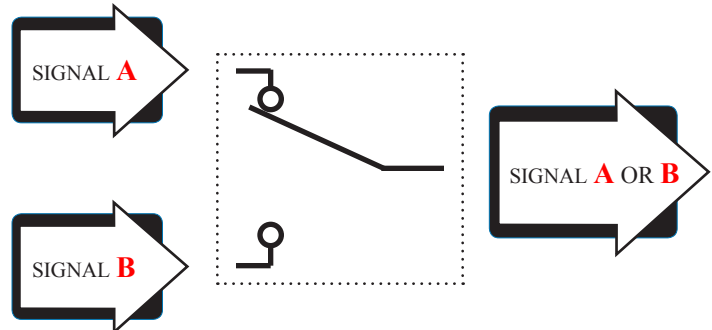## 2-Ch Fiber Protection Switch

SIGNAL **A**

SIGNAL **B**

SIGNAL **A** OR **B**

FEATURES:

- All-passive optical switch

- 2-Channel input

- Independent of signal format

- Compatible with Meridian's digital product line

- Auto/Manual front panel selection

- Singlemode operation

- ST or FC optical connectors

- Local LED status indicators to monitor critical system diagnostics

- Output relay for switch status

- SpectraSmart network management compatible

- Hot swappable cards

DESCRIPTION:

The SX-2FX, 2-ch fiber protection switch is a continuing expansion of Meridian's fiber transport products to provide improved fiber network security. This A/B protection switch card provides automatic or manual switching between two active fibers. When a loss of optical signal is detected, it will automatically switch to the alternate path in less than 10 msec. In addition, the user can override the switch to manually select one of the fiber paths. The switch is typically used at the receiving or head-end side to automatically switch the transmission path to the redundant fiber in the event a main fiber break. Upon detecting a signal loss, the switch will automatically switch to a known good fiber. The switching threshold can be set by the user to maximize the optical power budget available in the network. This switch has a number of front panel indicators to indicate the status each of the input fibers as well as the switch position. This switch is latching so it will retain its state during a loss of electrical power. An internal microcontroller ensures that the switch does not switch to the opposite state on a power-up. This switch can also be used with bi-directional information such as camera PTZ control and video conferencing systems.

The manual switch on the front panel allows the user to force the optical switch to either the A or B position or allow it to operate automatically by monitoring the status of the input fibers. A Form-C relay provides a contact output indicating the status of the switch.

The functionality of this card is further enhanced by its compatibility with Meridian's PC based SpectraSmart network Management and remote diagnostic software system. SpectraSmart monitors the operating parameters of the card and allows the user to remotely select the optical transmission path as well as change the switching threshold, among other performance monitors. See SpectraSmart brochure for additional details.

MARKETS:

√   Security and Surveillance
√   Pro Audio/Video
√   Broadcast
√   Video/Audio/Data Transport Systems

CONFIGURATIONS:

The SX-2FX card is available as a 1-slot rack card that can be installed in all of the Meridian card chassis. This product can be easily converted to a standalone module with the SR-500 or SR-1000/1001 chassis.

SPECIFICATIONS:

Optical

Wavelength range:	1260nm to 1610nm
Insertion loss:	1.5dB (typical), 2.5dB (max)
Return loss	50dB
Channel isolation	55dB
Repeatability	+/- 0.02dB (typical)
Polarization dependent loss (PDL)	0.1dB
Switching speed	5 msec (typical), 10msec (max)
Switching lifetime	10 million cycles
Optical input range	-35dBm to +5dBm

Power *

Card	1 Watt

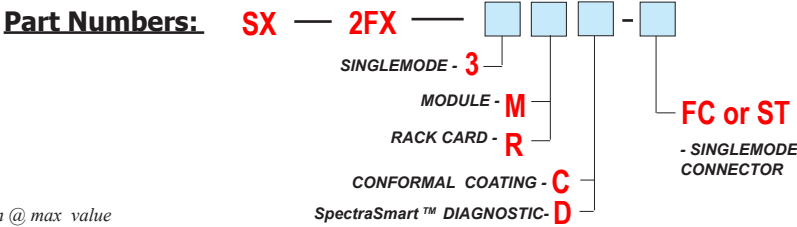## Indicators (LEDs)

Power	Green
Diagnostic	Green (OK), Red (alarm)
Port A	Green (Active), Red (alarm)
Port B	Green (Active), Red (alarm)
Manual	Green (Auto), Red (Manual), Dual Green/Red (PC)

Connectors

Alarm	Screw Terminal
Input Status	Screw Terminal
Optical	FC or ST (three connectors)
Power	See SR Series Chassis for Details

Physical

Dimensions (Card)	160 mm (6.3") L, 127 mm (5") W 20mm (0.80") W
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

Enviromental

Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

MTBF	>120,000 hours @ Ground Fix 35°C per MIL217F

Part Numbers: SX — 2FX — ☐ ☐ ☐ - ☐

SINGLEMODE - **3**

MODULE - **M**

RACK CARD - **R**

CONFORMAL COATING - **C**

SpectraSmart ™ DIAGNOSTIC- **D**

FC or ST

- SINGLEMODE CONNECTOR

* Due to variations of drivers and diagnostic options, power shown @ max value

FIBER-OPTIC SIGNAL **A**

FIBER-OPTIC SIGNAL **B**

FIBER-OPTIC SIGNAL **A** OR **B**

SX-2SF-3
Fiber-Optic Switch

OPTICAL:

Fiber Type/Size (um)	Min. Optical Output (dBm)	Max. Optical Output (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector
Singlemode (Laser) 9 / 125	-35	+5	40	1260 to 1610	ST, FC