
PXI-2564

Specifications

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This document lists specifications for the PXI-2564. 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 SPST (nonlatching) 8 DPST
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PXI-2564 Pinout

8-DPST Topology

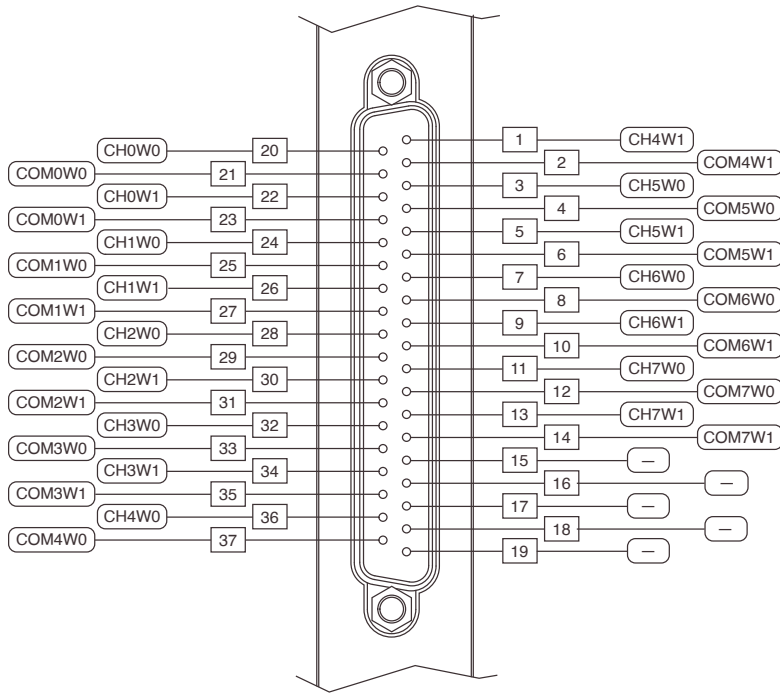


Table 1. Signal Descriptions

Signal	Description
CH x W0	Wire 0 signal connection
CH x W1	Wire 1 signal connection
COM x W0	Routing destination for Wire 0 on the corresponding channel
COM x W1	Routing destination for Wire 1 on the corresponding channel
—	No connection

16-SPST Topology

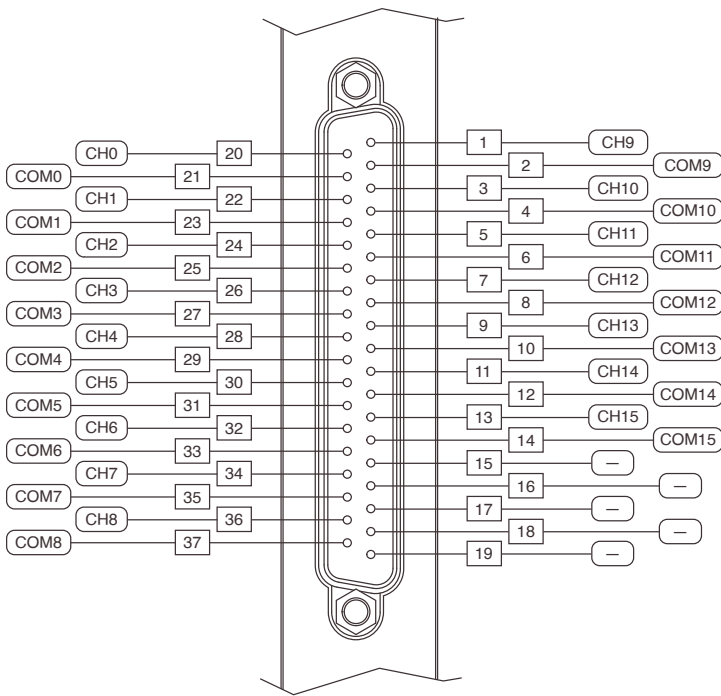


Table 2. Signal Descriptions

Signal	Description
CHx	Signal connection
COMx	Routing destination for the corresponding channel
—	No connection

Related information:

- [PXI-2564 Hardware Diagram](#)
- [NI Switches Cable and Accessory Compatibility](#)

Input Characteristics

Maximum switching voltage	
Channel-to-channel	150 V DC, 150 V AC

Channel-to-ground	150 V DC, 150 V AC, CAT II ¹
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Caution This module is rated for Measurement Category II and intended to carry signal voltages no greater than 150 V AC/150 V DC. This module features 1,400 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 MAINs supply circuits (for example, wall outlets) greater than 150 V DC; do not connect to MAINs circuits of 208 V AC (US) or 230 V AC (Europe).



