High-Density General-Purpose SPDT Relays

NI PXI-2570

- 40 independent SPDT relays
- Maximum switch capacity
  Up to 100 VDC, 100 VAC
  Up to 1 A switching/1 A carry
- Latching relays
- 32,000-step scan list for
  deterministic scanning
- Fully software programmable
- 145 cycles/s
- Tight synchronization with instruments
  through hardware triggers

Operating Systems
- Windows 2000/NT/XP

Recommended Software
- LabVIEW™
- LabWindows™/CVI™
- Measurement Studio™
- NI Switch Executive

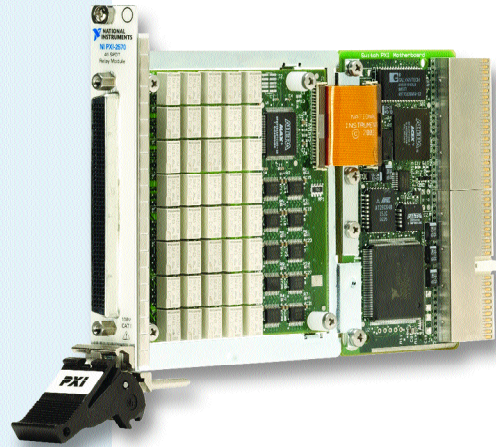### Other Compatible Software
- Visual Basic
- C/C++

Driver Software (included)
- NI-SWITCH

Compliance
- UL
- CE

Overview

The National Instruments PXI-2570 is a 40-channel, general-purpose switch module. Featuring independent SPDT (Form C) relays, the NI PXI-2570 maximizes relay density in a single PXI slot. Each relay contains a normally closed (NC), normally open (NO), and common (COM) terminal and can handle up to 100 VDC/100 VAC or up to 1 A of current. With 40 channels per module, you can switch several hundred ATE loads in a single PXI chassis or thousands of channels in a multiple-chassis configuration.

Automatic Scanning

The PXI-2570 is able to maximize throughput in automated test applications by the use of scanning. Scanning improves throughput by downloading a list of up to 32,000 connections to the switch and cycling through the list using an event (trigger) without any interruption from the host processor. Scanning is most efficiently accomplished by mating the PXI-2570 with an instrument, such as the NI PXI-4070 6½-digit FlexDMM, which issues a trigger after each measurement.

Software

All National Instruments PXI switch modules are shipped with NI-SWITCH, an IVI-compliant driver offering complete functionality for all switch modules. For additional assistance in configuring, programming, and managing higher-channel-count switching systems, NI Switch Executive software offers an easy-to-use, intelligent switch management and visual routing environment.

Ordering Information

NI PXI-2570 778572-70
Includes switch module, NI-SWITCH driver software.

Accessories
NI Switch Executive
     Development System 778546-01
     Deployment Engine 778548-00

BUY ONLINE!
Visit ni.com/info and enter pxi2570.

NATIONAL INSTRUMENTS™

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Specifications

Input Characteristics

Maximum switching voltage
    Channel-to-ground..................................... 100 V, CAT I
    Channel-to-channel .... 100 V
Maximum current
    (switching or carry, per channel)............... 1 A
Simultaneous channels at
    maximum current (55 ˚C)....................... 40
Maximum switching power
    (per channel, resistive)............................. 60 W, 62.5 VA
Typical DC path resistance (channel-to-common)
    Initial... <0.5
    End of life .... ≤1
Thermal EMF .... ≤12 µV
Bandwidth (-3 dB, typical at 23 ˚C)................. ≤40 MHz

Dynamic Characteristics

Maximum speed... 145 cycles
Relay operate time
    Typical... 1 ms
    Maximum... 3.4 ms

Expected Relay Life

    Mechanical .... 100,000,000 cycles
    Electrical
        10 VDC, 100 mADC, resistive .... 2,500,000 cycles
        10 VDC, 1 ADC, resistive .... 1,000,000 cycles
        30 VDC, 1 ADC, resistive .... 500,000 cycles
        60 VDC, 1 ADC, resistive .... 100,000 cycles

Physical

Relay types.. Electromechanical, latching
Contact material... Palladium-ruthenium, gold-covered
I/O connectors... 200-pin LFH Matrix 50 receptacle
Dimensions.. 10 by 17.4 cm (3.9 by 6.9 in.)

Environment

Operating temperature..................................... 0 to 55 ˚C
Storage temperature .... -40 to 70 ˚C
Relative humidity .... 5 to 85% noncondensing
Pollution degree 2
Indoor use only

Safety

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:
• IEC 61010-1, EN 61010-1
• UL 3111-1, UL 61010B-1
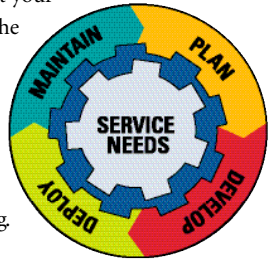• CAN/CSA C22.2 No. 1010.1

CE Compliance

This product meets the essential requirements of applicable European Directives, as amended for CE marking, as follows:
Low-Voltage Directive (safety)........................ 73/23/EEC
Electromagnetic Compatibility
Directive (EMC) 89/336/EEC

NI Services and Support

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We also offer service programs that provide automatic upgrades to your application development environment and higher levels of technical support. Visit ni.com/ssp.

Hardware Services
NI Factory Installation Services

NI Factory Installation Services (FIS) is the fastest and easiest way to use your PXI or PXI/SCXI™ combination systems right out of the box. Trained NI technicians install the software and hardware and configure the system to your specifications. NI extends the standard warranty by one year on hardware components (controllers, chassis, modules) purchased with FIS. To use FIS, simply configure your system online with ni.com/pxiadvisor.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit ni.com/calibration.

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