

Miniature Opto-Mechanical Switch

MOM Series



Key Features



- 1x1, 1x2 (2x1) and 2x2 (bypass) in both latching and non-latching configurations
- Hermetic packaging
- Unilateral input/output fiber location
- High durability

Applications

- Configurable optical add/drop multiplexing
- Protection switching
- Network monitoring

Compliance

- Telcordia GR-1221-CORE and GR-1073-CORE

The JDSU Agile Optical Components family includes modulators, switches, attenuators and tunable filters. These products provide the basis for spectrally efficient DWDM transmission utilizing dispersion tolerant modulation, channel monitoring, wavelength switching, remote power control and dynamic channel selection. They support a wide range of flexible functionalities at lower operational expenses for the Agile Optical Network. In addition, we have a complete line of tunable lasers assemblies and sub-assemblies in our Agile Transmission Module family.

The JDSU next-generation, all-optical miniature opto-mechanical (MOM) fiberoptic switch is a single-mode component that increases network flexibility. Its hermetic packaging provides high reliability under demanding central office conditions and is GR-1221 qualified.

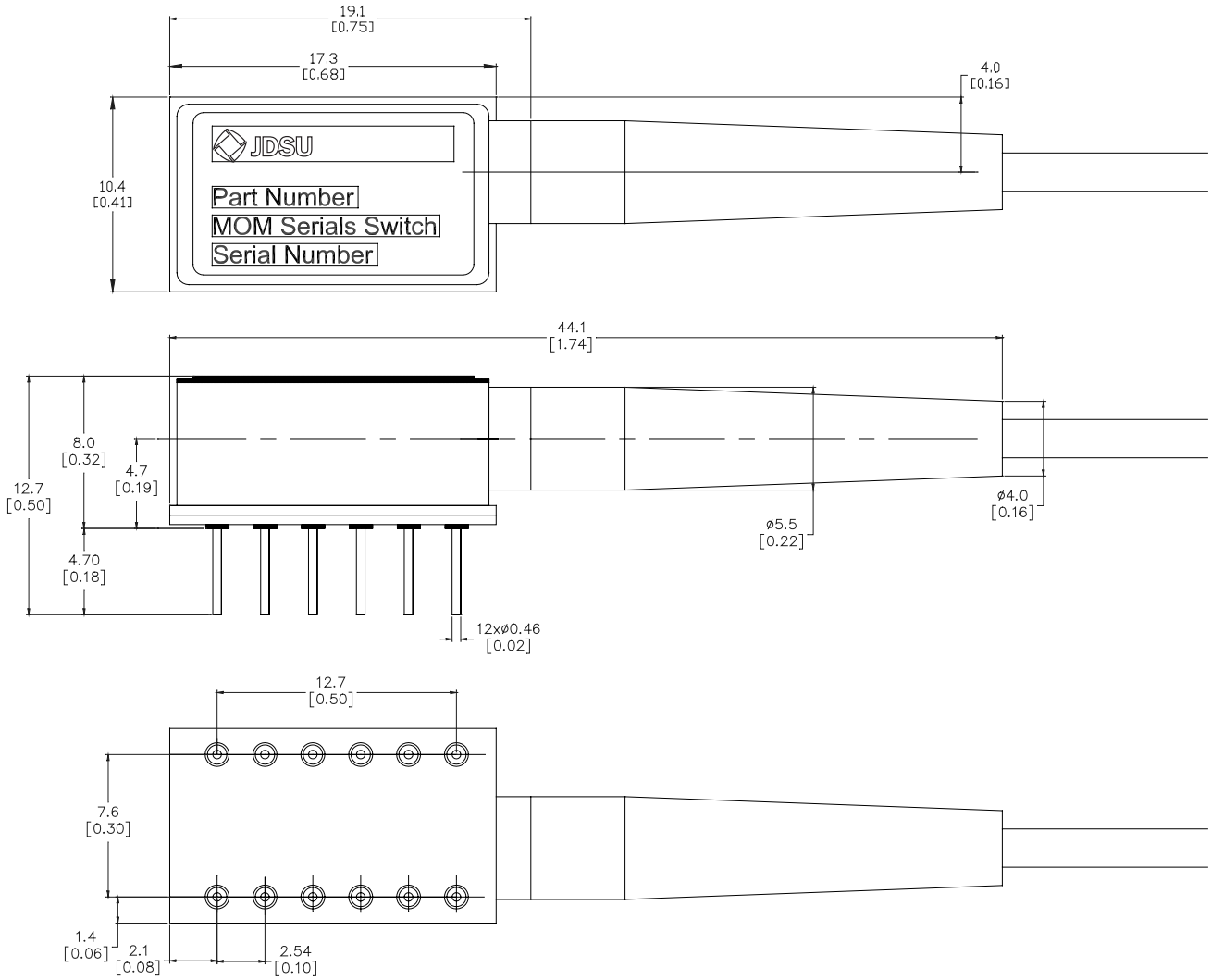
Collimated beam optics, an epoxy-free optical path, and a specially designed mirror and moving prism mechanism enable excellent performance characteristics. Directly mountable on printed circuit boards, the MOM switch is equipped with status contacts to provide an electrical readout of the switch position.

