



# Fiber access terminals

Solutions for the always-on networks of tomorrow

COMMScope®

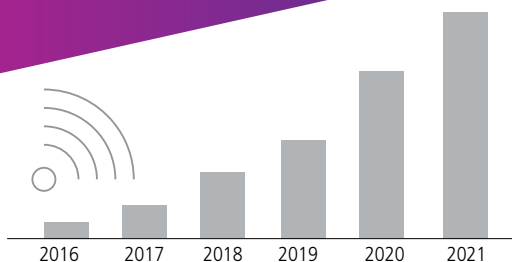
# The network landscape is changing relentlessly.

In today's fiber optic data networks traffic is growing at unprecedented rates. Consumers worldwide are demanding high-quality, reliable connectivity, spurring a huge growth in data traffic, especially from mobile devices. In fact, mobile data consumption is expected to grow seven-fold between 2016 and 2021, increasing mobile data's share of total internet traffic from 8 percent in 2016 to 20 percent in 2021.<sup>1</sup>

The increasing demand for the speed of fiber from smartphones and other mobile devices is forcing providers to deploy additional equipment in markets from dense metropolitan zones to small towns and rural areas. Additionally, cloud computing, streaming hi-def video, gaming, the Internet of Things, and other bandwidth-intensive applications are prompting fiber buildouts in networks of all sizes. As service providers face the need to upgrade, they must deal with many uncertainties. Yes, there is huge demand on the horizon, but where, exactly? And how much? To defer investments but, at the same time, meet the demands of the market, service providers are searching for flexible technology solutions—solutions that provide the options to deal with present needs, and solutions that ensure their network is ready for the future.

## MOBILE DATA CONSUMPTION

GROWTH from 2016 – 2021 **700%** 



SPEED

DENSITY

FLEXIBILITY

## Providers need a partner with vision and expertise for the future.

Providers are constantly seeking solutions that allow them to react quickly to changes in the technology environment. **Speed** of network deployment and connecting subscribers is a critical part in sustaining competitive advantage and maintaining customer satisfaction. Additionally, network providers that maximize the productivity of their labor force will see increased speed and agility when deploying new technology.

Network **density** is the number of potential connections in a network that are actually connected. Today's networks are becoming increasingly dense to serve new customers and provide the latest high-bandwidth services. To have the capacity to deal with the huge amount of data that networks are forecast to carry in the near future, cutting-edge equipment solutions are designed to pack more connections into smaller spaces. The best solutions will have high capacity and still be easy for technicians to access when it's time for expansion or maintenance.

Because applications can greatly vary, providers are always looking for options to ensure any configuration challenge can be easily resolved. Will new equipment have the design superiority, the features, and the technical support to maintain the **flexibility** providers need to face the inevitable changes coming down the road?

<sup>1</sup>Cisco <https://newsroom.cisco.com/press-release-content?articleId=1819296>

# A wealth of choices at the speed of plug-and-play




After listening carefully to our customers who’ve deployed hardened connectivity in their own networks, we’ve created the industry’s most versatile access terminals portfolio. It incorporates patented technologies like the DLX® fiber optic connector system with miniaturized hardened connectors, innovative fiber indexing techniques, and superior environmental protection. The result: access terminals that combine speed and flexibility with the ease of installation of hardened connectivity.

We know network solutions aren’t one-size-fits-all—each network has its own unique challenges. Our 40 years of proven experience means we can be trusted to anticipate any need, solve any challenge, and pursue any opportunity. The access terminals portfolio offers a versatile plug-and-play architecture that maximizes speed of deployment, minimizes splicing, and reduces labor costs. Innovations like miniaturized DLX connectors can give networks the density needed for the future—technicians can make more connections in smaller spaces, an important factor when it’s time to add new subscribers or services.

The access terminal portfolio brings true flexibility to networks. Designed for quick installation, built for long-life service, these solutions deliver the options providers need to meet their network

challenges—today and in the future. Creatively combining speed, density, and flexibility, CommScope’s access terminals deliver reliable performance for the life of an FTTx network... with the speed of plug-and-play.



