

1x8 Mechanical Optical Switch

The Series 1x8 fiber optic switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved by using a patent pending optical-to-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 an unmatched low cost. Electronic driver is available for this series of switches.

Features

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

Applications

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

Specifications

Operating Wavelength	1260~1620nm (SM) 850nm(MM)	Insertion Loss	≤1.2dB
Wavelength Dependent Loss	≤0.35dB	Polarization Dependent Loss	≤0.05dB
Temperature Dependent Loss	≤0.25dB	Return Loss	SM≥50dB MM≥30dB
Cross Talk	SM≥55dB MM≥35dB	Switch Time	≤8ms
Repeatability	≤±0.02dB	Durability	≥10 ⁷ times
Operating Voltage	3 or 5V	Switch Type	Non-Latching/Latching
Operating Temperature	-20~+70°C	Storage Temperature	-40~+85°C
Optical Power	≤500mW	Dimension	35.0L×35.0W×9H mm

Pin Configurations

Latching Type:

Type	Optical Route	Relay	Electric Drive				State Sensor			
			Pin 1	Pin 5	Pin 6	Pin 10	Pin 2-3	Pin 3-4	Pin 7-8	Pin 8-9
1x8	Input- Port 1(Black)	Relay1	--	--	GND	V+	Close	Open	Open	Close

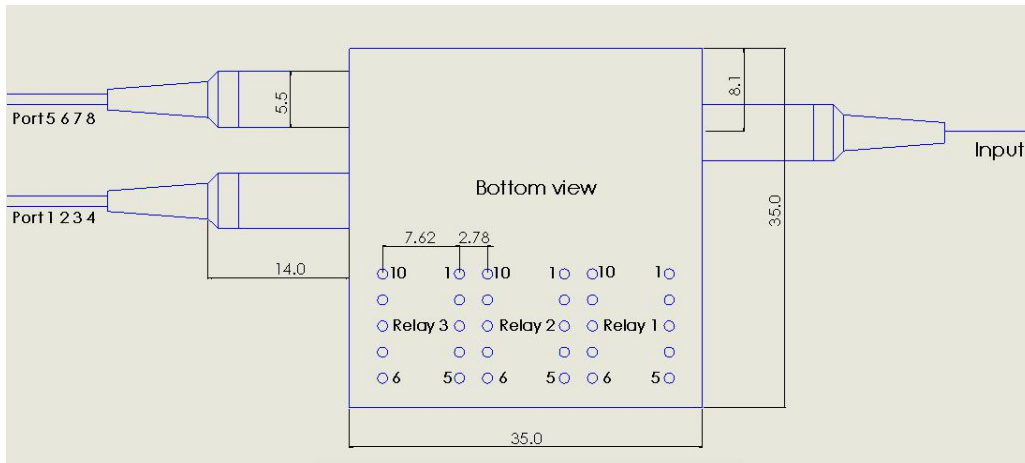
		Relay2	--	--	GND	V+	Close	Open	Open	Close
		Relay3	V+	GND	--	--	Open	Close	Close	Open
	Input- Port 2 (red)	Relay1	--	--	GND	V+	Close	Open	Open	Close
		Relay2	V+	GND	--	--	Open	Close	Close	Open
		Relay3	--	--	GND	V+	Close	Open	Open	Close
	Input- Port 3(blue)	Relay1	--	--	GND	V+	Close	Open	Open	Close
		Relay2	--	--	GND	V+	Close	Open	Open	Close
		Relay3	--	--	GND	V+	Close	Open	Open	Close
	Input- Port 4(White)	Relay1	--	--	GND	V+	Close	Open	Open	Close
		Relay2	V+	GND	--	--	Open	Close	Close	Open
		Relay3	V+	GND	--	--	Open	Close	Close	Open
	Input- Port 5(Black)	Relay1	V+	GND	--	--	Open	Close	Close	Open
		Relay2	--	--	GND	V+	Close	Open	Open	Close
		Relay3	V+	GND	--	--	Open	Close	Close	Open
	Input- Port 6 (red)	Relay1	V+	GND	--	--	Open	Close	Close	Open
		Relay2	V+	GND	--	--	Open	Close	Close	Open
		Relay3	--	--	GND	V+	Close	Open	Open	Close
	Input- Port 7(blue)	Relay1	V+	GND	--	--	Open	Close	Close	Open
		Relay2	--	--	GND	V+	Close	Open	Open	Close
		Relay3	--	--	GND	V+	Close	Open	Open	Close
	Input- Port 8(White)	Relay1	V+	GND	--	--	Open	Close	Close	Open
		Relay2	V+	GND	--	--	Open	Close	Close	Open
		Relay3	V+	GND	--	--	Open	Close	Close	Open

