



Market Central®

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8 Channel Secure Fiber Optic Switch

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1. Specifications

Connectors - (24) ST, (1) IEC320 male power input

Data Rates - Transparent to optical signal rates and formats

Switching Speed - 5 msec typical, 10 msec maximum

Sensitivity - 750 to 1450 nanometers

Optical Loss - 2.5 dB typical @ 1300 nm per FOTP-34 method B per channel

Compatibility - 62.5/125 μm multimode fiber

Crosstalk - -45 dB typical per FOTP-42

Grounding - None required

Operating Temperature - 14 to 149°F (-10 to +65°C)

Relative Humidity Tolerance - 10 to 95%, noncondensing

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

Power – 90 – 240 VAC 50/60 Hz

Size – 7” H x 19” W x 7” D

Weight - 9 lb.

2. Introduction

This 8 Channel Secure Fiber Optic Switch incorporates 8 full-duplex optical switch mechanisms controlled in banks of four by a two front-panel-mounted rotary A/B switches. It's used to share 8 fiber optic links between two fiber optic networks using 8 independent fiber optic switch mechanisms where each bank of 4 mechanisms is simultaneously actuated by one of two single controls.

The switch utilizes unique optical switching mechanisms. When you turn a knob on the front of the switch to select a port, the switch redirects a light beam from Port C (the “common” port) to either Port A **or** Port B by rotating a micro-miniature mirror. There is one mirror mechanism for each of the eight ports that is switched. The only electrical signal used is the DC power that rotates the mirrors.

3. Installation

Place the switch in a location that is relatively free from vibration and mechanical disturbances. Please follow this procedure of paragraph two below for of the eight channels to be connected to this switch.

Connect the first network connection to Port C fiber optic connectors. Connect the primary fiber link (of the two to be switched) to Port A. Connect the secondary link to Port B

Connect the AC line cord to a stable source of AC power.

4. Operation

Operation is easy. Simply turn the knob on the front panel that is associated with the channels that you wish to switch.

Turning the knob to "A" will route signals from Ports C to Ports A. Selecting "B" routes the signals from Ports C to Ports B.

The switch uses internal mirrors to switch between ports. Each mirror directs a light beam from Port C to Port A, or from Port C to Port B of each port. There's no optical-to-electrical conversion between your fiber optic links. The only electrical activity is the DC power that moves each mirror. That ensures your data's safety.

Power is applied internally to the switch mechanism when you select "B". If the switch loses power, or if you interrupt the power, the switch will automatically fall back to Port A.

You can leave the switch in a powered state indefinitely. It's not necessary to disconnect power from the switch when it's not in use.

5. Troubleshooting

5.1 Calling Your Supplier

If you determine that your Secure Fiber Optic Switch is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts.

Contact Market Central, Inc. at (412) 494-2800

Before you do, make a record of the history of the problem. We may be able to help you correct the problem without returning the switch. We'll be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular applications that, when used, appears to create the problem or make it worse.

5.2 Shipping and Packaging

If you need to transport or ship your switch:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the SecureSwitch for repair, make sure you include everything that came in the original package. Before you ship, contact Market Central, Inc. to receive a Return Materials Authorization (RMA) number.

Market Central, Inc.

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Federal Communications Commission (FCC) Statement

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