	Multiport service terminals	Fiber indexing terminals	Flexible service terminals
Architecture	Star	Daisy-chain	Star
Recommended application	Pole, pedestal, hand hole or strand mounting options	Pole, pedestal or hand hole mounting options	Highly flexible and easy to fit into tight places—handhole and pedestal
Single fiber drop ports	12 full size or 12 DLX miniaturized	8 DLX miniaturized	12 full size or 12 DLX miniaturized
Multi fiber drop ports	No	Yes	No
Reverse feed capability	No	Yes	No
Internal splitter	No splitter or 1:4 or 1:8 splitter	No splitter or 1:4 or 1:8 splitter	No splitter or 1:4 or 1:8 splitter
Sealing level	IP68	IP68	IP68
			

# Multiport service terminal series— the industry's workhorse

CommScope's history of innovation in fiber connectivity and material science has given the multiport service terminal (MST) series the reputation of the industry's access terminal workhorse. Designed and built with hardened connector technology, the MST series is factory-terminated and environmentally sealed, to withstand rugged outside plant environments. Plug-and-play connectivity ensures fast deployment and lower installation costs by eliminating time-consuming splicing.

## The MST series offers four options.

The MST gives providers pole, pedestal, hand-hole, or strand mounting options, and is offered in two primary configurations: 4x3 or 2xN terminal bodies, each using full-size optical connectors.

The mini-MST is designed specifically for situations requiring high connector densities and small footprints. It can be factory-terminated with as many as 12 hardened miniaturized DLX connectors. This patented connector, only two-thirds the size of full-size connectors, saves space and brings all the speed and flexibility of plug-and-play installations.

The MST-04 series is designed specifically for aerial and wall-mounted applications. This lightweight and very compact terminal features miniaturized DLX connectors, and is perfect for installations in tight spaces or where concealment is desired.

For fiber-rich applications, the MHT series provides up to six ports, with two fibers available per port. The multiport MHT is factory-terminated with HMFOC (hardened multifiber fiber optical connector) connectors, and does not have an internal splitter option.

- No splicing required in the terminal
- No terminal re-entry required
- Available with hardened full-size optical or miniaturized DLX connectors with up to 12 ports
- 1:2, 1:4, or 1:8 splitter options
- Dielectric, toneable, or armored input stub cables
- Pole, pedestal, handhole, or strand mounting options
- Ships with universal mounting bracket
- User-friendly packaging allows for easy un-spooling
- Factory-sealed enclosure for environmental protection

## CONFIGURATIONS

### MST: full-size connectors

- 2xN style: 2, 4, 6, 8, or 12 ports
- 4x3 style: 4, 6, 8, or 12 ports

### Mini-MST: miniaturized DLX connectors

- 4, 6, 8, or 12 ports

### MST-04: miniaturized DLX connectors

- 4 DLX ports

### MHT: HMFOC connectors

- 2, 4, or 6 HMFOC 2 fiber ports



MST



mini-MST



MST-04



# Fiber indexing terminals series—the next evolution in FTTx deployment

With innovative fiber indexing technology, the benefits of plug-and-play hardened connectivity are dramatically increased. Designed specifically for fiber indexing deployments, fiber indexing terminals give providers pole, pedestal, or hand-hole mounting options, and are designed for quick and easy installation.

When deployed in a daisy-chain architecture, fiber indexing terminals have all the advantages of the access terminals portfolio—speed, flexibility, and density—plus, they save the network provider as much as 70 percent of their fiber cabling budget.

In fiber indexing, up to 12 terminals are daisy-chained in a series. This allows a fast and repeatable “cookie-cutter” approach to network design and deployment. The efficient modular design enables efficient, cost-effective connections for new subscribers and services, while allowing providers to take a pay-as-you-grow approach to FTTx deployment.

