

# NI PXI-2567 Specifications

## 64-Channel Relay Driver Module

このドキュメントには、日本語ページも含まれています。

This document lists specifications for the NI PXI-2567 relay driver module. All specifications are subject to change without notice. Visit [ni.com/manuals](http://ni.com/manuals) for the most current specifications.

Topology ..... Independent

Channels are in a bank arrangement, with eight banks of eight channels. Refer to the *NI Switches Help* for detailed topology information.



**Caution** Refer to the *Read Me First: Safety and Electromagnetic Compatibility* document for important safety and compliance information.



**Caution** When operating this product, use shielded cables and accessories.

### About These Specifications

*Specifications* characterize the warranted performance of the instrument under the stated operating conditions.

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

All voltages are specified in DC, AC<sub>pk</sub>, or a combination unless otherwise specified.

### Input Characteristics

Maximum drive voltage,  
external power ..... 50 VDC

Maximum drive current

Per channel ..... 600 mA  
Per module ..... 25 A

Internal drive power ..... 5 V at 1.25 A,  
12 V at 0.5 A

Per channel protection circuitry

- Overvoltage protection activates at 80 V maximum.
- Over-current protection activates at 1.5 A minimum.
- Over-temperature protection activates at 150 °C junction temperature.

Internal drive power protection circuitry

- The 5 V and 12 V internal power supplies have fuses for over-current protection. These fuses are customer replaceable. Refer to the *Accessories* section of this document for fuse ratings.

### Dynamic Characteristics

Single-channel operate time  
(typical at 25 °C) ..... 60 μs



**Note** The operate time is measured from an input trigger to 90% activation of a 500 Ω resistor or between consecutive channel operations.

During power-on or reset, all relay drivers disconnect (power down).

Channel-to-ground resistance (RDSon)  
0–600 mA drive current ..... 0.280 Ω, maximum

Typical channel off drain current (IDSS)  
13 V drive voltage ..... 50 μA  
25 V drive voltage ..... 200 μA

## Trigger Characteristics

### Input trigger

Sources .....	PXI trigger lines 0–7, Front panel
Minimum pulse width .....	150 ns



**Note** The NI PXI-2567 can recognize trigger pulse widths less than 150 ns if you disable digital filtering. For information about disabling digital filtering, refer to the *NI Switches Help*.

### Front panel input voltage

Minimum .....	–0.5 V
VL maximum .....	+0.7 V
VH minimum .....	+2.0 V
Nominal .....	+3.3 V
Maximum .....	+5.5 V

### Output trigger

Destinations .....	PXI trigger lines 0–7, Front panel
Pulse width .....	Programmable (1 $\mu$ s to 62 $\mu$ s)
Front panel nominal voltage .....	3.3 V TTL, 8 mA

## Physical Characteristics

I/O connector .....78-pin D-SUB

### PXI power requirement, including

optional internal drive power .....	8 W at 5 V, 0.5 W at 3.3 V, 6 W at 12 V
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Dimensions (L  $\times$  W  $\times$  H).....3U, one slot,  
PXI/cPCI module  
21.6  $\times$  2.0  $\times$  13.0 cm  
(8.5  $\times$  0.8  $\times$  5.1 in.)

Weight .....220 g (8 oz)

## Environment

Operating temperature.....	0 °C to 55 °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 to 500 Hz, 0.3 $g_{rms}$
Nonoperating .....	5 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.)

