

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



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RELIABLE DATA FIRST TIME EVERY TIME

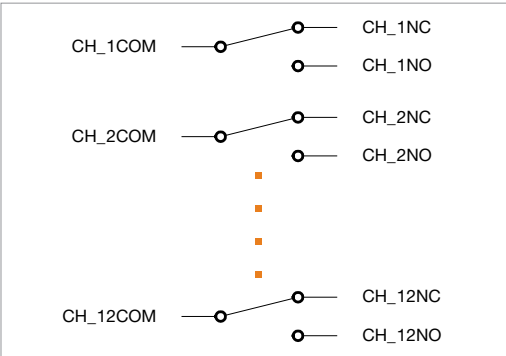
OVERVIEW

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.

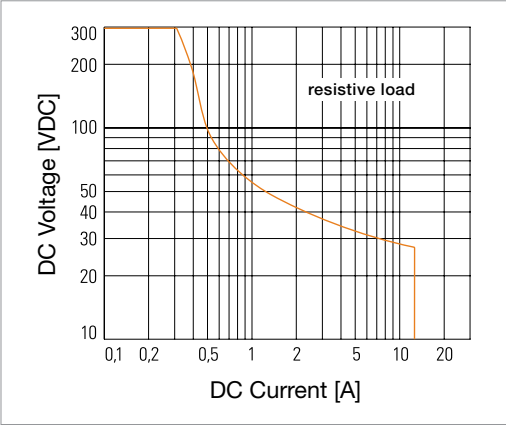
Since this module typically switches power to the UUT or interface, the digital input lines on the EX1200 series mainframes support the ability to force all relays automatically to their normally open state if a fault condition occurs. This approach instantly removes all power to the UUT or interface. 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 lviSwitch-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 | 5×10^7 |
| Electrical | 1×10^5 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

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|-----------------------|---|
| EX1200-2002 | 12-channel 16 Amp form C (SPDT) switch |
| ACCESSORIES AND TOOLS | |
| 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 |