



Optical Switch

OSX-100



Product Overview

The OSX-100 Optical Switch, is a customizable benchtop/rackmount instrument ideal for high-volume manufacturing production testing. Available in single-mode or multimode, channel counts range from 1x2 up to 1x400. Extra common inputs are possible by adding a 1xN or in 2B or 2C configurations. A variety of other path routing configurations are available upon request.

The switch can be controlled through USB or Ethernet and the front panel bulkheads fitted with FC, SC or LC connector types.

Features

- Up to 400 outputs
- Ultra low IL < 0.5 dB
- ± 0.005 dB repeatability
- Crosstalk < -80 dB
- Customization available



Applications

- High-volume production testing
- Multiple device testing
- Test automation
- Pair with RLM for multifiber testing



Compliance

- UL/CSA 61010
- IEC 61010
- FCC Part 15 (Class A)
- EN 61326 (Class A)

Invisible



In all aspects, OSX-100 is designed to be invisible within your application. Its repeatability of ± 0.005 dB makes it ideal for any automated or long term measurement application and IL < 0.5 dB makes it a perfect fit for tight IL budgets. Each channel will maintain a high signal-to-noise ratio thanks to the OSX's excellent crosstalk < -80 dB.

Use with the RLM Return Loss Meter

OSX-100 can be connected directly to an RLM for multifiber testing. The RLM takes full control of the switch, automating measurements while storing all references and results. If desired, a second OSX switch can be connected to measure insertion loss, return loss, and verify mapping of multifiber connectors or complex assemblies.



Benchtop or Rackmount

OSX-100 is available in 6 form factors:



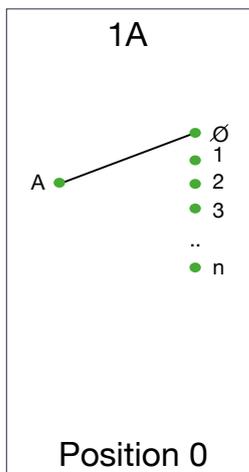
- 1U half rack
- 2U half rack or full rack
- 3U rack or full rack
- 6U full rack

Customizable

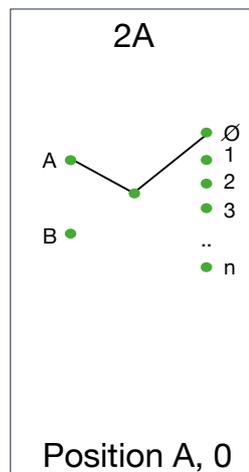
OSX-100 switch can be customized to suit your needs at no additional cost. If you need multiple switches of different configurations within one chassis or a custom spliced schematic including couplers or various output connector types, talk to us and we'll make it happen!



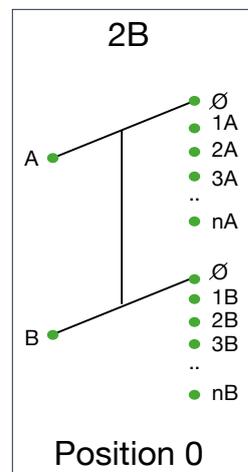
Configuration Options



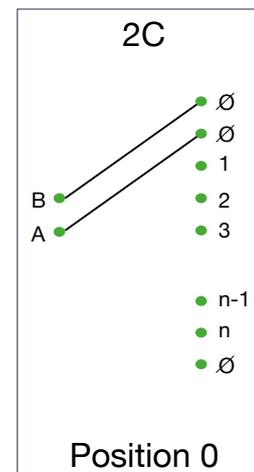
1A Configuration
Single input,
switched to any output



2A Configuration
Two switchable inputs,
switched to any output



2B Configuration
Two inputs switched to
synchronized outputs



2C Configuration
Two inputs switched to
any output with second
input trailing first input

OSX Optical / Electrical Specifications

Parameter	Specification			
	Single-mode		Multimode	
Fiber Type	9/125	Panda PM	50/125	62.5/125
Wavelength Range (nm)	1250-1670		840-1350	
Insertion Loss (dB) ^{1,2,3}	≤0.5	≤1.0	≤0.5	
Backreflection (dB) ¹	≤-60		≤-40	
PDL (dB) ²	≤0.05	N/A	N/A	
PER (dB) ^{1,2}	N/A	≥23	N/A	
Repeatability (dB) ^{2,4}	± 0.005			
Crosstalk (dB)	<-80			
Maximum Input Power (dBm)	23			
Switch Life	10 ⁸ cycles			
Switching Time (ms)	300			
Remote Interface	Ethernet / USB			
Input Voltage	100 - 240 V AC, 50 - 60 Hz			
Power Consumption (VA)	80 maximum			
Display	Optional 5" touch screen			

Notes:

¹ Excluding Connectors

² Standard switch size (< 80 ch), 1A and 2B configurations.