In a typical FTTx network, signals from the fiber distribution hub (FDH) travel “forward” from the first terminal to the last. When a second FDH cable is connected to the last terminal, the signal runs “backwards” toward the first terminal. Called “reversed

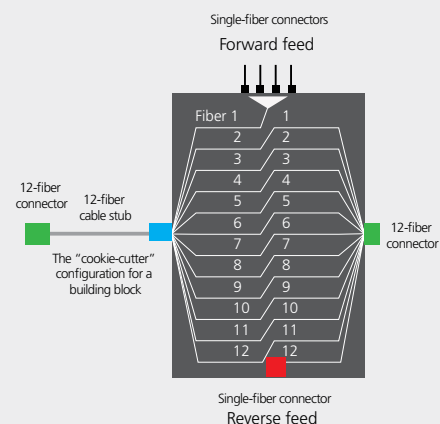
feed,” this technique makes additional fibers available, which providers can use to respond in a virtual instant to unforeseen demands for a wide range of revenue-generating services.

- No splicing required in the terminal
- No terminal re-entry required
- Available with hardened miniaturized DLX connector adapters with 4 and 8 ports
- Available with terminal only, 1:4, and 1:8 integrated splitters; or branching terminals
- Connector ports colored and clearly labeled for fast installation
- Dielectric input stub cables
- Ships with universal mounting bracket
- User-friendly packaging allows for easy unspooling
- Factory-sealed enclosure for environmental protection

## FIBER INDEXING

Fiber indexing is the shifting of a fiber's position from one multifiber connector to another, within each terminal.

- 1 The process begins with a 12-fiber cable from the fiber distribution hub (FDH) entering the first index terminal.
- 2 Inside the terminal, the fibers divide and the signal from the fiber in the first position is routed to a 1:4 or 1:8 splitter for servicing local customers.



- 3 The remaining fibers are “indexed”—advanced one position in the order—then combined using a 12-fiber HFMOC.
- 4 The exiting 12-fiber hardened cable connects to the next terminal where the indexing process is repeated.



Want to learn more about Fiber indexing?

[WATCH VIDEO](#)

# Flexible service terminal series—the ultimate option for difficult environments

The flexible service terminal (FST) series is designed specially for fast, easy network connections in space-constrained environments. A small terminal unit attached to staggered-length connector cables gives installers maximum flexibility in the tightest, most challenging install situations. Hardened fiber stubs make for fast, reliable, plug-and-play distribution to customer premises. The FST's unique design also simplifies maintenance, as the flexible hardened adapter stubs are easy to clean and re-connect without removing the terminal from its installed position.

This factory-sealed terminal withstands harsh outside plant conditions, and is an ideal option for spaces such as handholes or congested pits where moisture is possible. The small unit's flexible structure gives technicians a wealth of install options—it's a simple solution that can reduce or even eliminate the costs of civil works and construction. The FST series consists of three options:

The FST-T terminal features preconnectorized, hardened, full-size or miniaturized DLX single-fiber adapter drops and an HMFOC stub.

The FST-B features four single-fiber preconnectorized, hardened, full-size connector adapter drops, and two four-fiber branch drops with HMFOC connectors.

The FST-S is available with a factory-integrated 1x4 or 1x8 planar splitter and full-size connectors.

- No splicing required in the terminal
- No terminal re-entry required
- Output cables are grouped and staggered to distribute space consumption and minimize kinking
- Hardened adapter drops are configured in pre-defined lengths for easy identification and management
- Transparent dust caps for easy port identification using a visible light source
- Dielectric input cable with nylon jacket for termite protection
- Easy and quick installation to the distribution cable through the 12-fiber HMFOC interface
- Multiple mounting options

## CONFIGURATIONS

### FST-T: full-size or DLX ports

- Single fiber drops
- 4, 8, or 12 drops

### FST-B: full-size ports

- 4 single-fiber drops
- 2 four-fiber branch drops

### FST-S: full-size ports

- 4 or 8 single-fiber drops



FST-T

If you have design, installation, or troubleshooting questions, find prompt, expert support from a CommScope professional.

