

Mini 1x8 Mechanical Optical Switch

GEZHI Series Mini 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 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 an unmatched low cost.

Features

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

Application

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

Performance

1x8 Mini Switch	Unit	Min	Typical	Max
Operation Wavelength	nm	1260 ~ 1610nm		
Insertion Loss ¹	dB	0.5	0.8	1.2
Wavelength Dependent Loss	dB		0.2	0.4
Polarization Dependent Loss	dB	0.05	0.1	0.15
Return Loss	dB	>55		
Cross Talk	dB	>50		
Switching Time	ms		3	10
Repeatability		<±0.05		
Operating Voltage	VDC	3V or 5V		
Voltage Pulse Width (Latching)	ms	Typical: 20		
Operating Current ⁹	Latching	<26		
	Non-Latching	<36		
Switching Type		Latching / Non-Latching		
Operating Temperature ²		-5~+70		
Optical Power Handling	mW	Typical: 300mW Max:500mW		
Storage Temperature	°C	-40~+85		
Fiber Type		SMF-28		
Package Dimension	mm	67L x 25W x 10H		

Electrical Driving
Latching

Optical Path	Relay	Electrical Drive			Status Sensor		
		Pin 1	Pin 8	Pin 2-3	Pin 3-4	Pin 5-6	Pin 6-7
Input → Port 1	Relay 1	5V Pulse	GND	Open	Close	Close	Open
	Relay 2,3,4,5,6,7	N/A	N/A	--	--	--	--
Input → Port 2	Relay 1	GND	5V Pulse	Close	Open	Open	Close
	Relay 2	5V Pulse	GND	Open	Close	Close	Open
	Relay 3,4,5,6,7	N/A	N/A	--	--	--	--
Input → Port 3	Relay 1, 2	GND	5V Pulse	Close	Open	Open	Close
	Relay 3	5V Pulse	GND	Open	Close	Close	Open
	Relay 4,5,6,7	N/A	N/A	--	--	--	--
Input → Port 4	Relay 1,2,3	GND	5V Pulse	Close	Open	Open	Close
	Relay 4	5V Pulse	GND	Open	Close	Close	Open
	Relay 5,6,7	N/A	N/A	--	--	--	--
Input → Port 5	Relay 1,2,3,4	GND	5V Pulse	Close	Open	Open	Close
	Relay 5	5V Pulse	GND	Open	Close	Close	Open
	Relay 6,7	N/A	N/A	--	--	--	--
Input → Port6	Relay 1,2,3,4,5	GND	5V Pulse	Close	Open	Open	Close
	Relay 6	5V Pulse	GND	Open	Close	Close	Open
	Relay 7	N/A	N/A	--	--	--	--
Input → Port7	Relay 1,2,3,4,5,6	GND	5V Pulse	Close	Open	Open	Close
	Relay 7	5V Pulse	GND	Open	Close	Close	Open
Input → Port8	Relay 1,2,3,4,5,6,7	GND	5V Pulse	Close	Open	Open	Close

Non-Latching

Optical Path	Relay	Electrical Drive			Status Sensor			
		Pin 1	Pin 8	Pin 2-3	Pin 3-4	Pin 5-6	Pin 6-7	
Input → Port 1	Relay 1	5V Pulse	GND	Open	Close	Close	Open	
	Relay 2,3,4,5,6,7	No Power			Close	Open	Open	Close
Input → Port 2	Relay 2	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,3,4,5,6,7	No Power			Close	Open	Open	Close
Input → Port 3	Relay 3	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,2,4,5,6,7	No Power			Close	Open	Open	Close
Input → Port 4	Relay 4	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,2,3,5,6,7	No Power			Close	Open	Open	Close
Input → Port 5	Relay 5	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,2,3,4,6,7	No Power			Close	Open	Open	Close
Input → Port 6	Relay 6	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,2,3,4,5,7	No Power			Close	Open	Open	Close
Input → Port7	Relay 7	5V Pulse	GND	Open	Close	Close	Open	
	Relay 1,2,3,4,5,6	No Power			Close	Open	Open	Close
Input → Port8	Relay 1,2,3,4,5,6,7	No Power			Close	Open	Open	Close

