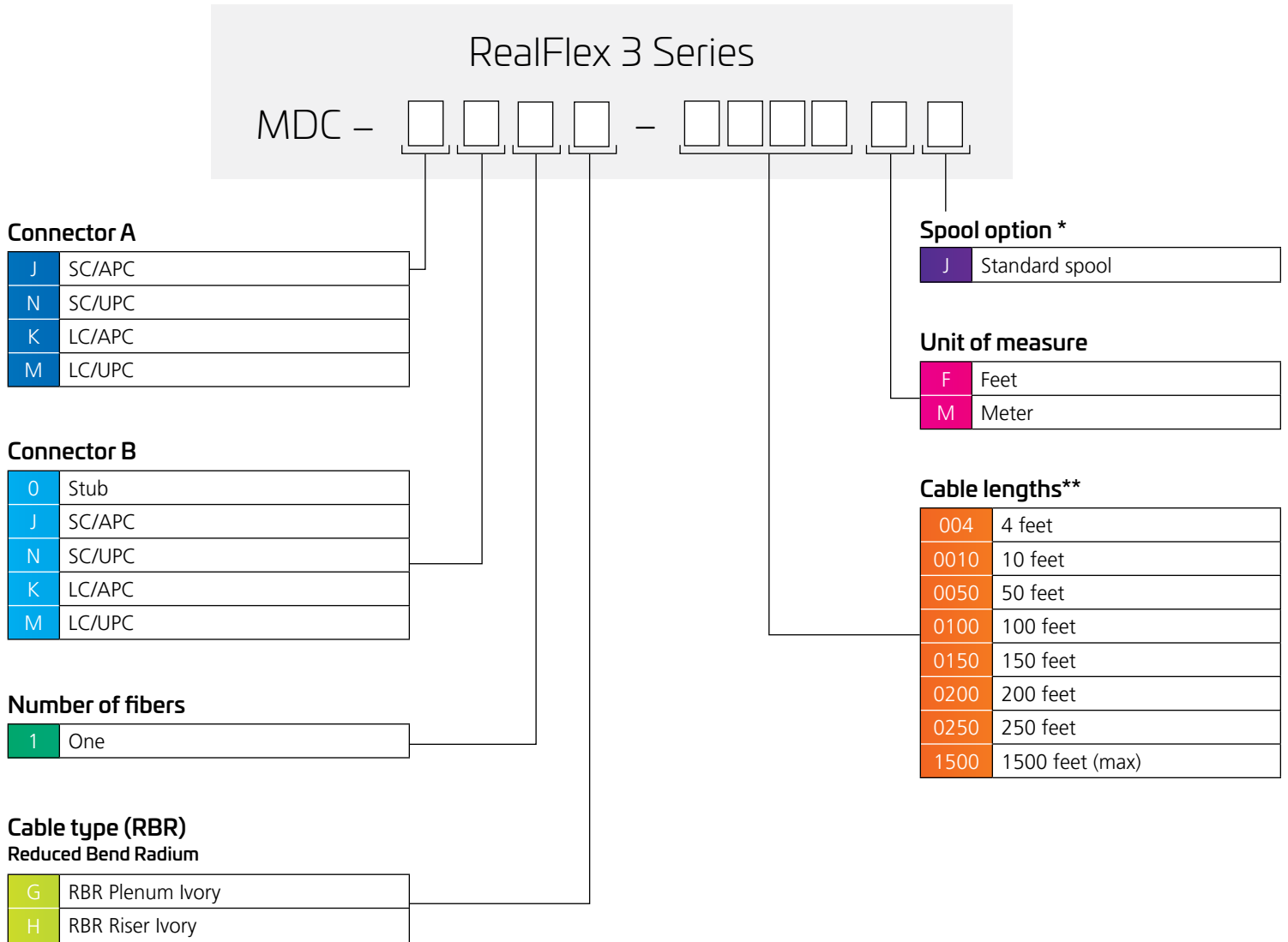
0050	50 feet
0100	100 feet
1000	1000 feet
2000	2000 feet

### Cable type

A	12F flat dielectric
H	24F flat dielectric

\*Cable length shown as an example; Cable type A available up to 3000 ft. Cable type H available up to 2000 ft. Drops are automatically coiled 0 to 300. Drops are automatically spooled at 301ft with connector B deploying first from the spool.

# Ordering information



\*Drops are automatically coiled 0-350 ft. Lengths 351+ are automatically spooled. Connector A deploys first.

\*\*Cable length shown as an example; additional cable lengths available upon request up to 1500 ft

# Accessories

## Fiber drop cable assembly accessories and test cables

MID	Description
760252078	HCA-ACC-BAYONET-CVTR (converter for Prodigy connector to bayonet connector)
760255490	HCA-ACC-FEMALE-BAYONET-CVTR (converter for Prodigy connector to female bayonet connector)
760252079	HCA-ACC-FULLSIZE-CVTR (converter for Prodigy connector to full-size connector)
760255254	HCA-ACC-FEMALE-FULLSIZE-CVTR (converter for Prodigy connector to female full-size connector)
760252080	HCA-ACC-DLX-CVTR (converter for Prodigy connector to DLX connector)
760252081	HCA-ACC-SCAPC-CVTR (converter for Prodigy connector to SC/APC connector)
460201619	Prodigy Fiber Optic Cleaner
760255889	HCA-ACC-3mm Test Lead 10 ft, Prodigy to SC/APC (includes full size, DLX and Bayonet converter)
760255888	HCA-ACC-3mm Test Lead 20 ft, Prodigy to SC/APC (includes full size, DLX and Bayonet converter)
760258038	HCA-ACC-3mm Test Lead 40FT, Prodigy to SC/APC (includes full size, DLX and Bayonet converter)
760258039	HCA-ACC-3mm Test Lead 50FT, Prodigy to SC/APC (includes full size, DLX and Bayonet converter)
MHD-ACC-F12J	HMFOC plug/non-pinned/female to 12 SC/APCs, 3 feet
MHD-ACC-M12J	HMFOC jack/pinned/male to 12 SC/APCs, 3 feet



760252078



760255490



760252079



760255254



760252080



760252081



460201619



## 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 [commscope.com/supportcenter](https://commscope.com/supportcenter).

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement.

We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at [commscope.com](https://commscope.com)

**COMMSCOPE®**

---

[commscope.com](https://commscope.com)

Visit our website or contact your local CommScope representative for more information.

© 2024 CommScope, LLC. All rights reserved.

CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see <https://www.commscope.com/trademarks>. All product names, trademarks and registered trademarks are property of their respective owners.