

# 16-Channel High-Power, General-Purpose Relay

## NI PXI-2565

- 16 independent SPST nonlatching relays
- Switch capacity per channel
  - 7 A at 250 V<sub>rms</sub>
  - 5 A at 30 VDC
- 1024 step scanlist for deterministic scanning
- Fully software programmable
- 5 operation/s

### Operating Systems

- Windows 2000/NT/XP

### Recommended Software

- LabVIEW
- LabVIEW Real-Time Module
- LabWindows/CVI
- Measurement Studio
- NI Switch Executive

### Other Compatible Software

- Visual Basic
- C/C++

### Driver Software (included)

- NI-SWITCH

### Compliance

- CE



16-Channel High-Power, General-Purpose Relay

## Overview

The National Instruments PXI-2565, a 16-channel general-purpose relay switch module, delivers high-current switching of DC power supplies, AC line power, and AC/DC current sources. The module has 16 independent Form A, nonlatching socketed relays, which can be replaced in the field with the relay replacement kit. The module switches up to 5 A at 30 VDC and 7 A at 250 VAC. You have full control of the module with the IVI-compliant NI-SWITCH driver.

## Extended Features and Specifications

National Instruments switch modules are built with a number of core features that are covered in detail in the Switch Overview section.

*For additional information about the NI PXI-2565, including software, certifications and compliance, relay control, etc., please see page 20. For detailed specifications, please see page 507.*

## Ordering Information

NI PXI-2565 .....777754-01  
Includes switch module, NI-SWITCH driver software, and two 16-pin screw terminal plug kits.

For information on extended warranty and value added services, see page 20.

See page 499 for accessory and cable information.

### BUY ONLINE!

Visit [ni.com/products](http://ni.com/products) and enter `pxi2565`.

# Switch Specifications

## Specifications (continued)

Expected life for SCXI-1160/1161	
Mechanical .....	10 <sup>8</sup> operations at 2 A, 30 VDC
Electrical .....	10 <sup>5</sup> operations at 2 A, 250 V <sub>rms</sub>

### Physical

Dimensions .....	3.0 by 17.2 by 20.3 cm (1.2 by 6.8 by 8.0 in.)
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### Environment

Operating temperature .....	0 to 50 °C
Operating temperature .....	-20 to 70 °C
Relative humidity .....	5 to 90% noncondensing

## PXI-2565

### Input Characteristics

Number of relays .....	16 SPST
Common-mode voltage	
Channel-to-channel .....	250 V <sub>rms</sub> , 250 VDC
Channel-to-ground .....	250 V <sub>rms</sub> , 250 VDC
Maximum switching voltage	
AC .....	250 V <sub>rms</sub>
DC .....	125 VDC
Maximum switching capacity per channel	
30 VDC (resistive load) .....	5 A
250 VAC (resistive load) .....	7 A
Maximum switching power per channel .....	1750 VA, 150 W
Maximum combined channel current .....	80 A
Channel on resistance .....	30 mΩ
Contact material .....	Gold-flash over silver alloy

### Dynamic Characteristics

Relay operate time (20 °C) .....	5 ms typical, 10 ms maximum
Relay release time (20 °C) .....	4 ms typical, 10 ms maximum
Maximum switching rate .....	5 operations/s per channel

Expected life	
Mechanical (3 operations/s) .....	5x10 <sup>7</sup> operations
Electrical at maximum	
switching capacity .....	10 <sup>5</sup> operations (exceeding maximum switching capacity decreases electrical life)
PXI bus interface .....	Slave

### PXI Trigger Bus

Trigger lines .....	8
Star trigger .....	1

### Power Requirement

+5 VDC .....	350 mA (all relays open) 1.4 A (all relays closed)
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### Physical

Dimensions .....	10x16 cm (3.9 x 6.3 in.) 2 slots wide
I/O connector .....	16x2 minicombin header
I/O mating connector .....	Two 16x1 minicombin connectors

### Environment

Operating temperature .....	0 to 50 °C
Storage temperature .....	-20 to 70 °C
Relative humidity .....	5 to 85% noncondensing

### Shock and Vibration

Functional shock .....	MIL-T-28800E Class3 (30 g half-sine shock pulse) also meets IEC 60068-2-27
Random vibration .....	MIL-T-28800E, MIL-STD-810E Category 1
Operational .....	5 to 500 Hz, 0.3 g <sub>rms</sub>
Nonoperational .....	5 to 500 Hz, 2.4 g <sub>rms</sub>