PXI-2585 Specifications

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PXI-2585 Specifications

This document lists specifications for the PXI-2585. 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	1-wire 10 × 1 multiplexer

Input Characteristics

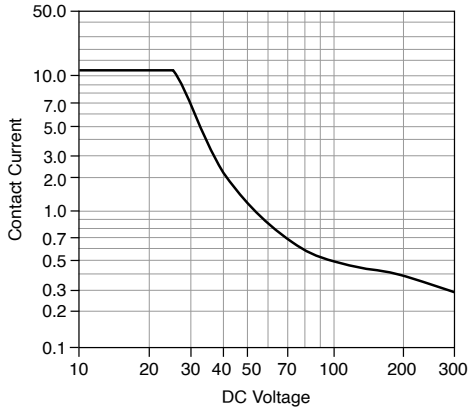
Caution When hazardous voltages (>42.4 Vpk/60 V DC) are present on any channel, safety low-voltage (≤42.4 Vpk/60 V DC) cannot be connected to any other channel.

Maximum switching voltage	
Channel-to-channel	300 V
Channel-to-ground	300 V, Measurement Category II

Caution The switching power is limited by the maximum switching current and the maximum voltage. For AC systems, switching power must not exceed 3 kVA. For maximum DC switching power, refer to the following figure.

Maximum switching power (per channel)	
AC systems	3 kVA (up to 60 Hz)

Figure 1. Maximum Switching Power for DC Loads (Per Channel)

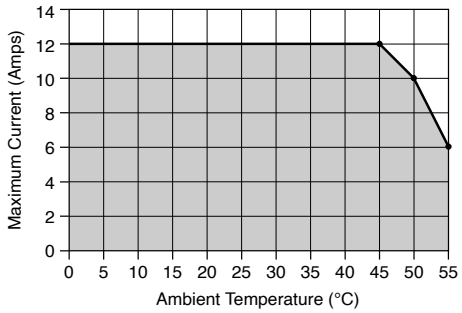


Maximum current (switching or carry, per channel or common)

Ambient temperature ≤45 °C	12 A

Refer to the following figure for the maximum current (switching or carry, per channel or common) for ambient temperatures >45 °C.

Figure 1. Maximum Current for Ambient Temperatures



Note Switching inductive loads (for example, motors and solenoids) can produce high voltage transients in excess of the module's rated voltage. 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 relayflyback.

DC path resistance	
Initial	≤50 mΩ
End-of-life	>100 mΩ

DC path resistance typically remains low for the life of the relay. At the end of relay life, the path resistance rapidly rises above 100 mΩ. Load ratings apply to relays used within the specification before the end of relay life.

Minimum switch load	12 V 100 mA

Bandwidth (-3 dB, 50 Ω termination)	≥10 MHz, typical

Crosstalk (50 Ω termination)

Channel-to-channel

10 kHz	≤-85 dB, typical
100 kHz	≤-65 dB, typical
1 MHz	≤-45 dB, typical
10 MHz	≤-25 dB, typical

Isolation (50 Ω termination)

Open channel

10 kHz	≥85 dB, typical
100 kHz	≥65 dB, typical
1 MHz	≥45 dB, typical
10 MHz	≥25 dB, typical

Dynamic

Relay operate time[1]	15.4 ms, maximum

Expected relay life[2]

Mechanical	1×10^7 cycles

Electrical	
30 V DC, 10 A DC resistive	1×10^5 cycles
30 V DC, 12 A DC resistive	3×10^4 cycles

Trigger

Input trigger	
Sources	PXI trigger lines <0...7>
Minimum pulse width[3]	150 ns

Output trigger	
Destinations	PXI trigger lines <0...7>
Pulse width	Software-selectable: 1 µs to 62 µs

Physical

Relay type	Electromechanical, single-side stable
Relay contact material	Silver-nickel
I/O connector	20-position, Positronic GMCT series plug
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 cm × 2.0 cm × 13.0 cm (8.5 in. × 0.8 in. × 5.1 in.)
Weight	400 g (14 oz)

Environment

Maximum altitude	2,000 m (at 25 °C ambient temperature)
Pollution Degree	2

Indoor use only.

Operating Environment

Ambient temperature range	0 °C to 55 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2.)
Relative humidity range	10% to 90%, noncondensing (Tested in accordance with IEC 60068-2-56.)

Storage Environment

Ambient temperature range	-40 °C to 71 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2.)
Relative humidity range	5% to 95%, noncondensing (Tested in accordance with IEC 60068-2-56.)

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, 0.31 g_{rms} (Tested in accordance with IEC 60068-2-64.)
Nonoperating	5 Hz to 500 Hz, 2.46 g_{rms} (Tested in accordance with IEC 60068-2-64. 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.)

[1] Certain applications may require additional time for proper settling. Refer to the **NI Switches Help** for more information about including additional settling time.

[2] Relays are field replaceable. Refer to the **NI Switches Help** for more information about replacing a failed relay.

[3] The PXI-2585 can recognize trigger pulse widths less than 150 ns if you disable digital filtering. Refer to the **NI Switches Help** for information about disabling digital filtering.