# PXI-2565 Specifications

2025-03-14

# Contents

# PXI-2565 Specifications

This document lists specifications for the PXI-2565. All specifications are subject to change without notice.

## Definitions

***Warranted*** specifications describe the performance of a model under stated operating conditions and are covered by the model warranty.

***Characteristics*** describe values that are relevant to the use of the model under stated operating conditions but are not covered by the model warranty.

- ***Typical*** specifications describe the performance met by a majority of models.
- ***Nominal*** specifications describe an attribute that is based on design, conformance testing, or supplemental testing.

Specifications are ***Typical*** unless otherwise noted.

## Conditions

Specifications are valid at 23 °C unless otherwise noted.

All voltages are specified in DC, $AC_{pk}$, or a combination unless otherwise specified.

## Topology

| | |
|---|---|
| Topology | 16-channel SPST |

## Input Characteristics

| |
|---|
| **Maximum switching voltage** |

| | |
|---|---|
| Channel-to-channel | 125 V DC, 250 V AC |
| Channel-to-ground | 125 V DC, 250 V AC, CAT II[1] |

**Caution** This module is rated for Measurement Category II and intended to carry signal voltages no greater than 250 V AC/125 V DC. This module Features 1400 Vrms isolation between input signals and the backplane as verified by a dielectric withstand test, one minute maximum. Do not use this module for connection to signals or for measurements within Categories III or IV. Do not connect to Category II supply circuits (for example, wall outlets) greater than 250 V AC; do not connect to Category III MAINs circuits.

**Caution** When hazardous voltages (>42.4 Vpk/60 V DC) are present on any relay terminal, safety low-voltage (≤42.4 Vpk/60 V DC) cannot be connected to any other relay terminal.

**Caution** The switching power is limited by the maximum switching current, the maximum voltage, and must not exceed 150 W, 1750 VA.

| | |
|---|---|
| Maximum switching current | 5 A at 30 V DC |
| Maximum switching current (resistive, per channel) | 7 A at 250 V AC |
| Maximum switching power (per channel) | 150 W, 1750 VA |
| Maximum carry current (per channel) | 5 A DC, 7A AC |

| | |
|---|---|
| Minimum switch load | 10 mA, 5 V DC |

**Note** Switching inductive loads (for example, motors and solenoids) can produce high voltage transients in excess of the rated voltage of the module. Without additional protection, these transients can interfere with module operation and impact relay life. For more information about transient suppression, visit ni.com/info and enter the Info Code `induct`.

| **DC path resistance** | |
|---|---|
| Initial | <0.03 Ω |
| End of life | >1 Ω |

DC path resistance typically remains low for the life of the relay. At the end of relay life, the path resistance rises rapidly above 1 Ω. Load ratings apply to relays used within the specification before the end of relay life.

| **Power dissipation** | |
|---|---|
| All relays open | 1.75 W |
| All relays closed, 0 A per channel | 7 W |
| All relays closed, 5 A per channel | 21.5 W |
| All relays closed, 7 A per channel | 35.0 W |

# Dynamic Characteristics

| | |
|---|---|
| Relay operate time (at 20 °C) | 5 ms, typical<br>10 ms, maximum |
| Release time (at 20 °C) | 4 ms, typical<br>5 ms, maximum |

**Note** Certain applications may require additional time for proper settling. Refer to the ***NI Switches Help*** at ni.com/manuals for information about including additional settling time.

| **Expected relay life** | |
|---|---|
| Mechanical | $5 \times 10^7$ cycles |
| Electrical (maximum load) | $1 \times 10^5$ cycles |

**Note** The relays used in the PXI-2565 are field replaceable. Refer to the ***NI Switches Help*** at ni.com/manuals for information about replacing a failed relay.

# Trigger

| **Input trigger** | |
|---|---|
| Sources | PXI trigger lines <0...7> |

| | |
|---|---|
| Minimum pulse width | 70 ns |
| **Output trigger** | |
| Destinations | PXI trigger lines <0...7> |
| Pulse width | Software-selectable: 1 µs to 62 µs |

# Physical

| | |
|---|---|
| Relay type | Electromechanical, non-latching |
| Relay contact material[2] | Gold-flash over silver alloy |
| I/O connector | 16 × 2 minicombicon header |
| PXI power requirement | 5.5 W at 5 V |
| Dimensions (L × W × H) | 3U, two-slot, PXI/cPCI, 21.6 × 4.1 × 13.0 cm (8.5 × 1.6 × 5.1 in.) |
| Weight | 390 g (14 oz) |

# Environment

| | |
|---|---|
| Operating temperature | 0 °C to 50 °C |

| | |
|---|---|
| Storage temperature | -20 °C to 70 °C |
| Relative humidity | 5% to 85%, noncondensing |
| Pollution Degree | 2 |
| Maximum altitude | 2,000 m |

Indoor use only.

# Shock and Vibration

| | |
|---|---|
| Operational Shock | 30 g peak, half-sine, 11 ms pulse (Tested in accordance with IEC 60068-2-27. Test profile developed in accordance with MIL-PRF-28800F.) |
| **Random Vibration** | |
| Operating | 5 Hz to 500 Hz, 0.3 $g_{rms}$ |
| Nonoperating | 5 Hz to 500 Hz, 2.4 $g_{rms}$ (Tested in accordance with IEC 60068-2-64. Nonoperating test profile exceeds the requirements of MIL-PRF-28800F, Class 3.) |

# Compliance and Certifications

## Safety Compliance Standards

This product is designed to meet the requirements of the following electrical equipment safety standards for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1

- UL 61010-1, CSA C22.2 No. 61010-1

**Note** For safety certifications, refer to the product label or the Product Certifications and Declarations section.

## Electromagnetic Compatibility

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

- EN 61326-1 (IEC 61326-1): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- EN 55022 (CISPR 22): Class A emissions
- EN 55024 (CISPR 24): Immunity
- AS/NZS CISPR 11: Group 1, Class A emissions
- AS/NZS CISPR 22: Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions

**Note** In the United States (per FCC 47 CFR), Class A equipment is intended for use in commercial, light-industrial, and heavy-industrial locations. In Europe, Canada, Australia, and New Zealand (per CISPR 11), Class A equipment is intended for use only in heavy-industrial locations.

**Note** Group 1 equipment (per CISPR 11) is any industrial, scientific, or medical equipment that does not intentionally generate radio frequency energy for the treatment of material or inspection/analysis purposes.

**Note** For EMC declarations, certifications, and additional information, refer to the Product Certifications and Declarations section.

## Product Certifications and Declarations

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for NI products, visit ni.com/product-certifications, search by model number, and click the appropriate

link.

## Environmental Management

NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the ***Engineering a Healthy Planet*** web page at ni.com/environment. This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

### EU and UK Customers

- **Waste Electrical and Electronic Equipment (WEEE)**—At the end of the product life cycle, all NI products must be disposed of according to local laws and regulations. For more information about how to recycle NI products in your region, visit ni.com/environment/weee.

### 电子信息产品污染控制管理办法（中国RoHS）

- **中国RoHS**— NI符合中国电子信息产品中限制使用某些有害物质指令(RoHS)。关于NI中国RoHS合规性信息，请登录 `ni.com/environment/rohs_china`。(For information about China RoHS compliance, go to `ni.com/environment/rohs_china`.)