

OSW42XX & MSW42XX Series

Optical Switch

Version 1.5

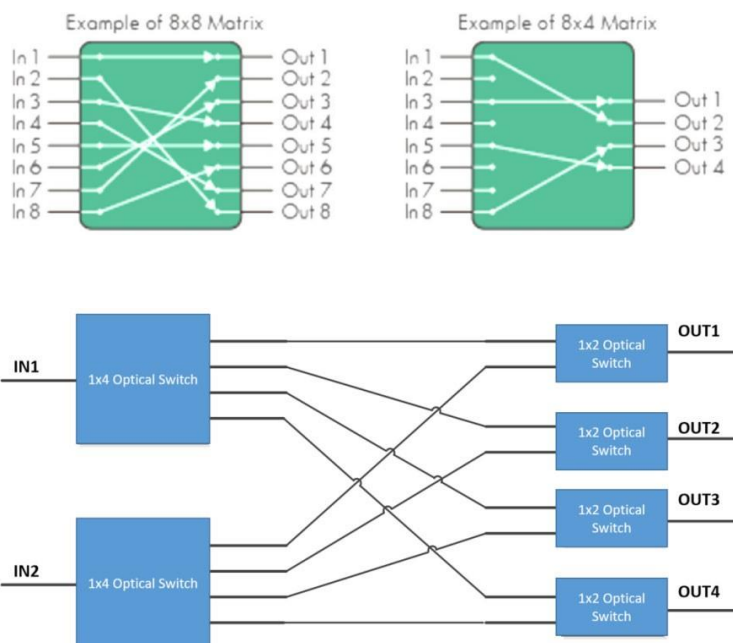


Product Description

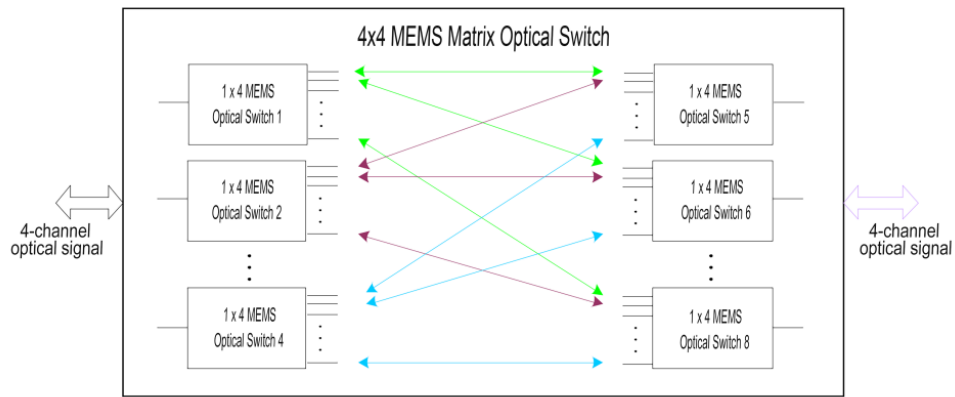
OSW42XX and MSW42XX optical switches have extremely low loss, compact size and fast switching speed. The equipment supports USB and LAN interfaces, provides instruction set and callable dynamic link library, facilitates the development of automatic test system, and is widely used in automatic testing of optical components and subsystems. Optical switch can avoid repeated connection in the measurement process of automatic test equipment, which is crucial to the automation process. Low IL and PDL and high repeatability ensure that the switch has the least influence on the measurement accuracy. A typical use case is 1x4 switch switching between multiple instruments, such as power meter, DCA or BERT.

Key Features

- Compact instruments combine and integrate multiple functions, reducing capital expenditure and floor space;
- Fast and accurate setting to improve throughput;
- Ultra-low insertion loss and excellent optical performance;
- Support LAN and USB remote control;



Optical path diagram of 2x4 multichannel optical switch



Optical path structure diagram of MEMS matrix optical switch

Technical Specification

Parameter	OSW420X	OSW422X
Mode	Single-mode	Multi-mode
Number of channels	1xN	1xN
Fiber type	9/125 μm	50/125 μm
Wavelength range	1260~1650 nm	850 \pm 20 nm
Insertion loss	Max \leq 1.2 dB	Max \leq 1.5 dB
Return loss	SM \geq 45 dB	MM \geq 35 dB
Wavelength dependence loss	\leq 0.25 dB	
Polarization dependence loss	\leq 0.1 dB	
Repeatability	$\leq \pm 0.05$ dB	
Maximum withstand optical power	\leq 500 mW	
Switching time	<10 ms	
Connector type	FC/UPC (user-customizable)	
Switching life	$\geq 10^7$ times	
Working temperature	0 $^{\circ}$ C ~ 55 $^{\circ}$ C	
Storage environment	-20 $^{\circ}$ C ~ 70 $^{\circ}$ C	
Power	LINE: 85-250VAC, 50/60Hz, 25W FUSE: T2AL 250VAC	
Dimensions (D x W x H) mm	266 \times 407 \times 90 (channel 1, 2, 4 and 8)	
Communication interface	USB and LAN	
Equipment weight	12 kg	
Heat engine time	10 minutes	

Matrix switch	MSW42224	MSW42044	MSW42048	MSW42088	MSW420416
Channel	2x4 multi-	4x4 single-	4x8 single-	8x8 single-	4x16 single-

	mode	mode	mode	mode	mode
Connector type	FC/PC		FC/APC or FC/UPC		
Fiber aperture	50/125 μm		9/125 μm		
Wavelength	850 \pm 20 nm		1250~1650 nm		
Insertion loss	Max \leq 2.5 dB		Max \leq 2.5 dB		
Return loss	MM \geq 35 dB		SM $>$ 45 dB		
Dynamic range	NA		-25 dBm to +20 dBm		
Noise interference	\leq -70 dB		$<$ -50 dB		
Repeatability	\leq 0.1 dB		$\leq \pm$ 0.15 dB		
Accuracy	NA		+/-1.0 dBm		
Connection stability	NA		+/-0.1 dB		
Polarization dependence loss	NA		Max \leq 0.1 dB (C+L Bands)		
Wavelength dependence loss	NA		Max \leq 0.3 dB (C+L Band)		
Maximum incoming light power	+27 dBm				
Switching life	$\geq 3 \times 10^7$		$> 10^8$ cycles		
Switching time	< 15 ms		< 30 ms		
Working temperature	-5 ~ 60 $^{\circ}\text{C}$				
Storage environment	-20 ~ 70 $^{\circ}\text{C}$				
Power	LINE: 85-250VAC, 50/60Hz, 25W FUZE: T2AL 250VAC				
Dimensions (D x W x H) mm	266 \times 407 \times 90 (channel 1, 2, 4 and 8) 490 \times 407 \times 140 (channel 16,32)				
Communication interface	USB and LAN				
Equipment weight	12 kg				
Heat engine time	10 minutes				

Ordering information

Product model	Product description
OSW420X	1xN single-mode optical switch
OSW422X	1xN multi-mode optical switch
MSW420XX	Single-mode matrix optical switch
MSW422XX	Multi-mode matrix optical switch
MSW42024	2x4 single-mode matrix optical switch
MSW42044	4x4 single-mode matrix optical switch

MSW42048	4x8 single-mode matrix optical switch
MSW42088	8x8 single-mode matrix optical switch
MSW420416	4x16 single-mode matrix optical switch

Options

Connector options	
021	FC/UPC
0222	FC/APC
Default	FC/UPC

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*This information is subject to change without notice.