

A solid red circle.

ABS Module PLC Fiber Splitter Data Sheet



Contents

Product Overview	-----	3
Features and Benefits	-----	3
Quality Certification	-----	3
Applications	-----	3
Optical Specifications	-----	4
General Specifications	-----	4
Split Architectures in PON	-----	5
Ordering Information	-----	6
Customization Capability	-----	7

I Overview

Planar Lightwave Circuit (PLC) Splitter is a type of passive optical component using silica optical waveguide technology to distribute optical signals from the Central Office (CO) to multiple premise locations, allowing for efficient communication.

FS ABS Module Splitters are engineered for high-density networks, offering exceptional scalability and reliability. FS PLC splitters come in a full range of 1xN and 2xN models, with a variety of connector options including LC, SC, FC, and ST, as well as customizable split ratios to meet the specific needs of different applications. Additionally, we provide multiple packaging formats and other tailored solutions, ensuring flexibility and seamless integration into diverse network designs. FS is committed to providing high-quality, customizable solutions to meet the evolving needs of modern telecommunications.



I Features and Benefits

- $\leq 4.1\text{dB}$ Low Insertion Loss and $\leq 0.2\text{dB}$ Low Polarization Dependent Loss
- Split Single or Dual Optical Inputs Evenly into Multiple Optical Outputs
- Fits Racks, Wall-mounted Boxes, Optical Distribution Boxes, etc.
- Wide Operating Wavelength: 1260nm to 1650nm
- Wide Operating Temperature: -40°C to 85°C

I Quality Certification

- CE: Free of hazardous substances according to RoHS2015/863/EU
- Design and Test Criteria: Compliant with Telcordia GR-1209-CORE and GR-1221-CORE

I Application

- FTTX Systems
- LAN, WAN and Metro Networks
- CATV / MSOs
- Telecommunications networks

Optical Specifications

Parameters	1 x 2	1 x 4	1 x 16	1 x 32
Split Ratio	Symmetrical			
Operating Wavelength (nm)	1260~1650			
Fiber Type	G.657A1			
Insertion Loss (dB)	≤4.1	≤7.4	≤13.8	≤16.9
Loss Uniformity (dB)	≤0.4	≤0.6	≤1.2	≤1.5
Polarization Dependent Loss (dB)	≤0.2	≤0.2	≤0.3	≤0.3
Return Loss (dB)	≥55	≥55	≥55	≥55
Directivity (dB)	≥55	≥55	≥55	≥55
Wavelength Dependent Loss (dB)	≤0.3	≤0.3	≤0.5	≤0.5
Temperature Dependent Loss (dB)	≤0.5	≤0.5	≤0.5	≤0.5
Maximum Input Power (mW)	300mW	300mW	300mW	300mW
Connector Type	SC/APC	SC/APC	SC/APC	SC/APC

