

# 2x2 Mechanical SM Bypass Fiberoptic Switch

ACP's MS Series switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved using a patent pending opto-mechanical proprietary configuration and activated via an electrical control signal. The Switch offers ultra-high reliability and fast switching speed as well as bi-directional performance. The MS fiberoptic switches are true switching solution for optical networking applications.

## PERFORMANCE SPECIFICATIONS

Parameter	Specifications			
	Single		Dual	
Operating Windows	Single		Dual	
Operating Wavelength	1310 ± 40 or 1550 ± 40nm		1310/1550 ± 30nm	
Grade	P	A	P	A
Insertion Loss	≤ 0.60dB	≤ 0.90dB	≤ 0.80dB	≤ 1.0dB
Wavelength Dependent Loss	≤ 0.25dB		≤ 0.30dB	
Polarization Dependent Loss	≤ 0.05dB			
Channel Crosstalk	≥ 55dB			
Return Loss	≥ 55dB			
Repeatability	± 0.02dB			
Switching Speed (Typ.)	4ms			
Switching Speed (Max.)	≤ 5ms			
Operating Voltage	5 ± 0.5V			
Durability (Cycles)	10Million			
Optical Power	≤ 500mW			
Operating Temperature	0 to +70°C			
Storage Temperature	- 40 to +85°C			
Package Dimensions (LxWxH)	H Package: 22.3x12.1x11.0 V Package: 25.0x12.6x8.5			

All values referenced are without connector.

## FEATURES

- Unmatched Low Cost
- Low Insertion Loss
- High Channel Isolation
- High Stability and Reliability
- Epoxy Free Optical Path
- Latching or Non-Latching

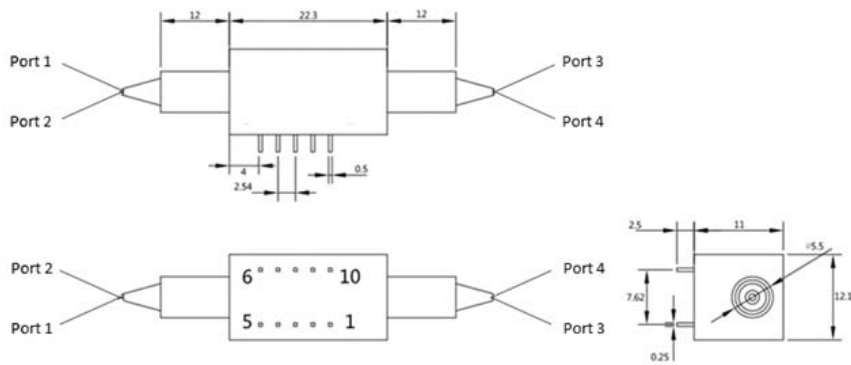
## APPLICATION

- Optical Network Protection/ Restoration
- Optical Signal Routing
- Configurable Optical Add/Drop
- Transmitter & Receiver Protection
- Network Test Systems
- Instrumentation

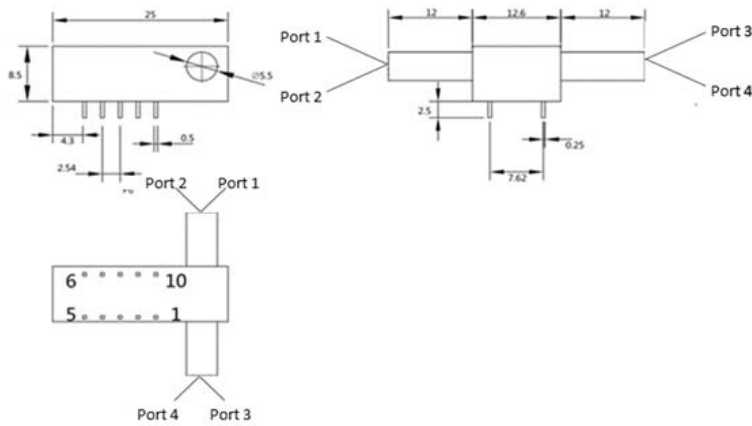
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### MECHANICAL DIMENSIONS

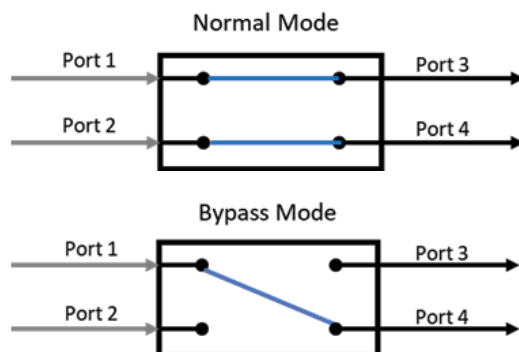
H Package



V Package



### PORT CONFIGURATIONS



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### OPTICAL PATH AND ELECTRICAL PIN CONFIGURATION (TYPE A)

Optical Path		Port 1 to 3 and Port 2 to 4		Port 1 to 4	
Electrical Drive	Non-Latching	Pin 1	Pin 10		
	Latching	Pin 1	Pin 5	Pin 6	Pin 10
		V+	GND	GND	V+
Sensor Status	Non-Latching and Latching	Pin 2-3, Pin 8-9 Open		Pin 2-3, Pin 8-9 Close	
		Pin 3-4, Pin 7-8 Close		Pin 3-4, Pin 7-8 Open	

### OPTICAL PATH AND ELECTRICAL PIN CONFIGURATION (TYPE B)

Optical Path		Port 1 to 3 and Port 2 to 4		Port 1 to 4	
Electrical Drive	Non-Latching	Pin 6	Pin 5		
	Latching	Pin 6	Pin 10	Pin 1	Pin 5
		V+	GND	GND	V+
Sensor Status	Non-Latching and Latching	Pin 3-4, Pin 7-8 Open		Pin 3-4, Pin 7-8 Close	
		Pin 2-3, Pin 8-9 Close		Pin 2-3, Pin 8-9 Open	

### ELECTRICAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Unit
Switch Voltage	4.5	5.0	5.5	V
Switch Current		≥ 40		mA
Pulse Duration		≥ 20		ms

### ORDERING INFORMATION

Option	Operating Wavelength	Grade	Port	Port Configuration	Package	Fiber Type*	Pigtail Style	Fiber Length	In Connector	Out Connector
L=Latching	31=1310±50nm	P=P Grade	O202=Normal	A=Type A	H=H Package	2=SMF-28 Ultra	1=Bare fiber	05=0.5m	0= None	0= None
N=Non-Latching	55=1550±50nm 3155=1310/1550±40nm	A=A Grade	BP2P=Bypass	B=Type B	V=V Package	2=SMF-28 Ultra (G.657.A1)	2=900um loose tube	10=1.0m	1=FC/APC	1=FC/APC
									2=FC/PC	2=FC/PC
									3=SC/APC	3=SC/APC
									4=SC/PC	4=SC/PC
									5=ST	5=ST
6=LC/UPC	6=LC/UPC									
7=LC/APC	7=LC/APC									
						3=ClearCurve ZBL(G.657.B3)		20=2.0m		

\*1=SMF-28(G.652) is available upon request.