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**FREECALL 1800 680 680**

# Ruggedized Small Channel Count Switch Module

## SR Series



### Key Features

- 1x1, 1x2, 2x2 2x4, 4x4
- Compact size
- Typical IL 0.6 dB
- Return loss (RL) greater than 55 dB
- Several configurations available
- Reliable, small modules suitable for rugged environments where vibration and shock performance are critical
- Simple control
- Direct or TTL control of switching
- High repeatability over a broad range of environmental conditions
- Available in single-mode and multimode



### Applications

- Optical signal routing, fiber network configuration, and restoration
- Sensor switching, source/detection selection, reference, and multisource measurements in instrumentation products
- Fiber optic component testing
- Research and development (R&D)

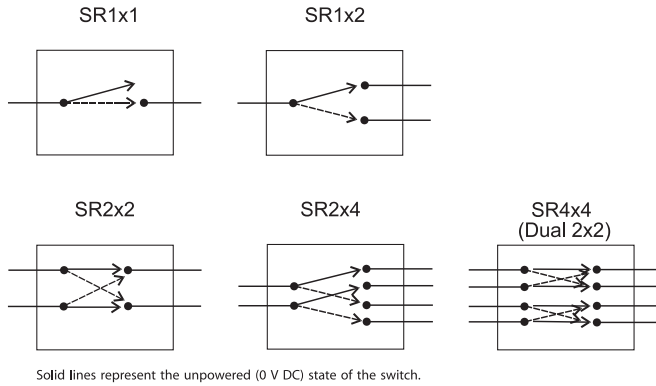
The JDSU Ruggedized Small Channel Count Switch Module (SR series) is used for incorporating customized test assemblies and specialized applications operating multiple source measurement instruments, such as optical spectrum analyzers, wavelength meters, and power meters.

The SR series switches are manufactured for harsher environments, and are specified for a wide operating temperature range of -25 °C to +65 °C.

Both single-mode (SM) and multimode (MM) versions of the SR Series switch connect optical channels by redirecting optical signals into a selected output fiber. This is achieved using a mirror driven by a highly precise mechanism that is activated via an electrical control signal. Switching can be done by applying either a direct electrical or TTL control. The SR series is available in both single-mode and multimode.

Using collimating lenses minimizes the insertion loss (IL) and improves the repeatability and stability of the switch parameters. The SR Series is optically passive and is, therefore, transparent to signalling formats and bandwidth. All configurations are optimized for bidirectional performance.

## SR Series Switch Configurations



## Specifications

| Parameter   | Typical                                   | Maximum      |
|---|---|--------------|
| Insertion loss (IL)                               |   |              |
| Single-mode <sup>1</sup> (SM) 1 x 1, 1 x 2, 2 x 4 | 0.6 dB                                    | 0.9 dB       |
| SM 2 x 2 and 4 x 4                                | 0.9 dB                                    | 1.2 dB       |
| Multimode <sup>1</sup> (MM) 1 x 1, 1 x 2, 2 x 4   | 0.5 dB                                    | 0.8 dB       |
| MM 2 x 2 and 4 x 4                                | 0.8 dB                                    | 1.1 dB       |
| Return loss (RL)                                  |   |              |
| SM <sup>2</sup>                                   | 50 dB                                     | 45 dB        |
| SM <sup>2</sup> (high RL)                         | 60 dB                                     | 55 dB        |
| MM  | 25 dB                                     | 20 dB        |
| Polarization dependent loss (PDL) <sup>2</sup>    |   |              |
| SM  | 0.06 dB                                   | 0.1 dB       |
| IL stability <sup>3</sup>                         | ± 0.03 dB                                 | ± 0.05 dB    |
| Repeatability <sup>4</sup>                        | ± 0.01 dB                                 | ± 0.02 dB    |
| Crosstalk   |   |              |
| SM  | -60 dB                                    | -50 dB       |
| MM  | -45 dB                                    | -35 dB       |
| Optical input power                               | N/A                                       | 300 mW       |
| Switching time                                    | 7 ms                                      | 10 ms        |
| Control signal duration                           | 25 ms                                     | N/A          |
| Cycle rate  | N/A                                       | 10 Hz        |
| Power   | 5 ± 5 % V DC/50 mA (75 mA for TTL option) |              |
| Control   | Direct or TTL                             |              |
| Operating temperature                             | N/A                                       | -25 to 65 °C |
| Storage temperature                               | N/A                                       | -40 to 80 °C |
| Humidity (non-condensing)                         | N/A                                       | 95 %         |
| Dimensions (W x H x D)                            |   |              |
| SR1 x 1, 1 x 2, 2 x 2                             | 70 x 17 x 40 mm (fiber or cable version)  |              |
| SR2 x 4, Dual 2 x 2                               | 70 x 17 x 44 mm (fiber version)           |              |
| SR2 x 4, Dual 2 x 2                               | 101 x 17 x 44 mm (cable version)          |              |
| Weight  | 90 g (110 g for SR2 x 4, Dual 2 x 2)      |              |

1. Excluding connectors. Include 0.2 dB (typical IL) for each connector.

2. Excluding connectors.

3. Drift of any channel relative to one assigned reference channel at ± 3 °C deviation of ambient temperature over seven day period.

4. Measured between two consecutive readings over 100 cycles.

**Ordering Information**
**Sample: SR44+2228MNCE1.5**

SR

+2



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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