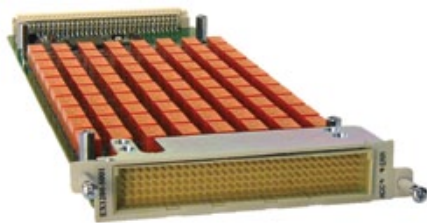


DATA SHEET



# EX1200-5001

# EX1200-5006

80-CHANNEL 2 A FORM A (SPST) SWITCH

40-CHANNEL 2 A FORM A (SPST) SWITCH

## FEATURES

Can be mixed and matched to create application specific configurations

Ideal for general purpose switching of up to 300 V (AC/DC) or 2 A

Can be used to switch a common point to either power or ground (Form C)

Connect together using external wiring for flexible switch design

Easy to use configuration software facilitates end-to-end path-level switching for simplified programming



[www.vtiinstruments.com](http://www.vtiinstruments.com)

RELIABLE DATA FIRST TIME EVERY TIME

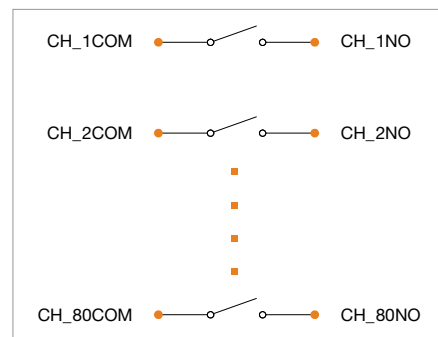
# OVERVIEW

The EX1200-5001 (80 channels) and EX1200-5006 (40 channels) are high-density general purpose 2 A SPST switch modules designed for systems where individual relays can be used to route signals to/from the units under test (UUT) or combined externally to form user-defined configurations. These relays are commonly used to create complex signal distribution networks that can be reconfigured through different wiring in test adapters. Up to 240 SPST relays can be accommodated in a 1U full-rack mainframe for maximum density. The modules can also be configured with other EX1200 series switch modules as part of a flexible system switch design.

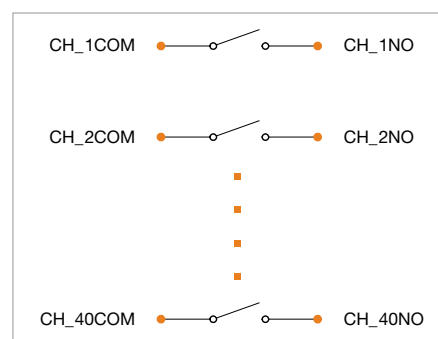
Since these modules may be used to switch power to the UUT or interface, the digital input lines on the EX1200 series mainframes support the ability to force all relays automatically to their normally open state if a fault condition occurs. This approach instantly removes all power to the UUT or interface. These modules can be automatically configured in the setup phase at the beginning of each scan step to facilitate test sequencing and control.

The EX1200-5001 and EX1200-5006 can be controlled programmatically using IviSwitch-compliant calls. Both path-level programming and individual relay control are available.

EX1200-5001 BLOCK DIAGRAM



EX1200-5006 BLOCK DIAGRAM



# General Specifications

<b>CHANNEL COUNT</b>	80 SPST / 40 DPST
EX1200-5001	40 SPST / 20 DPST
EX1200-5006	300 V DC, 300 V AC rms
<b>MAXIMUM SWITCHING VOLTAGE</b>	2 A
<b>MAXIMUM SWITCHING CURRENT</b>	60 W DC, 125 VA
<b>MAXIMUM SWITCHING POWER<sup>1</sup></b>	10 mV DC, 10 µA (resistive)
<b>MINIMUM CONTACT RATING<sup>2</sup></b>	
<b>RATED SWITCH OPERATIONS</b>	
Mechanical	1 x 10 <sup>8</sup> (no load)
Electrical	1 x 10 <sup>6</sup> @ 50 V DC, 0.1 A (resistive) or 10 V DC, 10 mA (resistive)
<b>SWITCHING TIME</b>	< 3 ms
<b>PATH RESISTANCE</b>	< 300 mΩ
<b>INSULATION RESISTANCE</b>	> 1 X 10 <sup>9</sup> Ω
<b>MAXIMUM THERMAL OFFSET PER CHANNEL (HI-LO)</b>	< 1 µV
<b>CAPACITANCE</b>	
Open channel	< 50 pF
Channel-mainframe	< 80 pF
High-low	< 50 pF
<b>BANDWIDTH (-3 dB)</b>	80 MHz (typical)
<b>CROSSTALK (TYPICAL)</b>	
100 kHz	< -55 dB
1MHz	< -45 dB
<b>ISOLATION (TYPICAL)</b>	
100 kHz	< -50 dB
10 MHz	< -35 dB
<b>CONNECTOR TYPE</b>	160-pin

Notes:

1. Maximum switched power is derated non-linearly as voltage is increased.
2. This value is in reference to a resistive load. Minimum capacity changes depending on switching frequency and environmental conditions.

## Ordering Information

EX1200-5001	80-channel 2 A form A (SPST) switch
EX1200-5006	40-channel 2 A form A (SPST) switch
<b>ACCESSORIES AND TOOLS</b>	
70-0363-504	Strain relief bracket (includes connector, recommended accessory)
70-0363-503	Strain relief bracket kit (without connector)
52-0109-000	Crimp pin (includes 100 crimp pins)
27-0088-160	Mating connector (one per board)
46-0010-000	Crimp tool (DIN)
46-0011-000	Extraction tool (DIN)
70-0363-505	160-pin, unterminated cable assembly, 3 ft
70-0367-005	EX1200-TB160SE terminal block, single-ended module (EX1200-5001 only)