## Accessories



**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.

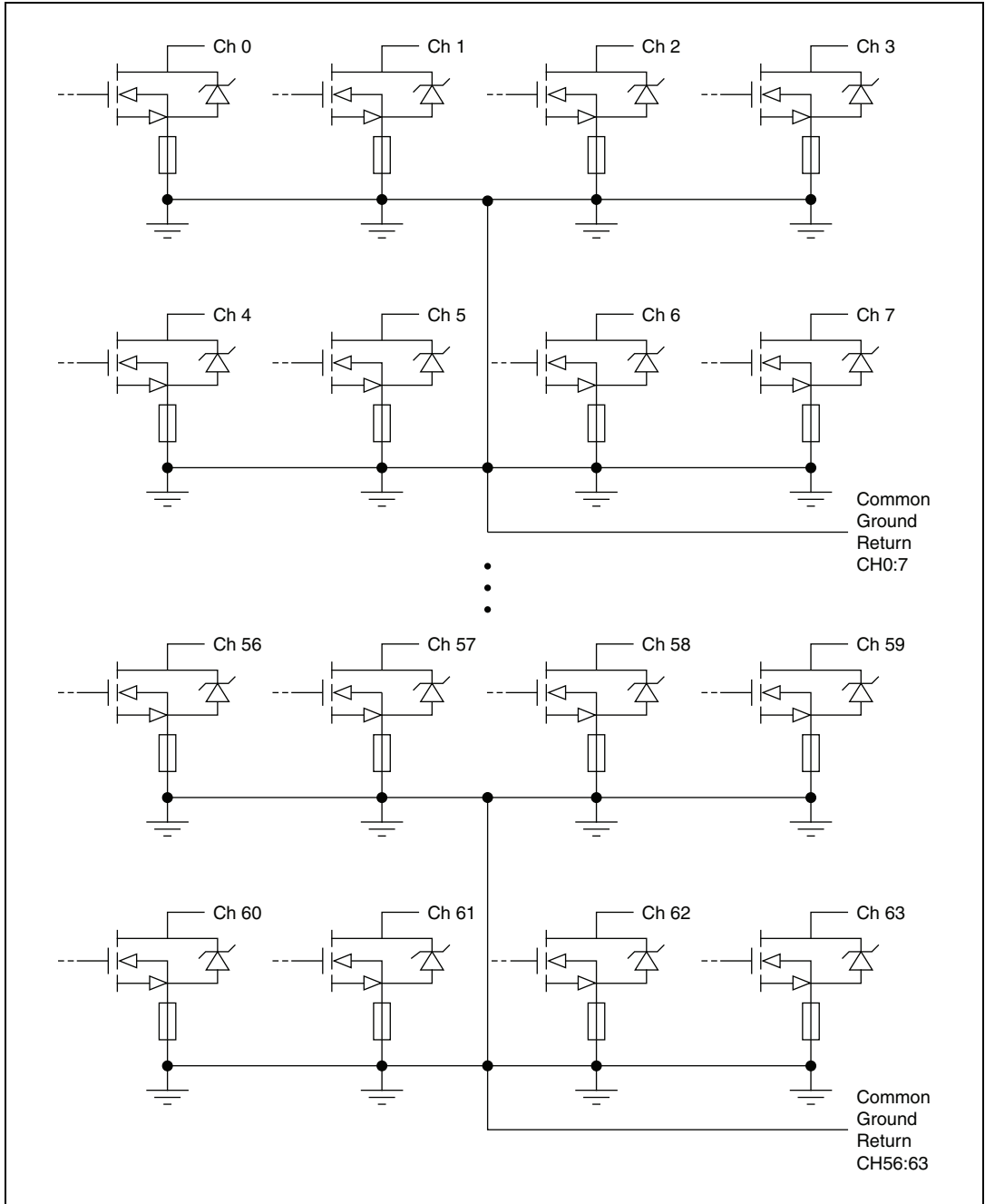
The module comes with one mating connector and backshell kit. Replacement fuses and additional mating connectors are available through general electronics catalogs.

**Table 1.** Third-Party Accessories for the NI PXI-2567

Accessory	Rating	Manufacturer and Part Number
5 V internal supply fuse	F2 A, 125 V	Littelfuse, NANO <sup>2</sup> , 0453.002
12 V internal supply fuse	F0.75 A, 125 V	Littelfuse, NANO <sup>2</sup> , 0453.750
78-pin D-SUB, female, vertical or right-angle	60 V, 5 A	Any

# Diagrams

Figure 1 shows the NI PXI-2567 relay driver output topology.



**Figure 1.** NI PXI-2567 Relay Driver Output Topology

Figure 2 shows the NI PXI-2567 pinout.

