



**Market Central<sup>®</sup>**

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**412.494.2800** **CAGE 1BGJ7**

**Data DeadBolt<sup>®</sup>**  
**Secure Fiber Optic**  
**OFF/A/B Switch**  
with micro-mirror optical movements



**Model 5100619**

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## 1. Specifications

**Connectors** - (6) ST, (1) 3.5-mm 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** - 0.5 dB typical @ 1300 nm per FOTP-34 method B

**Compatibility** - 62.5/125  $\mu\text{m}$  multimode fiber

**Crosstalk** - -45 dB typical per FOTP-42

**Grounding** - None required

**Approvals** - UL and CE (power supply)

**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** - 120-VAC, 60-Hz wallmount power supply,  
5-VDC output

**Size** - 3.5”H x 19” W x 6.5” D

**Weight** - 7 lb. (1.8 kg)

## **2. Introduction**

The Secure Fiber Optic A/B/C Switch with OFF Position is a full-duplex optical switch. It's used to connect one workstation between two networks or remote devices and has an OFF position to inhibit communications between the host and remote devices.

The switch operates with a unique switching mechanism. When you turn the knob on the front of the switch to select a network, the switch redirects a light beam from Port A to Port B by rotating a gold-plated, spherical mirror. The only electrical signal used is the DC power that rotates this mirror.

## **3. Installation**

Place the switch in a location relatively free from vibration and mechanical disturbances.

Connect the workstation to Port C. Connect one remote device to Port A and the other to Port B. Note that the switch supports separate transmit and receive paths, so you must be consistent when connecting the fiber pairs to the switch.

## **4. Operation**

Operation is easy. Simply turn the knob on the switch front panel to route the signals.

Turning the knob to "A" will route signals from the workstation to the first remote device or network (Port A). Selecting "B" routes the signals from the workstation or the other remote device (Port B). Selecting OFF will inhibit optical connections between Port C and both Port A and Port B. No data will pass between Port C and the other ports.

The switch uses an internal mirror to switch between ports. The gold-plated spherical mirror directs a light beam from Port C to Port A, or Port C to Port

B. There's no optical-to-electrical conversion between your fiber optic networks. The only electrical activity is the DC power that moves the mirror. That ensures your data's safety.

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

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 A/B/C Switch with OFF Position 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. Your supplier will 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 switch for repair, make sure you include everything that came in the original package. Before you ship, contact Market Central, Inc. to get a Return Materials Authorization (RMA) number.

MARKET CENTRAL, INC.

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