## 2x2 Mechanical MM <br> Fiberoptic Switch

ACP's MMS 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 |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Operating Windows | Single | Dual |  |  |
| Operating Wavelength | $850 \pm 40,1310 \pm 40$ or $1550 \pm 40 \mathrm{~nm}$ | $850 / 1310 \pm 30,850 / 1550 \pm 30$ |  |  |
| or $1310 / 1550 \pm 30 \mathrm{~nm}$ |  |  |  |  |
| Grade | P | A | A |  |
| Insertion Loss | $\leq 1.0 \mathrm{~dB}$ | $\leq 1.2 \mathrm{~dB}$ | $\leq 1.2 \mathrm{~dB}$ | $\leq 1.4 \mathrm{~dB}$ |
| Wavelength Dependent Loss | $\leq 0.25 \mathrm{~dB}$ | $\leq 0.30 \mathrm{~dB}$ |  |  |
| Channel Crosstalk | $\geq 35 \mathrm{~dB}$ |  |  |  |
| Return Loss | $\geq 35 \mathrm{~dB}$ |  |  |  |
| Switching Speed (Typ.) | 4 ms |  |  |  |
| Switching Speed (Max.) | $\leq 10 \mathrm{~ms}$ |  |  |  |
| Operating Voltage | 5 V |  |  |  |
| Durability (Cycles) | 10 Million |  |  |  |
| Optical Power | $\leq 500 \mathrm{~mW}$ |  |  |  |
| Operating Temperature | 0 to $+70^{\circ} \mathrm{C}$ |  |  |  |
| Storage Temperature | -40 to $+85^{\circ} \mathrm{C}$ |  |  |  |
| Package Dimensions (LxW $x H$ ) | V Package: $32.76 . \times 12.6 \times 11.0$ |  |  |  |

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

V Package


PORT CONFIGURATIONS


## 2x2 Mechanical MM Fiberoptic Switch

## OPTICAL PATH AND ELECTRICAL PIN CONFIGURATION

| Optical Path |  | Port 1 to 3 and Port 2 to 4 |  | Port 1 to 4 and Port 2 to 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Electrical Drive | Non-Latching | Pin 1 | Pin 10 |  |  |
|  | Latching | Pin 1 | Pin 5 | Pin 6 | Pin 10 |
|  |  | V+ | GND | GND | V+ |
| Sen | 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 |  |

## ELECTRICAL SPECIFICATIONS

| Parameter | Min. | Typ. | Max. | Unit |
| :--- | :--- | :--- | :--- | :---: |
| Switch Voltage | 4.5 | 5.0 | 5.5 | V |
| Switch Current | $\geq 40$ | mA |  |  |
| Pulse Duration | $\geq 25$ | ms |  |  |

## ORDERING INFORMATION

## MMS

| Option | Grade | Operating Wavelength | Port | Package | Fiber Type | Pigtail Style | Fiber Length | In <br> Connector | Out <br> Connector |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L=Latching | $\mathrm{P}=\mathrm{P}$ Grade | $85=850 \mathrm{~nm}$ | $202=2 \times 2$ | $\mathrm{V}=\mathrm{V}$ Package | A $=50 / 125$ | 1=Bare fiber | 05 $=0.5 \mathrm{~m}$ | $0=$ None | $0=$ None |
| $\mathrm{N}=$ NonLatching | A=A Grade | $31=1310 \mathrm{~nm}$ |  |  | $B=62.5 / 125$ | 2=900um | $10=1.0 \mathrm{~m}$ | 1 = FC/APC | 1 = FC/APC |
|  |  | $55=1550 \mathrm{~nm}$ |  |  |  | loose tube | - | $2=F C / P C$ | $2=F C / P C$ |
|  |  | $8531=850 / 1310 \mathrm{~nm}$ |  |  |  |  | - | $3=$ SC/APC | 3 = SC/APC |
|  |  | 8555=850/1550nm |  |  |  |  | - | 4 =SC/PC | 4 =SC/PC |
|  |  | $3155=1310 / 1550 \mathrm{~nm}$ |  |  |  |  | $20=2.0 \mathrm{~m}$ | $5=\mathrm{ST}$ | $5=\mathrm{ST}$ |
|  |  |  |  |  |  |  |  | 6=LC/UPC | 6 = LC/UPC |
|  |  |  |  |  |  |  |  | 7 = LC/APC | 7 = LC/APC |

