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FREECALL 1800 680 680

Small Channel Count Switch Module

SW Series

**Key Features**

- 1 x 1, 1 x 2 and 2 by-pass modes
- Compact size
- Low IL
- High return loss (RL)
- Direct or TTL control of switching
- High repeatability over a broad range of environmental conditions
- Available in SM and MM

Applications

- Incorporation into customized switch assemblies required for test and measurement applications
- Network monitoring and testing
- Sensor switching
- Source/detection selection
- R&D

Safety Information

- Complies to CE requirements plus UL3101-1 and CAN/CSA-C22.2 No. 1010.1

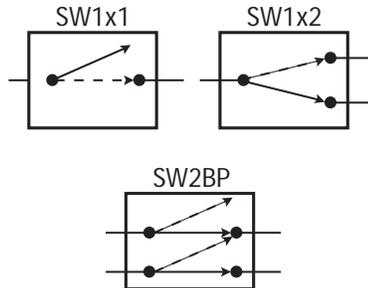
The JDSU Small Channel Count Switch Module (SW) series is used for incorporating customized test assemblies and specialized applications operating multiple source measurement instruments, such as optical spectrum analyzers, wavelength meters, and power meters. This high performance switch is suitable for system trial applications where monitoring, testing and routing are required. Other applications include sensing, calibration, reference, research and development (R&D).

In operation, the switch connects the optical channels by redirecting the optical signal into a selected output fiber. This action is achieved using optical prisms driven by a high-precision non-latching mechanism and activated by electrical control signal. Switching can be done by applying either a direct electrical or TTL control. The SW series of switch is available in both single-mode (SM) and multimode (MM).

The use of collimating optics minimizes the insertion loss (IL) and improves the repeatability and stability of the optical parameters. The switch is optically passive and, therefore, is transparent to signalling formats. Configurations can be optimized for bi-directional performance as a factory option.

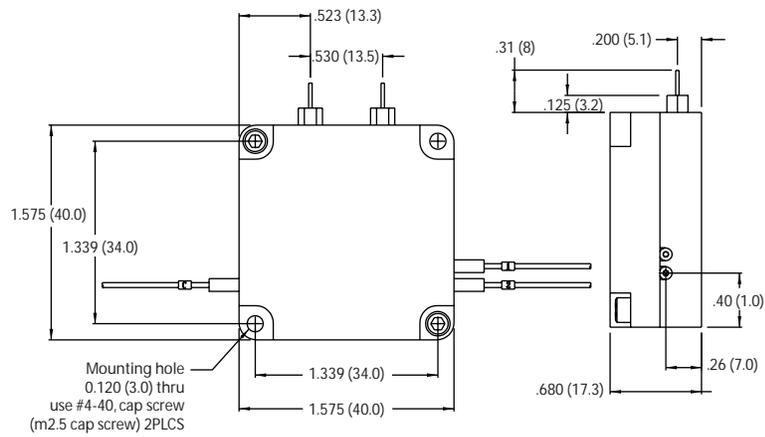
2

SW Series Switch Configurations

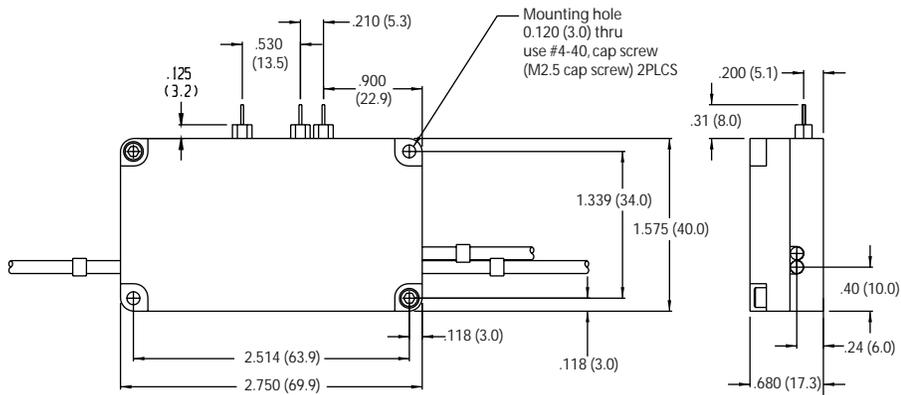


Dimensions Diagram

(Specifications in inches [mm] unless otherwise noted.)



