FAST
FIBER OPTIC
1x24 SWITCH

Multimode Variant

OVERVIEW

The **sercalo** 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 5 ms switching time and below 2.5 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 miniature package withstands rugged environments and is well suited for direct mounting on printed circuit boards.

The switch is built by cascading 1x2 switches which are qualified according to Telcordia GR1221.
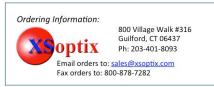
APPLICATIONS

- Optical Reconfiguration

- Instrumentation

- Provisioning

ORDERING INFORMATION
SW1x24-50N (50 um core, graded index)
SW1x24-62N (62.5 um core, graded index)

FEATURES

- reliable

- 1.2 dB insertion loss

- 5 ms response time

- 60 dB crosstalk

- miniature size

- non-latching

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TECHNICAL SPECIFICATIONS *(Multimode Variant)*

	Unit	Min	Typ	Max
Switch				
Wavelength Range	nm	700		1700
Insertion Loss	dB		1.2	2.0
Crosstalk	dB		60	45
Backreflection	dB		45	35
Polarisation Dependent Loss	dB			0.25
Repeatability[1]	dB			0.002
Switching Time	ms		2	20
Switching Voltage	V			5
Fiber Pigtail	µm		50/125/900 or 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	x	5	0	5	1
0	x	5	5	0	2
0	x	5	5	5	3
0	x	5	0	0	4
5	0	5	0	5	5
5	0	5	5	0	6
5	0	5	5	5	7
5	0	5	0	0	8
5	5	0	0	5	9
5	5	0	5	0	10
5	5	0	5	5	11
5	5	0	0	0	12
5	5	5	0	0	13
5	5	5	5	5	14
5	5	5	5	0	15
5	5	5	0	5	16
5	0	0	0	0	17
5	0	0	5	5	18
5	0	0	5	0	19
5	0	0	0	5	20
0	x	0	0	0	21
0	x	0	5	5	22
0	x	0	5	0	23
0	x	0	0	5	24

0 = 0 V (TTL or CMOS level)
5 = 5 V (TTL or CMOSlevel)
x = 0 V or 5 V

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MECHANICAL OUTLINE

VIEW FROM PIN SIDE

105

90

11

15.0

6.0

+5V
5
4
3
2
1
0V

2.5

31.0

20

2.5

23 24 13

19 20 21 22

15 16 17 18

11 12 13 14

7 8 9 10

3 4 5 6

common 1 2

206

200

10

Contact Pin:
length: 4 ± 0.5 mm
diameter: 0.59 mm
pitch: 2.54 mm
centering: 0.2 mm
rubber insulation:
ø 1.7 mm

M2

SIDE VIEW

5

10

10

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