

High-Density General-Purpose SPST Relays

NI PXI-2569, NI PXIe-2569 **NEW!**

- 100 independent single-pole single-throw (SPST) relays
- Maximum switch capacity
 - Up to 100 VDC, 100 VAC, CAT I
 - 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
- Available in both PXI and PXI Express versions for optimal slot placement

Operating Systems

- Windows XP/2000/NT

Recommended Software

- LabVIEW
- LabWindows™/CVI
- Measurement Studio for Visual C++
- NI Switch Executive

Other Compatible Software

- Visual Basic
- ANSI C/C++

Driver Software (included)

- NI-SWITCH

Compliance

- UL
- CE



Overview

The NI PXI-2569 and PXIe-2569 are 100-channel, general-purpose switch modules featuring SPST (Form A) armature relays. Ideal for medium-power automated test loads, these modules offer maximum relay density, with 100 latching relays in a single PXI slot. NI 2569 modules are able to switch up to 100 VDC/100 VAC or up to 1 A. They are fully software-programmable and contain a 32,000-step scan list for deterministic scanning capability.

Automatic Scanning

NI 2569 modules are 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. You can most efficiently implement scanning by mating an NI 2569 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 that offers complete functionality for all switch modules. For additional assistance in configuring, programming, and managing higher-channel-count switching systems, NI Switch Executive software provides an easy-to-use, intelligent switch management and visual routing environment.

Ordering Information

NI PXI-2569	778572-69
NI PXIe-2569	780587-69
Includes switch module and NI-SWITCH driver software.	

NI Switch Executive

Development system.....	778546-01
Deployment engine	778548-00

BUY NOW

For complete product specifications, pricing, and accessory information, call 800 813 3693 (U.S.) or go to ni.com/switches.

High-Density General-Purpose SPST Relays

Specifications

Specifications subject to change without notice. Visit ni.com/manuals for the latest full specifications.

Input Characteristics

Maximum switching voltage	
Channel-to-ground.....	300 V, CAT I
Channel-to-channel.....	300 V
Maximum current.....	1 A
	(switching or carry, per channel)
Simultaneous channels at	
maximum current ($\pm 35^\circ\text{C}$).....	50
Maximum switching power.....	60 W, 62.5 VA (DC to 60 Hz)
	(per channel, resistive)
Typical DC path resistance	
Initial.....	$<0.55\ \Omega$
End of life.....	$\leq 1\ \Omega$
Thermal EMF.....	$\leq 12\ \mu\text{V}$
Bandwidth (-3 dB, typical at 23°C).....	$\leq 20\ \text{MHz}$

Dynamic Characteristics

Maximum speed.....	145 cycles
Relay operate plus debounce time	
Typical.....	1 ms
Maximum.....	3.4 ms
Expected relay life	
Mechanical.....	10^8 cycles
Electrical	
10 VDC, 100 mADC, resistive.....	2.5×10^6 cycles
10 VDC, 1 ADC, resistive.....	1×10^6 cycles
30 VDC, 1 ADC resistive.....	5×10^5 cycles
60 VDC, 1 ADC resistive.....	1×10^5 cycles

Physical

Relay types.....	Electromechanical, latching
Contact material.....	Palladium-ruthenium, gold covered
I/O connectors.....	200 POS LFH Matrix 50, receptacle
Dimensions.....	10 by 17.5 cm (3.9 by 6.9 in.), 1 3U slot

Environment

Operating temperature.....	0 to 55°C
Storage temperature.....	-20 to 70°C
Relative humidity.....	5 to 85% noncondensing
Pollution degree.....	2
Approved at altitudes up to 2,000 m.	

Safety Compliance

- IEC 61010-1, EN 61010-1
- UL 61010-01, CSA 61010-1

Electromagnetic Compatibility

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326 (IEC 61326): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- AS/NZS CISPR 11: Group 1, Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions

Note: For EMC compliance, operate this product according to the documentation.

CE Compliance

This product meets the essential requirements of applicable European Directives as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

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