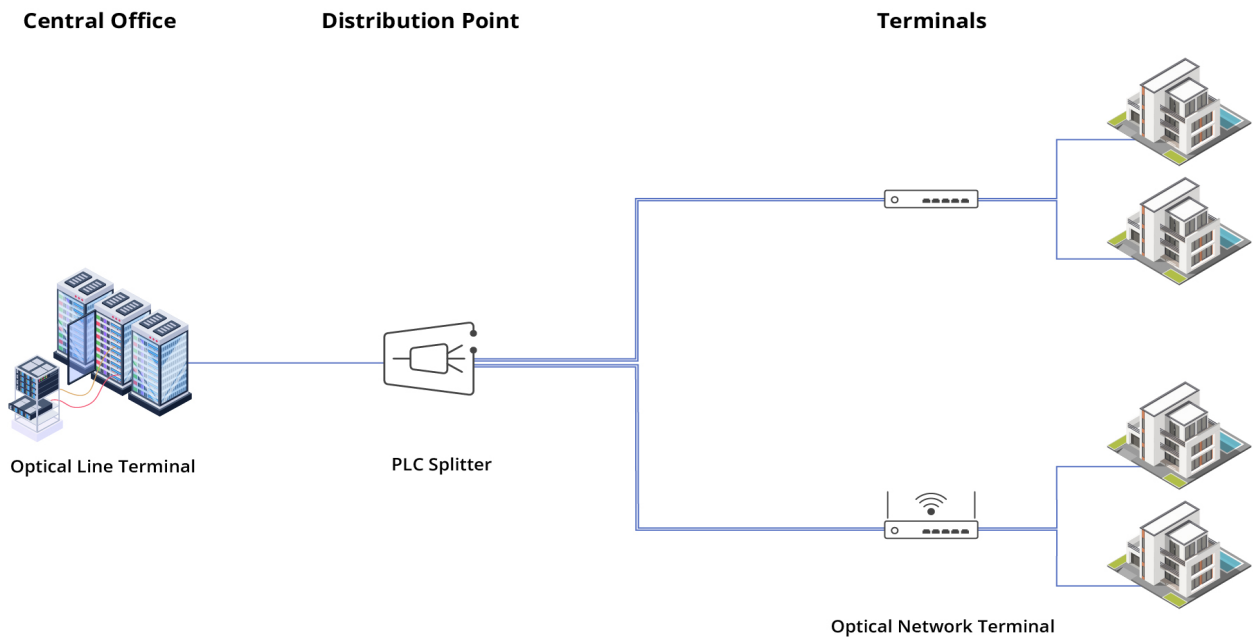
General Specifications

Parameters	ABS Module PLC Splitter
Operating Temperature	-40 to 85° C(-40 to 185° F)
Storage Temperature	-40 to 85° C(-40 to 185° F)
Relative Humidity	45-75%
Dimensions (HxWxD)	0.39"x3.94"x3.15" (10x100x80mm)

Split Architectures in PON

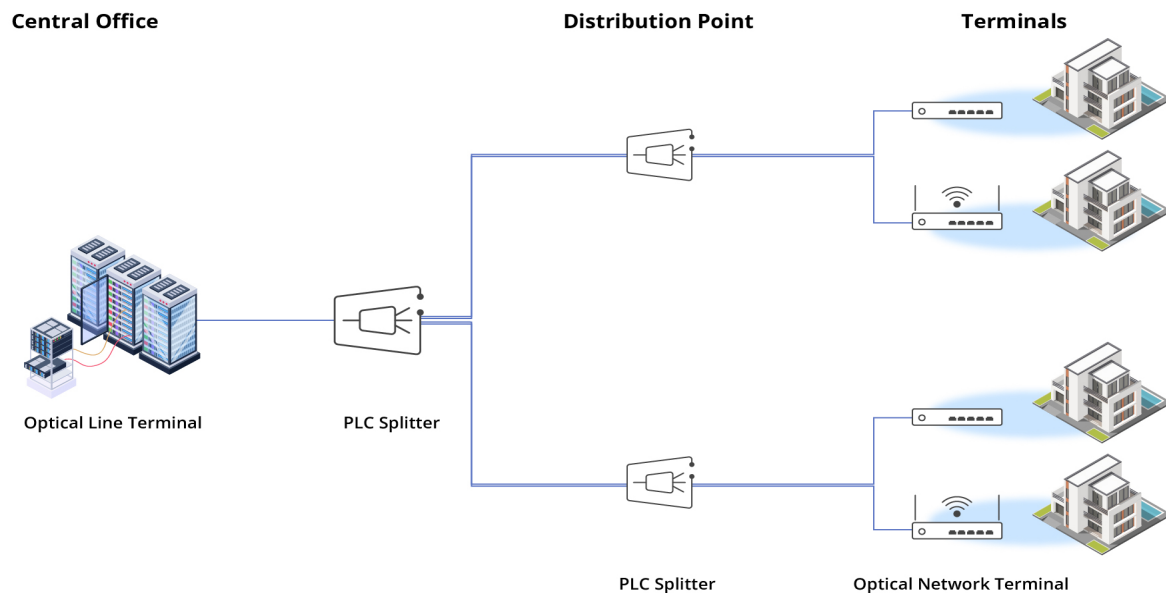
Centralized Split Architecture

- Centralized Fiber Configuration: All splitters are housed in one location for easier management.
- Maximum Network Flexibility: Facilitates simple network upgrades and scaling.
- Consolidated Splice Locations: Reduces the number of splice points for easier maintenance.



