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; UKCA
- Compatible with Raspberry P®
- Passes NEMA Showering Arc Test (ICS 2-230)
- Meets IEEE Surge Withstand Specification (IEEE-472)

G4 Digital Switch Modules

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'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.

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

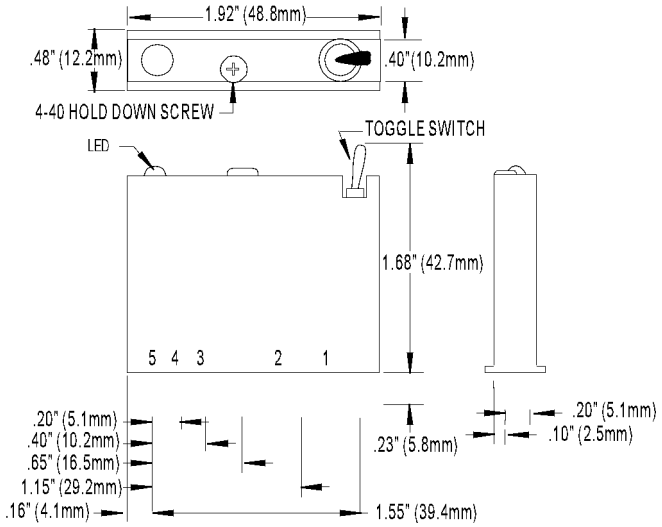
Raspberry Pi® is a trademark of the Raspberry Pi Foundation.

G4SWIN

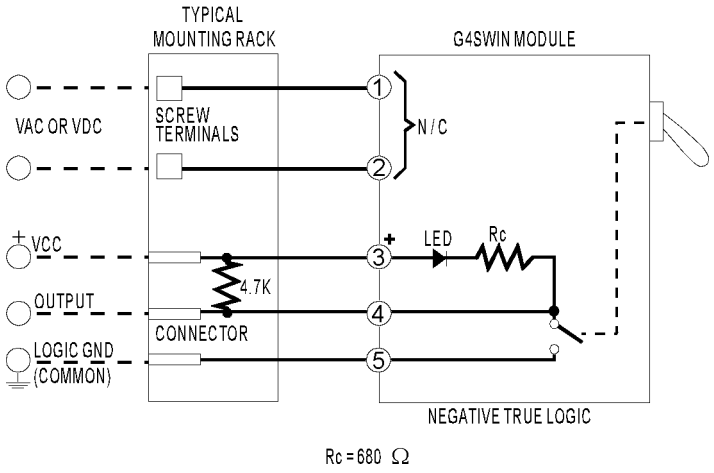
Specifications

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

Dimensions



Schematics

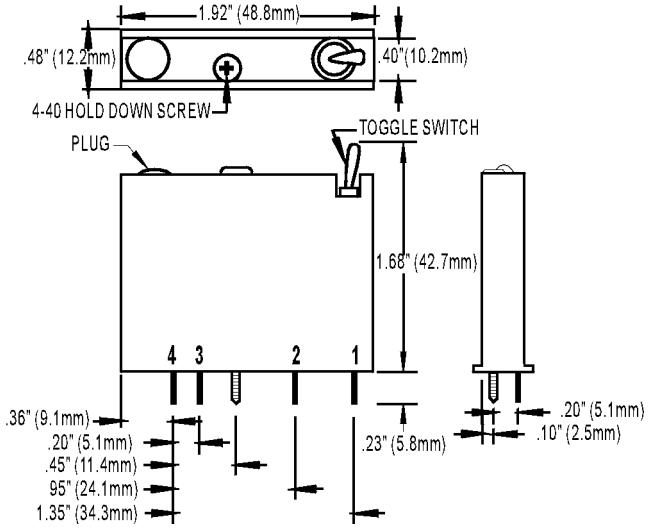


G4SWOUT

Specifications

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

Dimensions



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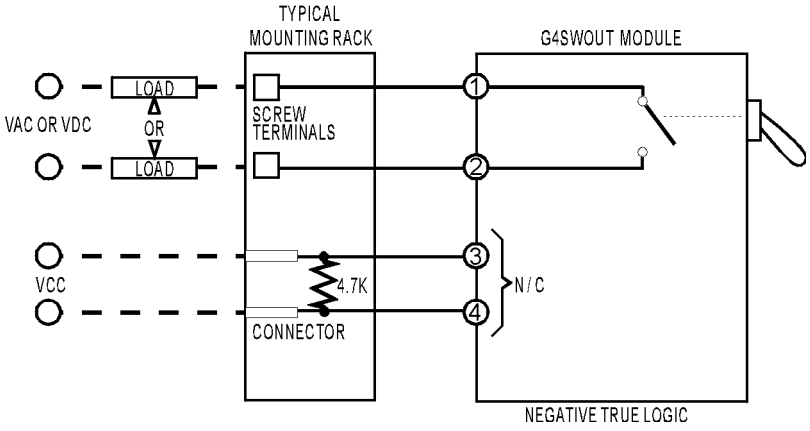

More about Opto 22

OPTO 22

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov RIO®

groov RIO edge I/O offers a single, compact, PoE-powered industrial package with web-based configuration and IIoT software built in, support for multiple OT and IT protocols, and security features like a device firewall, data encryption, and user account control.

Standing alone, *groov* RIO connects to sensors, equipment, and legacy systems, collecting and securely publishing data from field to cloud. Choose a universal I/O model with thousands of possible field I/O configurations, with or without Ignition from Inductive Automation®, or a RIO EMU energy monitoring unit that reports 64 energy data values from 3-phase loads up to 600 VAC, Delta or Wye.

You can also use *groov* RIO with a Modbus/TCP master or as remote I/O for a *groov* EPIC system.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system gives you industrially hardened control with a flexible Linux®-based processor with gateway functions, guaranteed-for-life I/O, and software for your automation and IIoT applications.

groov EPIC Processor

The heart of the system is the *groov* EPIC processor. 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, and online services, both on premises and in the cloud. No industrial PC needed.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen, on a monitor connected via the HDMI or USB ports, or on a PC or mobile device with a web browser.

groov EPIC I/O

groov I/O connects locally to sensors and equipment. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status. *groov* I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Software

The *groov* EPIC processor comes ready to run the software you need:

- Programming: Choose flowchart-based PAC Control, CODESYS Development System for IEC61131-3 compliant programs, or secure shell access (SSH) to the Linux OS for custom applications
- Node-RED for creating simple IIoT logic flows from pre-built nodes
- Efficient MQTT data communications with string or Sparkplug data formats
- Multiple OPC UA server options
- HMI: *groov* View to build your own HMI viewable on touchscreen, PCs, and mobile devices; PAC Display for a Windows HMI; Node-RED dashboard UI
- Ignition or Ignition Edge® from Inductive Automation (requires license purchase) with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications

Older products

From solid state relays, to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and working hard at thousands of installations worldwide. You can count on us for the reliability and service you expect, now and in the future.

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 afford to 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 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 free online training at OptoU, how-to videos, user's guides, the Opto 22 KnowledgeBase, and OptoForums.

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.

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