BLACK BOX
NETWORK SERVICES

JANUARY 2008
Model# SW1002A

FIBER OPTIC A/B SWITCH
(LATCHING)

CUSTOMER SUPPORT INFORMATION
Order toll-free in the U.S.: 877-877-BBOX (outside U.S. call 724-746-5500)
FREE technical support, 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746
Mail order: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: www.blackbox.com • E-mail: info@blackbox.com

FCC STATEMENT

FEDERAL COMMUNICATIONS COMMISSION
AND
INDUSTRY CANADA
RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le Industrie Canada.

Contents

Specifications

Connectors
(6) ST, (1) 3.5-mm power input
Also available with SC connectors—Please call!

Data Rates
Transparent to signal rates, wavelengths, & formats

Switching Speed
less than 1 sec typical

Sensitivity
750 to 1450 nanometers

Optical Loss
less than 3.0 dB typical per FOTP-171 method B1

Compatibility
62.5/125 µm multimode fiber

Crosstalk
less than -45 dB typical per FOTP-42

Grounding
None required

Approvals
UL, CE, and PSE (power supply)

Operating Temperature
14 to 149ºF (-10 to +65ºC)

Relative Humidity Tolerance
10 to 95%, non-condensing

Mean Time Between Failures
100,000 hours or 1,000,000 cycles

Power
100-240 VAC 50/60 Hz wall-mount PSU, 12 VDC out

Size
2.5”H x 8”W x 6.3”D (6.4 x 20.3 x 16 cm)

Weight
4 lb. (1.8 kg)

Introduction

The latching Fiber Optic A/B Switch is a full-duplex, optical 2 port switch. It can be used to connect one workstation to two different networks (one at a time) or to other remote devices. A front panel rotary style knob allows the user to select which of two ports (A or B) is connected to the COMMON (C) port on the switch. The switch operates using a unique all-optical micro-mirror movement. When you turn the rotary knob on the front of the switch to select a network, the internal micro-mirror movement redirects the optical beam from one network port to another network port by rotating a miniature mirror. This technique eliminates the need to convert optical signals to electronic signals to for switching and it is therefore transparent to data rates and protocols.

This switch is perfectly suited for applications where a selected connection must be maintained in the event of a power failure. You should use a non-latching fiber optic switch like Model # SW1000A for applications requiring a switch that falls back to pre-determined connection during the loss of AC power. These switches use power only for switching the selected connection. No power is required to pass data through the switches.

Installation

Place the switch in a convenient stable location and connect the power supply unit to a reliable source of AC power that meets the requirements shown in the Specifications section of this manual. Then change the front panel rotary knob to switch between the different connection states to insure that the latching fiber optic switch modules are in a known position before connecting the switch to your fiber optic devices.

Connect the two fiber leads from the device to be shared to the common switch port labeled C. Connect the networks or other devices to the user selectable output ports labeled A and B.

Your installation of this switch is now complete.

Troubleshooting

If the Fiber Optic A/B Switch fails to operate, check the following before calling for technical support.

1. Ensure that the power supply connected to a power source and to the switch.
2. Check the fiber optic connectors for proper connections to the correct ports of the switch.
3. Operate the switch knob to verify that it's tightly secured to the switch shaft and does not spin loosely.
4. Verify the integrity of the fiber optic leads by replacing a suspect lead with a spare.

Notes:

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