



3RU Model

Features

Switch Configuration	1xN bidirectional Terminated & Non-Terminated Maximum 1x143
Operating Frequency	DC-18 GHz or DC-26.5 GHz
Manual Control	LCD with Keypad (1RU) Touch Screen LCD (2RU-4RU)
Remote Control	ENET: Ethernet, Built-In Website, RS-232 and USB port. GPIB: IEEE-488, RS-232 and USB port.
Impedance	50-Ohm

Application

MP-series is a multiplexer with the capability to switch one input to as many as 143 outputs. The input/output ports are bidirectional.

Design starts from 1x13 to 1x143 (1RU-4RU enclosure) and can be customized to support a larger configuration. It is available with maximum frequency at 18 GHz or 26.5 GHz, both terminated and non-terminated options along with SMA or N-type connectors.

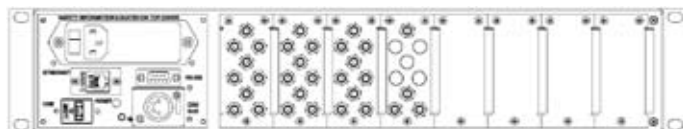
Software Features:

- Built-in firmware to add, remove and address switches for trouble free switch replacement
- Application configuration available through "configuration file" - transferred via HTTP, USB or COM ports.
- Keeps track of the life of each switch
- Field upgradable firmware via boot loader ⁽¹⁾

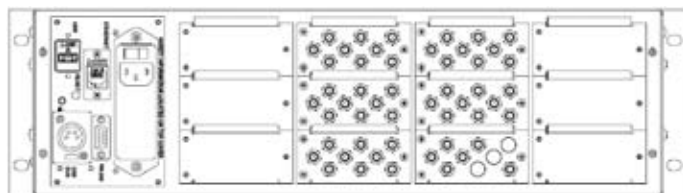
⁽¹⁾ Check Availability

Rear View Samples ⁽²⁾

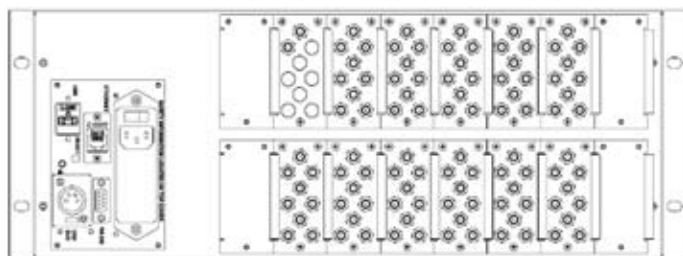
2RU
(1x30)



3RU
(1x50)



4RU
(1x100)



⁽²⁾ The exact port locations may be different

Specifications

Relay Type	Coaxial
I/O Connector Type	SMA Female or N Female
Switching Time	50 ms (incl. control delay)
Operating Life (min)	1,000,000 (cold)
MTBF	30,000-50,000 Hours
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +70 °C
Operating Humidity	10-80% non-condensing
Dimensions (max)	19" Wide rack mount 15.25" (1U-2U) & 18.5" (3U-4U) Depth (w/o handles) 1U to 4U Height (1.75" to 7.00")
Weight	Varies per part number

Manual Control	LCD/Keypad or Touch Screen LCD
Remote Control Ethernet or GPIB Option	
ENET Option	Ethernet (TCP/IP), 10/100 BASE-T, built-in website, manual or DHCP IP address assignment
RS-232	DB9-F, Baud Rate 1200 - 115200 bps
USB Port	Operates as a virtual RS-232
GPIB Option	GPIB (IEEE-488), RS-232 and USB
Commands/Syntax	Dow-Key SCPI commands
Fuse	Accessible/replaceable on the rear
AC Power Supply	110-240 VAC, 50-60 Hz
Cooling / Venting	Fans as required with 2U-4U models

RF Specifications

THE RF PERFORMANCE FOR $\leq 1 \times 70$ IS SLIGHTLY BETTER.

SP10T AND/OR SP12T SWITCHES MOUNTED ON THE REAR

DC-18 GHz, Non-Terminated, SMA				1x13 to 1x84
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.30	70	1.0	100
4-8	1.35	65	1.5	70
8-12.4	1.50	60	1.5	60
12.4-18	1.80	55	2.0	50

THE RF PERFORMANCE FOR $\leq 1 \times 100$ IS SLIGHTLY BETTER.

