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Find the *DiCon SP-12-9-L2-13/15-FC/PC-1* at our website: ***Click HERE***

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1x2 Prism Switch

DiCon's 1x2 Prism Switch provides channel selection between one input fiber and two output fibers. Actuated electrically and operating independently of data rate and signal format, the component uses a moving prism between fixed collimators. DiCon's 1x2 Prism Switch can be built with Corning SMF-28, Flexcor 1060 or Polarization Maintaining Panda fiber.



Features

- Ultra low insertion loss
- Built in position sensor
- Flexible fiber types and wavelength ranges

Applications

- 1x2 Prism Switches with Corning SMF-28 fiber can be used for protection switching or in reconfigurable optical add/drop multiplexing modules.
- 1x2 Prism Switches with Panda fiber can be used to switch between light sources which use polarization maintaining fiber pigtails.
- 1x2 Prism Switches with Flexcor 1060 fiber can be used to switch between different 980 nm pump laser sources.

DiCon FIBEROPTICS, INC

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SWITCHES

Specifications[1,2,3]

Insertion loss		0.6 dB typ., 1.0 dB max.
Switching time		10 ms typ.
Cross-talk		-70 dB max.
Extinction ratio[3]		18 dB min.
Durability		10 million cycles min.
Repeatability[4]		±0.02 dB max.
PDL[5]		0.05 dB max.
Optical power[6]		300 mWatt max.
Switching voltage		4.5 VDC min., 6.0 VDC max.
Switching current	Non-latching 2-pin	36 mA min., 48 mA max.
	Latching 2-pin	65 mA min., 87 mA max.
	Latching 3-pin	90 mA min., 120 mA max.
Coil resistance	Non-latching 2-pin	125±10% ohm
	Latching 2-pin	69.5±10% ohm
	Latching 3-pin	50±10% ohm
Back-reflection		-55 dB max.
Operating temperature		-20° C to +75° C
Storage temperature		-40° C to +85° C

1. All specifications referenced without connectors.
2. Bottom-mount terminals available upon request.
3. Corning Panda PM 1300 fiber type only.
4. Repeatability for 100 cycles at constant temperature.
5. For SMF-28 fiber type only. Measured at 1550 nm.
6. High power option available by request.

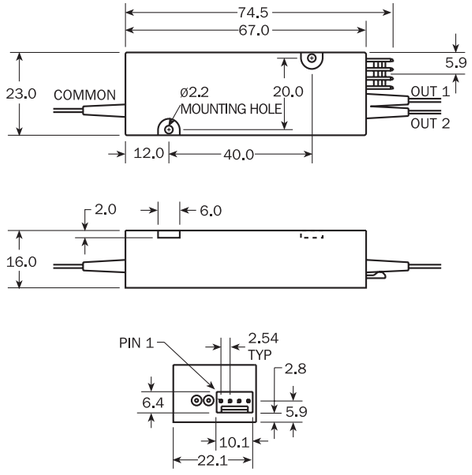
Actuation Style

Non-latching 2-pin control. Requires no power to maintain one position and a constant +5 VDC across pins 1 and 2 to maintain the other position.
Latching 2-pin control: Changes position when the polarity of the +5-VDC signal to pins 1 and 2 is reversed. When no power is applied to pins 1 and 2, the switch is latched in place.
Latching 3-pin control: Pins 1, 2 and 3 are used for control. Pin 3 is a center tap. Position changes when pin 1 or pin 2 is held to ground. When no power is applied to pins 1 and 2, the switch is latched in place.
Position sensor: Sensor output is on pin 4, as either a normal open or closed contact (low or high signal), depending on the switch position. The position sensor is powered with +5 VDC on pin 3.

Actuation Style	IN - OUT2				IN - OUT1			
	Switch Control		Position Sensor		Switch Control		Position Sensor	
	Pin 1	Pin 2	Pin 3	Pin 4	Pin 1	Pin 2	Pin 3	Pin 4
Non-latching 2-pin Control	GND	GND	+5V DC	Low	GND	+5V-DC	+5V DC	High
Latching 2-pin Control[1]	GND	+5V DC	+5V DC	Low	+5V DC	GND	+5V DC	High
Latching 3-pin Control[1]	GND	+5V DC	+5V DC	Low	+5V DC	GND	+5V DC	High

1. Switch position remains the same when power is removed.

Housing Dimensions



Units: mm
Electrical connector is 4-pin male MTE (Molex 22-23-2041).

DiCon Fiberoptics, Inc. 1689 Regatta Blvd. Richmond, CA 94804 Tel. (510)620-5000 Fax. (510)620-4100 www.diconfiber.com

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Switches

SP - 12 - □ - □ - □ - □ - □ - □ - □ - □

Fiber Type

9	9/125[1]
50	50/125
62	62.5/125
10	Flexcor 1060[2]
PM	Panda 1300[3]

Actuation Style

N	Non-latching 2-pin
L2	Latching 2-pin
L3	Latching 3-pin

Wavelength Range

9	960 - 1000 nm[4]
8/13	780 - 1350 nm[5]
13/15	1290 - 1360 nm and 1530 - 1560 nm[6]
13/16	1290 - 1360 nm and 1530 - 1610 nm[6]
15	1530 - 1560 nm[7]
16	1530 - 1610 nm[6]

Connector Type

FC	FC/SPC
FC/APC	FC/APC
FC/UPC	FC/UPC
SC	SC/SPC
SC/APC	SC/APC
SC/UPC	SC/UPC
ST	ST/SPC
ST/UPC	ST/UPC
LC	LC/SPC
LC/UPC	LC/UPC
MU/UPC	MU/UPC
N	No connectors

Connector Key Orientation[8]

S	Slow axis
F	Fast axis
N	Not applicable

Fiber Jacket

2	250 micron, 200 kpsi bare fiber
9	900 micron, tight buffer
N	Not applicable for Panda fiber.

Pigtail Length

1	1 meter
X	Specify X meters

1. Corning fiber SMF-28.
2. Corning Flexcor 1060 fiber with 250 um jacket.
3. Corning Panda PM 1300 fiber with 400 um jacket.
4. Flexcor only.
5. Multimode fiber only.
6. 9/125 fiber only.
7. 9/125 fiber and Panda 1300 fiber only.
8. Applicable to Corning PM 1300 with FC connectors only.

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