OBU-102 Series

2-channel optical fiber bypass units
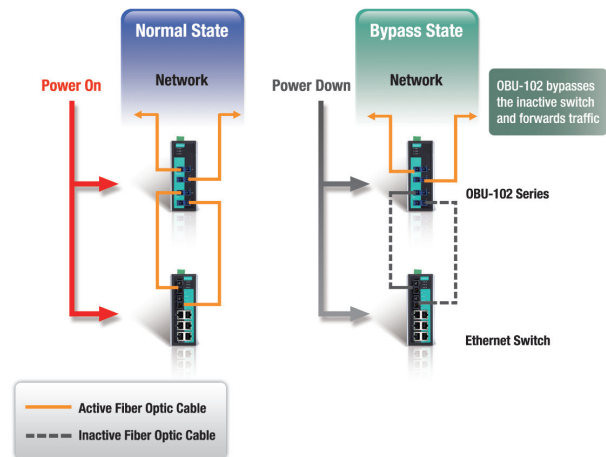
> Supports Fast, Gigabit, and 10 Gigabit Ethernet fiber connections in SC/ST/LC connectors
> Redundant dual 12/24/48 VDC power inputs
> IP30 metal housing
> -20 to 70°C operating temperature range
> DIN-rail mounting ability
> Ultra low power consumption 0.72 W

Introduction

Moxa's OBU-102 fiber optical bypass units add bypass relay functionality to any network node. In linear topologies, a single power outage or node failure can take out an entire chunk of the network, because communications to all the network nodes further down the line are also cut. With relay bypass, that node is instead simply bypassed in the event of a failure, and the rest of the network is unaffected.

The OBU-102 sits between a node and the network to add bypass relay functionality to any network switches that do not already support this important function. In normal operations, the OBU-102 simply acts as a gateway that forwards network traffic to and from the network switch. However, if power is lost, the OBU-102 will bypass the unpowered switch and simply pass network traffic to the next switch in the relay.

Specifications

Bypass Properties
Optical Switching Time: Max. 10 ms
Insertion Loss: Max. 1.6 dB

Interface
Fiber Ports: 100M/1G/10G fiber in SC/ST/LC connector, single mode
Rotary Switches: For configuring the boot delay interval

Power Requirements
Input Voltage: 12/24/48 VDC, redundant dual inputs
Operating Voltage: 9.6 to 60 VDC
Overload Current Protection: 1100 mA @ 48 VDC
Connection: 2 removable 2-contact terminal block
Reverse Polarity Protection: Present

Physical Characteristics
Housing: Metal
IP Rating: IP30 protection
Dimensions: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight: 700 g (1.55 lb)
Installation: DIN-rail mounting, wall mounting (with optional kit)

Environmental Limits
Operating Temperature: -20 to 70°C (-4 to 158°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications
Safety: UL 508
EMC: EN 55032 Class A
EMI: CISPR 32, FCC Part 15B Class A
EMS:
IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV
IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m
IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV
IEC 61000-4-5 Surge: Power: 2 kV; Signal: 0.5 kV
IEC 61000-4-6 CS: Signal: 10 V
IEC 61000-4-8
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
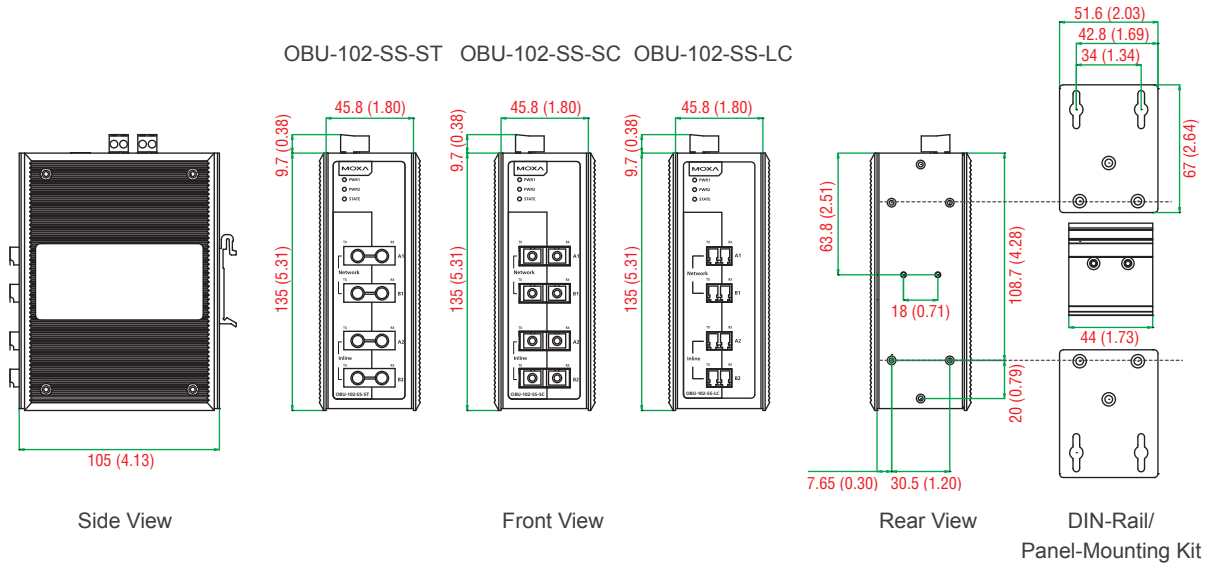Note: Please check Moxa's website for the most up-to-date certification status.

Warranty
Warranty Period: 2 years
Details: See www.moxa.com/warranty

MOXA®

Dimensions

Unit: mm (inch)

OBU-102-SS-ST   OBU-102-SS-SC   OBU-102-SS-LC

Side View

Front View

Rear View

DIN-Rail/
Panel-Mounting Kit

Ordering Information

Available Models (-20 to 75°C)	Port Interface		
	Single-Mode, SC Connector	Single-Mode, ST Connector	Single-Mode, LC Connector
OBU-102-SS-SC	4	–	–
OBU-102-SS-ST	–	4	–
OBU-102-SS-LC	–	–	4

Optional Accessories (can be purchased separately)
DR-4524/75-24/120-24: 45/75/120 W DIN-rail 24 VDC power supplies
MDR-40-24/60-24: 40/60 W DIN-rail 24 VDC power supplies, -20 to 70°C operating temperature
RK-4U: 4U-high 19-inch rack-mounting kit
WK-30: Wall-mounting kit, 2 plates with 4 screws
WK-46: Wall-mounting kit, 2 plates with 8 screws

Package Checklist
- OBU-102 unit
- Hardware installation guide (printed)
- Warranty card