

## G4 DIGITAL O/I MOUNTING RACKS (HEAD CONNECTOR)

### Features

- > Available in 16- and 8-channel models
- > Require minimum panel space
- > Built-in fuse tester
- > Spare 1 A fuse on board; can accept 5A fuse
- > Power indicator LED
- > For field power, use a single 5, 15, or 24 VDC power supply



G4PB16H

### DESCRIPTION

The G4PB16H and G4PB8H Digital I/O Mounting Racks are designed for use with G4 digital I/O modules. The G4PB8H accepts up to 8 digital I/O modules, and the G4PB16H accepts 16.

Both racks work with Opto 22's PBSA, PBSB, and PBSC power supplies.

Logic supply is fused with a 1 A fuse, which, if desired, can be swapped out for a 5 A fuse (sold separately).

Barrier strips with screw terminals provide the field and mounting rack power connections. I/O modules are secured to the mounting rack with a threaded captive hold-down screw. You can insert and remove modules easily and quickly without disturbing field wiring.

For logic connections, the header connector accommodates the following devices:

- Standard 50-pin cable
- Optomux<sup>®</sup> E1 brain board
- Optomux B1 brain board
- Pamux<sup>®</sup> B5 brain board
- *mistic*<sup>™</sup> B100 brain board
- Digital I/O Carrier Board for Raspberry Pi<sup>®</sup> (part number [OPTO-P1-40P](#))

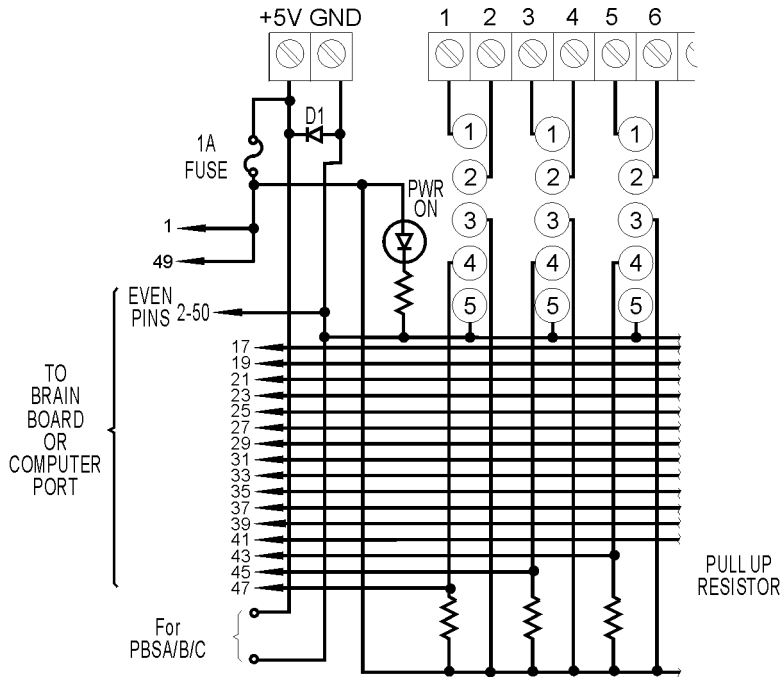
### SPECIFICATIONS

<b>Interface Connectors</b>	
Field	Screw-type barrier strip accommodates up to 10 AWG wire
Control	50-conductor header connector
Power	Two-position screw terminal (used with a 5.00 VDC +0.1 power source) or Opto 22 PBSA/B/C Power Supply
Operating Temperature	0 to 70 °C
Relative Humidity	95% humidity, non-condensing
Agency Approvals	UL, CE, CSA, RoHS, DFARS; UKCA
Warranty	30 months from date of manufacture

### Part Numbers

Part	Description
G4PB16H	G4 16-Channel Mounting Rack with Header Connector
G4PB8H	G4 8-Channel Mounting Rack with Header Connector