³ Add 0.2 for 2C and 0.7 for 2A.

⁴ Sequential switching. Add + 0.02 for random.

Max Channel Count (1A Configuration, Front Panel Bulkheads)

Connector Type	Specification					
	1H	2H	2F	3H	3F	6F
With 5" touchscreen						
FC	N/A	12	36	20	58	360
SC (duplex)		18	50 ¹	30	82	360
LC (quad)		36	50 ¹	52	136	360
Without display						
FC	16	36	50 ¹	66	88	400
SC (duplex)	16	46	50 ¹	80 ¹	118	400
LC (quad)	24 ¹	50 ¹	50 ¹	80 ¹	196	400

Notes:

¹ Higher port count available in other configurations

OSX Mechanical / Environmental Specifications

Parameter	Chassis Size		
	1H	2H	2F
Unit Dimensions W x H x D (cm) ¹	22.5 x 4.5 x 32.5	22.5 x 9 x 32.5	45 x 9 x 32.5
Unit Weight (kg)	6	8	12
Shipping Box Dimensions W x H x D (cm)	36.5 x 39 x 53		
Volumetric Weight (kg) ²	15		
Operating Temperature (°C)	0 to 55		
Storage Temperature (°C)	-40 to 70		
Humidity (Non-Condensing) (°C)	Maximum 95% RH from 0 to 40		

Notes:

¹ Excluding removable rubber bezels. Add 1.5 cm to W and 3.5 cm to H with the removable rubber bezels.

² W*H*D / 5000

OSX Mechanical / Environmental Specifications

Parameter	Chassis Size		
	3H	3F	6F
Unit Dimensions W x H x D (cm) ¹	22.5 x 13.5 x 32.5	45 x 13.5 x 32.5	45 x 27 x 50
Unit Weight (kg)	12	14	16
Shipping Box Dimensions W x H x D (cm)	36.5 x 39 x 53	53 x 32 x 57	55 x 55 x 55
Volumetric Weight (kg) ²		19	33
Operating Temperature (°C)	0 to 55		
Storage Temperature (°C)	-40 to 70		
Humidity (Non-Condensing) (°C)	Maximum 95% RH from 0 to 40		

Notes:

¹ Excluding removable rubber bezels. Add 1.5 cm to W and 3.5 cm to H with the removable rubber bezels.

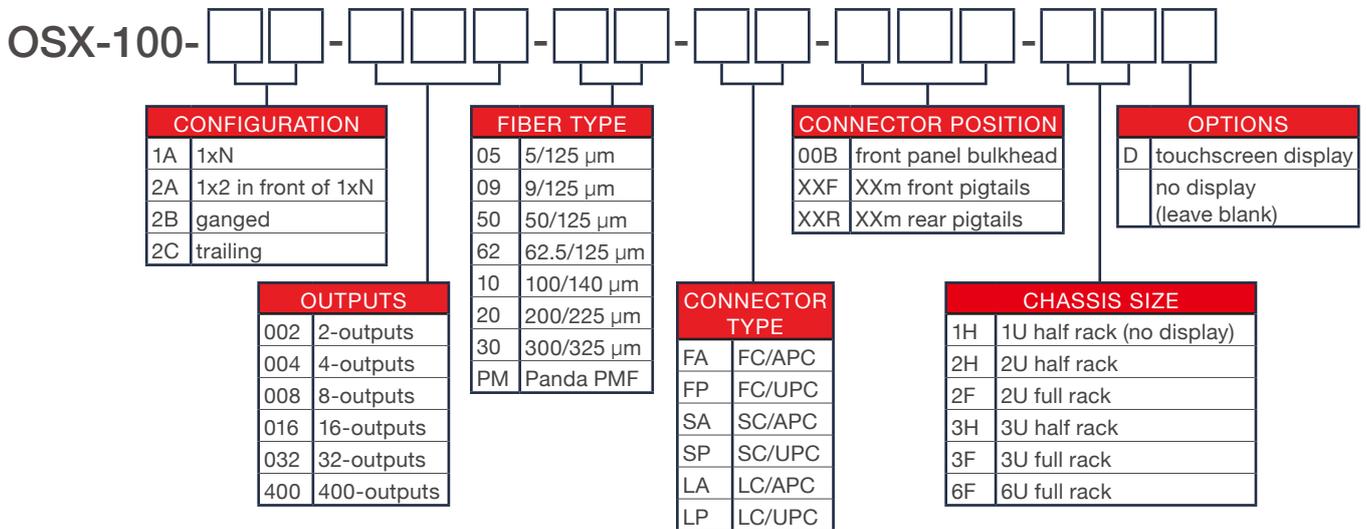
² W*H*D / 5000

Ordering Scheme & Instructions

1. Configure OSX Optical Switch



Opto-mechanical version



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