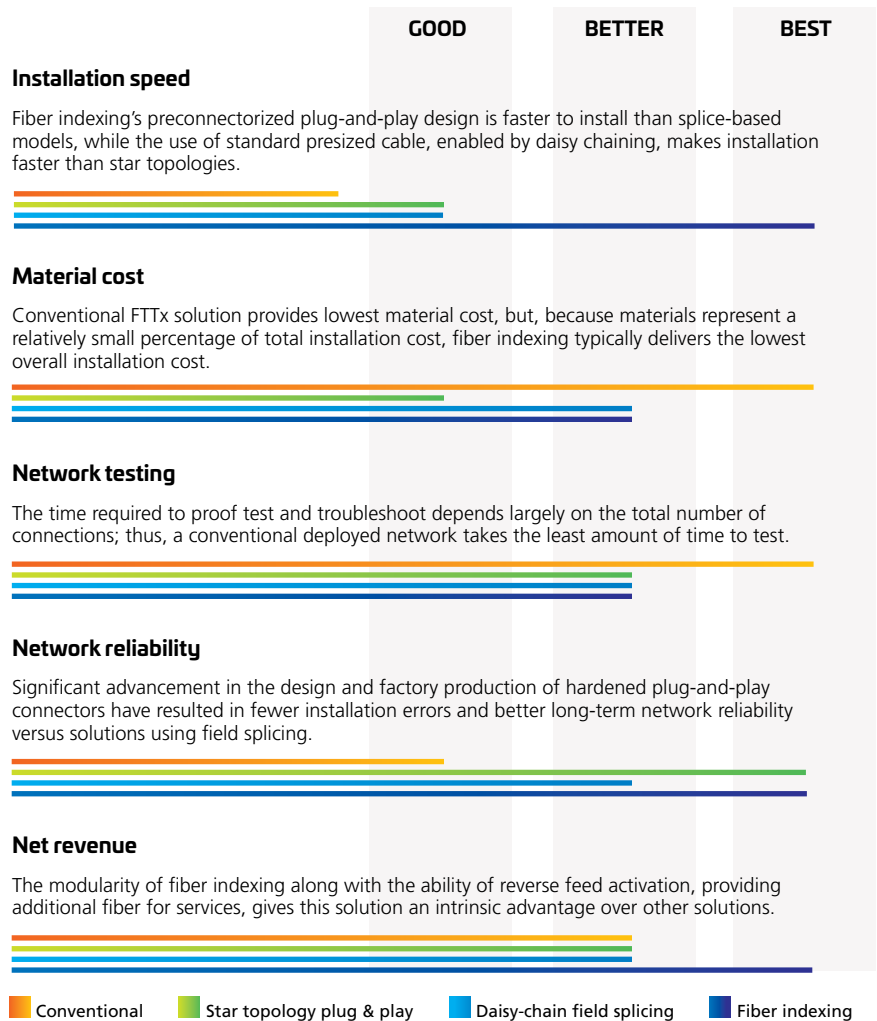
SUPPORT CENTER

# Partner with a proven innovator to build your network

CommScope is committed to providing our customers with the support they need to build their network fiber infrastructure on a solid foundation—one that addresses immediate needs and prepares for the future. Creating the FTTx infrastructure that's right for you begins with a thorough understanding of the strengths and tradeoffs of various deployment options.

Some variables, such as first cost and installer availability and expertise, have short-term implications and are critical to consider upfront. Others, such as the ability to respond to unforeseen demand for future services, impact the network further down the road, but are no less important.

A future-ready fiber infrastructure is one that's scalable and agile enough to handle both today's needs and those of tomorrow. If you're seeking long-term solutions that allow cost-effective labor and quality products, look no further than CommScope. We'll work with you to custom-build your ideal infrastructure.



## Let's shape the future together

With a 40-year record of industry leadership, innovation, and customer success, CommScope can help you create the fiber infrastructure you need. Leveraging our network expertise and diverse FTTx solutions—of which fiber indexing is one of many—we collaborate with our customers to ensure the single best design and blend of technologies for each specific application. From solution architects to field application engineers, we're there with best-practice advice and real-world information on technology pros and cons to help you get the most from your FTTx deployment. More than a supplier, CommScope is a partner and trusted advisor.





"A pioneer in the field, CommScope first brought the MST series to market four decades ago. Today these industry-standard terminals have been improved with new configurations for added versatility, and tougher housing materials for increased reliability. It's good to see that, just as their customers' needs evolve, so does CommScope's determination to improve their equipment...to keep pace with that evolution."

