

## DATA SHEET

Form 638-011130

### Description

The G4IAC5MA and G4IDC5MA solid state input modules feature an integral three-position Manual On/Off and Automatic Operation override switch. By flipping the switch, they can be used as operator inputs or standard input modules.

The three-position switch is in series with an internal current limiting resistor on the optically isolated control side of the module. This provides a simulated input and eliminates the need for actual real world devices during program development. Once development is complete, the same module can be used in the final application.

These modules are *mistic* controller system compatible and are supported by a variety of G4 I/O racks.

Part Numbers	Description
G4IAC5MA	AC input 90-140 VAC, 5 VDC logic W/SW
G4IDC5MA	DC input 10-32 VDC, 5 VDC logic with HOA/SW



### Features

- Solid state switching
- 4000 V optical isolation
- LED status indicator
- UL recognized
- CSA certified
- Small footprint
- Passes NEMA showering arc test [ICS2-230]
- Meets IEEE surge withstand specification [IEEE-472]
- Compatible with *mistic* control systems and G4 racks

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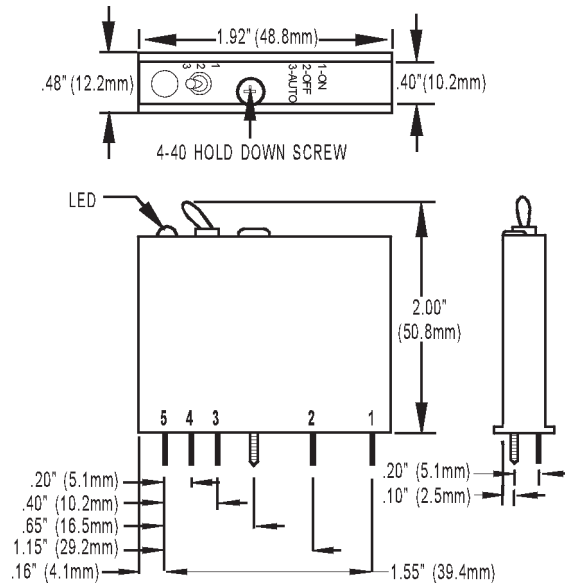
### Specifications

#### General Applies to All Models

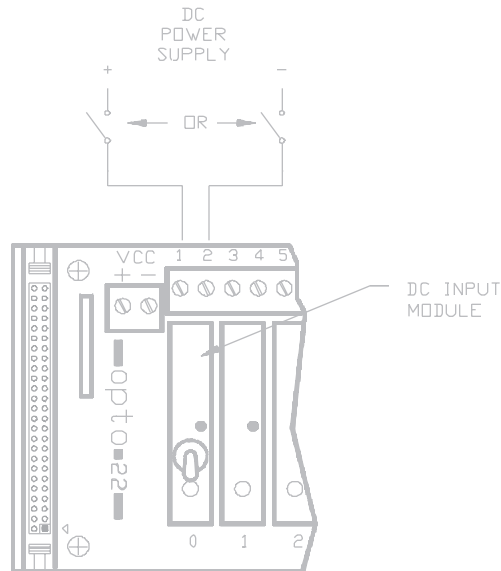
Operating ambient temperature	- 30°C to 70°C
Isolation input-to-output	4000 Vrms
Output voltage drop	0.4 V @ 50 mA
Output current (max)	50 mA
Leakage with no input	100 mA @ 30 VDC
Output transistor	30 V breakdown

	G4IAC5MA	G4IDC5MA
Input voltage range	90 - 140 VDC 90 - 140 VAC	10 - 32 VDC 12 - 32 VAC
Input current @ max line	11 mA	25 mA
Turn-on time	20 ms	5 ms
Turn-off time	20 ms	5 ms
Input allowed for no logic output	3 V, 45 mA	1 V, 3 mA
Logic supply voltage - nominal	5 VDC	5 VDC
Logic supply voltage range	4.5 - 6 VDC	4.5 - 6 VDC
Logic supply current @ nominal logic voltage	12 mA	12 mA
Input resistance (R1 in schematic diagram)	14 K ohms	1.5 K ohms
Control resistance (Rc in schematic diagram)	220 ohms	220 ohms