## G4PB16H CONNECTIONS

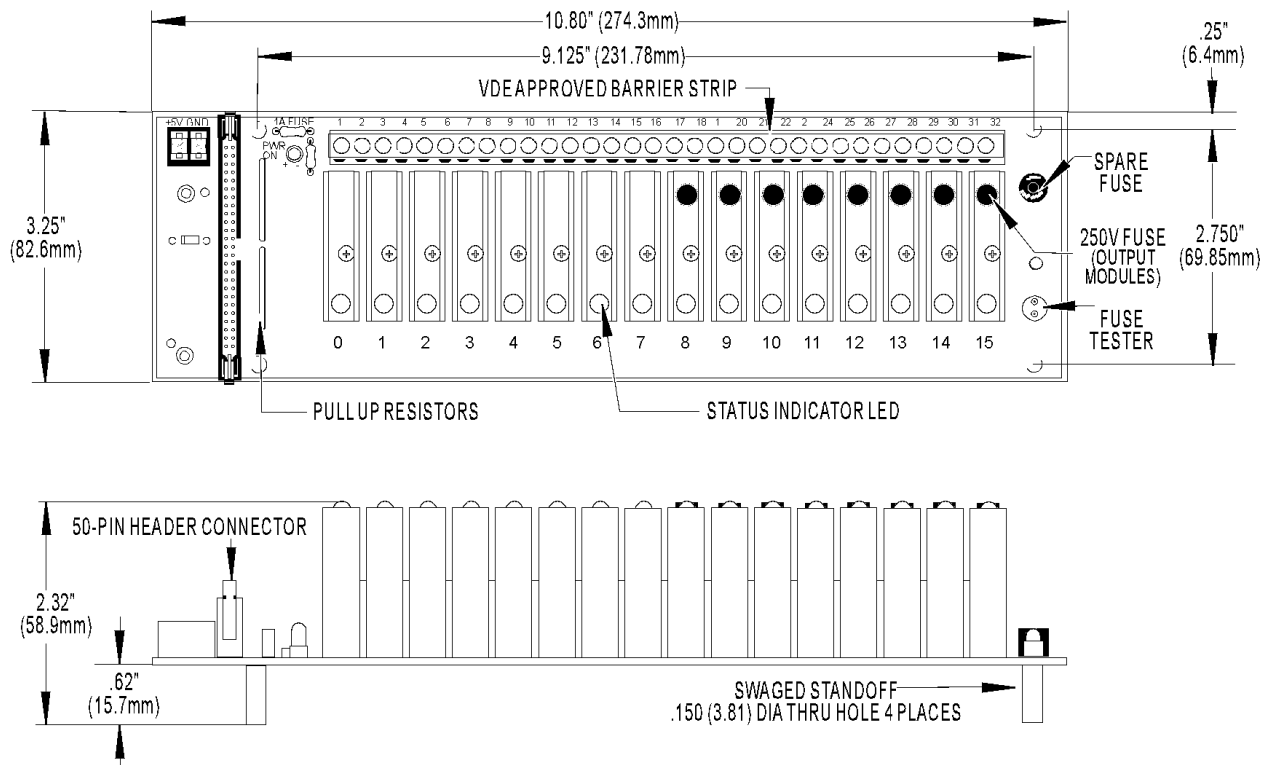


Module Position	Control (Header Connector)	Field (Terminal Strip)
0	47	1 and 2
1	45	3 and 4
2	43	5 and 6
3	41	7 and 8
4	39	9 and 10
5	37	11 and 12
6	35	13 and 14
7	33	15 and 16
8	31	17 and 18
9	29	19 and 20
10	27	21 and 22
11	25	23 and 24
12	23	25 and 26
13	21	27 and 28
14	19	29 and 30
15	17	31 and 32

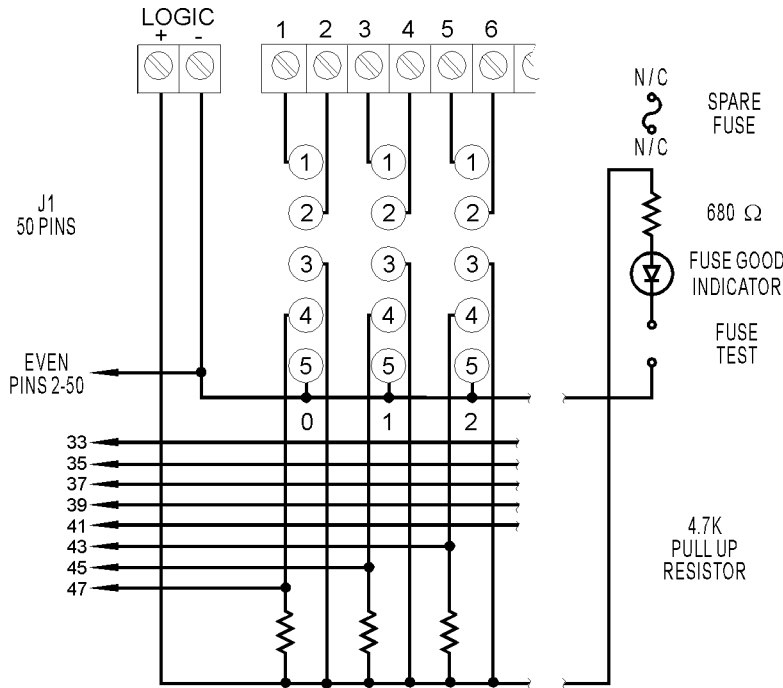
Notes:

1. Even pins on control connector are connected by etch to common.
2. +VCC and return connected to terminals marked +5V and GND.
3. At each module position on the field terminal strip, the lower number is always connected to pin 1 of the I/O module.
4. Use only 5 VDC logic modules when using the mounting rack with a brain board.