SP10T AND/OR SP12T SWITCHES MOUNTED INSIDE THE ENCLOSURE

DC-18 GHz, Non-Terminated, SMA				1X85 to 1X120
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.30	70	2.0	100
4-8	1.35	65	3.0	70
8-12.4	1.50	60	4.0	60
12.4-18	1.80	55	5.0	50

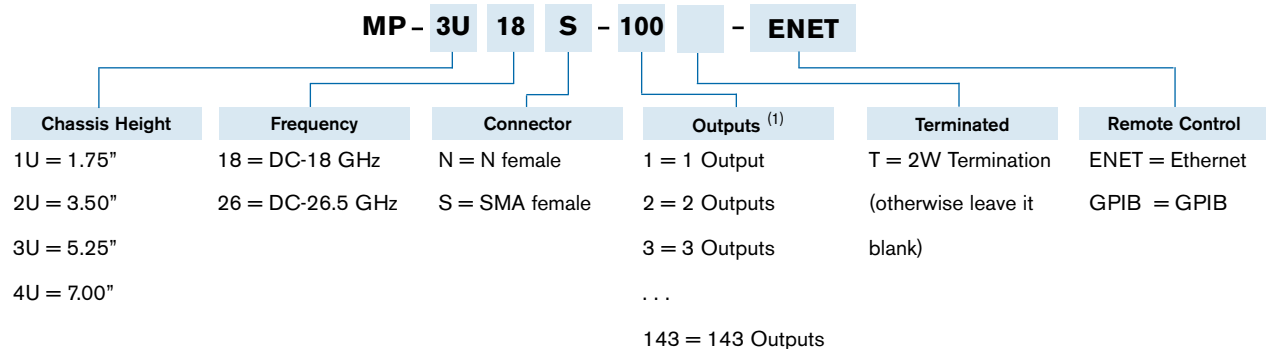
SP12T SWITCHES MOUNTED INSIDE THE ENCLOSURE

DC-18 GHz, Non-Terminated, SMA				1x121 to 1x143
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.30	70	2.0	100
4-8	1.45	65	3.5	70
8-12.4	1.60	60	4.5	60
12.4-18	2.00	55	5.5	50

SEE APPENDIX B FOR MORE RF DATA & APPENDIX C FOR SWITCH SCHEMATICS

We reserve the right to alter, amend or replace any specifications at our sole discretion and without prior notice.

Part Number Selector



(1) Maximum outputs vary per following parameters:
 For DC-18GHz Switch: Maximum 143 outputs (Non-Terminated & SMA)
 Maximum 132 outputs (Terminated & SMA)
 Maximum 47 outputs (Non-Terminated or Terminated & N)
 For DC-26.5GHz Switch: Maximum 64 outputs (Non-Terminated or Terminated & SMA)

DC-18 GHZ TERMINATED SWITCHES WITH SMA-TYPE CONNECTORS

THE RF PERFORMANCE

VARIOUS SWITCH COMBINATIONS MOUNTED ON THE REAR

FOR $\leq 1 \times 56$
IS SLIGHTLY
BETTER.

DC-18 GHz, Terminated, SMA				1x13 to 1x85
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.30	70	1.0	100
4-8	1.35	65	1.5	70
8-12.4	1.50	60	1.5	60
12.4-18	1.80	55	2.0	50

SP10 & SP12T SWITCHES MOUNTED INSIDE THE ENCLOSURE

DC-18 GHz, Terminated, SMA				1x86 to 1x132
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.30	70	2.0	100
4-8	1.45	65	3.5	70
8-12.4	1.60	60	4.5	60
12.4-18	2.00	55	5.5	50

DC-18 GHZ SWITCHES WITH N-TYPE CONNECTORS

SP10T MOUNTED INSIDE THE ENCLOSURE

DC-18 GHz, Non-Terminated, N				1x13 to 1x47
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.40	70	2.0	100
4-8	1.60	65	3.0	70
8-12.4	1.80	60	4.0	60
12.4-18	2.20	55	5.5	50

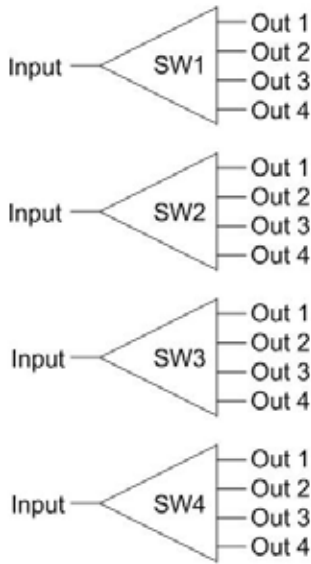
SP8T & SP10T SWITCHES MOUNTED INSIDE THE ENCLOSURE