Package A



Package B

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Specifications

Parameter ¹	Typical (Maximum)
Insertion loss (IL) ^{2,3}	
Single-mode (SM)	0.5 (0.8) dB
Multimode (MM) SW1 x 1, 1 x 2, 2 x B	0.4 (0.7) dB
Return loss ³ (RL)	
SM (Low)	50 (45) dB
SM (Ultra-low)	60 (55) dB
MM	25 (20) dB
Polarization dependent loss (PDL) ³	0.12 dB at 1310 nm/0.07 dB at 1550 nm maximum
IL stability ^{2,3,4,5}	± 0.03 (± 0.05) dB
Repeatability ^{5,6}	± 0.005 dB maximum
Crosstalk (maximum) SM	-70 (-60) dB
Optical input power SM	300 mW maximum
Lifetime	At least 10 million cycles
Switching speed	10 (15) ms
Duty cycle	5 Hz
Control interface	Direct control or transistor logic (TTL control)
Operating voltage	
Direct control	5 ± 5 % V DC at 45 mA
TTL control	5 ± 5 % V DC at 70 mA
Operating temperature	-5 to 65 °C
Storage temperature	-40 to 80 °C
Humidity	95 % maximum, non-condensing
Dimensions (W x H x D)	40 x 17 x 40 mm (fiber) or 70 x 17 x 40 mm (cable) - package A or B
Weight	45 and 80 g (packages A and B respectively)

1. Customized specifications are available.

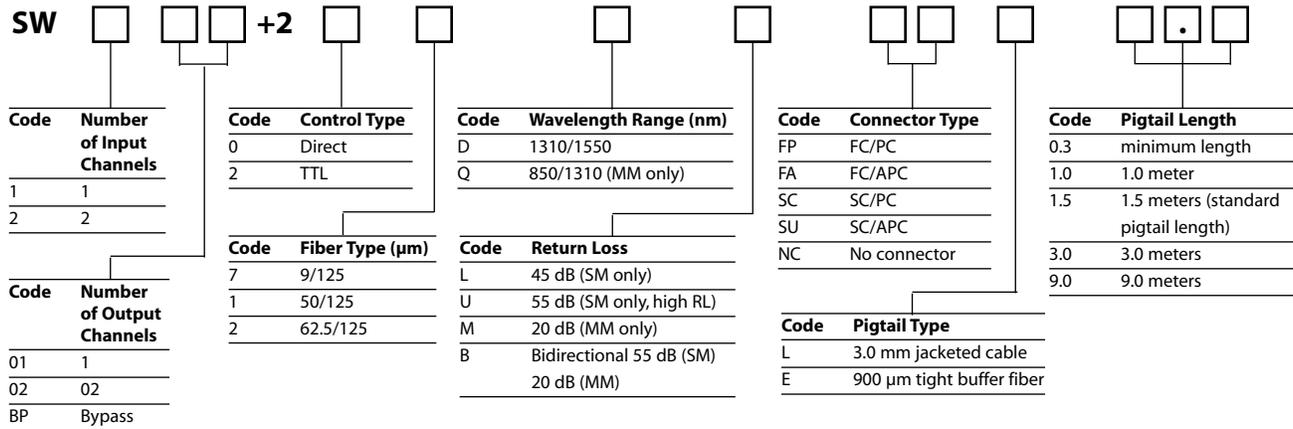
2. At room temperature and optimized at 850, 1310 or 1550 nm.

3. Excluding connectors.

4. Drift of any channel relative to the straight-through path at ± 3 °C deviation of ambient temperature over a seven-day period.

5. Please contact JDSU for details on testing methods.

6. Measured between two consecutive readings over 100 cycles.

Ordering Information
Sample: SW101+207DUFPE1.5

Mechanical Package (based on switch type)

Switch	900 μm fiber	3 mm cable
1 x 1	A	B
1 x 2	A	B
2BP	A	B

Where A = 40 x 17 x 40 mm (W x H x D)

and B = 70 x 17 x 40 mm (W x H x D)



If the configurations available do not meet your performance requirements, please contact our global sales and customer service team to discuss the potential for specialized solutions.

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NORTH AMERICA TEL: 1 866 228 3762 FAX: +1 301 353 9216	LATIN AMERICA TEL: +55 11 5503 3800 FAX: +55 11 5505 1598	ASIA PACIFIC TEL: +852 2892 0990 FAX: +852 2892 0770	EMEA TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	WEBSITE: www.jdsu.com
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