IBP-202

Optical Fiber Bypass Switch

- 100M/1G/2.5G/10G Ethernet or Telecom applications
- SC/ST/LC SM or MM optical
- Optical bypass switching time <10ms
- Provides rotary switch to set delay boot time (0~180 seconds)

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 substation, where fiber link failures are not tolerated.

Features

- Low insertions loss (<1.5dB)
- Redundant dual DC input power 12/24/48VDC (9.6 ~ 60VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20 ~ 70°C

Specifications

Fiber Connector	SC, ST, LC
Operating wavelength	SM: 1260 ~ 1650nm MM: 810~890nm , 1260~1340nm
Optic Fiber cable	Single mode: 8/125um~10/125um Multi mode: 50/125um
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
Storage temperature	-40 ~ 85°C
Operating Humidity	5% ~ 95% (Non-condensing)
MTBF	273,054 Hours (MIL-HDBK-217)
Warranty	5 Years
Certification	
EMC	CE (EN55024, EN55032)
EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A, CE
EMS (Electromagnetic Susceptibility) Protection Leve	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (EFT) Level 3, Criteria A
	EN61000-4-5 (Surge) Level 3, Criteria B
	EN61000-4-6 (CS) Level 3, Criteria A
	EN61000-4-8 (PFMF) Field strength 300A/m Criteria A
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

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.

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

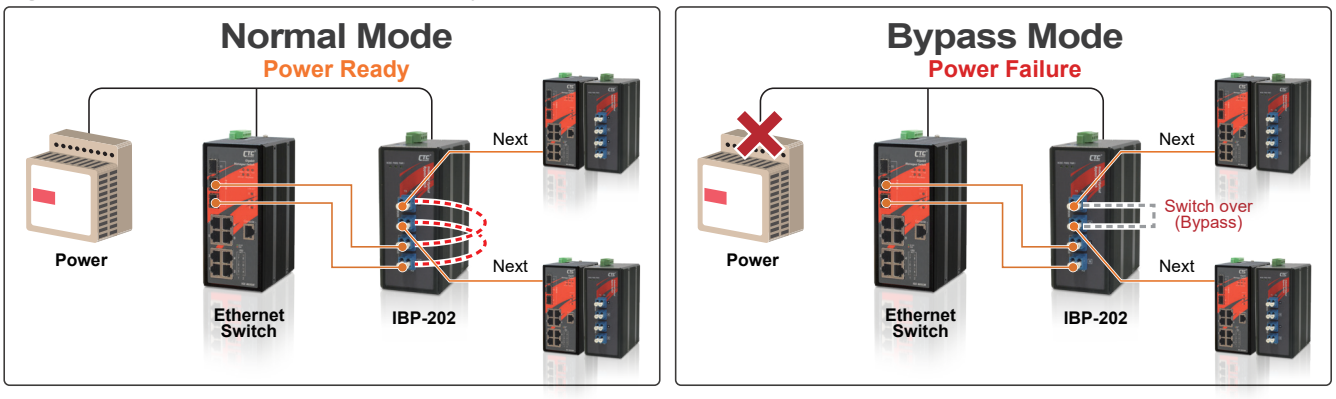


Figure 2 : Application example in line connection

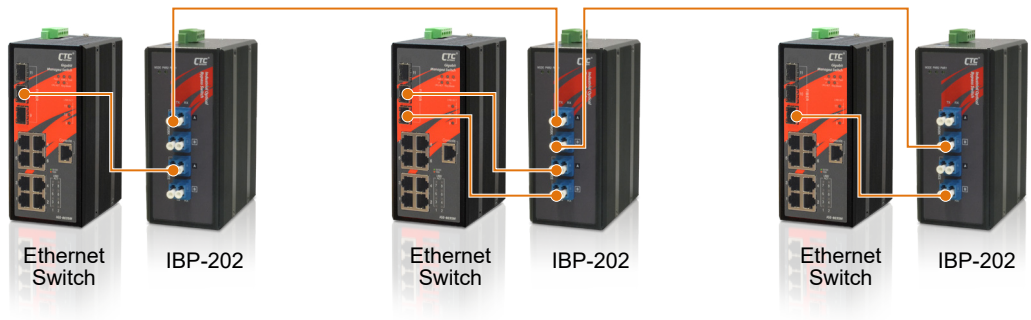
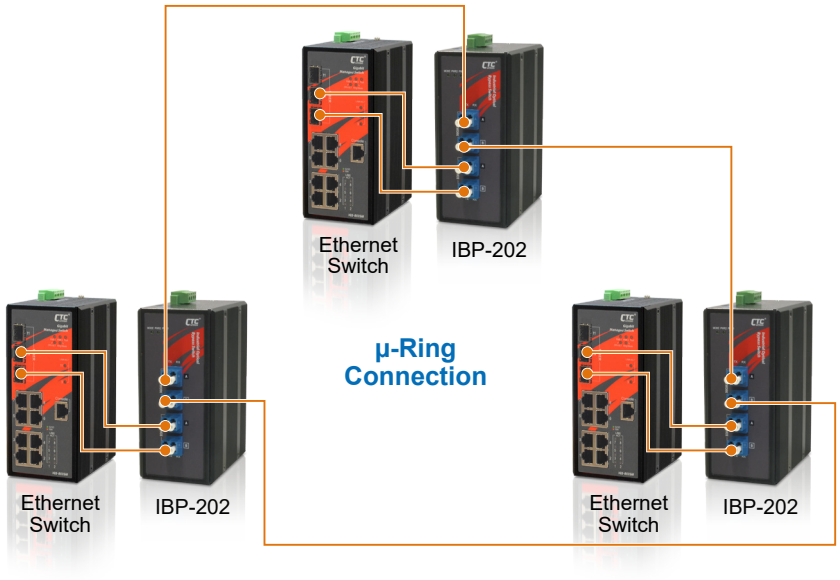
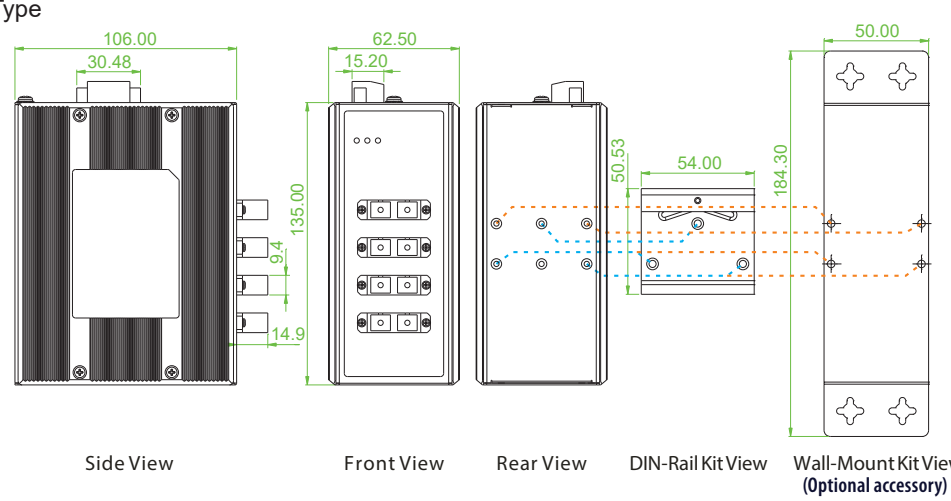


