

FSXpert™ Optical AB Protection Switch



Features:

- Automatic, remote, or manual operation
- Main and backup signals monitored
- User-set switching threshold
- 850/1310 (MM) and 1310/1550 (SM) bandpass
- -48 Vdc operation
- Single, Tandem, or Dual configuration

Only AB Protection Switch in the market to include optical power meter capabilities!

Call us for more details...



FSXpert™ Optical AB Protection Switch

Description

The FSXpert Optical A/B Protection Switch is a continuation of Alcon's FSXpert system. The A/B Protection Switch module may be installed in any FSXpert system chassis and used in conjunction with other FSXpert modules.

The A/B Protection Switch module provides automatic or manual switching between two fiber lines. When a loss of optical signal is detected, it will switch to the alternate path in less than 8 msec. The switch is typically used at the receiving end to switch a transmission to a spare fiber. Upon detecting a signal loss, the switch will automatically switch to a known good fiber. The switching threshold is set by the user to maximize the optical power budget available in the user's network.

The dual optical monitors allow the user to know immediately if the alternate fiber has lost its optical signal. The 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.

A 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 input fibers. The manual switch has a locking toggle to prevent accidental switching. All of the status indicators are also available as relay contact closures on the rear power connector.

Application

11/07 • 8322000C A/B Switch

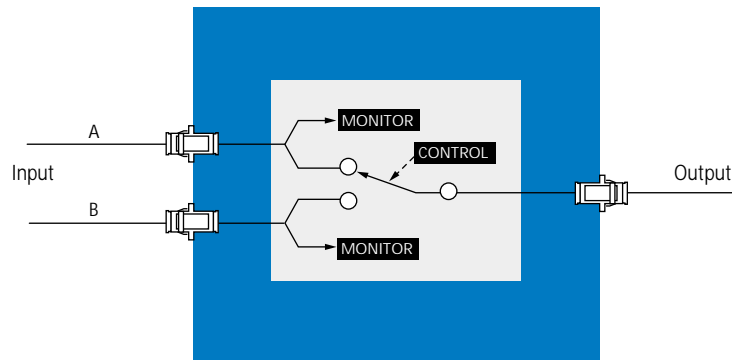


Figure 1
A/B Protection Switch Schematic

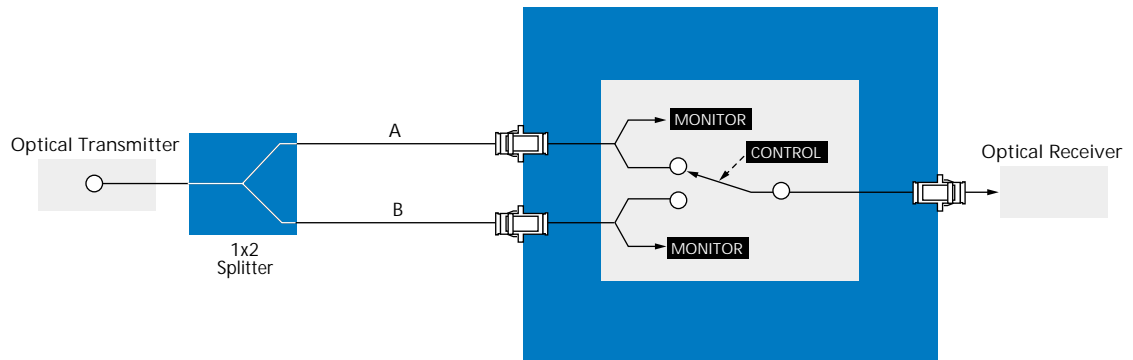


Figure 2
Sample Application of A/B Protection Switch



FSXpert™ Optical AB Protection Switch

Ordering Information

11/07 • 832200C A/B Switch

Catalog Number
 AB- - - -

Module Option:

A1	Single AB Switch All front Adapters
A2	Dual AB Switch Front and Rear Adapters
B2	Dual Tandem AB Switch Front and Rear Adapters
C2	Dual AB Switch All front Adapters (with LX.5/LC Connectors)
D1	Single AB Switch with Splitter Front and Rear Adapters

Splitter (Module Option D1):

Leave Blank	No Splitter
XX	Splitter Ratio
50	50/50 Ratio
90	90/10 Ratio

Multimode Options:

Leave Blank	SM
MM-85-50	MM 850 50/125UM
MM-85-62	MM 850 62.5/125UM
MM-13-50	MM 1310 50/125UM
MM-13-62	MM 1310 62.5/125UM