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 and the maximum voltage, and must not exceed 30 W at 150 V DC, 150 W at 30 V DC, or 150 V AC, 5 A.

Maximum switching power (per channel)	
AC	750 VA
DC	
30 V	150 W
150 V	30 W

1. Measurement Category II is for measurements performed on circuits directly connected to the electrical distribution system. This category refers to local-level electrical distribution, such as that provided by a standard wall outlet, for example, 115 V for U.S. or 230 V for Europe.

Maximum current (switching or carry, per channel)	5 A
Simultaneous channels at maximum current (≤ 55 °C)	16



Caution 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	<100 m Ω
End-of-life	≥ 250 m Ω

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

Minimum switch load	10 mA, 5 V DC
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Dynamic Characteristics

Relay operate time	10.4 ms (maximum)
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Note Certain applications may require additional time for proper settling.

For information about including additional settling time, refer to the *NI Switches Help* at ni.com/manuals.

Expected relay life	
Mechanical	2×10^7 cycles
Electrical (full load)	1×10^5 cycles



Note The relays used in the PXI-2564 are field replaceable. Refer to the *NI Switches Help* at ni.com/manuals for information about replacing a failed relay.

Trigger Characteristics

Input trigger	
Sources	PXI trigger lines <0...7>
Minimum pulse width ²	150 ns
Output trigger	
Destinations	PXI trigger lines <0...7>
Default pulse width	2 μ s, typical

2. The PXI-2564 recognizes trigger pulse widths less than 150 ns if digital filtering is disabled. Refer to the *NI Switches Help* for information about disabling digital filtering.

Physical

Relay type	Electromechanical, non-latching
Relay contact material ³	Gold-plate silver cadmium oxide
I/O connector	37-pin D-SUB, male
PXI power requirement	5 W at 5 V, 2.5 W at 3.3 V
Dimensions (L × W × H)	3U, one slot, PXI/cPCI module, 21.6 × 2.0 × 13.0 cm (8.5 × 0.8 × 5.1 in.)
Weight	267 g (9.5 oz)

Environment

Operating temperature	0 °C to 55 °C
Storage temperature	-20 °C to 70 °C
Relative humidity	10% to 90%, operational 5% to 95%, storage
Pollution Degree	2

3. Certain devices are built with silver, gold covered. Contact NI for more details on a specific device.

Maximum altitude	2,000 m
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Indoor use only.

Shock and Vibration

Table 3. 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}
Random vibration, 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.

EMC Guidelines

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC). These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.

This product is intended for use in industrial locations. However, harmful interference may occur in some installations, when the product is connected to a peripheral device or test object, or if the product is used in residential areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Furthermore, any changes or modifications to the product not expressly approved by NI could void your authority to operate it under your local regulatory rules.

Refer to the following notices for cables, accessories, and prevention measures necessary to ensure the specified electromagnetic compatibility (EMC) performance.



Note Operate this product only with shielded cables and accessories.



Note Refer to the *Read Me First: Safety and Electromagnetic Compatibility* document for important safety and electromagnetic compatibility information. To obtain a copy of this document online, visit ni.com/docs, and search for the document title.



Note When exposed to transient electromagnetic phenomena such as electrostatic discharge (ESD) or power surges, this product may experience a temporary upset or other performance degradation that requires more than 10 seconds for self-recovery.



Note The FlexRIO FPGA module front panel interface is sensitive to electrostatic discharge. Use caution when handling the FlexRIO FPGA module to prevent damage to the internal components exposed by this interface.



Note Using the PXI-2564 in a manner not described in this document may impair the protection the PXI-2564 provides.

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 *Product Certifications and Declarations*.

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.)