

DATA SHEET



## EX1200-2002

12-CHANNEL 16 AMP FORM C (SPDT) SWITCH

### FEATURES

Large switching capacity in a small footprint

Switch up to 16 A current - highest in its class

High breakdown voltage (1,000 V rms between open contacts)

Ideal for switching ac or dc power supplies and current sources

Fail-safe interrupt inputs that can detect a fault condition automatically open up relays to their default state

Combine with other EX1200 switch modules to form a switching subsystem



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

RELIABLE DATA FIRST TIME EVERY TIME

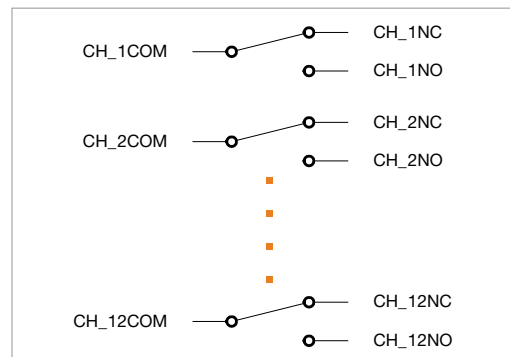
# OVERVIEW

The EX1200-2002 is the only switch module in its class with the ability to switch up to 16 A. 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.

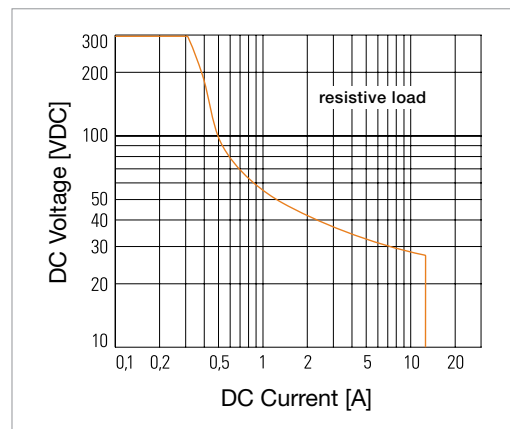
Since this module typically switches power to the UUT or interface, the digital input lines on the EX1200 series mainframes support the ability to force all relays automatically to their normally open state if a fault condition occurs. This approach instantly removes all power to the UUT or interface.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

The EX1200-2002 can be controlled programmatically using IviSwitch-compliant calls. Both path level programming and individual relay control are available.

## BLOCK DIAGRAM



## SWITCHING CAPACITY



The switching capacity curve shows the maximum voltage and maximum current that can be switched simultaneously by the card. Switching above these limits can reduce life of the relays on the card and is not recommended.

# General Specifications

CHANNEL COUNT	12 SPDT
MAXIMUM SWITCHING VOLTAGE	250 V AC rms, 300 V DC
MAXIMUM SWITCHING CURRENT	16 A
MAXIMUM SWITCHING POWER	480 W DC, 4000 VA per channel
RATED SWITCH OPERATIONS	
Mechanical	$5 \times 10^7$
Electrical	$1 \times 10^5$ at full load
SWITCHING TIME	< 10 ms
PATH RESISTANCE	< 100 mΩ
INSULATION RESISTANCE	> $1 \times 10^9 \Omega$
MAXIMUM THERMAL OFFSET PER CHANNEL (HI-LO)	< 50 μV
CAPACITANCE	
Open channel	< 20 pF
Channel-mainframe	< 75 pF
BANDWIDTH (-3 dB)	40 MHz (typical)
INSERTION LOSS (TYPICAL)	
100 kHz	< 0.2 dB
1 MHz	< 0.5 dB
10 MHz	< 1.0 dB
CROSSTALK (TYPICAL)	
100 kHz	< -50 dB
1 MHz	< -35 dB
10 MHz	< -20 dB
CONNECTOR TYPE	41-pin

## Ordering Information

<b>EX1200-2002</b>	12-channel 16 Amp form C (SPDT) switch
<b>ACCESSORIES AND TOOLS</b>	
70-0190-001	Connector kit (includes 1 each connector and backshell plus 44 pins)
27-0087-041	Connector, power, female with backshell, insulated, 41 PLC
27-0087-000	Contact, female, crimp, power connector, 14 - 16 GA (Order qty: 41 per board)
46-0012-000	Crimp tool and turret head
46-0014-000	Tool, contact insertion, size 16 contact, AMP M series
46-0015-000	Tool, pin extractor, power/coaxial
70-0363-506	41-pin, 16GA, unterminated cable assembly, 3 ft