On request, JDSU also provides customized modular assemblies that incorporate taps, wavelength division multiplexers (WDMs), splitters, and other components. The MOM switch's unique unilateral input and output fiber configuration is ideal for these assemblies.

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Dimensions Diagram

(Specifications in mm [inches] unless otherwise noted. Common footprint and electrical pinout for both the latching and non-latching versions.)



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Specifications

| Parameter | Specification |
|--------------------------------|---|
| Wavelength range | 1290 to 1330 nm and/or 1525 to 1610 nm |
| Insertion loss ^{1,2} | |
| 1x1, 1x2 (2x1) | <0.5 dB (0.3 dB typical) |
| 2x2 (bypass) | <0.6 dB (0.4 dB typical) |
| Polarization dependent loss | <0.07 dB (0.03 dB typical) |
| Crosstalk | >55 dB (65 dB typical) |
| Return loss ¹ | >50 dB (55 dB typical) |
| Optical input power | <500 mW |
| Repeatability | <±0.02 dB (cycle to cycle) |
| Switching time ³ | <4 ms (2.5 ms typical) |
| Switching voltage | 5 ±10% V DC |
| Maximum switching current | |
| Latching | 32 mA |
| Non-latching | 46 mA |
| Switch lifetime ⁴ | 100 million cycles |
| Cycle frequency | <10 Hz |
| Nominal dimensions (L x W x H) | 17.3 x 10.4 x 8.0 mm (0.68 x 0.41 x 0.32 inches) |
| Operating temperature | 0 to 70 °C or -5 to 80 °C short term ⁵ |
| Humidity | <85% RH, or <90% RH short term ⁵ |
| Storage temperature | -40 to 85 °C |
| Qualification | Telcordia GR-1221-CORE and GR-1073-CORE |

1. Specified without connectors.
2. Add an additional 0.3 dB for operation over the specified wavelength range, operating temperature range, and all states of polarization.
3. The elapsed time between power application and achievement of 90% of steady state value of the new switch.
4. One switch cycle is defined as one set pulse followed by a reset pulse.
5. Short term is defined as less than 96 consecutive hours and less than a total of 15 days over a one year period.

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: MOM-0012LW350

MOM-00

| Code | Port Configuration |
|------|--------------------|
| 11 | 1x1 |
| 12 | 1x2 (2x1) |
| 22 | 2x2 (bypass) |

| Code | Latching Type |
|------|---------------|
| L | Latching |
| N | Non-latching |

| Code | Wavelength |
|------|-------------------------------------|
| 1 | 1525 to 1610 nm |
| 4 | 1290 to 1330 nm |
| W | 1290 to 1330 nm and 1525 to 1610 nm |

| Code | Fiber Type |
|------|--|
| 1 | 250 μ m buffer SMF-28 ¹ |
| 3 | 900 μ m buffer SMF-28 |

| Code | Fiber Length ² |
|------|---------------------------|
| 0 | 1.0 meter |
| 5 | 1.5 meters |

| Code | Connector Type |
|------|----------------|
| 0 | No connector |
| 1 | FC/PC |
| 3 | FC/APC |
| 4 | SC/PC |
| 5 | SC/APC |
| B | LC/PC |
| C | MU |

1. 250 μ m buffer SMF-28 fiber is only available with the "no connector" option.
2. Tolerance on fiber length is ± 0.1 m

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