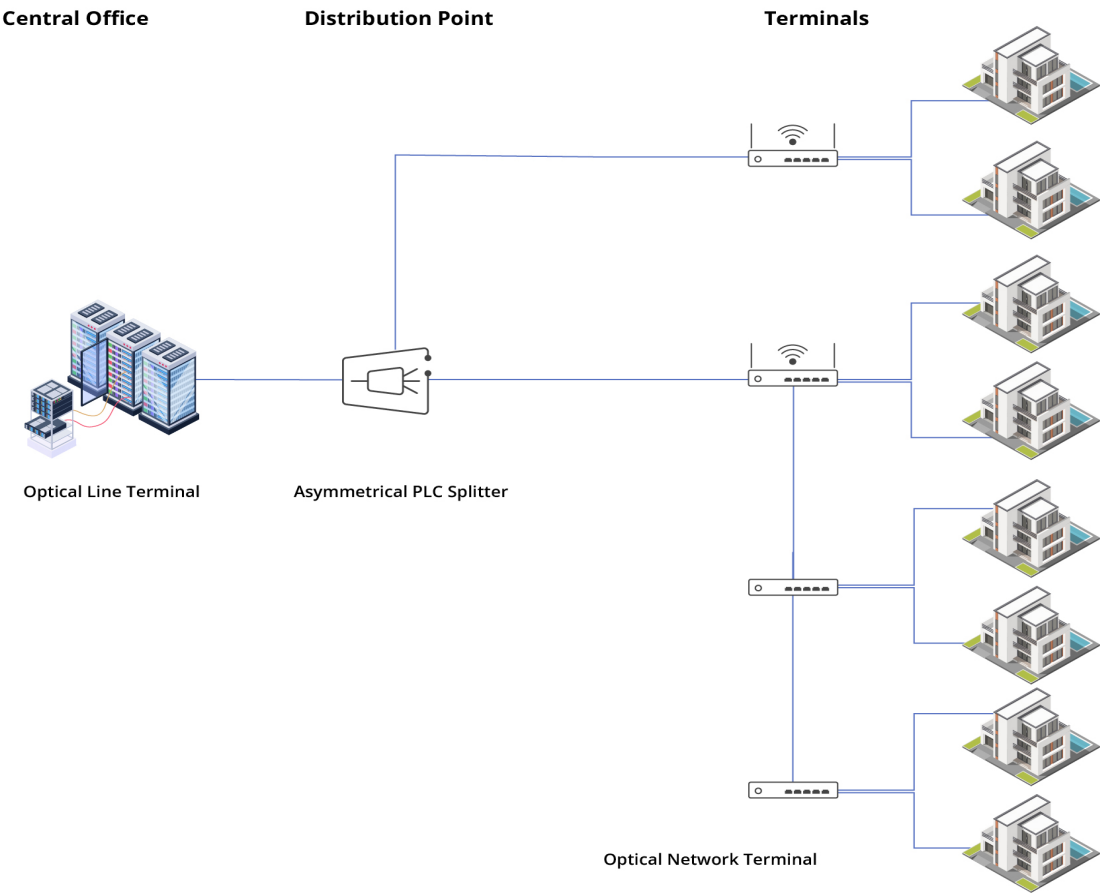
Distributed Split Architecture

- Good Network Flexibility: Offers flexibility in network design and scalability.
- Reduced Fiber Count: Minimizes the use of high fiber count cables, reusing fibers for cost efficiency.



Optical Tap Architecture

- Efficient Fiber and Power Utilization: Minimizes fiber usage and optimizes OLT optical power efficiency, ideal for cost-effective, low-density areas.
- Simplified Network Design: Fewer splices are needed, reducing complexity and streamlining the installation process.
- Optimized Signal Distribution: Asymmetrical PLC splitters are used to ensure balanced signal strength across varying network lengths and locations.



