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Find the *National Instruments PXI-2585* at our website: *Click HERE*

DEVICE SPECIFICATIONS

PXI-2585

10-Channel Multiplexer

This document lists specifications for the PXI-2585 general-purpose relay module. All specifications are subject to change without notice. Visit *ni.com/manuals* for the most current specifications.

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PXI-2585 Specifications

Specifications characterize the warranted performance of the instrument under the stated operating conditions. Data in this document are *Specifications* unless otherwise noted.

Typical Specifications are specifications met by the majority of the instrument under the stated operating conditions and are tested at 23 °C ambient temperature. Typical specifications are not warranted.

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

Caution The protection provided by the PXI-2585 can be impaired if it is used in a manner not described in this document.

Topology

Refer to the *NI Switches Help* at *ni.com/manuals* for detailed topology information.

Topology	1-wire 10 × 1 multiplexer

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Input Characteristics

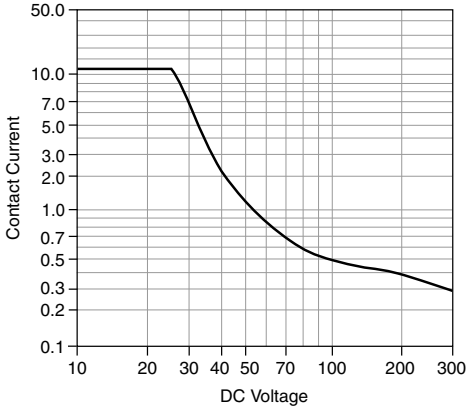
Caution When hazardous voltages (>42.4 Vpk/60 V DC) are present on any channel, safety low-voltage (≤42.4 Vpk/60 V DC) cannot be connected to any other channel.

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)

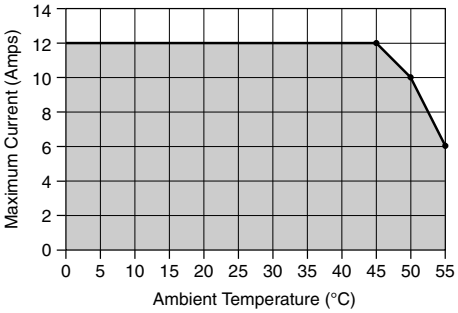


Maximum current (switching or carry, per channel or common)	
Ambient temperature ≤45 °C	12 A

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

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Figure 2. 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

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1 MHz	≥45 dB, typical
10 MHz	≥25 dB, typical

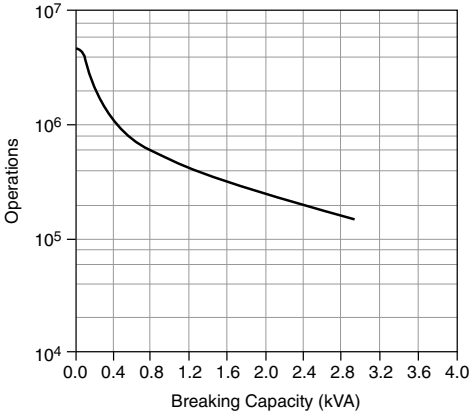
Dynamic Characteristics

Relay operate time	15.4 ms, maximum

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

Expected relay life	
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

Figure 3. Contact Life for Resistive AC Load, Typical



Note Relays are field replaceable. Refer to the *NI Switches Help* at *ni.com/manuals* for more information about replacing a failed relay.

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Trigger Characteristics

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

Note The PXI-2585 can recognize trigger pulse widths less than 150 ns if you disable digital filtering. Refer to the *NI Switches Help* at *ni.com/manuals* for information about disabling digital filtering.

Output trigger	
Destinations	PXI trigger lines <0...7>
Pulse width	Programmable (1 µs to 62 µs)

Physical Characteristics

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.)

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Storage Environment

Ambient temperature range	-20 °C to 70 °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

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 61010-1

Note For UL and other safety certifications, refer to the product label or the *Online Product Certification* 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
- AS/NZS CISPR 11: Group 1, Class A emissions

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- 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 and certifications, refer to the *Online Product Certification* section.

CE Compliance CE

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

- 2014/35/EU; Low-Voltage Directive (safety)
- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)

Online Product Certification

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for this product, visit *ni.com/certification*, search by model number or product line, and click the appropriate link in the Certification column.

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 *Minimize Our Environmental Impact* 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.

Waste Electrical and Electronic Equipment (WEEE)

EU Customers 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）

中国客户 National Instruments 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 National Instruments 中国 RoHS 合规性信息，请登录

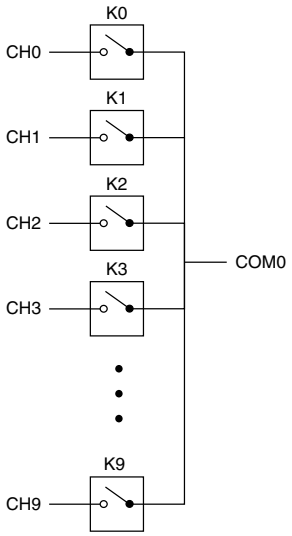
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ni.com/environment/rohs_china。(For information about China RoHS compliance, go to ni.com/environment/rohs_china.)

Diagrams

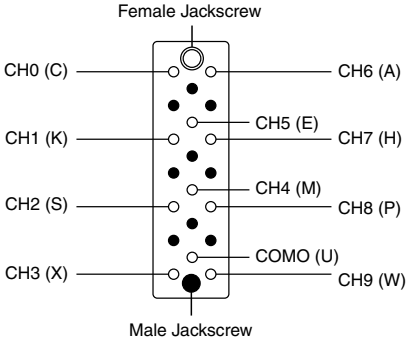
Refer to the following figure for the PXI-2585 power-on state:

Figure 4. PXI-2585 Power-On State



Refer to the following figure for the PXI-2585 front panel connector pinout:

Figure 5. PXI-2585 Connector Pinout



Note Letters in parentheses reference the pin designators of the connector.

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Note For topology-specific connection information, refer to your device in the *NI Switches Help* at *ni.com/manuals* and associated cable or terminal block installation instructions.

Accessories

Visit *ni.com* for more information about the following accessories.

Table 1. NI Accessories for the PXI-2585

Accessory	Part Number
PXI-258x BACKSHELL custom cable kit	779168-01
GMCT20-GMCT20 1M switch cable	781256-01
GMCT20-BARE WIRE 2M switch cable	781257-01

Caution You must install mating connectors according to local safety codes and standards and according to the specifications provided by the connector manufacturer. You are responsible for verifying safety compliance of third-party connectors and their usage according to the relevant standard(s), including UL and CSA in North America and IEC and VDE in Europe.

Table 2. Third-Party Accessories for the PXI-2585

Accessory	Manufacturer	Part Number	Details
Mating pins to front connector	Positronic	FS116N2	Additional cover or enclosure required.
Connector and backshell	Positronic	GMCT20F0E100JC	Requires the mating pins to front connector accessory, which must be purchased separately.
Polyimide kapton tape	Small Parts, Inc.	HTT-180108-36	—

Note When using third-party accessories with the PXI-2585, always observe safety guidelines. For information about how to safely build a third-party connector and backshell, refer to the *NI PXI-2585/2586 Connector and Backshell Kit Installation Guide* located at *ni.com/manuals*.

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