# IBS-102FX Series

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## *Industrial 2-port optical bypass switch for fiber optical network with 4xLC duplex connector*

### Features

- Support 100M/1G/10G optical bypass function of 2 port duplex or 4 port simplex fiber connection
- Different models supported for multi-mode or single-mode optical fiber
- Low insertions loss
- Throughput not affected and no extra delay
- Bypass switching time < 8ms
- Dual Wide range power inputs: 12~48VDC
- Relay output for pwer failed warning
- Rigid IP-30 housing design
- Din-Rail/Wall-mount installation




-20~70°C Temperature | Redundant PWR | Slim Type | RoHS Lead Free | CE | FC

## Introduction

IBS-102FX series are external Bypass switches for 100M/1G/10G fiber optical networks. These fiber optical bypass switches protect the network from failures and Network maintenance by ensuring network integrity during power loss. Each of these optical bypass switches includes Network ports and Monitor ports. The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-link local networking device. When the power is on, the operating mode of the Bypass switch is set to Normal , and the local networking device is connected with main-network. When power failure occurs, the Bypass switch is swiftly set to bypass mode to isolate the main-network from the local networking device.

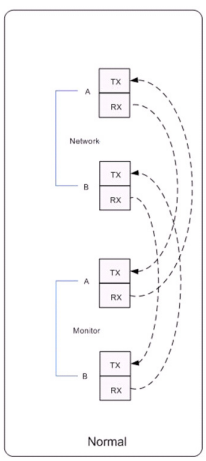
## Practical Operation

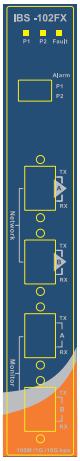
**Normal mode:**

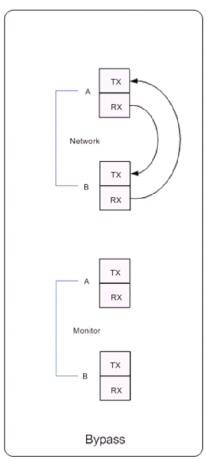
The Bypass switch diverts the data from the Network ports data to the Monitor ports.

**Bypass mode**:

The Network data traffic routed directly to the other Network port. And the Monitor data traffic routed directly to the other Monitor port.

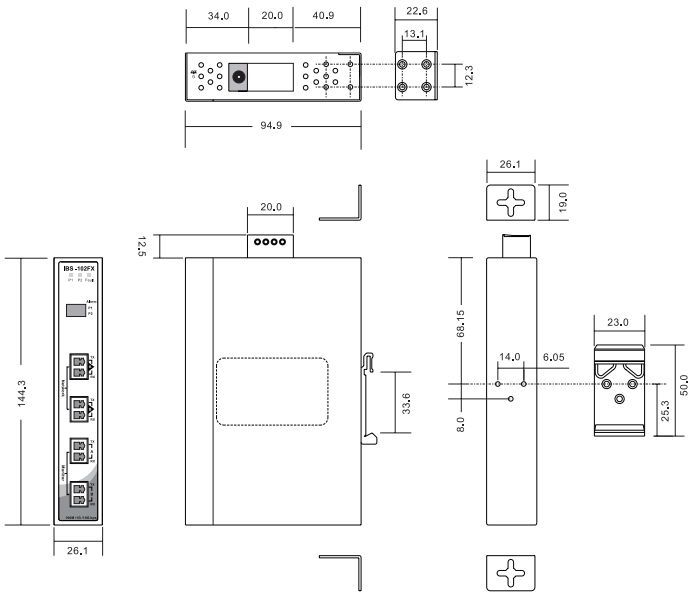



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## Dimensions




(Unit=mm)

## Specifications

| ORing Bypass Switch Model | IBS-102FX-SS-LC | IBS-102FX-MM-LC |
|---|---|---|
| **Physical Ports** | | |
| LC connector | 4 Duplex Single-mode LC connector | 4 Duplex Multi-mode LC connector |
| **Fiber Ethernet** | | |
| Optical Fiber | Single-mode: 9/125μm | Multi-mode: 50/125μm or 62.5/125μm |
| Operating Wavelength | 1310±40, 1550±40 nm | 850±40, 1310±40 nm |
| Insert loss | typical1.2 dB , Maximun 2 dB | typical1.2 dB , Maximun 1.6 dB |
| Switch time | < 8ms | |
| **DIP Switch Settings** | | |
| DIP Swicth No.1 | Power-1 failed warning detection – (On) relay enable (Off) relay disable | |
| DIP Switch No.2 | Power-2 failed warning detection – (On) relay enable (Off) relay disable | |
| **LED Indicators** | | |
| Power indicator | Green : power LED x 2. | |
| Normal indicator | Green On : Operated in normal mode | |
| Fault indicator | Amber : Indicates power failure | |
| **Fault contact** | | |
| Relay | Relay output to carry capacity of 1A at 24VDC. | |
| **Power** | | |
| Input power | Dual 12~48 VDC power inputs at DC-Jack and 4-pin terminal block | |
| Power consumption (Typ.) | 2.7 Watts | |
| Overload current protection | Present | |
| Reverse Polarity | Present on terminal block | |
| **Physical Characteristics** | | |
| Enclosure | IP-30 | |
| Dimensions (W x D x H) | 26.1(W) x 94.9(D) x 144.3(H) mm (1.03 x 3.74 x 5.68 inch.) | |
| Weight (g) | 405 g | |
| **Environmental** | | |
| Storage Temperature | -40 to 85°C (-40 to 185°F) | |





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| | |
|---|---|
| Operating Temperature | -40 to 75°C (-40 to 167°F) |
| Operating Humidity | 10% to 90% Non-condensing |
| **Regulatory Approvals** | |
| EMC | CE EMC (EN 55024, EN55032), FCC Part 15B |
| EMI | EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A |
| EMS | EN 55024 (IEC/EN 61000-4-2,(ESD), IEC/EN 610000-4-3(RS), IEC/EN 61000-4-4 (FET), IEC/EN61000-4-5 (Surge), IEC/EN61000-4-6 (CS), IEC/EN61000-4-8(PFMIF), EN61000-4-11(DIP)) |
| Shock | IEC60068-2-27 |
| Free Fall | IEC60068-2-31 |
| Vibration | IEC60068-2-6 |
| MTBF | 1246758hrs |
| Warranty | 3 year |

## Ordering Information

**IBS-10 A FX- BB -LC**

| Code Definition | Networking Port Number | Single mode or Multi mode |
|---|---|---|
| **Option** | **- 2:** 2 ports | **- MM:** Multi-mode<br>**- SS:** Single-mode |

| | Model Name | Description |
|---|---|---|
| Available Model | IBS-102FX-MM-LC | Industrial 2-port bypass switch for fiber optical network with 4xLC duplex, multi-mode, LC connector |
| | IBS-102FX-SS-LC | Industrial 2-port bypass switch for fiber optical network with 4xLC duplex, single-mode, LC connector |

**Packing List**

- IBS-102FX x 1
- Din-Rail Kit x 1
- Quick Installation Guide x 1
- Wall-mount Kit x 1

**Optional Accessories (Can be purchased separately)**

- DR/SDR/DRP Series DIN-Rail power supply

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