

LightBend™ 1x8 Fiber OptoMechanical Fiberoptic Switch

Product Description

The LB Series 1x8 fiber optic switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved using a patent pending opto-mechanical configuration activated via an electrical control signal. Latching operation preserves the selected optical path after the drive signal has been removed. The switch has integrated electrical position sensors, and the new material based advanced design significantly reduces moving part position sensitivity, offering unprecedented high stability as well as unmatched low cost.

Performance Specifications

LB Series 1x8 Switch	Min	Typical	Max	Unit
Operation Wavelength	1260-1360, 1510-1610			nm
Insertion Loss ¹		1.0	1.2	dB
Wavelength Dependent Loss			0.15	dB
Polarization Dependent Loss			0.15	dB
Return Loss	55			dB
Cross Talk	50			dB
Switching Time		2	10	ms
Repeatability		0.05	0.10	dB
Durability		10 Million		Cycle
Operating Voltage	4.5	5	6	V
Voltage Pulse Width (Latching Type)	10	50	1000	ms
Switching Type	Latching / Non-Latching			
Operating Temperature	-5		70	°C
Optical Power Handling		300	500	mW
Storage Temperature	-40		85	°C
Fiber Type	SMF-28			
Package Dimension	111.0L x 48.3W x 10.0L			mm

Note:

1. Exclude connectors.

Features

- Unmatched Low Cost
- Low Optical Distortions
- High Isolation
- High Reliability
- Epoxy-Free Optical Path

Applications

- Channel Blocking
- Configurable Add/Drop
- System Monitoring
- Instrumentation

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Electrical Driving Requirements

Agiltron offer an computer control kit with TTL and RS232 interface and Windows™ GUI

Latching Type

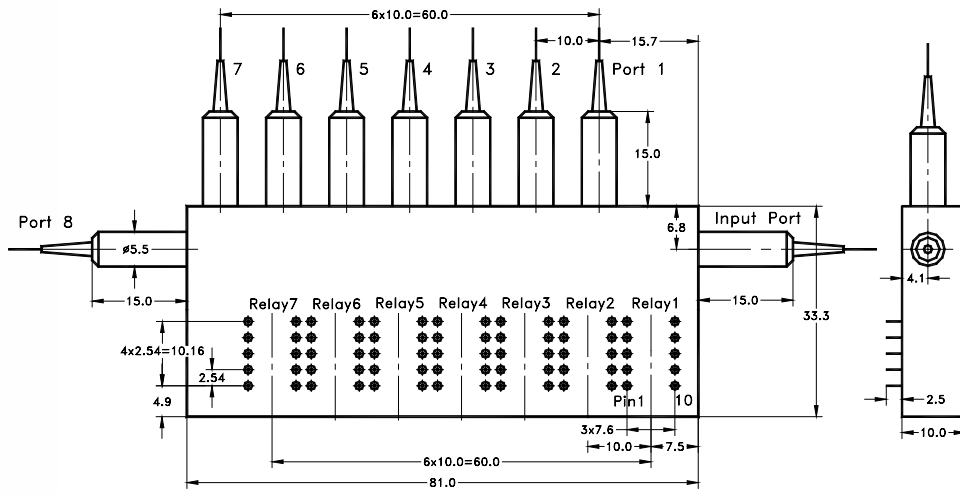
Optical Path	Relay	Electric Drive		Status Sensor					
		Pin 1	Pin 10	Pin 5	Pin 6	Pin 2-3	Pin 3-4	Pin 7-8	Pin 8-9
Input → Port 1	Relay1	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 2, 3, 4, 5, 6, 7	N/A	N/A	N/A	N/A				
Input → Port 2	Relay 1	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 2	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 3, 4, 5, 6, 7	N/A	N/A	N/A	N/A				
Input → Port 3	Relay1, 2	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 3	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay4, 5, 6, 7	N/A	N/A	N/A	N/A				
Input → Port 4	Relay 1, 2, 3	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 4	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 5, 6, 7	N/A	N/A	N/A	N/A				
Input → Port 5	Relay 1, 2, 3, 4	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 5	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 6, 7	N/A	N/A	N/A	N/A				
Input → Port 6	Relay1, 2, 3, 4, 5	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 6	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 7	N/A	N/A	N/A	N/A				
Input → Port 7	Relay 1, 2, 3, 4, 5, 6	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close
	Relay 7	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
Input → Port 8	Relay 1, 2, 3, 4, 5, 6, 7	GND	5V Pulse	N/A	N/A	Close	Open	Open	Close

Non-Latching Type

Optical Path	Relay	Electric Drive		Status Sensor					
		Pin 1	Pin 10	Pin 5	Pin 6	Pin 2-3	Pin 3-4	Pin 7-8	Pin 8-9
Input → Port 1	Relay1	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 2, 3, 4, 5, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 2	Relay 2	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 3, 4, 5, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 3	Relay 3	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 4, 5, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 4	Relay 4	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 3, 5, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 5	Relay 5	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 3, 4, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 5	Relay 5	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 3, 4, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 6	Relay 6	5V Pulse	GND	N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 3, 4, 5, 7	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 7	Relay 7	5V Pulse		N/A	N/A	Open	Close	Close	Open
	Relay 1, 2, 3, 4, 5, 6	No Power		N/A	N/A	Close	Open	Open	Close
Input → Port 8	Relay 1, 2, 3, 4, 5, 6, 7	No Power		N/A	N/A	Close	Open	Open	Close

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Mechanical Dimension



Ordering Information

LBSW-	Type	Wavelength	Grade	Package Type	Fiber Type	Fiber Length	Connector
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x8=18 8x1=81 Special=00	1310=3 1550=5 1310/1550=8 Special=0	Latch=1 Non-latch=2	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SMF-28=1 Special=0 Bare fiber=1 900um loose tube=3 Special = 0	0.25m=1 0.5m=2 1.0m=3 Special=0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0