Fiberoptic Switch
SN Series

Key Features

- 1x1, 1x2 (2x1), and 2x2 latching configurations
- Compact and suitable for PCB mounting

Applications

- Network switching in central office environments
- Optical network protection and restoration
- Configurable optical add/drop
- Transmitter and receiver equipment protection

Compliance

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

The JDSU SN Series fiberoptic switch is GR-1221 qualified and designed for use in central office network applications. This reliable, miniature optical component is available as a 1x1 (on/off), 1x2, and 2x2 switch.
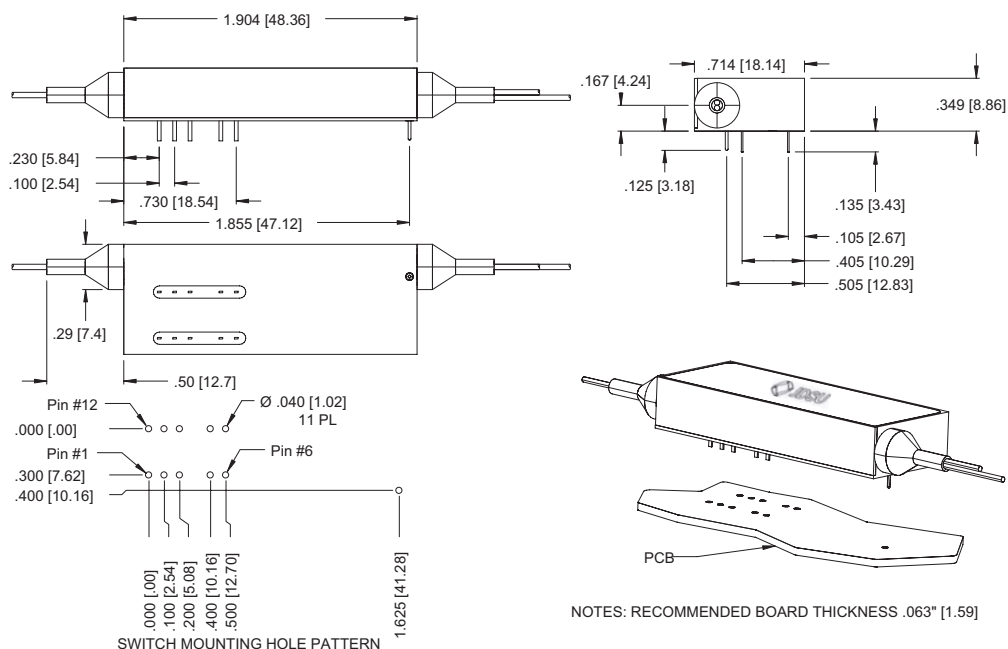
Collimated lenses and a moving mirror minimize insertion loss and improve the repeatability and stability of the switch parameters. The switch itself is directly mounted on printed circuit boards (PCBs), and is equipped with status contacts to provide an electrical readout of the switch position. Latching operation ensures that the switch remains in position following power loss.

On request, JDSU also provides customized modular assemblies that incorporate taps, wavelength division multiplexers (WDMs), splitters, and other components.

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SN Series Dimensions Diagram | (Specifications in inches [mm] unless otherwise noted.)

1.904 [48.36]

.230 [5.84]
.100 [2.54]
.730 [18.54]
1.855 [47.12]

.29 [7.4]
.50 [12.7]

Pin #12
.000 [.00]
Ø .040 [1.02]
11 PL
Pin #1
.300 [7.62]
Pin #6
.400 [10.16]

.000 [.00]
.100 [2.54]
.200 [5.08]
.400 [10.16]
.500 [12.70]
1.625 [41.28]

SWITCH MOUNTING HOLE PATTERN

.167 [4.24]
.714 [18.14]
.349 [8.86]
.125 [3.18]
.135 [3.43]
.105 [2.67]
.405 [10.29]
.505 [12.83]