INDUSTRY EXPERT

# Ordering information

## MST SERIES

2xN footprint  
full size

MST –  M H 0 0 –   

### Terminal model

02	2 ports
04	4 ports
06	6 ports
08	8 ports

### Cable type

A	Dielectric, flat, loose tube
B	Locatable, flat, loose tube
C	Armored, round, loose tube

\*0–300 ft length of cable is automatically coiled (option U),  
for greater than 300 ft cable length, choose U or A option.

### Mounting style\*





U	Universal: Terminal is on top of the spool; stub deploys first
A	Reversal spool: Terminal is on the bottom of the spool; terminal deploys first

### Cable stub length

0050	50 feet
0100	100 feet
0250	250 feet
0500	500 feet
0750	750 feet
1000	1000 feet
1500	1500 feet
2000	2000 feet

Standard length shown

4x3 footprint  
full size

MST –  R H 0 0 –   

### Terminal model

06	6 ports
08	8 ports
12	12 ports
ON	1 x 4 splitter
OJ	1 x 8 splitter

### Cable type

A	Dielectric, flat, loose tube
B	Locatable, flat, loose tube

\*0–300 ft length of cable is automatically coiled (option U),  
for greater than 300 ft cable length, choose U or A option.



### Mounting style\*

U	Universal: Terminal is on top of the spool; stub deploys first
A	Reversal spool: Terminal is on the bottom of the spool; terminal deploys first

### Cable stub length

0050	50 feet
0100	100 feet
0200	200 feet
0500	500 feet
0750	750 feet
1000	1000 feet
1500	1500 feet
2000	2000 feet

Standard length shown



MINI MST

MST – [ ] X X [ ] – [ ] [ ] [ ] [ ] [ ]

Terminal model

06	6 ports
08	8 ports
12	12 ports
ON	1 x 4 splitter
OJ	1 x 8 splitter

Cable termination

00	Pigtail (No connector)
XO	DLX connector (only available on splitter modules)

Cable type

A	Dielectric, flat, loose tube
B	Locatable/tonable, flat, loose tube

Mounting style\*

U	Universal: Terminal is on top of the spool; stub deploys first
A	Reversal Spool: Terminal is on the bottom of the spool; terminal deploys first

\*0–300 ft length of cable is automatically coiled (option U), for greater than 300 ft cable length, choose U or A option.

Cable stub length

0050	50 feet	0750	750 feet
0100	100 feet	1000	1000 feet
0250	250 feet	1500	1500 feet
0500	500 feet	2000	2000 feet

\*Cable lengths shown are for example; additional cable lengths are available in feet or meters upon request

MHT SERIES

MHT – [ ] [ ] [ ] [ ] [ ] [ ] – [ ] [ ] [ ] [ ] [ ] [ ] – F

Terminal model

02	2 ports
04	4 ports
06	6 ports

Connector type

H	HMFOC
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Number of fibers per port

2	2 fibers
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Cable length

0500	
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Cable type

A	Dielectric flat
---	-----------------

Mounting style

U	Universal
A	Aerial

Tail end

00	Stub end
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MST-04 SERIES

MST –  FX –  –  –  – UM

Number of ports

04

4 ports

Connector type at tail end

00

Stub

Cable stub length

0010	10 feet	0250	250 feet
0050	50 feet	0500	500 feet
0100	100 feet	0750	750 feet
0200	200 feet	1000	1000 feet

Cable type

O

Round—5 mm

NDX SERIES

NDX –  –  F

Terminal model

06	1 x 4 splitter w/reverse
10	1 x 8 splitter w/reverse
D1	Index only, 1F w/reverse
B2	Branching, 2F
B3	Branching, 3F
B4	Branching, 4F
B5	Branching, 5F
B6	Branching, 6F
M2	Multi-use, 2F w/reverse
M3	Multi-use, 3F w/reverse
M4	Multi-use, 4F w/reverse

Housing type

B

Mini Indexing terminal

Connector type housing

T	DLX adapters and 1 HMFOC
D	Index only, 1 HMFOC, 1 DLX, 1 DLX (reverse)
H	Branching, 2 HMFOC (only available for housing type 'B')
R	Multi-use, DLX and 1 HMFOC

