



# OSX-150

## MEMS Optical Switch



### Product Overview

The OSX-150 Optical Switch features the latest in MEMS technology for high-speed applications. With excellent repeatability and low loss, the OSX-150 is ideally suited for automation applications where switching time needs to be minimized or space is at a premium.

Available in 9 μm single-mode fiber, custom configurations and path routings 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

- High reliability MEMS
- Switching time < 10 ms
- Small footprint
- Up to 1x36 without cascading
- Max input power < 27 dBm



### Applications

- Line protection and redundancy
- Remote network monitoring
- By-pass switching
- Resource sharing

### OSX Optical / Electrical Specifications

| Parameter                              | Specification              |       |       |       |
|----------------------------------------|----------------------------|-------|-------|-------|
|                                        | Single-mode                |       |       |       |
| Fiber Type                             | 9/125                      |       |       |       |
| Wavelength Range (nm)                  | 1250 to 1670               |       |       |       |
| Channel Count (1xN)                    | < 4                        | < 16  | < 24  | < 36  |
| Insertion Loss (dB) <sup>1,2</sup>     | < 1.0                      | < 1.2 | < 1.5 | < 2.0 |
| Backreflection (dB) <sup>1</sup>       | < -50                      |       |       |       |
| PDL (dB)                               | < 0.1                      |       |       |       |
| Repeatability (dB) <sup>3</sup>        | ± 0.01                     |       |       |       |
| Crosstalk (dB)                         | < -50                      |       |       |       |
| Maximum Input Power (dBm) <sup>4</sup> | 27                         |       |       |       |
| Switch Life                            | No wear out                |       |       |       |
| Switching Time (ms)                    | < 10                       |       |       |       |
| Remote Interface                       | USB or Ethernet            |       |       |       |
| Display                                | Optional 5" touch screen   |       |       |       |
| Input Voltage                          | 100 - 240 V AC, 50 - 60 Hz |       |       |       |
| Power Consumption (VA)                 | 60 maximum                 |       |       |       |

Notes:

<sup>1</sup> excluding connectors

<sup>2</sup> at 25 °C and 1550 nm. Add 0.5 dB over full wavelength range.

<sup>3</sup> for constant temperature.

<sup>4</sup> it is recommended to turn off the laser during switch transients when switching optical power above 20 dBm

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

| Conector Type       | Chassis Size           |                 |                 |
|---------------------|------------------------|-----------------|-----------------|
|                     | 1H                     | 2H              | 2F              |
| With 5" Touchscreen |                        |                 |                 |
| FC                  | N/A                    | 12              | 36              |
| SC (duplex)         |                        | 18              | 36 <sup>1</sup> |
| LC (quad)           |                        | 36              | 36 <sup>1</sup> |
| Without Display     |                        |                 |                 |
| FC                  | 16                     | 36              | 36 <sup>1</sup> |
| SC (duplex)         | 16                     | 36 <sup>1</sup> | 36 <sup>1</sup> |
| LC (quad)           | 36                     | 36 <sup>1</sup> | 36 <sup>1</sup> |
|                     | Maximum 80% RH at 40°C |                 |                 |

Notes:

<sup>1</sup> higher port count available in other configurations

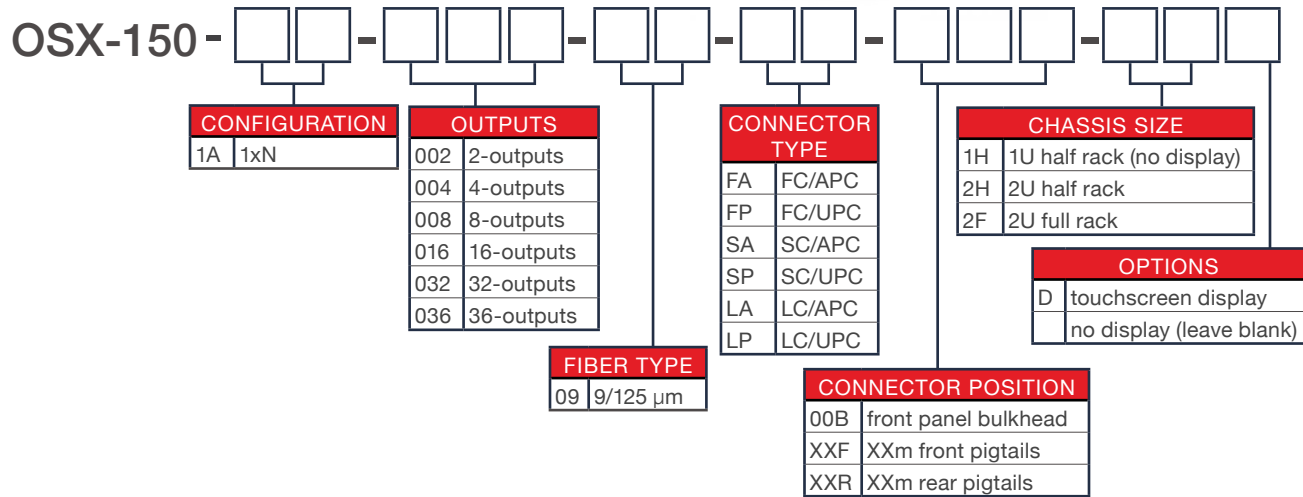
Mechanical / Environmental Specifications

| Parameter                                  | Specification          |                 |                |
|--------------------------------------------|------------------------|-----------------|----------------|
|                                            | 1H                     | 2H              | 2F             |
| Unit Dimension W x H x D (cm) <sup>1</sup> | 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         | 36.5 x 39 x 53  | 36.5 x 36 x 53 |
| Volumetric Weight (kg) <sup>2</sup>        | 15                     | 15              | 15             |
| Operating Temperature (°C)                 | 0 to 55                |                 |                |
| Storage Temperature (°C)                   | -40 to 70              |                 |                |
| Humidity (Non-condensing)                  | Maximum 80% RH at 40°C |                 |                |

Notes:  
<sup>1</sup> excluding removable rubber bezels. Add 1.5 cm to W and 3.5 cm to H with the removable rubber bezels.  
<sup>2</sup> W\*H\*C / 5000

Ordering Scheme & Instructions

1. Configure OSX-150 MEMS Optical Switch



2. Add Accessories

**2U-Rack-Short-Ear**  
2U Rack Short Ear



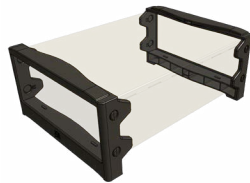
**2U-Rack-Long-Ear**  
2U Rack Long Ear Filler Plate



**2U-Connector-Plate**  
2U Chassis Connector Plate



**2U-Bezel**  
2U Rubber Bezels



 In the Box

- OSX-150 - MEMS Optical Switch**
- OSX-150
  - AC power cord
  - Test report



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