



NC-ONS-Yx Series

Passive Optical Splitters



Overview

Passive splitters are a key enabler of the flexibility and efficiency that PON (Passive Optical Networking) installers have come to love. These splitters are completely solid-state Optics, and require no power, cooling, or maintenance. In addition, they are completely immune to electromagnetic interference and high voltage. They can be installed anywhere and never require access for maintenance. Use passive splitters to create a customized topology to match your intelligent building's physical layout and your requirements for high-availability.

Applications

- Airports, shopping malls, campuses, etc.
- High-rise buildings
- Surveillance systems

Features & Benefits

- Optimized cabling throughout the smart building by running a single fiber and just splitting it where needed.
- No power, no climate control, and no maintenance required.
- A wide selection of splitters offering a variety of flexible and expandable architectures – both with and without redundancy.
- Available in rack-mount or compact form factors for deployment in any environment.

Product Specifications

	Case	Input	Outputs	Connector	Lead Length	Dimensions	Insertion Loss	
General Use - Star topology - ABS Plastic Enclosure								
NC-ONS-YPS-2	ABS Plastic	Single	2	SC/UPC Male	40 cm (16")	90×20×10 mm 3.6×0.8×0.4"	3.2 dB	
NC-ONS-YPS-2-L	ABS Plastic	Single	2		2 m (6')			
NC-ONS-YPS-4	ABS Plastic	Single	4		40 cm (16")	100×80×10 mm 4.0×3.2×0.4"	6.4 dB	
NC-ONS-YPS-4-L	ABS Plastic	Single	4		2 m (6')			
NC-ONS-YPS-8	ABS Plastic	Single	8		40 cm (16")			
NC-ONS-YPS-8-L	ABS Plastic	Single	8		2 m (6')	120×80×18 mm 4.8×3.2×0.8"	12.8 dB	
NC-ONS-YPS-16	ABS Plastic	Single	16		40 cm (16")			
NC-ONS-YPS-16-L	ABS Plastic	Single	16		2 m (6')			
General Use - Star topology – Rack-mount Enclosure								
NC-ONS-YRS-8	Rack-mount	Single	8	SC/UPC Female	N/A	483×240×44 mm 19×9.5×1.7"	10.3 dB	
NC-ONS-YRS-16	Rack-mount	Single	16				13.3 dB	
NC-ONS-YRS-32	Rack-mount	Single	32				16.5 dB	
Dual-Input – Connect Two Aggregation Switches for Redundancy								
NC-ONS-YPD-2	ABS Plastic	Dual	2	SC/UPC Male	40 cm 16"	100×80×10 mm 4.0×3.2×0.4"	3.2 dB	
NC-ONS-YPD-4	ABS Plastic	Dual	4				6.4 dB	
NC-ONS-YPD-8	ABS Plastic	Dual	8				9.8 dB	
NC-ONS-YRD-8	Rack-mount	Dual	8	SC/UPC Female	N/A	483×240×44 mm 19×9.5×1.7"	10.3 dB	
NC-ONS-YRD-16	Rack-mount	Dual	16				13.3 dB	
NC-ONS-YRD-32	Rack-mount	Dual	32				16.5 dB	
Ring Splitters – Create a Redundant Fiber Ring with Two Aggregation Switches							Trunk	Branch
NC-ONS-YPG-1	ABS Plastic	Ring	1	SC/UPC Male	40 cm (16")	100×80×10 mm 4.0×3.2×0.4"	1.3 dB	14.5 dB
NC-ONS-YPG-1-L	ABS Plastic	Ring	1		2 m (6')			
NC-ONS-YPG-2	ABS Plastic	Ring	2		40 cm (16")		1.6 dB	14.5 dB
NC-ONS-YPG-2-L	ABS Plastic	Ring	2		2 m (6')			
NC-ONS-YPG-4	ABS Plastic	Ring	4		40 cm (16")		2.6 dB	13.6 dB
NC-ONS-YPG-4-L	ABS Plastic	Ring	4		2 m (6')			
NC-ONS-YPG-6	ABS Plastic	Ring	6		40 cm (16")		3.5 dB	16.5 dB
NC-ONS-YPG-6-L	ABS Plastic	Ring	6		2 m (6')			
NC-ONS-YPG-8	ABS Plastic	Ring	8		40 cm (16")		6 dB	15.5 dB
NC-ONS-YPG-8-L	ABS Plastic	Ring	8		2 m (6')			
Daisy-Chain Splitters – Asymmetrical Ratio Splitters for High-rise or Perimeter							Trunk	Branch
NC-ONS-YPS-2-A05	ABS Plastic	Single	2 (5/95%)	SC/UPC Male	40 cm (16")	90×20×10 mm 3.6×0.8×0.4"	0.3 dB	13.1 dB
NC-ONS-YPS-2-A05-L	ABS Plastic	Single			2 m (6')			
NC-ONS-YPS-2-A05-LR	ABS Plastic	Single			Root: 25m, Branch: 3m, Trunk: 1m			
NC-ONS-YPS-2-A10	ABS Plastic	Single	2 (10/90%)		40 cm (16")	0.5 dB	10.0 dB	
NC-ONS-YPS-2-A10-L	ABS Plastic	Single			2 m (6')			
NC-ONS-YPS-2-A10-LR	ABS Plastic	Single			Root: 25m, Branch: 3m, Trunk: 1m			
NC-ONS-YPS-2-A15	ABS Plastic	Single	2 (15/85%)		40 cm (16")	1 dB	8.3 dB	
NC-ONS-YPS-2-A15-L	ABS Plastic	Single			2 m (6')			
NC-ONS-YPS-2-A15-LR	ABS Plastic	Single			Root: 25m, Branch: 3m, Trunk: 1m			
NC-ONS-YPS-3-A10	ABS Plastic	Single	3 (10/10/80%)		40 cm (16")	1.1 dB	10.0 dB	
NC-ONS-YPS-3-A10-L	ABS Plastic	Single		2 m (6')				
NC-ONS-YPS-3-A10-LR	ABS Plastic	Single		Root: 25m, Branch: 3m, Trunk: 1m				

