64-Channel External Relay Driver

NI PXI-2567, NI SCXI™-1167

- Controls up to 64 single-side stable relays (or 32 2-coil latching relays)
- Accepts internal and external power
  - Up to 50 V
  - Up to 600 mA per channel
- High-power protection circuitry
- Hardware or software scanning
- 32,000-step scan list for deterministic scanning
- Programmable switching delay

Applications
- High-current relays
- RF relays
- Small DC motors
- Existing embedded relays

Operating Systems
- Windows 2000/NT/XP

Recommended Software
- LabVIEW™
- LabWindows™/CVI™
- Measurement Studio
- NI Switch Executive

Other Compatible Software
- Visual Basic
- C/C++

Driver Software (included)
- NI-SWITCH

Overview

The National Instruments PXI-2567 and SCXI-1167 are designed to be 64-channel, multipurpose relay drive modules, capable of driving many types of external relays. The relay driver is the ideal choice when the current and voltage requirements for relays exceed those found in existing relay modules (or for relays embedded in a test system). High-current, high-voltage, or multipole RF switches all fit into the realm of possibilities. The NI PXI-2567 and NI SCXI-1167 can also drive small DC motors or other inductive relay coils.

Internal and External Power Support

The PXI-2567 and SCXI-1167 can provide up to 50 V or 600 mA of drive capacity per channel when connected to an external power supply. Without an external power supply, the PXI-2567 can source up to 1.25 A from the 5 V pin or 500 mA from the 12 V pin provided by the PXI backplane. The SCXI-1167 can supply up to 750 mA at 5 V without an external power source. No one channel can drive more than 600 mA with either an internal or external source, and total module current is limited to 25 A of simultaneous drive.

Protection Circuitry

The eight banks of eight drivers in the PXI-2567 and SCXI-1167 protect against overvoltage and overcurrent conditions. When the condition clears, the channel is automatically reset so no disassembly of the module is required. A fly-back diode is also included to protect against damage from inductive loads.

Automatic Scanning

The PXI-2567 and SCXI-1167 are able to maximize throughput in automated test applications by the use of scanning. Scanning improves throughput by downloading a list of up to 32,000 connections to the switch modules and cycling through the list using an event (trigger) without any interruption from the host processor. Scanning is most efficiently accomplished by mating the PXI-2567 or SCXI-1167 with an instrument, such as the NI PXI-4070 FlexDMM, that issues a trigger after each measurement.

Software

All National Instruments PXI and SCXI switch modules are shipped with NI-SWITCH, an IVI-compliant driver offering complete functionality for all switch modules. For additional assistance in configuring, programming, and managing higher-channel-count switching systems, NI Switch Executive software offers an easy-to-use intelligent switch management and visual routing environment.

NATIONAL INSTRUMENTS

64-Channel External Relay Driver

Ordering Information

NI PXI-2567 778572-67
NI SCXI-1167..776572-67
Includes NI-SWITCH driver software and one mating connector and backshell kit.

BUY ONLINE!
Visit ni.com/info and enter pxi2567 and/or scxi1167.

Specifications

Input Characteristics

Channels	64 single-coil nonlatching relay drivers, 32, 2-coil latching relays
Max drive voltage	50 V
Max drive current	600 mA
Maximum current per module	25 A

Internal Drive Power

PXI-2567	5 V, 1.25 A or 12 V, 0.5 A
SCXI-1167	5 V, 0.75 A

Dynamic Characteristics

Maximum operating speed	150 operations/s

Physical

Dimensions

PXI-2567	2 x 10 x 16 cm (.8 x 3.9 x 6.4 in.)
SCXI-1167	3.0 x 17.2 x 20.3 cm (1.2 x 6.9 x 8.0 in.)
I/O connector	78 pin D-Sub

Environment

Operating temperature	0 to 55 °C
Storage temperature	-40 to 70 °C
Relative humidity	5 to 85% noncondensing
Pollution degree	2

Approved at altitudes up to 2,000 m
Indoor use only

Safety

This product is designed to meet the requirements of the following standards
of safety for electrical equipment for measurement, control, and laboratory use:
- IEC 61010-1, EN 61010-1
- UL 3111-1, UL 61010B-1
- CAN/CSA C22.2 No. 1010.1

CE Compliance CE

This product meets the essential requirements of applicable European Directives,
as amended for CE marking, as follows:

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Low-Voltage Directive (safety)	73/23/EEC
Electromagnetic Compatibility Directive (EMC)	89/336/EEC

Global Services and Support

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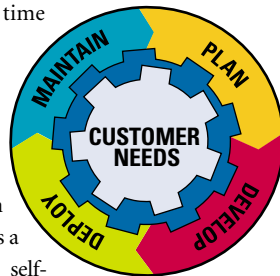
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