



1 of 9 (4 x 4)

2 A Matrix Switching

Overview

The SMP4000 series high-density matrix modules allow the user to connect any row to any column.

The smallest building block is a (4x4) 2-wire matrix, and rows and columns can easily be expanded to form larger matrices. A (4x216) 2-wire matrix can be accommodated in a double-slot VXIbus card (SM1200).

Various configurations are shipped from the factory, and the user also has the capability to define a custom configuration using the available 9 (4x4) building blocks.

Complete block diagrams for each configuration can be found in the SMIP//™ manual.

Specifications

SMP4001	9 (4x4) 2-Wire Matrices
SMP4002	1 (4x36) 2-Wire Matrix
SMP4003	2 (4x16) 2-Wire and 1 (4x4) 2-Wire Matrix
SMP4004	1 (8x16) 2-Wire and 1 (4x4) 2-Wire Matrix
SMP4005	1 (12x12) 2-Wire Matrix
SMP4006	3 (4x12) 2-Wire Matrices
SMP4007	2 (8x8) 2-Wire Matrices
SMP4001-S-xxxx	User-defined

Highest Density 2 A Matrix Available
on the Market (4x216 in 2 VXIbus
Slots)

Extensive Signal Shielding Employed
on PCBs for Excellent Signal Fidelity

Matrices Built up Using 4x4 Building
Blocks for Configuration Flexibility

2 A Switching per Path

Maximum Switching Voltage:	300 V ac, 300 V dc
Maximum Switching Current:	2 A
Maximum Switching Power:	60 W dc, 125 VA
Path Resistance:	<500 mΩ
Insulation Resistance:	>1x10 ⁹ Ω
Maximum Thermal Offset per Channel (HI-LO):	<7 μV
Capacitance:	
Open Channel	<50 pF
Channel-Mainframe	<80 pF
High-Low	<50 pF
Bandwidth (-3 dB):	>45 MHz (SMP4001) >30 MHz (SMP4005)
Insertion Loss:	
100 kHz:	<0.1 dB
1 MHz:	<0.2 dB
10 MHz:	<1.0 dB
Crosstalk:	
100 kHz:	<-80 dB
1 MHz:	<-70 dB
10 MHz:	<-50 dB
Isolation:	
100 kHz:	<-80 dB
1 MHz:	<-60 dB
10 MHz:	<-50 dB
Rated Switch Operations:	
Mechanical:	1x10 ⁷
Electrical:	5 x10 ⁵ at full load
Switching Time:	<3 ms