



FAST FIBER OPTIC 1x24 SWITCH

OVERVIEW

The SW fiber optic switch is a very fast opto-mechanical switch based on the MEMS technology. The component makes an optical connection between an optical port and either one of 24 input or output lines. The highly reliable switching mechanism use integrated micromirrors and features below 1 ms switching time and below 2.0 dB insertion loss. The switch is powered by a 5 V supply voltage. A 5 V TTL or CMOS drive signal is used to control the switching state.

The switching mechanism offers the reliability of a solid state device; it neither wears out nor degrades over time. Even after billions of cycles the switching quality stays constant. The small package withstands rugged environments and is well suited for direct mounting on printed circuit boards.

FEATURES

- reliable
- 1.5 dB insertion loss
- 1 ms response time
- 60 dB crosstalk
- miniature size
- non-latching

APPLICATIONS

- Optical Reconfiguration
- Instrumentation
- Provisioning

ORDERING INFORMATION

SW1x24-9N (smf 28, single mode fiber) SW1x24-50N (50 um core, graded index) SW1x24-62N (62.5 um core, graded index) Contact: Sercalo microtechnology ltd Landstrasse 151, 9494 Schaan Principality of Liechtenstein Tel. +423 237 57 97 Fax. +423 237 57 48 www.sercalo.com e-mail:info@sercalo.com



TECHNICAL SPECIFICATIONS (Single Mode Variant)								
	Unit	Min	Тур	Max				
Switch								
Wavelength Range	nm	1250		1650				
Insertion Loss	dB		1.4	2.0				
Crosstalk	dB		60	50				
Backreflection	dB		55	45				
Polarisation Dependent Loss	dB			0.25				
Repeatability ¹	dB			0.002				
Switching Time	ms		0.5	1				
Switching Voltage	V			5				
Fiber Pigtail		SMF28 or						
	μm		50/125/900					
			62/125/900					
Durability	cycles		no wear out					
Package								
Power Consumption	mW		200					
Operation Temperature	°C	0		70				
Storage Temperature	°C	-40		85				
Size (L x W x H)	mm	206 x 105 x 10						
¹ value for constant temperature and polarisation								

ELECTRICAL CONNECTION

Optical port selection table

	•	_		-	
1	2	3	4	5	Port
0	Х	5	0	5	1
0	Х	5 5	5	0	2 3
0	Х		5	5	3
0	Х	5	0	0	4
5	0	5	0	5	5
5 5 5	0	5	5 5	0	6
5	0	5		5	7
5	0	5 5 5 5 5 0	0	0	8
5	5	0	0	5	9
5	5	0	5	0	10
5 5 5	5 5 5 5 5 5 5 5	0	5	5 0	11
5	5	0	0	0	12
	5	5 5 5	0	0	13
5	5	5	5	5	14 15 16 17
5	5	5	5	0	15
5	5 0	5 0	0	5	16
5	0		0	0	17
5 5	0	0	5	5	18
5	0	0	5	0	19
5	0	0 0	0	5	20
0	Х		0	0	21
0	Х	0	5	5	22
0	Х	0	5	0	20 21 22 23 24
0	Х	0	0	5	24

 $\begin{array}{l} 0 = 0 \ V \ (TTL \ or \ CMOS \ level) \\ 5 = 5 \ V \ (TTL \ or \ CMOS level) \\ x = 0 \ V \ or \ 5 \ V \end{array}$