### Dimensions



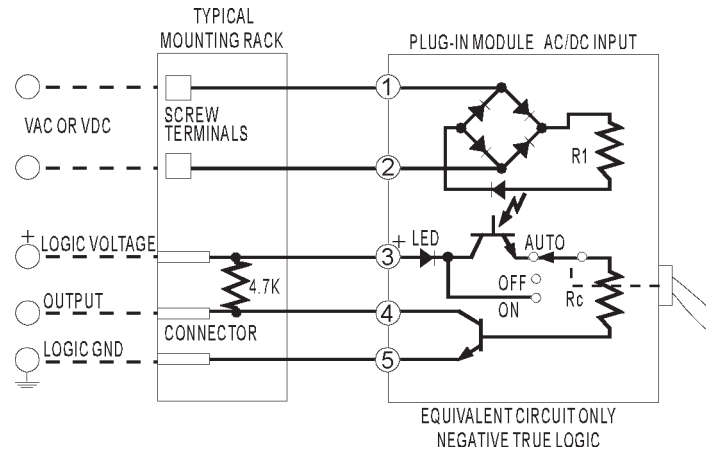
### Connections



WARNING:  
DO NOT REMOVE OR INSTALL MODULES  
WITH POWER APPLIED.

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### Schematics



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**OPTO 22**

### Products

Opto 22 produces a broad array of reliable, flexible hardware and software for industrial automation and remote monitoring. Opto 22's diverse and complete product range allows you to buy in at any level, from solid-state relays to fully integrated control systems.

#### SNAP Ultimate I/O™

The most intelligent and powerful I/O system available, SNAP Ultimate I/O effectively combines I/O, control, networking, and enterprise connectivity into a single cohesive system. SNAP Ultimate I/O has the ability to communicate *directly* with enterprise systems, eliminating the need for complex middleware and the significant investments associated with it. Software and utilities for use with SNAP Ultimate I/O include ioControl™ flowchart-based control programming software and ioDisplay™, a Windows-based HMI development package.



#### SNAP Ethernet I/O™

Using SNAP Ethernet I/O systems, you can connect a wide variety of electronic and mechanical devices such as lights, temperature and pressure sensors, motors, and serial devices to computers via a standard Ethernet network, wireless LAN, or even the Internet.



#### SNAP-IT™ Systems

A packaged solution that brings industry-proven SNAP Ethernet technology to your enterprise faster and easier than ever before, SNAP-IT is a Web-enabled hardware appliance that connects environmental, device, and other sensors directly to your enterprise applications. The connected devices can then be controlled and real-time operational data can be collected, monitored, and delivered via a standard Ethernet, wireless LAN, or dial-up network.



#### Opto 22 FactoryFloor™ Software

FactoryFloor is an integrated suite of industrial control software applications designed to help you develop control automation solutions, build easy-to-use operator interfaces, and expand your manufacturing systems' connectivity.



### Other Software and Hardware

Software developer kits (SDKs), diagnostic utilities, support for the Linux operating system, and a full line of SNAP industrial controllers are also available from Opto 22.



### Quality

In delivering hardware and software solutions for worldwide device management and control, Opto 22 retains the highest commitment to quality.

We do no statistical testing; each product is made in the U.S.A. and is tested twice before leaving our 160,000 square-foot manufacturing facility in Temecula, California. That's why we can guarantee solid-state relays and all optically-isolated I/O modules *for life*.

### Product Support

Opto 22's Product Support Group offers comprehensive technical support for Opto 22 products. The staff of support engineers represents years of training and experience, and can assist with a variety of project implementation questions. Product support is available in English and Spanish from Monday through Friday, 8 a.m. to 5 p.m. Pacific Standard Time.

### Opto 22 Web Sites

[www.opto22.com](http://www.opto22.com)  
[www.ManageTheRealWorld.com](http://www.ManageTheRealWorld.com)  
[www.internetio.com](http://www.internetio.com) (live Internet I/O demo)  
[www.ultimateio.com](http://www.ultimateio.com) (SNAP Ultimate I/O information)

### Other Resources

- OptoInfo CDs
- Ongoing, up-to-date training
- Integration support
- FaxBack service: (800) 474-OPTO

### About Opto 22

Founded in 1974, Opto 22 is a leading manufacturer of high-quality hardware and software solutions for connecting real-world devices with computer networks. Customer applications include enterprise management, remote monitoring and control, industrial automation, and data acquisition. Opto 22 was one of the first companies to recognize and implement solutions involving networks, computers, and real-world equipment and devices. More than 65 million devices worldwide are reliably connected to Opto 22 systems.

