The IBP-202 Optical Bypass Switch is an industrial grade external bypass switch for optical-node failure in fiber optical network infrastructures. The IBP-202 Optical Bypass Switch prevents and saves communication from network failures during power loss. When power failure occurs, the Bypass switch will swiftly set to bypass mode and isolate the main-network from the local networking device (See Figure 1). Bypass switches are commonly used in some major optical networks, such as in railway communication systems, factory automation, and power substations, where fiber link failures are not tolerated.

**Features**

- Supports 100M/1G/2.5G/10G Ethernet or Telecom applications
- Supports SC/ST/LC single mode optical connectors
- Optical bypass switching time <10ms with Low insertions loss
- Provides rotary switch to set delay boot time (0~180 seconds)
- Redundant dual DC input power 12/24/48VDC (9.6 ~ 60VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20 ~ 70°C
- Heavy industrial grade EMS, EMI, EN50121-4, EN61000-6-2, EN61000-6-4,CE, FCC certified

**Specifications**

- **Fiber Connector**: SC, ST, LC
- **Operating wavelength**: 1260 ~ 1650nm
- **Optic Fiber cable**: Single mode 8/125um, 9/125um
- **Insertion loss**: <1.5dB
- **Optical Switching time**: < 10ms
- **LED indicator**: Power 1, Power 2, Operation mode (Normal /Bypass)
- **Boot up delay adjuster**: Provides a rotary switch to configure boot up delay time (0~180 seconds)
- **Removable Terminal Block**: Provide for redundant power
- **Power supply**: 12/24/48VDC (9.6~60VDC), Redundant power with polarity reverse protect function and removable terminal block
- **Reverse Polarity Protection**: Supported for Power Input
- **Overload Current Protection**: Supported
- **Power consumption**: 0.4W (12VDC), 0.5W (24VDC), 0.8W (48VDC)
- **Housing**: Rugged metal, IP30 protection and fanless
- **Dimensions**: 106 x 62.5 x 135mm (D x W x H)
- **Weight**: 530g (IBP-202-SLC), 545g (IBP-202-SSC, IBP-202-SST)
- **Installation**: DIN Rail mounting, or wall mounting (Optional)
- **Operating Temperature**: -20~70°C

**Application**

The IBP-202 supports the function of optical path Normal mode and Bypass mode for fiber optical networks. It offers a simple mechanism to switch both of upload and down load fiber path when a power system failure occurs, and a path restores when power back. It offers a simple way to reduce the risk of optical network Node-Down which is caused by the power system.
Industrial Optical Fiber Bypass Switch

Figure 1: IBP-202 Data flow in Normal or Bypass mode

<table>
<thead>
<tr>
<th>Normal Mode</th>
<th>Bypass Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Ready</strong></td>
<td><strong>Power Failure</strong></td>
</tr>
</tbody>
</table>

![Diagram of IBP-202 Data flow in Normal or Bypass mode]

Figure 2: Application example in line connection

![Diagram of IBP-202 Application example in line connection]

Figure 3: Application example in ring connection

![Diagram of IBP-202 Application example in ring connection]
**Dimensions**

- **IBP-202 SC Type**

- **IBP-202 LC Type**

- **IBP-202 ST Type**
## Ordering Information

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Connector type</th>
<th>Connector Qty</th>
<th>Data rate</th>
<th>Power Input</th>
<th>Certification</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBP-202-SSC</td>
<td>SM SC</td>
<td>4</td>
<td>100M/Giga/10G</td>
<td>12/24/48VDC</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>IBP-202-SST</td>
<td>SM ST</td>
<td>4</td>
<td>100M/Giga/10G</td>
<td>12/24/48VDC</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>IBP-202-SLC</td>
<td>SM LC</td>
<td>4</td>
<td>100M/Giga/10G</td>
<td>12/24/48VDC</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

### Package List
- IBP-202 device
- Quick installation guide
- Din Rail with screws
- Terminal block

### Optional Accessories

#### Wall Mount Kit Accessories
- IND-WMK02: Wall Mount kit for Industrial product, 184 x 50mm