

Power Switch Modules

Overview

The SMP2001A and SMP2002 A 16 A switch modules are the first to break the 13 A switching barrier found on other VXI power switching cards. Up to 120 16 A SPST or 72 SPDT relays can be accommodated in two VXIbus card slots for maximum density, or mixed and matched with other SMIP//™ cards for flexibility. Some applications include: ac line power switching, switching of dc or ac power supplies, control or driving relays for industrial machines (robotics, numerical control machines), automotive engine control, and solenoid switching.

All relays are driven from the VXIbus +5 V supply line since VXIbus mainframes always have ample current capability on this supply line, as opposed to the +24 V or +12 V supply lines. Since these modules typically switch power to the UUT or interface, a fail-safe interrupt input line is provided on the front panel that can open all relays automatically if a safety condition occurs. This approach instantly removes all power to the UUT or interface.

Specifications

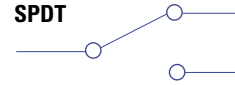
Maximum Switching Voltage:	250 V ac 125 V dc
Maximum Switching Current:	16 A
Maximum Switching Power:	300 W dc, 2000 VA per channel. 25 kW per switch module
Path Resistance:	<100 mΩ
Insulation Resistance:	>1x10 ⁹ Ω
Maximum Thermal Offset Per Channel (HI-LO):	<50 μV
Capacitance:	
Open Channel:	<20 pF
Channel-Mainframe:	<20 pF
Bandwidth (-3 dB):	>20 MHz bandwidth
Insertion Loss:	
100 kHz:	<0.2 dB
1 MHz:	<0.5 dB
10 MHz:	<1.0 dB
Crosstalk:	
100 kHz:	<-75 dB
1 MHz:	<-50 dB
10 MHz:	<-40 dB
Rated Switch Operations:	
Mechanical:	5 x 10 ⁷
Electrical:	1 x 10 ⁵ at full load
Switching Time:	<10 ms

SPST



SMP2001A - 1 of 20 SPST

SPDT



SMP2002A - 1 of 12 SPDT

Features

SMP2001A 20 SPST 16 A Power Switch or 10 DPST 16 A Power Switch

SMP2002A 12 SPDT 16 A Power Switch

Large Switching Capacity in a Small Footprint

High Breakdown Voltage (1,000 V rms between open contacts)

Ideal for Switching ac or dc Power Supplies and Current Sources

Fail-safe Interrupt Input on Front Panels for Emergency Safety Conditions

Combine with Other SMP Modules within a Single or Double-slot VXI Card

Switching