Nu Data Part Number NJ009

Secure Latching Fiber Optic Switch

1950 Swarthmore Avenue • Lakewood, NJ 08701 • (732) 942-1007 • Fax: (732) 905-5708

Contents

A non-latching version of this switch is also available.
It is commonly used as a fall-back switch.
Nu Data part number NJ004 may be used to order the non-latching switch.

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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 µm multimode fiber

Crosstalk - -45 dB typical per FOTP-42

Grounding - None required

Approvals - UL and CE (power supply)

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

Relative Humidity Tolerance - 10 to 95%, noncondensing

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

Power - 120-VAC, 60-Hz wall mount power supply, 5-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)

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2. Introduction

The Secure Fiber Optic Switch is a full-duplex optical switch. It's used to connect one workstation between two networks or 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's 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). The LED indicator associated with the selected port will glow whenever power is supplied to the switch.

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 either "A" or "B". If the switch loses power, or if you interrupt the power, the switch will remain in the last position selected before power was removed. Any attempt to select the other position while power is absent will be disregarded. Please note that the LED indicator will be extinguished when power is lost or removed even though the switch position is maintained.

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.

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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 Nu Data Customer Service at (732) 942-1007

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 Nu Data to obtain a Return Materials Authorization (RMA) number.