Ordering information

FS P/N	Product description
PLC-102-AB-20-SCA-15	1 x 2 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 2.0mm, SC/APC, Singlemode
PLC-104-AB-20-SCA-15	1 x 4 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 2.0mm, SC/APC, Singlemode
PLC-116-AB-20-SCA-15	1 x 16 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 2.0mm, SC/APC, Singlemode
PLC-132-AB-20-SCA-15	1 x 32 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 2.0mm, SC/APC, Singlemode
PLC-104-AB-90-SCA-15	1 x 4 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 900µm, SC/APC
PLC-1128-AB-90-SCU-15	1 x 128 PLC Fiber Splitter, Splice/Pigtailed ABS Module, 2.0mm, SC/UPC, Singlemode

[ABS-PLC-C](#) Customized 1xN, 2xN PLC Splitter, Splice/Pigtailed ABS Module, LC/SC/FC/ST, Singlemode

Series	Distribution Type		Input Connector	Output Connector	Cable Diameter	Fiber Length
ABS Module PLC Splitter	1x2	2x2	SC/UPC	SC/UPC	900μm	0.5m
	1x3	2x4	SC/APC	SC/APC	2.0mm	1.0m
	1x4	2x8	LC/UPC	LC/UPC	3.0mm	1.5m
	1x5	2x16	LC/APC	LC/APC		2m
	1x6	2x32	FC/UPC	FC/UPC		Custom
	1x8	2x64	FC/APC	FC/APC		
	1x9		ST/UPC	ST/UPC		
	1x12		ST/APC	ST/APC		
	1x16					
	1x24					
	1x32					
	1x64					
	1x128					

Customization Capability

FS provides a whole series of 1xN and 2xN PLC splitter products available in a wide range of package types, connectors, and split ratios, tailored for specific applications. With its compact structure, stable optical characteristics, robust performance and reliable certification, FS PLC splitter solutions strengthen your network infrastructure and facilitate smooth communication across multiple fibers, improving both efficiency and reliability.

Series		Customized Options					
		Split Ratio	Configuration Type	Input Connector	Output Connector	Cable Diameter	Fiber Length
Bare Fiber		✓	✓	✓	✓	✓	✓
Mini Module		✓	✓	✓	✓	✓	✓
ABS Module		✓	✓	✓	✓	✓	✓
LGX Cassette		✓	✓	✓	✓	—	—
FHD Cassette		✓	✓	✓	✓	—	—
1U Rack Mount		✓	✓	✓	✓	—	—



Delaware, United States

Address: Delaware: 380 Centerpoint Blvd, New Castle, DE 19720, United States
Email: US@fs.com
Tel: +1 (888) 468-9910

Germany

Address: Röntgenstraße 18, 85757 Karlsfeld, Germany
Email: DE@fs.com
Tel: +49 (0) 8131 377 3008

Australia

Address: 57-59 Edison Rd, Dandenong South, VIC 3175, Australia
Email: AU@fs.com
Tel: +61 3 5909 9990

Japan

Address: JS Progress Building 5F, 4-1-23, Heiwajima, Ota Ku, Tokyo, 143-0006, Japan
Email: JP@fs.com
Tel: +81-3-6897-9438

Wuhan (China)

Address: Building A1-A4, Chuangxin Tiandi, No. 88 Guanggu Sixth Road, Hongshan District
Email: sales@feisu.com
Tel: +86(400)865 2852

California, United States

Address: California: 15241 Don Julian Rd, City of Industry, CA 91745, United States
Email: US@fs.com
Tel: +1 (888) 468-9910

United Kingdom

Address: Unit 8, Urban Express Park, Union Way, Aston, Birmingham B6 7FH, United Kingdom
Email: UK@fs.com
Tel: +44 (0) 121 726 4775

Singapore

Address: 7002 ANG MO KIO AVENUE 5 #05-02 Singapore 569914
Email: SG@fs.com
Tel: +65 31381992

Shenzhen (China)

Address: Room 1903-1904, Block C, China Resources Tower, Dachong Community, Yuehai Subdistrict, Nanshan District
Email: sales@feisu.com
Tel: +86(400)865 2852

Shanghai (China)

Address: Unit 1201, Lee Gardens Shanghai Office Tower, No. 668 Xinzha Road, Jing'an District
Email: sales@feisu.com
Tel: +86(400)865 2852



FS has several offices around the world. Addresses, phone numbers are listed on the FS Website at https://www.fs.com/contact_us.html. FS and FS logo are trademarks or registered trademarks of FS in the U.S. and other countries.