DC-18 GHz, Terminated, N				1x13 to 1x47
Frequency [GHz]	VSWR Max.	Isolation Min. [dB]	Insertion Loss Max. [dB]	CW Power Max. [W]
DC-4	1.40	70	2.5	100
4-8	1.60	65	4.0	70
8-12.4	1.80	60	5.0	60
12.4-18	2.10	55	6.5	50

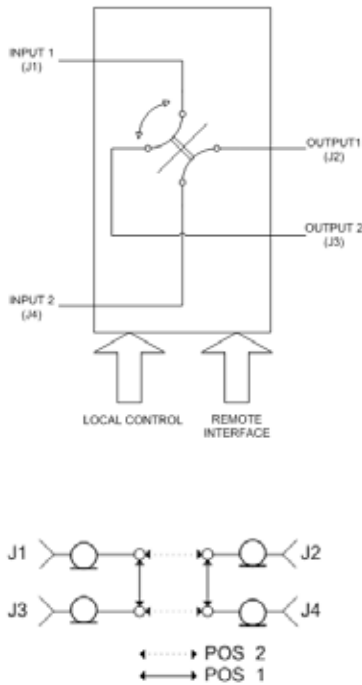
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MS-SERIES: Example of Individual Switches

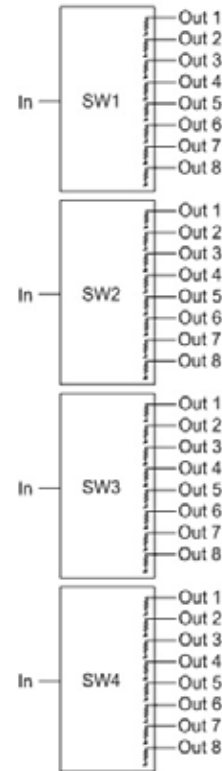
4x SP4T NON-TERMINATED SWITCH



1x DPDT SWITCH

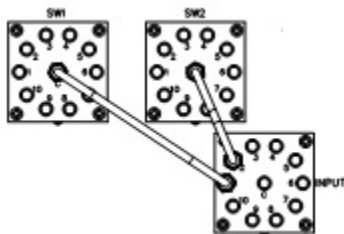
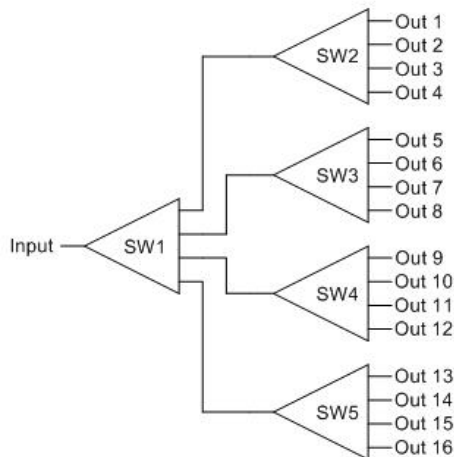


4x SP8T TERMINATED SWITCH



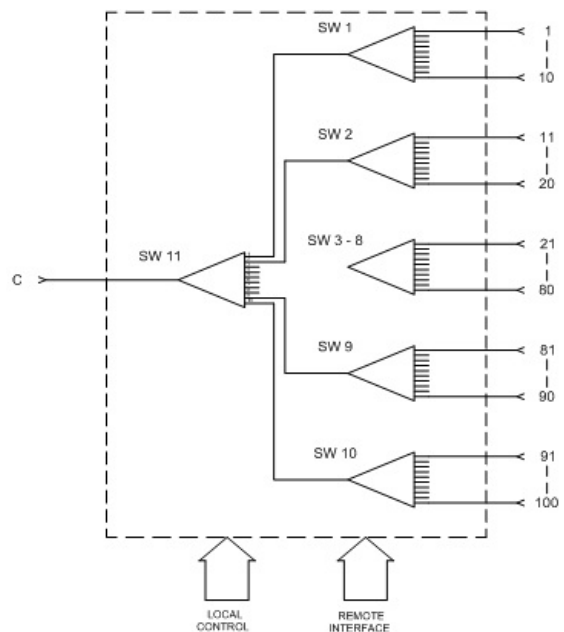
MP-SERIES: Example of 1xN Switch Configurations

1x16 NON-TERMINATED SWITCH



1x20 NON-TERMINATED SWITCH MOUNTED ON THE REAR (OUTSIDE THE ENCLOSURE)

1x100 NON-TERMINATED SWITCH



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