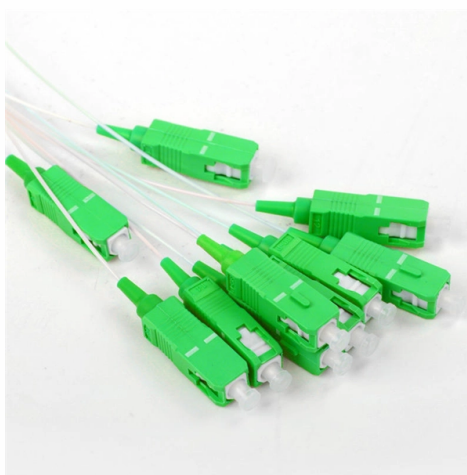


# What wires should be connected to the optical splitter



## Overview

Comprehensive Guide to Optical Splitters It is widely used in passive optical network systems, such as EPON, GPON, BPON, FTTX, and FTTH, to connect central.

## Key Takeaways

To wire an optical splitter correctly, identify input/output ports, prepare and clean fibers, connect securely, and verify signal strength with an optical power meter. Step 1: Identify Splitter Type and Ports Choose the appropriate splitter type based on your network needs: PLC splitters for uniform distribution or FBT splitters for non-uniform splitting, ensuring wavelength compatibility (e.g., 1310nm/1550nm). Identify the input port (usually marked "IN" or "E") and the output ports for connecting to end devices.

Step 2: Prepare Fiber Cables Measure and cut the fiber cables to the required length. Strip the fiber jacket carefully (about 5mm) using a fiber stripper to expose the bare fiber. Clean the fiber with alcohol wipes or a fiber cleaning pen to remove dust and debris, preventing signal loss.

Maintain a minimum bend radius of 5cm to avoid fiber damage. Step 3: Connect Fibers to the Splitter Align the fiber core with the splitter port for a cold splice or mechanical splice. Insert the input fiber into the splitter's input port and the output fibers into the corresponding output ports.



Secure the connectors using clips or screws to prevent loosening and optical degradation. Ensure the splitter is mounted flat or on a wall with connectors facing downward to reduce dust accumulation. Step 4: Test and Verify Use an optical power meter to measure the input and output power.

Confirm that the insertion loss is within the theoretical range (e.g., ~3.5 dB for a 1:2 split). Ensure the optical power for each channel is within the safe range (typically -20 dBm to -25 dBm) to avoid network issues.

Step 5: Installation Best Practices Install splitters in dust- and moisture-proof locations, such as central office rooms, optical junction boxes, or distribution boxes. Avoid sharp bends and excessive tension on fibers. Regularly inspect and clean connectors to maintain signal quality.

For large networks, consider primary and secondary splitting methods to optimize signal distribution. Following these steps ensures reliable optical signal distribution, minimal insertion loss, and long-term network stability.

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