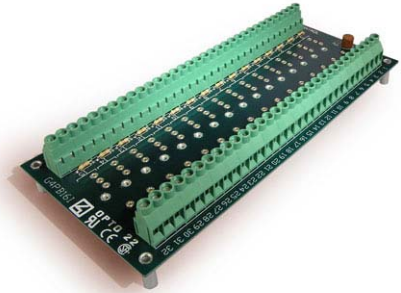


## CLASSIC G4 16-CHANNEL RACK

### Features

- > Requires minimum panel space
- > Spare module fuse on board
- > Screw terminals on both control and field connections
- > Negative-true or positive-true logic wiring for output modules
- > Negative-true logic wiring for input modules



G4 Digital I/O Rack

### DESCRIPTION

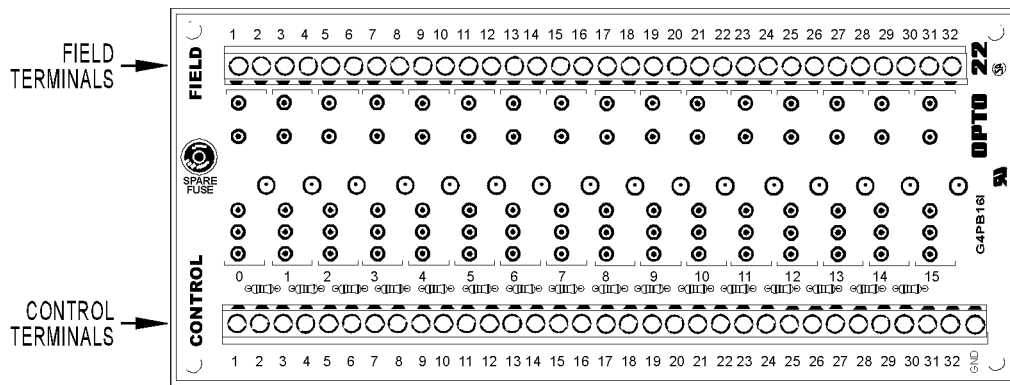
The G4PB16I I/O mounting rack accommodates up to 16 G4 digital I/O modules and features channel-to-channel isolation between all field and control circuits.

Output modules may have their control side wired for either positive-true or standard negative-true control signals from computer I/O ports. Input modules operate only with negative true logic.

Insert and remove modules easily and quickly without disturbing field wiring. Modules are secured to the mounting rack with a captive hold-down screw. Barrier strips with screw terminals provide the field, control, and mounting rack power connections.

### SPECIFICATIONS

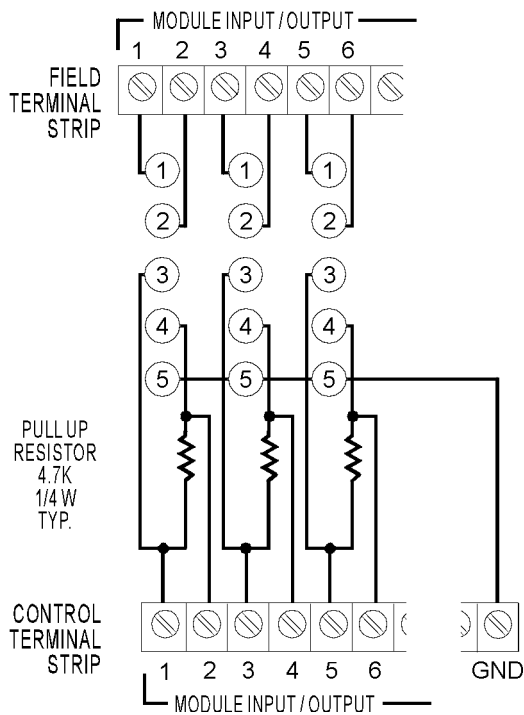
Interface connectors for Field and Control	Screw-type barrier strip accommodates up to 10 AWG wire
Torque, terminal strip	5.5 in-lb (0.6 N-m)
Operating temperature	0 to 70 °C
Humidity	95% relative humidity, non-condensing
Agency Approvals	UL, CSA, CE; UKCA



