



Market Central[®]
www.secureswitch.com

500 Business Center Drive Pittsburgh, PA 15205 USA
412.494.2800 **CAGE 1BGJ7**

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Data DeadBolt[®]
Latching Fiber Optic
A/B/C Switch ST



Part # 5100618 (leaded version)
6100618 (lead free version)

1. Specifications

Connectors - (4 pair) ST, (1) 3.5-mm power input (models with SC connectors also available)

Data Rates - Transparent to signal rates, wavelengths, & formats

Switching Speed - less than 1 sec typical

Sensitivity - 800 to 1600 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 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, 12 VDC output.

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)

2. Introduction

The Latching Secure Fiber Optic Switch is a full-duplex, optical 3 port switch. It can be used to connect one workstation between three different networks, or to other remote devices. A front panel rotary style knob allows the user to select which of three ports (A, B, or C) is connected to the “COMMON” port on the Latching Secure Fiber Optic Switch.

The switch operates with a unique internal switching mechanism. When you turn the rotary knob on the front of the switch to select a network, the internal switching mechanism redirects a light beam from one network port to the other network port by rotating a gold-plated, spherical mirror. This technique eliminates the need to convert between optical signals and electrical signals to do the switching, and is therefore transparent to data rates, wavelengths, and protocols.

Front panel-mounted LEDs indicate when Power has been applied to the switch, and which port (A, B, or C) is connected to the COMMON port.

3. Installation

Place the switch in a location relatively free from vibration and mechanical disturbances. Connect the workstation to the “COMMON” port on the switch. Connect up to three different networks or other devices to the “A”, “B”, and “C” ports on the switch. Note that the switch supports separate transmit and receive paths, so you must be consistent

when connecting the fiber pairs to the switch. The left position of the “A”, “B”, and “C” ports connects to the left position on the “COMMON” port. Likewise, the right position of the “A”, “B”, and “C” ports connects to the right position on the “COMMON” port.

Connect the DC power supply to the PWR jack on the rear of the switch, then plug the DC supply into a 120 VAC 60 Hz wall receptacle.

4. Operation

The Latching Secure Fiber Optic Switch uses internal mirrors to switch between ports. These mirrors direct the light beams between the Common port and the A, B, or C ports. The switch latches in the selected position and maintains that selection, even if the switch is powered off. Although the LED indicators will not glow, the switch will continue to pass data to the port that was last selected before power was lost.

When power is first applied, the Latching Secure Fiber Optic Switch will read the position of the front panel rotary knob, and then actuate the mirror mechanisms as needed to make the appropriate connection between the “COMMON” port and the selected network port (A, B, or C). The network connection can be switched between A, B, or C by moving the front panel rotary knob to the desired position. The Latching Secure Fiber Optic Switch will then switch to the selected port.

You can leave the Latching Secure Fiber Optic Switch in a powered state indefinitely. It isn’t necessary to disconnect power from the switch when it is not in use.

5. Troubleshooting

5.1 Calling Your Supplier

If you determine that your Latching 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. 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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