## G4PB16H DIMENSIONS



## G4PB8H CONNECTIONS

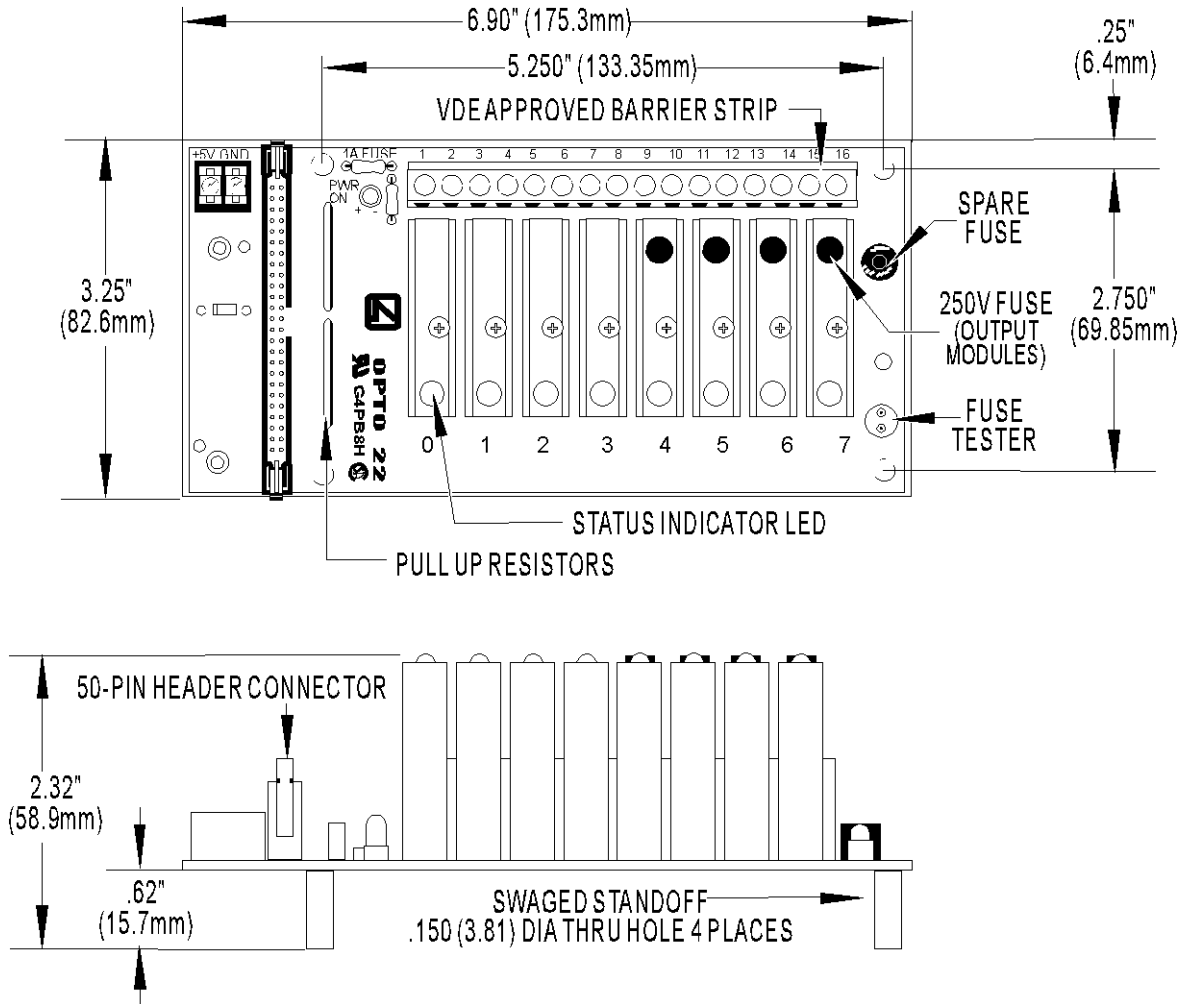


Module Position	Control (Header Connector)	Field (Terminal Strip)
0	47	1 and 2
1	45	3 and 4
2	43	5 and 6
3	41	7 and 8
4	39	9 and 10
5	37	11 and 12
6	35	13 and 14
7	33	15 and 16

Notes:

1. Even pins on control connector are connected by etch to common.
2. +VCC and return connected to terminals marked +5V and GND.
3. At each module position on the field terminal strip, the lower number is always connected to pin 1 of the I/O module.
4. Use only 5 VDC logic modules when using the mounting rack with a brain board.

## G4PB8H 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).