Non-Latching Type:

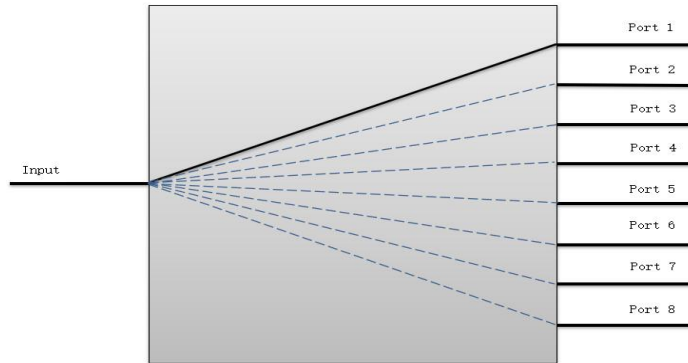
Type	Optical Route	Relay	Electric Drive				State Sensor			
			Pin 1	Pin 5	Pin 6	Pin 10	Pin 2-3	Pin 3-4	Pin 7-8	Pin 8-9
1x8 Non-Latching	Input- Port 1(Black)	Relay1	--	--	--	--	Close	Open	Open	Close
		Relay2	--	--	--	--	Close	Open	Open	Close
		Relay3	V+	--	--	GND	Open	Close	Close	Open
	Input- Port 2 (red)	Relay1	--	--	--	--	Close	Open	Open	Close
		Relay2	V+	--	--	GND	Open	Close	Close	Open
		Relay3	--	--	--	--	Close	Open	Open	Close
	Input- Port 3(blue)	Relay1	--	--	--	--	Close	Open	Open	Close
		Relay2	--	--	--	--	Close	Open	Open	Close
		Relay3	--	--	--	--	Close	Open	Open	Close
	Input- Port 4(White)	Relay1	--	--	--	--	Close	Open	Open	Close

		Relay2	V+	--	--	GND	Open	Close	Close	Open
		Relay3	V+	--	--	GND	Open	Close	Close	Open
	Input- Port 5(Black)	Relay1	V+	--	--	GND	Open	Close	Close	Open
		Relay2	--	--	--	--	Close	Open	Open	Close
		Relay3	V+	--	--	GND	Open	Close	Close	Open
	Input- Port 6 (red)	Relay1	V+	--	--	GND	Open	Close	Close	Open
		Relay2	V+	--	--	GND	Open	Close	Close	Open
		Relay3	--	--	--	--	Close	Open	Open	Close
	Input- Port 7(blue)	Relay1	V+	--	--	GND	Open	Close	Close	Open
		Relay2	--	--	--	--	Close	Open	Open	Close
		Relay3	--	--	--	--	Close	Open	Open	Close
	Input- Port 8(White)	Relay1	V+	--	--	GND	Open	Close	Close	Open
Relay2		V+	--	--	GND	Open	Close	Close	Open	
Relay3		V+	--	--	GND	Open	Close	Close	Open	

Mechanical Dimensions (Unit:mm)



Optical Route



Ordering Information

RD-FSW	-1x8-	-Wavelength-	-Switch Type-	-Voltage-	-Fiber Type-	-Package-	-Fiber length-	-Connector
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		1060=1	Latching=1	3V=3	SM28=1	Bare	0.25m=1	None=1
		C+L=2	Non-latching=2	5V=5	50/125=5	fiber=1	0.5m=2	FC/PC=2
		1310=3	MINI Latching=3	Special=0	62.5/125=6	900um	1.0m=3	FC/APC=3
		1410=4	MINI Non-latching=4		Special=0	tube=3	Special=0	SC/PC=4
		1550=5	Special=0			Special=0		SC/APC=5
		650=6						ST/PC=6
		780=7						LC/PC=7
		1260-1610=A						Duplex
		1310/1550=9						LC=8
		850=8						Special=0
		Special=0						