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## OX-20-2X1-D / OX-2O-2X2

Automatic Protection Switch for all types of optical signals with optional power detection

## Data Sheet

## Description

The OX-2O-2x1/ OX-2O-2x2 modules are an Optical Fiber Protection switch with $2 \times 1$ or $2 \times 2$-Bypass switching architecture.

It can be user for fiber redundancy switching, optical switching in fiber networks or protection switching in optical ring networks.

The module can be controlled with external GPI control, or from the XFD WEB control interface. In addition, it can also perform switching based on power supply failure.

The OX-20-2X1-D version has an additional optical power sense on both inputs. The user can decide which optical trigger level ( dBm ) to activate the switch. It will then automatically protect the fiber connection.

## Part Number Options

| Part Number | Temperature ${ }^{*}$ ) |
| :--- | :--- |
| OX-2O-2X1 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}$ |
| OX-2O-2X1-D | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}$ |
| OX-2O-2X2 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}$ |

${ }^{*}$ ) Rated temperature for the complete miniHUB.


## Features

- Available in $2 \times 1$ and $2 \times 2$-Bypass versions
- GPI control available
- Large Optical detection range, 0 dBm to $-30 \mathrm{dBm}(-\mathrm{D}$ verion)
- LEDs show selected input status and input signal presence (-D version)
- Automatic Protection Switching based on optical input power (-D version)
- Switching based on power failure
- Low optical insertion loss of typically < 2dB
- Use together with OS-2-50 to split fiber circuit into 2 fibers



## Absolute Maximum Ratings

Absolute maximum ratings are those values beyond which functional performance is not intended, device reliability is not implied, and damage to the device may occur.

| Parameter | Minimum | Maximum | Unit |
| :--- | :--- | :--- | :--- |
| Storage temperature (non-operating) | -40 | 185 | ${ }^{\circ} \mathrm{F}$ |
| Relative Humidity (non-condensing) | 5 | 95 | $\%$ |

General Operating Conditions

| Parameter |  |
| :--- | :--- |
| Control | 10 way DIP switch, GPI, WEB or Automatic(-D version) |
| LEDs | Card status, selected input. <br> Optical input presence (-D version) |
| Operating modes | Latching and Non-Latching |
| Number of inputs | 2 |
| Number of outputs | 1 or 2 |
| Connectors | LC/UPC |

## Optical Characteristics

| Parameter | Minimum | Typical | Maximum | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Switch versions | $2 \times 1$ or $2 \times 2$-Bypass |  |  |  |
| Operating Wavelenth | 1270-1610 |  |  | nm |
| Insertion Loss |  |  |  | dB |
| $\begin{aligned} & O X-20-2 \times 1 \\ & \text { OX-2O-2X1-D } \end{aligned}$ |  | 0.8 | 1.1 | dB |
|  |  | 1.4 | 2.1 | dB |
| OX-20-2X2 |  | 0.8 | 1.1 | dB |
| Max input power |  |  | 27 | dBm |
| Input power sensor detection range (-D version) | -30 |  | 0 | dBm |
| Input power sensor directivity (-D version) | 25 | 30 |  | dB |
| Return loss | 45 |  |  | dB |
| PDL |  | 0.05 | 0.1 | dB |
| Connector |  | LC/ |  |  |
| Transmitting circuit fiber | Single Mod | $5 \mu \mathrm{~m})$ |  |  |

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