Multimode
Fiber Optic Switch
Digital - Latching - Status Sensor

FO4649

The switching mechanism is available in either a latching or non-latching version with an integral position sensor for both versions. Switches are available in On/Off, 1x2 and 2x2 configurations. There is also a high attenuation version of the 2x2 switch used for node bypass applications.

The silicon based electromechanical multimode switch uses a moving mirror actuation scheme to allow light to pass through the switch on activation or to be blocked/diverted when the switch is deactivated in a non-latching configuration. This makes the switch particularly well suited for fail-safe bypass applications.

A standard PCB footprint allows the switch to be conveniently mounted. The standard switch is equipped with 1m 62.5/125 μm multimode fiber pigtails with no connectors, but a variety of fiber and connector options are available.

For more information about our entire line of fiber optic products, please visit our web site at **www.moog.com**.

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SPECIFICATIONS

	Min	Typ	Max	Unit
Environmental Ratings				
Operating Temperature Range	-10	—	70	° C
Storage Temperature Range	-40	—	85	° C
Humidity (non-condensing)	—	—	95	% RH
Mechanical Life	10	—	—	M CYCLE
Characteristics				
VCC (also available w/ 3.3V and 12V)	—	5	—	V
Switching Time	—	5.0	10.0	ms
Loss* 1-3 port	—	0.7	0.8	dB
Loss* 2-4 port	—	0.7	0.8	dB
Loss* 3-4 port	—	0.8	1.0	dB
Loss* 1-2 port	—	0.8	1.0	dB
Loss* 1-2 port (high atten. bypass)	4.5	5.5	6.0	dB
Crosstalk	60	—	—	dB

*Loss without connectors

PART NUMBERING

FO4649 - ☐D☐ - ☐☐☐☐☐ - ☐☐☐ - ☐☐☐

CONFIGURATION	
Code	**Type**
L	Latching
N	Non Latching

INTERFACE	
Code	**Type**
D	Digital (TTL)
x	Contact Mfg

ACTIVATION VOLTAGE	
Code	**Voltage**
3	3.3 V
5	5 V
1	12 V
x	Other

INPUT PORTS	
Code	*#*
01	1
02	2

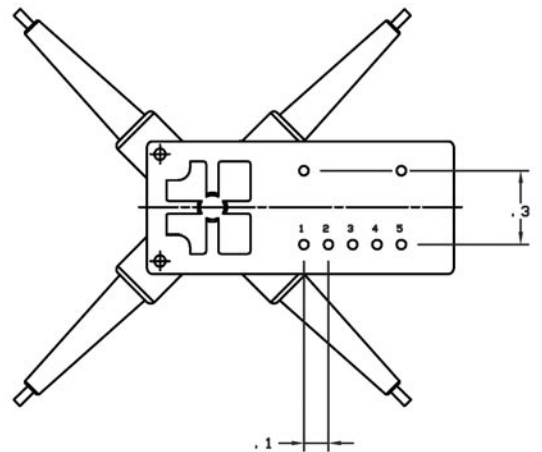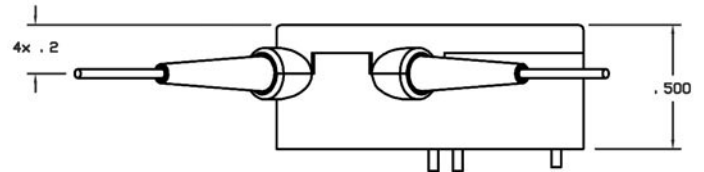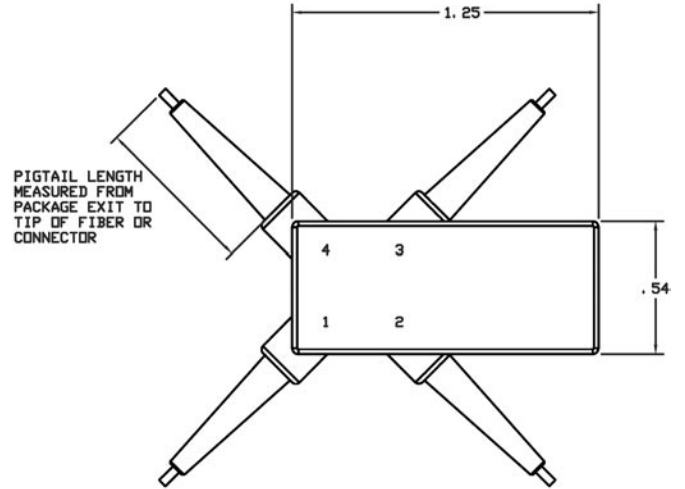| OUTPUT PORTS	
Code	*#*
01	1
02	2
B2	2

(1 High Attenuation Bypass Path)

PIGTAIL LENGTH
3 Digit Code for length in centimeters (+10/-00 cm). Standard length is 100 cm Maximum length equals 300 cm

CONNECTOR	
Code	**Style**
NC	None
FC	FC/PC
SC	SC/PC
LC	LC/PC
ST	ST/PC
XX	Special

FIBER	
Code	λ
A	50/125/900 µm
B	62.5/125/900 µm
C	100/140/900 µm
x	Special

CONFIGURATIONS

TYPICAL SWITCH CONFIGURATION (2X2)	
OPTICAL PATH	**STATUS**
1-3, 2-4	Logic High
1-2, 3-4	Logic Low

(Bypass Mode)

SWITCH PIN CONFIGURATION	
PIN NUMBER	**DESCRIPTION**
1	Set
2	VCC
3	GND
4	Rst
5	Status

PIGTAIL LENGTH MEASURED FROM PACKAGE EXIT TO TIP OF FIBER OR CONNECTOR

1.25

.54

4x .2

.500

.3

.1

All dimensions are in inches.

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