### Part Number

Part	Description
G4PB16I	G4 16-Channel I/O Module Rack Isolated Control

## CONNECTIONS



Module Position	Control Terminals	Field Terminals
0	1 and 2	1 and 2
1	3 and 4	3 and 4
2	5 and 6	5 and 6
3	7 and 8	7 and 8
4	9 and 10	9 and 10
5	11 and 12	11 and 12
6	13 and 14	13 and 14
7	15 and 16	15 and 16
8	17 and 18	17 and 18
9	19 and 20	19 and 20
10	21 and 22	21 and 22
11	23 and 24	23 and 24
12	25 and 26	25 and 26
13	27 and 28	27 and 28
14	29 and 30	29 and 30
15	31 and 32	31 and 32

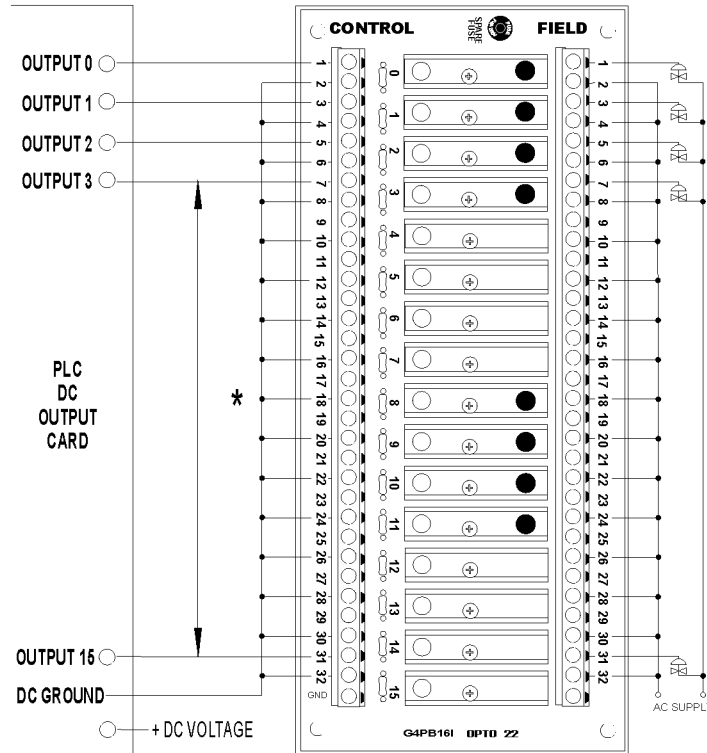
### Notes:

1. At each module position on the field terminal strip, the lower number is always connected to pin 1 of the I/O module.
2. Input modules and dry contact output modules (G4ODC5R and G4ODC5R5) require the power supply's ground to be connected to the control side's GND terminal.
3. Input modules and dry contact output modules (G4ODC5R and G4ODC5R5) require odd numbered connections on the control side be connected to +VCC.
4. Input modules use even-numbered control terminals and can only be wired for negative-true logic.
5. To wire output modules for standard negative-true logic, then connect the odd-numbered control terminals to Vcc and use the even-numbered terminals for control.
6. To wire output modules for positive-true logic, then connect the even-numbered control terminals to logic ground and use the odd-numbered terminals for control.

See diagrams on the following page.

