

G4 DIGITAL SWITCH MODULES

Features

- > On/off switch, ideal for testing application software (input) or field wiring (output)
- > Ability to simulate an external input or a G4 module output
- > Input has a built-in LED status indicator and logic levels of 5, 15, and 24 VDC; it is debounced for rapid counting.
- > Small footprint design matches other G4 I/O modules.
- > Operating temperature: -30° C to 70° C
- > UL recognized, CSA certified, CE approved
- > Compatible with Raspberry Pi®
- > Passes NEMA Showering Arc Test (ICS 2-230)
- > Meets IEEE Surge Withstand Specification (IEEE-472)

DESCRIPTION

Because these G4 digital modules simulate input or output with a manual toggle switch, they are ideal for testing application software and field wiring. The G4SWIN input module's switch is on the logic side of the module, while the G4SWOUT output module's switch is on the field side.

G4SWIN

Opto 22's G4SWIN input test module is used to simulate an input on an I/O mounting rack. Each module contains a toggle switch that closes a contact on the logic side of the module. An internal resistor limits the current through the switch and provides a load similar to that of an actual input module. An internal debounce circuit allows rapid switch closures without false counts.

The G4SWIN module works with logic voltages of 5, 15, and 24 volts. Internally, there is no connection to the field inputs.

The G4SWIN module is ideal for simulating discrete external events when testing application software.

G4SWOUT

Opto 22's G4SWOUT output test module provides a manual toggle switch on the field side. The switch closes a contact that shorts the field terminals to turn on a field output. Internally, there is no connection to the logic side of the module.

The G4SWOUT module is ideal for testing field wiring and devices by simulating an output from the computer. The switch can handle 3 amps at 250 VAC/VDC.



G4 Digital Switch Modules



Compatible with Raspberry Pi

Both G4 digital switch modules can be used with the Digital I/O Carrier Board for Raspberry Pi (part number [OPTO-P1-40P](#)) to monitor and control industrial devices with your Raspberry Pi.

Part Numbers

Part	Description
G4SWIN	G4 Digital Input Switch 5, 15, 24 VDC Logic
G4SWOUT	G4 Digital Output Switch, 250 VAC/VDC

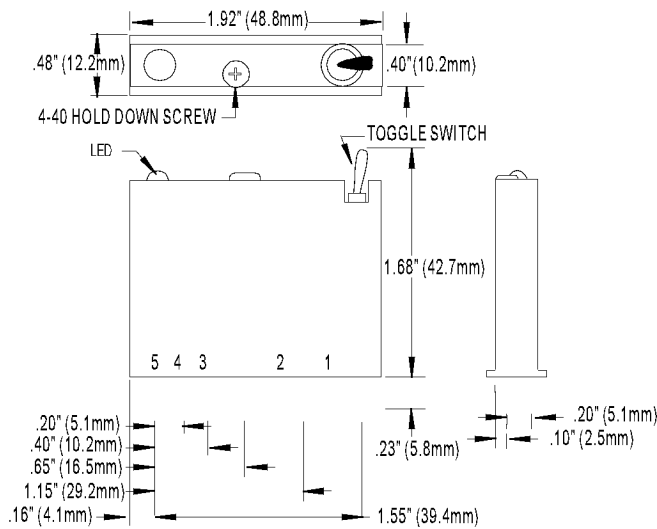
Raspberry Pi® is a trademark of the Raspberry Pi Foundation.

G4SWIN

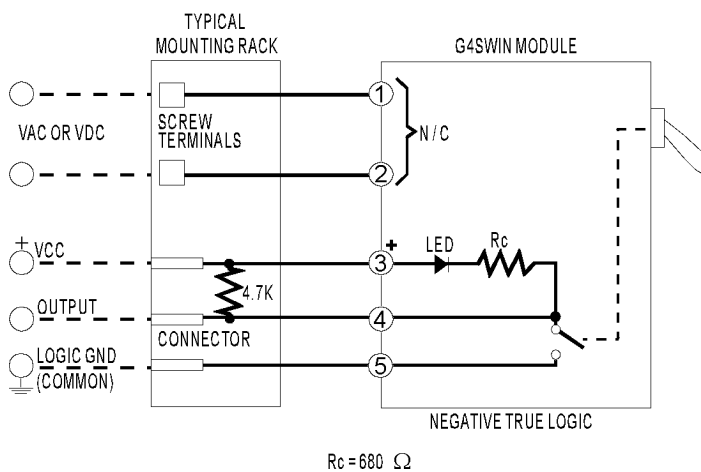
Specifications

Isolation, input-to-output (transient): 1 ms	4000 volts
1 minute	1500 volts
Temperature:	
Operating	-30 to +70 °C
Storage	-30 to +85 °C