Cable length

0010	10 feet	0600	600 feet
0050	50 feet	0750	750 feet
0100	100 feet	1000	1000 feet
0150	150 feet	1250	1250 feet
0200	200 feet	1500	1500 feet
0250	250 feet	1750	1750 feet
0350	350 feet	2000	2000 feet
0500	500 feet		

Cable type

A

Buried dielectric—flat

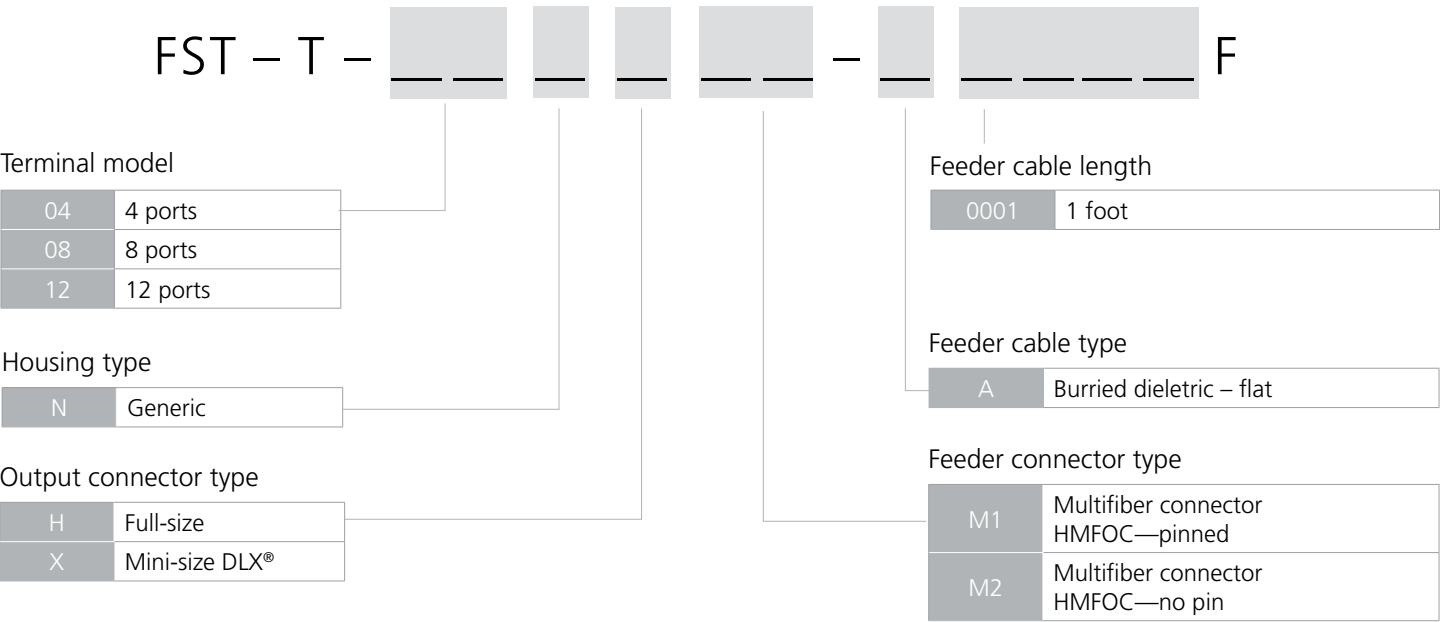
Mounting style

U	Universal (cable stub spool off reel first)
A	Aerial (terminal spool off reel first)