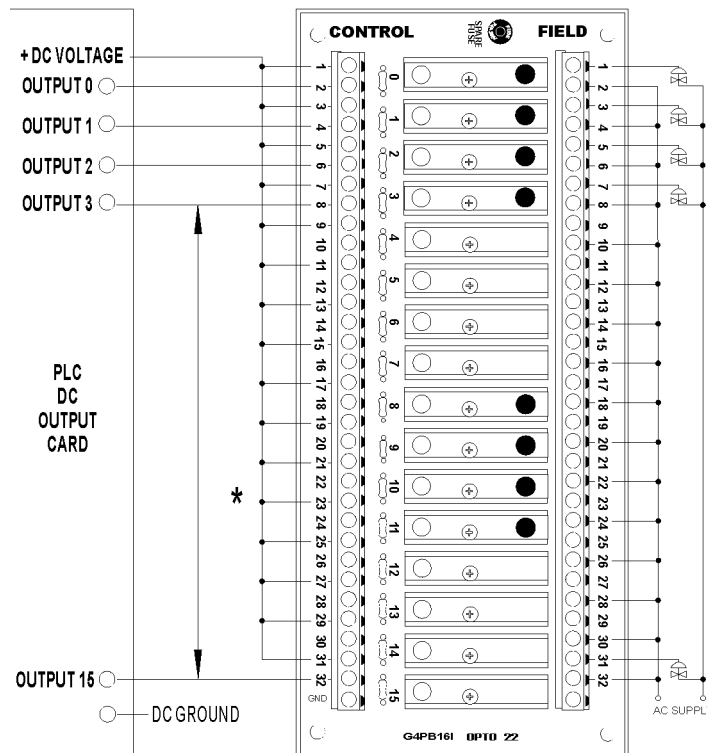
## APPLICATIONS

Positive true logic connection to PC



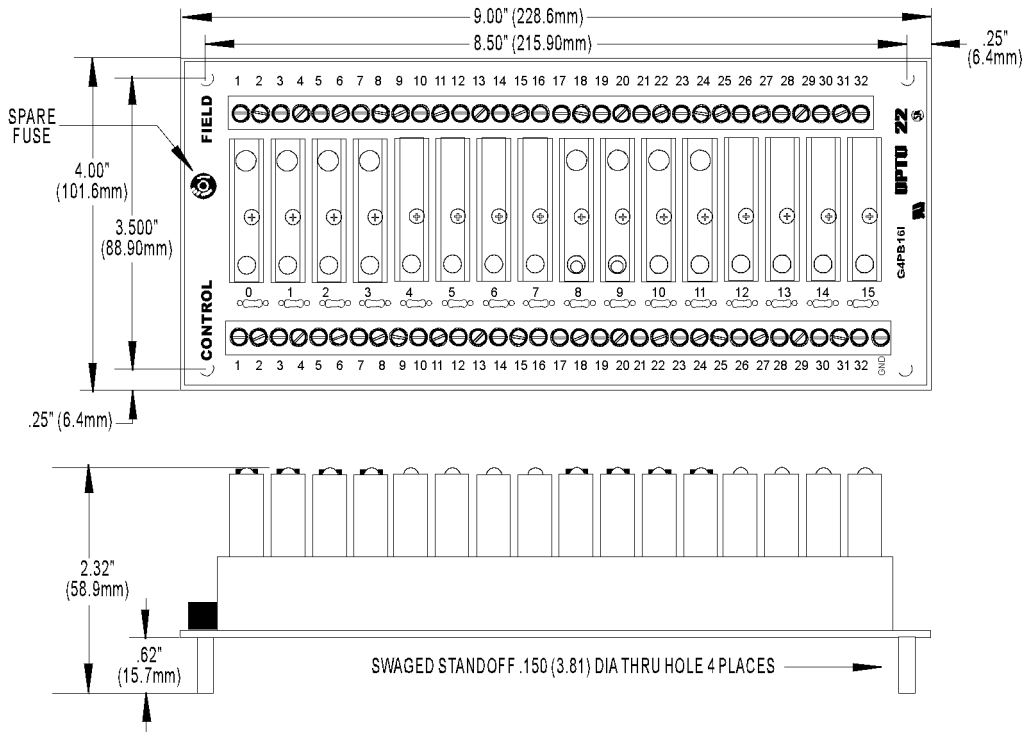
\* This wiring can be done using a G4STRAP.

Negative true logic connection to PC



\* This wiring can be done using a G4STRAP.

## DIMENSIONS



## 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](http://www.opto22.com).