Dimensions



Schematics

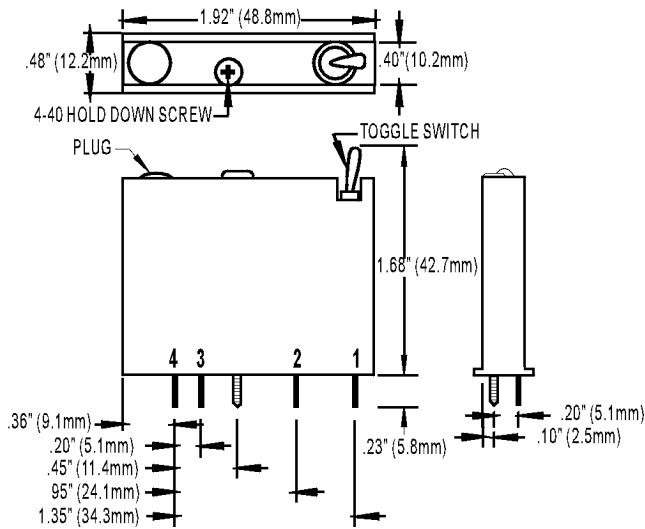


G4SWOUT

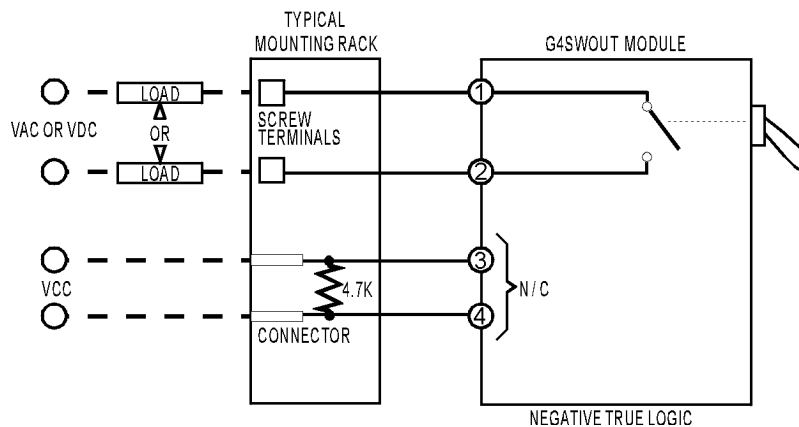
Specifications

Output voltage range	250 VAC/VDC
Isolation, input-to-output (transient)	4000 volts
Temperature:	
Operating	-30 to +70 °C
Storage	-30 to +85 °C

Dimensions



Schematics



PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products.

Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system is the culmination of over 40 years of experience in designing products for the automation industry.

groov EPIC gives you an industrially hardened system with guaranteed-for-life I/O, a flexible Linux®-based controller with gateway functions, and software for your IIoT application or any application.

groov EPIC I/O

I/O provides the local connection to sensors and equipment. *groov* I/O offers up to 24 channels on each I/O module, with a spring-clamp terminal strip, integrated wireway, and swing-away cover.

Opto 22 I/O is so reliable, we can afford to guarantee it for life. *groov* I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Controller

The heart of the system is the *groov* EPIC controller. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, online services, and more, both on premises and in the cloud.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution touchscreen. Authorized users can see your *groov* View HMI locally on the touchscreen or on a monitor connected via the HDMI or USB ports.

groov EPIC Software

Software includes:

- Flowchart-based PAC Control for control programming, or build your own custom application with optional secure shell access
- *groov* View for building and viewing your own device-independent HMI
- Node-RED for creating simple logic flows from pre-built nodes

- Ignition Edge® from Inductive Automation®, with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT/Sparkplug communications for efficient IIoT data transfer

groov Edge Appliance

Visualization, data handling, and connectivity in a compact, industrial box: that's the *groov* Edge Appliance. Included are:

- *groov* View for building and viewing operator interfaces on PCs and mobile
- Node-RED for building simple logic flows
- Ignition Edge® from Inductive Automation®, for OPC-UA drivers and MQTT/Sparkplug IIoT communications



Older products

From solid state relays (our first products) to world-famous G4 and SNAP I/O, to SNAP PAC controllers, Opto 22 products last a long time. You can count on us to give you the reliability and service you expect.



QUALITY

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California.

Because we test each product twice before it leaves our factory rather than testing a sample of each batch, we can guarantee most solid-state relays and optically isolated I/O modules for life.

FREE PRODUCT SUPPORT

Opto 22's California-based Product Support Group offers free, comprehensive technical support for Opto 22 products from engineers with decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Support is always available on our website, including how-to videos, user's guides, the Opto 22 KnowledgeBase, troubleshooting tips, and OptoForums. In addition, free hands-on training is available at our Temecula, California headquarters, and you can [register online](#).

PURCHASING OPTO 22 PRODUCTS

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at **800-321-6786** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.