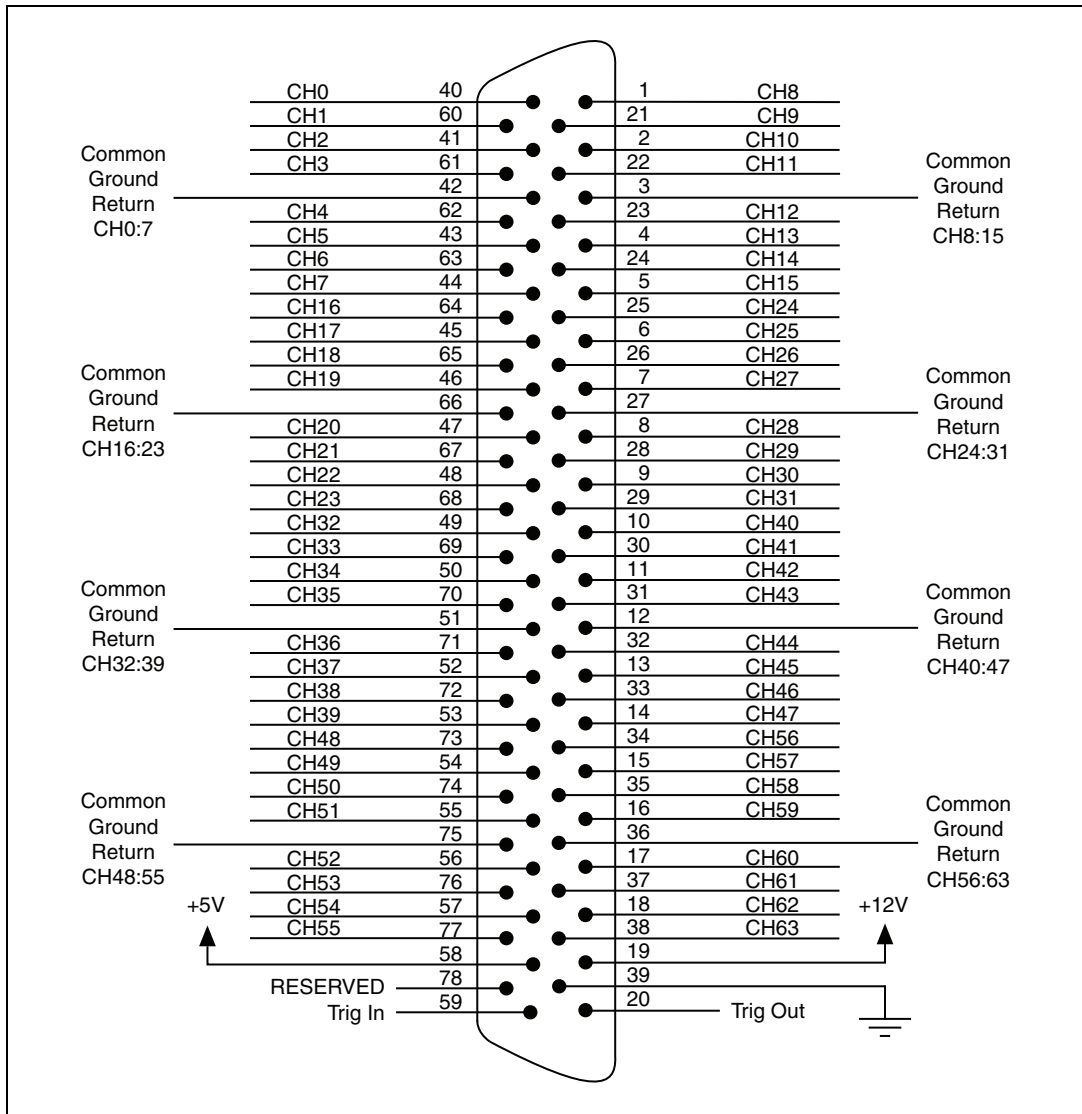


Figure 2. NI PXI-2567 Pinout



**Note** For topology-specific connection information, refer to your device in the *NI Switches Help* and the installation instructions for any associated cables or terminal blocks.

