

SMX4032

LOW THERMAL EMF SWITCH CARD

- Supports up to 4 differential 8:1 scan groups
- Software configurable for 2-Wire, 4-Wire, & 6-wire measurements
- Very low signal noise and low voltage errors
- Triggered scanning operations
- Comprehensive self test
- Plug-and-Play software with graphical user interface
- 3U PX module



DESCRIPTION

The SMX4032 is a high-density 32-channel relay switching card that is designed for use in applications requiring precision signal switching. With an on-board micro-controller, the intelligent SMX4032 is particularly suitable for demanding test applications. The very low thermal-offset, leakage, and capacitance make the SMX4032 ideal for switching low-level, precision signals. The SMX4032 can be configured on-the-fly to handle 2, 4 and 6-wire guarded measurements and offers high performance signal switching capability for use with 6-1/2 and 7-1/2 digit DMMs. Additionally, the SMX4032 features built-in self-test capability that checks for relay actuation time, contact bounce and contact failure.

The SMX4032 uses an isolated structure, high accuracy components and optical isolation, minimizing noise and keeping thermal EMFs to less than 1 microVolt. These low thermal EMF errors make it possible to make accurate measurements of voltages in the milliVolt range and resistances in the milliOhm range.

FEATURES

The SMX4032 offers a flexible switch architecture that can be configured in various ways. With 4 differential, 8x1 switch groups, the card can be configured as an 8 channel six wire mux, a 16 channel 4 wire mux, or 36 channel 2 wire mux. The card can also be configured as a single channel mux, supporting up to 64 channels. Each relay can be controlled

individually, or automatically routed using pre-defined configurations. All switching actions are performed with an actuation time of less than 5 milliseconds.

PROGRAMMING AND SOFTWARE

The board is supplied a 32-bit DLL driver. Various interface files provide access to the DLL from programming tools and languages such as ATEasy, LabVIEW, Microsoft® and Borland® C/C++, Microsoft Visual Basic®, Borland Delphi, and more. The available virtual panel can be used to interactively adjust and control the switch card from a window that graphically displays the relays and allows you to interactively control each relay. On-Line help file and PDF User's Guide provides documentation that includes instructions for installing, using and programming the board.

APPLICATIONS

- Applications Automatic Test Equipment (ATE)
- Data acquisition
- Sensor interfacing
- Low-level precision measurement system

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SPECIFICATIONS

MATRIX CONFIGURATION	
Matrix Configuration	Four 8:1 groups
Thermal EMF offset	< 1.0 μ V
Contact Life Rating at Low Level	108 cycles
Switchable Voltage, Maximum	220 VDC, 250 VAC
Switchable Current	1A
Contact Carry Current	1A
Operate Time	4 ms, typical
Release Time	2 ms, typical
ENVIRONMENTAL	
Operating Temperature	-0° To +50° C
Storage Temperature	-20° To +85° C
PHYSICAL	
Size	3U PXI
Weight	0.9 lbs
Connector	78-pin D Sub-type connector

Note: Specifications are subject to change without notice.

ORDERING INFORMATION

SMX4032	Low Thermal EMF Switch Card
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