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SG Series

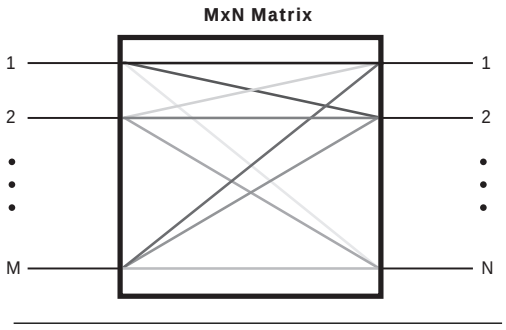
The JDS Uniphase Programmable Matrix Switch is a non-blocking, compact, rackmountable instrument providing reliable switching operations. The design allows the user to connect any input to any output without breaking other existing connections. Standard asymmetrical (4x8, 8x12, up to 28x36) and symmetrical (8x8, 16x16, up to 32x32) configurations are offered for a broad range of applications, in standard single-mode and multimode fiber.

The operation of the matrix switch is based on the proven expanded beam technology, utilizing precision stepper-motors to align optical channels. This feature results in excellent repeatability and stability. The use of collimating lenses minimizes insertion loss and enhances performance of the switches.

Optical signal stability over time is assured through the latching feature. Connections within the matrix switch change no more than 1 dB if there is a power interruption, and at power up the switch does not reconfigure until commanded to do so.

For reliability, two power supply options are available. A highly reliable integrated module is standard. As an option, a dual redundant, hot-swappable power supply is available as a separate rackmounted addition. Other options include an installation kit with rack slide set and rack extenders for a 24 inch (60.96 cm) rack.

Control of the device can be implemented remotely via a GPIB or an RS232 interface. A LabVIEW driver is provided in order to control and monitor connection "status and switch" operations.



SG Switch Configuration



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.



Key Features & Benefits

Up to 64 total inputs and outputs (32x32, 28x36, etc.)

Latching optical connections

Low insertion loss over operating range

Broad wavelength operation

High reliability

RS232 and GPIB remote control

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

Applications

Reconfiguration and restoration of broadband fiber networks

Data communication and multimedia networks

Research and development

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Programmable Matrix Switch

Specifications

PARAMETER[1]		TYPICAL	MAXIMUM
Insertion loss[2]	SM	1.0 dB	1.8 dB
	MM	1.0 dB	1.8 dB
Return loss[3]	SM	60 dB	55 dB
	MM	25 dB	20 dB
Polarization dependent loss	SM	0.03 dB	0.07 dB
Insertion loss stability		± 0.1 dB	± 0.2 dB
Insertion loss change on power off		0.5 dB	1.0 dB
Repeatability		± 0.04 dB	± 0.05 dB
Crosstalk (maximum)	SM	- 80 dB	
Input power (optical)		300 mW continuous	
Lifetime		at least 10 million cycles	
Switching time single-channel increments		120 ms	
average connection		225 ms	
Input power consumption		500 VA maximum	
Operating power		100-240 V AC, 50-60 Hz	
Control		remote via GPIB and RS232 interfaces	
Dimensions (W x H x D) 3U (19-inch rackmount)		48 x 13 x 38 cm	
7U (19-inch rackmount)		48 x 31 x 61 cm	
14U (19-inch rackmount)		48 x 62 x 61 cm	
Weight		15 kg (3U), 45 kg (7U), 75 kg (14U)	
Operating temperature		0 to 50 °C	
Storage temperature		- 40 to 70 °C	
Humidity		maximum 95 % RH from 0 to 50 °C non-condensing	

1. All optical measurements taken after temperature has been stabilized for one hour, at ambient (room) conditions.
2. All specifications referenced without connectors.
3. Return loss specifications based on 1 m pigtail length.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

SAMPLE ORDER: SG07142+27F000SC

SG □ □ □ □ □ +2 □ □ □ □ □ □ □

code	number of input channels[1]
02	2 input channels
.	.
16	16 input channels
.	.
32	32 input channels

code	number of output channels[1]
02	2 output channels
.	.
16	16 output channels
.	.
32	32 output channels

code	in/output port type[2]
1	Bulkheads on front (3U chassis only)
2	Bulkheads on back
3	Pigtails on front (3U chassis only)
4	Pigtails on back (3 mm cable)

code	fiber type (µm)
7	9/125
1	50/125
2	62.5/125
4	100/140

code	cable length (3 mm diameter)
001	1 m
003	3 m
005	5 m
009	9 m
000	Not applicable (bulkheads only)

code	wavelength range (nm)
F	1270-1670
Q	850-1350 (MM only)
B	750-940 (MM only)

code	connector type
FP	FC/PC
FA	FC/APC
SC	SC/PC
SU	SC/APC
SP	ST/PC
NC	No connector

1. 3 U height up to 8x8 channels.
   7 U height up to 16x16 channels.
   14 U height up to 32x32 channels.

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