Figure 3 : Application example in ring connection

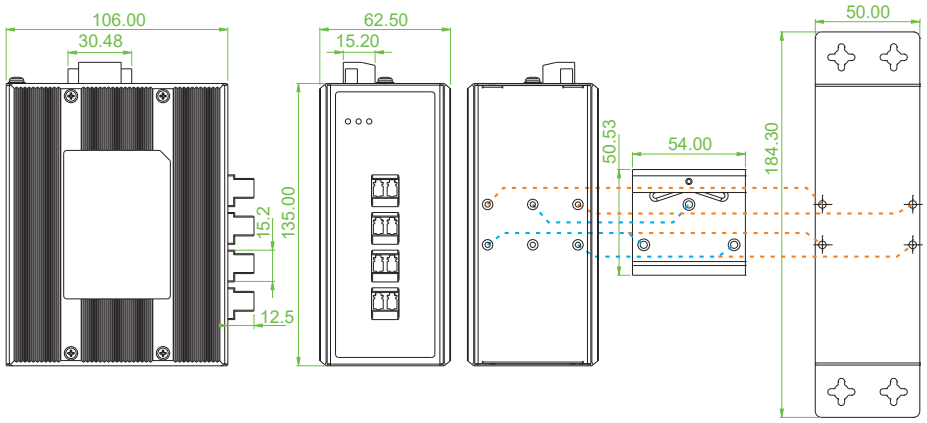


Dimensions

▶ IBP-202 SC Type

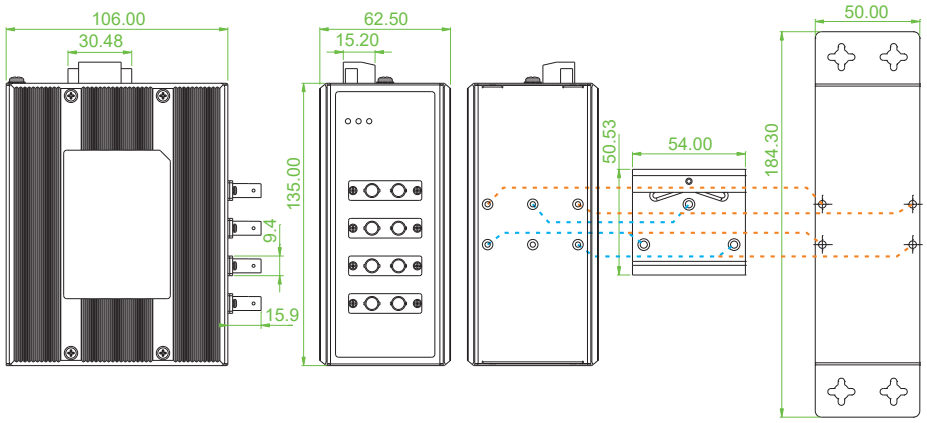


▶ IBP-202 LC Type



Side View　Front View　Rear View　DIN-Rail Kit View　Wall-Mount Kit View (Optional accessory)

▶ IBP-202 ST Type



Side View　Front View　Rear View　DIN-Rail Kit View　Wall-Mount Kit View (Optional accessory)

Ordering Information

Model Name	Fiber connector			Power Input	Certification		Operating Temperature
	Connector type	Connector Q'ty	Data Rate	Redundant	CE	FCC	
IBP-202-SSC	SM SC	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C
IBP-202-SST	SM ST	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C
IBP-202-SLC	SM LC	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C
IBP-202-MSC	MM SC	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C
IBP-202-MST	MM ST	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C
IBP-202-MLC	MM LC	4	100M/Giga/10G	12/24/48VDC	V	V	-20~70°C

■ Package List

- IBP-202 device
- Din Rail with screws
- Terminal block

Optional Accessories

■ Wall Mount Kit

IND-WMK02	Wall Mount kit for Industrial product, 184 x 50mm

■ Industrial Power Supply

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ +70°C
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70°C