acphotonics

RoHS COMPLIANT

Mechanical SM Fiber Optic Switch with Control Board

ACP's mechanical switch module is a switch with integrated driver, it comes in two control modes: manual push buttons and PC control via serial communications with a USB connection. It is powered and controlled via USB interface, no need for extra power supply. User friendly GUI interface with pre-set commands to get the switch information and drive switch to selected port or generate a sequence of switching operations with a predetermined duration.

PERFORMANCE SPECIFICATIONS

Parameter		Specifications	
Operating Windows		Single	Dual
Operating Wavelength		1310 ± 50 or 1550 ± 50nm	1310 /1550 ± 30nm
Insertion Loss	Single 1x2	≤ 0.60dB	≤ 0.80dB
	Single 2x2	≤ 1.1dB	≤ 1.3dB
	Single 2x2 Bypass	≤ 1.0dB	≤ 0.90dB
	Dual 1x2	≤ 0.6dB	≤ 0.80dB
	Dual 2x2 Bypass	≤ 0.90dB	≤ 1.1dB
	Single 1x4	≤ 1.1dB	≤ 1.3dB
Wavelength Dependent Loss		≤ 0.25dB	≤ 0.30dB
Polarization Dependent Loss		≤ 0.15dB	
Channel Crosstalk		≥ 55dB	
Return Loss		≥ 55dB	
Repeatability		± 0.02dB	
Switching Speed (Typ.)		5ms	
Switching Speed (Max.)		≤ 10ms	
Durability (Cycles)		≥ 10^7	
Optical Power		≤ 500mW	
Control Interface		USB Micro	
Operating Temperature		0 to +70°C	
Storage Temperature		- 40 to +85°C	
Package Dimensions (LxWxH)		J=86x80x20.8mm	

All values referenced are without connector.

FEATURES

- Convenient control: Serial communication and Manual Push Button
- Powered through USB port
- Compatible with a variety of ACP mechanical switches
- RoHS compliant

APPLICATION

- Optical Network Protection/Restoration
- Configurable Optical Add/Drop
- Lab application
- Instrumentation

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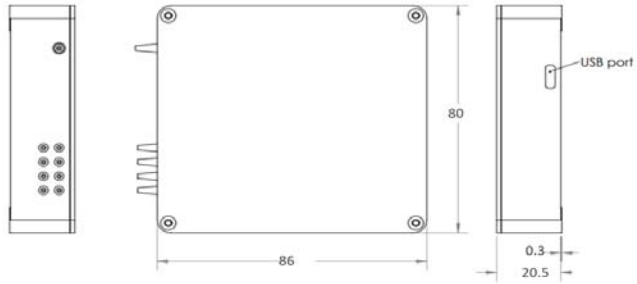
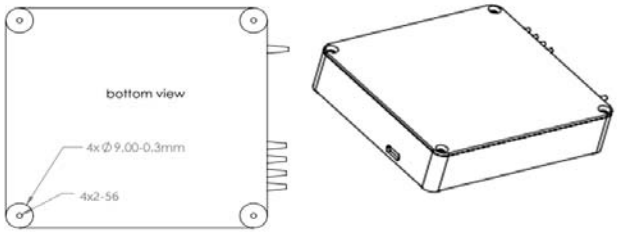
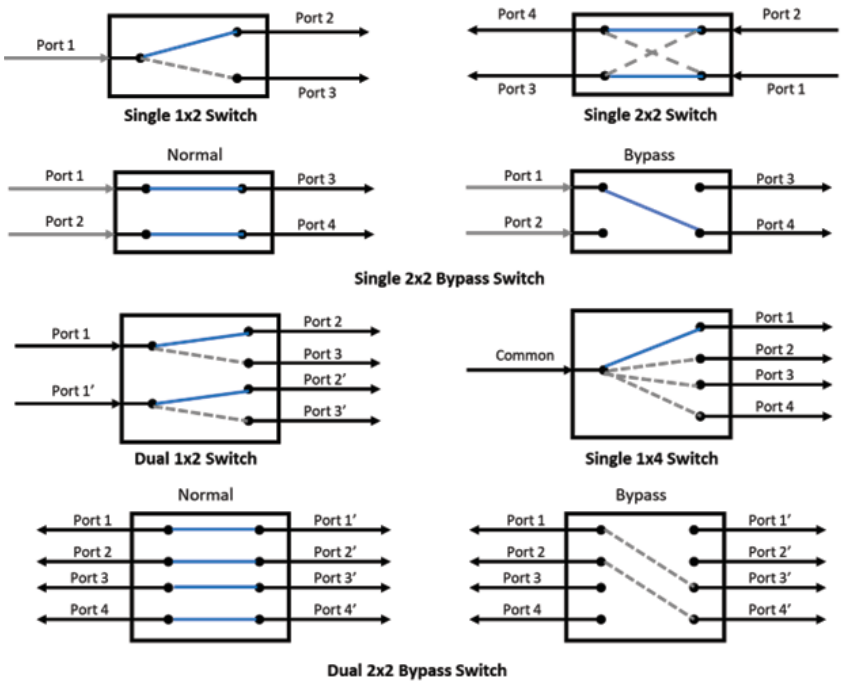
MECHANICAL DIMENSIONS

J Package





PORT CONFIGURATIONS



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LIST OF CONTROL COMMANDS

Command	Action
ID?	Inquiry command for MEMs switch information Return message example: 1x4 1310nm singe mode latching switch
PN?	Inquiry command for MEMs switch Part number Return message example: MLS31104J221011-CTR
SN?	Inquiry command for switch Serial number
SWxx	Switching command: xx – target switch position (01 to NN where NN is the number of channels of the switch). E.g. SW02 – switch to output 2.
PSW?	Inquiry command for the switch position. The switch position information will be returned in the blue message box.
MSW?	Inquiry command for applicable switch type of the board. The switch type information will be returned in the blue message box.
$88TTNN	Fast switching duration command to generate a sequence of switching operations with a predetermined duration: 88 – reserved slots TT – half-pulse duration in milliseconds (For TT <= 15, TT is set to 15 by default) NN – number of switching operations (NN: 00-99)

ORDERING INFORMATION

MS

Option	Operating Wavelength	Port	Package	Fiber Type*	Pigtail Style	Fiber Length**	In Connector	Out Connector
L=Latching N=Non-Latching	31=1260 ~ 1360nm 55=1510 ~ 1610nm 3155=1310/1550nm Custom	S102= Single 1x2 S202=Single 2x2 S2B2=bypass single 2x2 S104= single 1x4 D102= Dual 1x2 D2B2=Dual 2x2 bypass	J=J Package	2=SMF-28 Ultra (G.657.A1) 3=ClearCurve ZBL(G.657.B3)	1=Bare fiber 2=900um loose tube	05=0.5m 10=1.0m . . . 20=2.0m	0 = None 1 = FC/APC 2 = FC/PC 3 = SC/APC 4 = SC/PC 5 = ST 6 = LC/UPC 7 = LC/APC	0 = None 1 = FC/APC 2 = FC/PC 3 = SC/APC 4 = SC/PC 5 = ST 6 = LC/UPC 7 = LC/APC

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

** Other length is available upon request, limited 2m for 900um loose tube option.

RELATED PRODUCTS

- 1xN Mechanical SM SW
- 2 in 1 Mechanical SM SW
- MxN Mechanical SM SW
- 1xN Mechanical PM SW
- 2x2 Mechanical PM SW
- 1xN Mechanical MM SW
- 2x2 Mechanical MM SW
- 2 in 1 Mechanical MM SW