Connector Style:

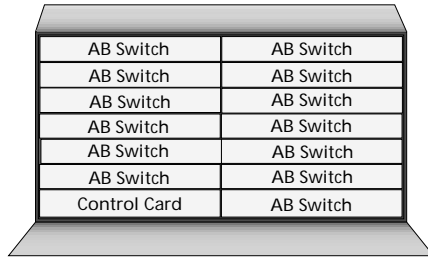
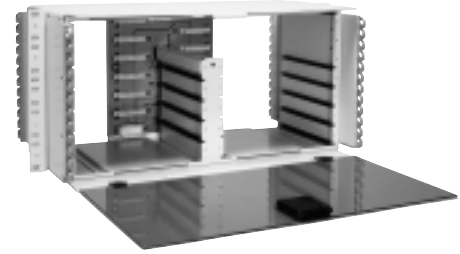
USC	SC UPC
ASC	SC APC
UFC	FC UPC
AFC	FC APC
UST	ST UPC
ULC	LC UPC
ALC	LC APC
ULX	LX.5 UPC
ALX	LX.5 APC
AE2	E2000 APC
AF3	F3000 APC



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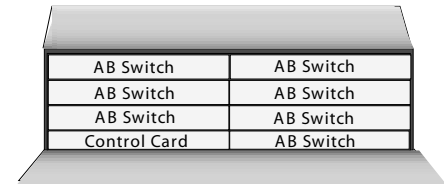
Chassis Information

The FSXpert chassis provides power and communications through a backplane to the FSXpert modules. The chassis is available in several configurations. It can contain all AB switches, or a combination of AB switches and other modules.



Catalog Number: FSX-CHAS-5U-14S

Description: FSXpert chassis with 14 slots consisting of one single slot for a controller and 13 single slots for FSXpert modules.



Catalog Number: FSX-CHAS-3U-8S

Description: FSXpert chassis with 8 slots consisting of one single slot for a controller and 7 single slots for FSXpert modules.

Ordering Notes: All chassis include mounting brackets for installation into standard 19- or 23-inch racks. Power connectors are also included. Mounting brackets for 600 mm rack mounting are also available, but must be ordered separately. Vertical cable guides (VCGs) are optional and must be ordered separately.

Chassis Specifications

ENVIRONMENTAL

Operating Temperature: 41°F to +104°F (5°C to +40°C)
Storage Temperature: -40°F to +160°F (-40°C to +70°C)
Humidity: 5% to 95%, non-condensing

POWER

Input Voltage: -40 to -60 Vdc; -48 Vdc nominal (A and B Feed)
Input Current: 1.5 Amps maximum @ -48 Vdc
Input Power: 216 watts maximum per chassis

PHYSICAL

Dimensions

Chassis

3U: 5.25" x 17.5" x 10.4" (13.34 x 44.45 x 26.42 cm)
5U: 8.75" x 17.5" x 10.4" (22.23 x 44.45 x 26.42 cm)

11/07 • 8322000C A/B Switch



FSXpert™ Optical AB Protection Switch

Specifications

ELECTRICAL

Input Voltage:	-40 to -60 Vdc
Input Current	
Quiescent state:	30 mA @-48 Vdc
During switching:	110 mA dual switch, 70 mA single switch @-48 Vdc

OPTICAL

Wavelength:	1290 to 1330 nm, 1530 to 1570 nm
Insertion Loss *	
5% Tap:	1.9 dB maximum 1.2 dB typical
1% Tap:	1.7 dB maximum 1.0 dB typical
Return Loss (both ways) *:	50 dB minimum
Isolation:	-60 dB maximum
Repeatability:	±0.05 dB maximum ±0.03 dB typical
Polarization Dependent Loss (PDL):	0.3 dB maximum
Switching Speed:	8 msec max, 5 msec typical (20 msec max in Auto Mode)
Switching Lifetime:	10 million cycles
Optical Range	
5% Tap:	-5 to -48 dBm
1% Tap:	+1 to -40 dBm
Resolution:	<0.1 dB

ENVIRONMENTAL

Operating Conditions:	5°C to 40°C
Storage Conditions:	-40°C to 70°C
	5% to 95% relative humidity, non-condensing

AGENCY COMPLIANCE

Safety:	UL1459 / CSA 22.2 / EN60950 (CE)
EMC:	FCC Part 15 Subpart B, Class A/EN50082

* Includes connector losses

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