PCB

NOTES: RECOMMENDED BOARD THICKNESS .063" [1.59]

Specifications

Parameter	Specification
Wavelength range	1290 to 1330 and/or 1525 to 1610 nm
Insertion loss[1]	
1x1, 1x2	0.8 dB
2x2	1.0 dB
Return loss[2]	55 dB
Polarization dependent loss[2]	0.1 dB
Repeatability	±0.05 dB
Crosstalk	-60 dB
Optical input power (continuous wave)	300 mW
Switching time	8 ms
Cycle rate	10 Hz
Power supply[3]	5 V DC/40 mA ±10%
Dimensions (W x H x D)	48.4 x 8.7 x 18.1 mm
Weight	14 g
Operating temperature	0 to 65 °C, or -5 to 70 °C short term[4]
Storage temperature	-40 to 85 °C
Humidity (non-condensing)	<85% RH, or 90% RH short term[4]
Qualification	GR-1221-CORE, GR-1073-CORE

1. Insertion loss is specified for the 1290 to 1330 nm and 1520 to 1570 nm wavelength ranges, all polarization states, and does not include connectors. Add 0.3 dB maximum over operating temperature range. Add 0.1 dB maximum for extended wavelength operation up to 1610 nm.
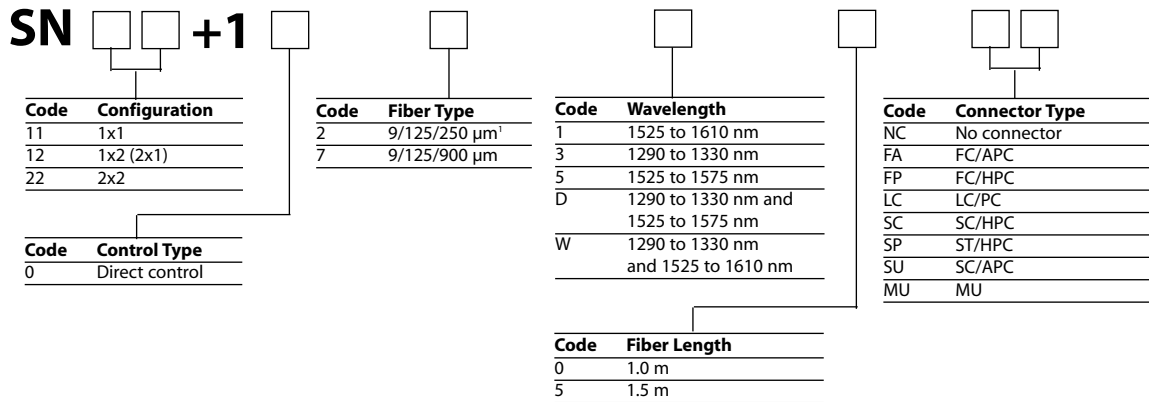
2. Excluding connectors.

3. A 5 V DC 40 mA pulse of 20 ms duration is recommended.

4. The switch can be operated over the short term from -5 to 70 °C for 96 consecutive hours or less and a total of 15 days or less 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: SN22+10750FA

SN ☐☐ +1 ☐   ☐   ☐   ☐   ☐☐

Code	Configuration
11	1x1
12	1x2 (2x1)
22	2x2

Code	Control Type
0	Direct control

Code	Fiber Type
2	9/125/250 µm[1]
7	9/125/900 µm

Code	Wavelength
1	1525 to 1610 nm
3	1290 to 1330 nm
5	1525 to 1575 nm
D	1290 to 1330 nm and 1525 to 1575 nm
W	1290 to 1330 nm and 1525 to 1610 nm

Code	Fiber Length
0	1.0 m
5	1.5 m

Code	Connector Type
NC	No connector
FA	FC/APC
FP	FC/HPC
LC	LC/PC
SC	SC/HPC
SP	ST/HPC
SU	SC/APC
MU	MU

1. The 250 µm fiber option is only available with the "no connector" option.