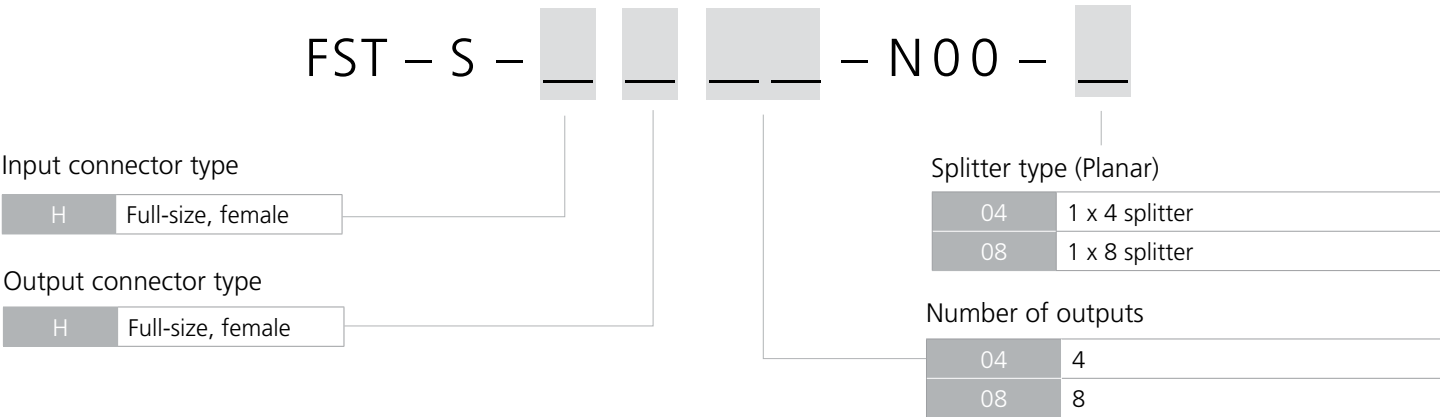
Tail end

00	Stub end
MO	HMFOC stub end

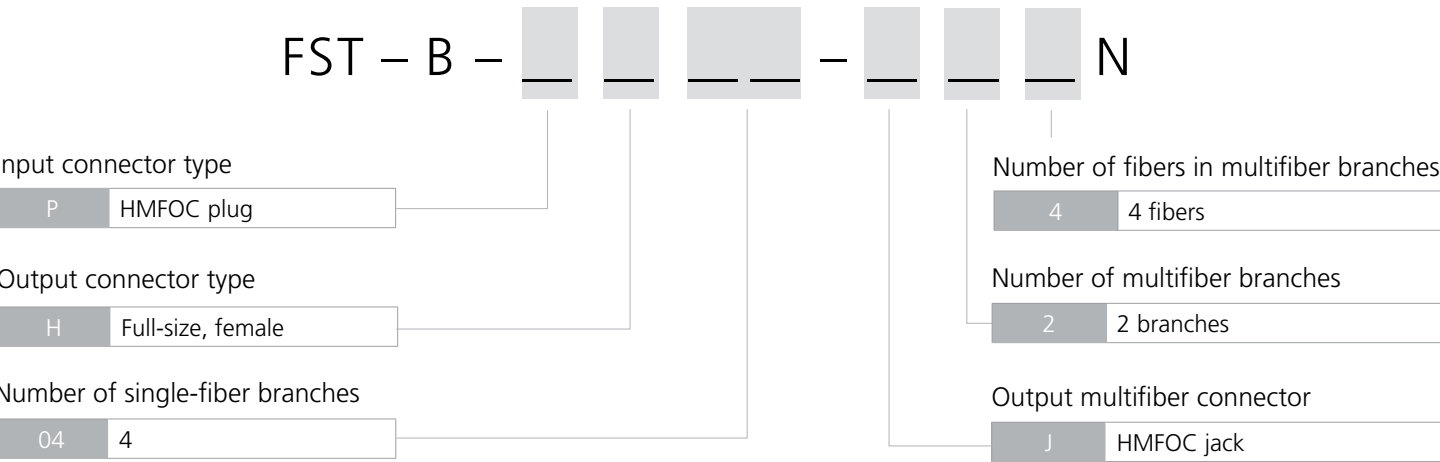
FST SERIES (Terminal type = FST)



FST SERIES (Terminal type = FST splitter)



FST SERIES (Terminal type = FST branch)



CommScope (NASDAQ: COMM) helps design, build and manage wired and wireless networks around the world. As a communications infrastructure leader, we shape the always-on networks of tomorrow. For more than 40 years, our global team of greater than 20,000 employees, innovators and technologists has empowered customers in all regions of the world to anticipate what's next and push the boundaries of what's possible. Discover more at [commscope.com](http://commscope.com)



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