Lead Options	Custom specified lengths for Root, Branch, Trunk, or Ring leads available. Up to 50 m / 165' max length for each lead. Pull-eye available.
Environmental	Operating Temperature: -40 ~ 85 °C / -40 ~ 185 °F. Immune to corrosion, EM radiation, and high-voltage. Plenum Rated

The following terminology is used for splitter connectors, leads, and Insertion Loss:

- **Root** – Input lead, leading back towards an Aggregation switch.
- **Trunk** – Output of an asymmetric splitter with the larger percentage of light power (smaller Insertion Loss). Typically, this continues towards the next splitter in a daisy-chain. Insertion Loss is measured from Root to Trunk.
- **Branch** – Output of a splitter with a smaller amount of light power. Typically, this connects to an Edge Switch. Insertion Loss is measured from Root to Branch.
- **Ring** – Special case for Ring Splitters. Bidirectional Input/Outputs that continue through other Ring Splitters to an Aggregation switch. Insertion Loss is measured across the 2 Ring Leads.

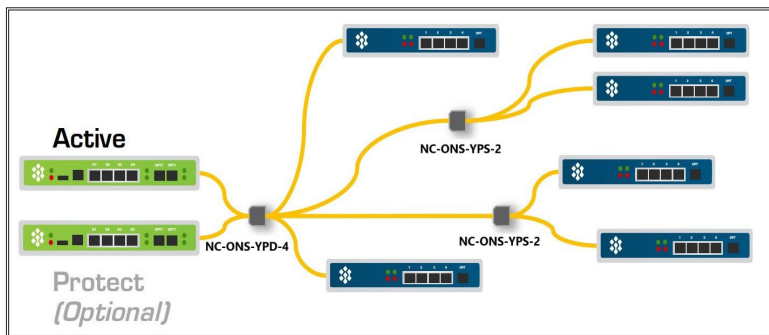
The Maximum Optical Budget is 30 dB for any path from Aggregation Switch to Edge Switch. General recommendation is designing for 26 dB.

All rack-mount splitters come with the appropriate brackets for a 19" rack.

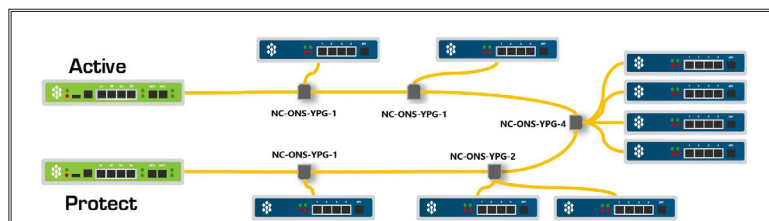
ABS Plastic splitters may be mounted with Velcro adhesive pads (included) or using the predrilled holes for M3 screws (not included).

Network Topologies

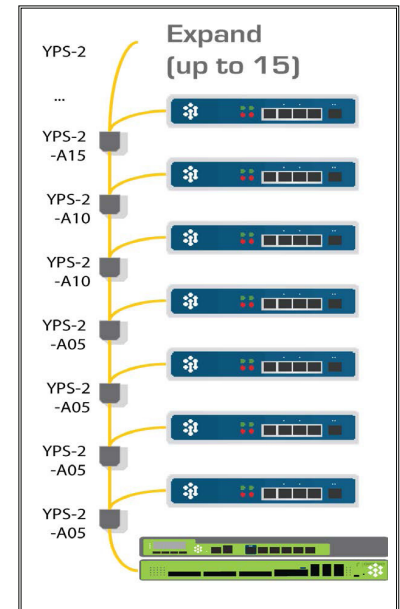
Star-Tree Hybrid (Airports, Shopping Malls, etc.)



Self-Healing Ring (Surveillance)



Passive Daisy-Chain (High-Rises)



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