## How to Replace the Fuses

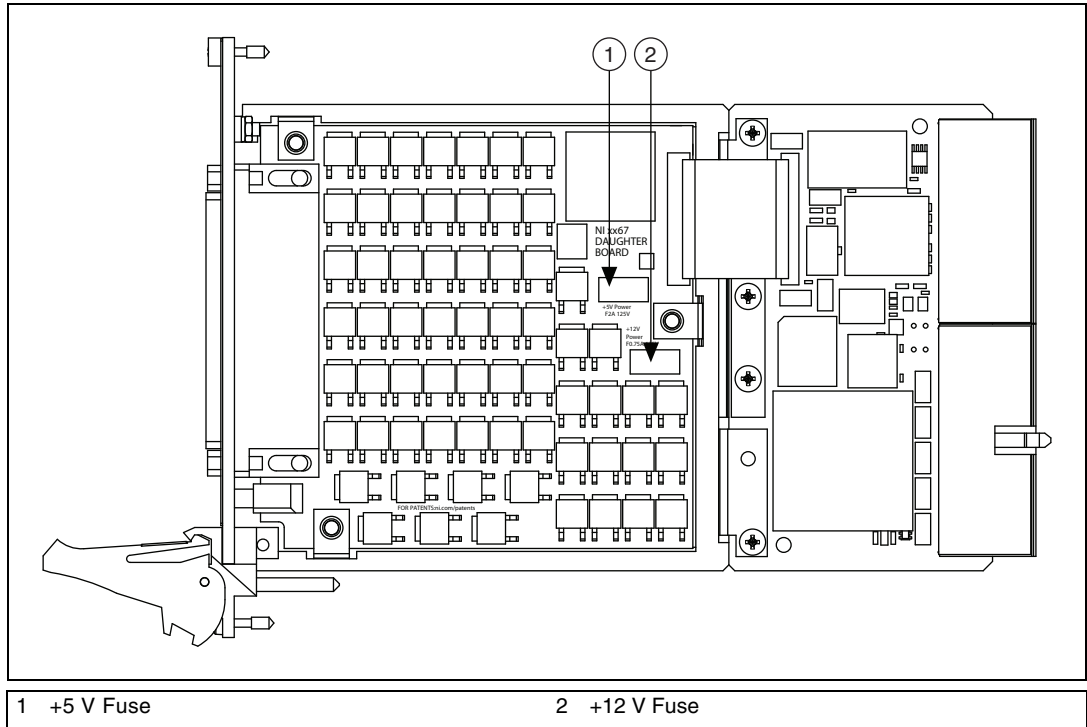
The front panel LEDs show the status of the +5 V and +12 V fuses. If an LED is on, the corresponding fuse is intact.

Complete the following steps to replace a fuse.

1. Ground yourself with a grounding strap or with a ground to your PXI chassis. Proper grounding prevents damage to your PXI module from electrostatic discharge.

2. Power off the PXI chassis and remove the module with the blown fuse.
3. Remove the blown fuse with pliers and replace it. Refer to Figure 3 for the fuse locations.

Figure 3 shows the NI PXI-2567 daughterboard diagram.



**Figure 3.** NI PXI-2567 Daughterboard Diagram with Fuse Locations

# Compliance and Certifications

## Safety

This product meets the requirements of the following standards of safety for electrical equipment 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
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions



**Note** For EMC declarations and certifications, refer to the *Online Product Certification* section.

## CE Compliance

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

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

## Online Product Certification

To obtain product certifications and the Declaration of Conformity (DoC) for this product, visit [ni.com/certification](http://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 *NI and the Environment* Web page at [ni.com/environment](http://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 products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers, National Instruments WEEE initiatives, and compliance with WEEE Directive 2002/96/EC on Waste Electrical and Electronic Equipment, visit [ni.com/environment/weee](http://ni.com/environment/weee).

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