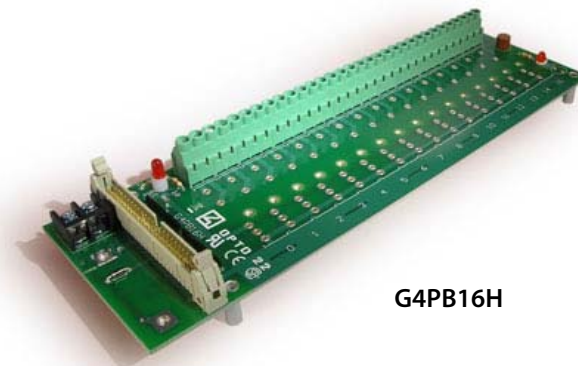# G4 Digital I/O Mounting Racks (Header Connector)

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
- ⟩ UL recognized; CSA certified; CE, RoHS, and DFARS approved
- ⟩ 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® E1 brain board
- Optomux B1 brain board
- Pamux® B5 brain board
- *mistic*™ B100 brain board
- Digital I/O Carrier Board for Raspberry Pi® (part number OPTO-P1-40P)

Specifications

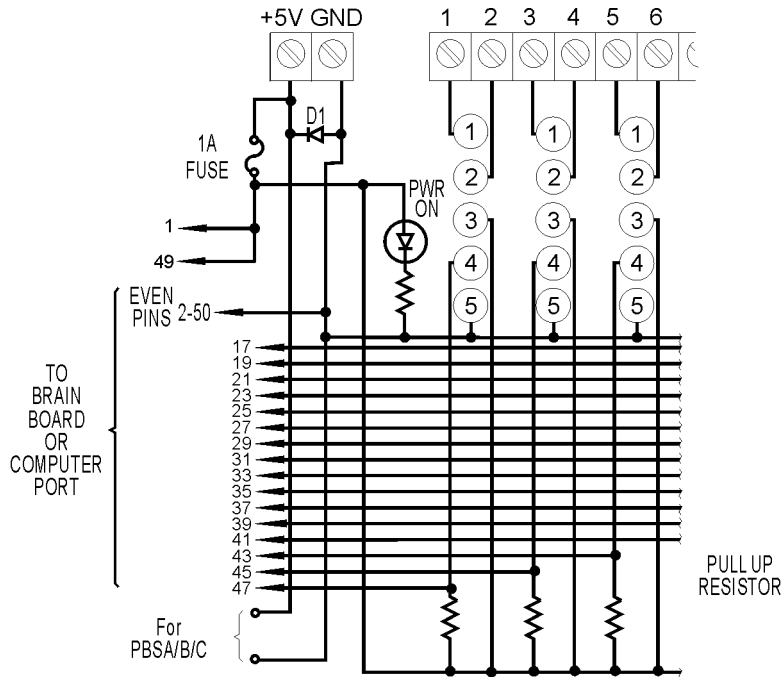| Interface Connectors	
Field	Screw-type barrier strip accommodates up to 10 AWG wire
Control	50-conductor header connector
Power	Two-position screw terminal (used with a 5.00 VDC +0.1 power source) or Opto 22 PBSA/B/C Power Supply
Operating Temperature	0 to 70 °C
Relative Humidity	95% humidity, non-condensing
Agency Approvals	UL recognized; CSA approved; compliant with CE, RoHS, DFARS
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.
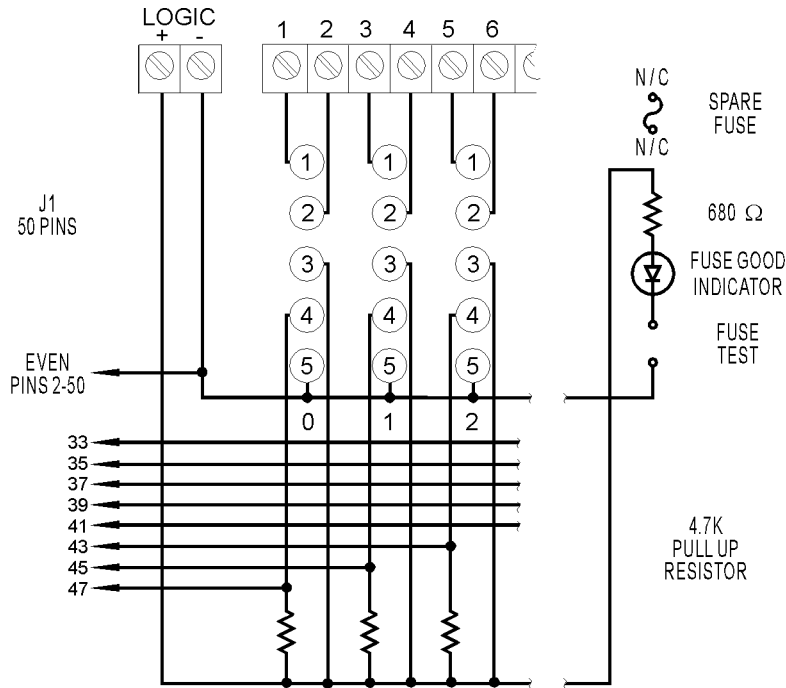
G4 Digital I/O Mounting Racks (Header Connector)

G4PB16H Dimensions

10.80" (274.3mm)

9.125" (231.78mm)

VDE APPROVED BARRIER STRIP

.25" (6.4mm)

3.25" (82.6mm)

2.750" (69.85mm)

SPARE FUSE

250V FUSE (OUTPUT MODULES)

FUSE TESTER

PULL UP RESISTORS

STATUS INDICATOR LED

50-PIN HEADER CONNECTOR

2.32" (58.9mm)

.62" (15.7mm)

SWAGED STANDOFF
.150 (3.81) DIA THRU HOLE 4 PLACES

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G4 Digital I/O Mounting Racks (Header Connector)

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.

G4 Digital I/O Mounting Racks (Header Connector)

G4PB8H Dimensions

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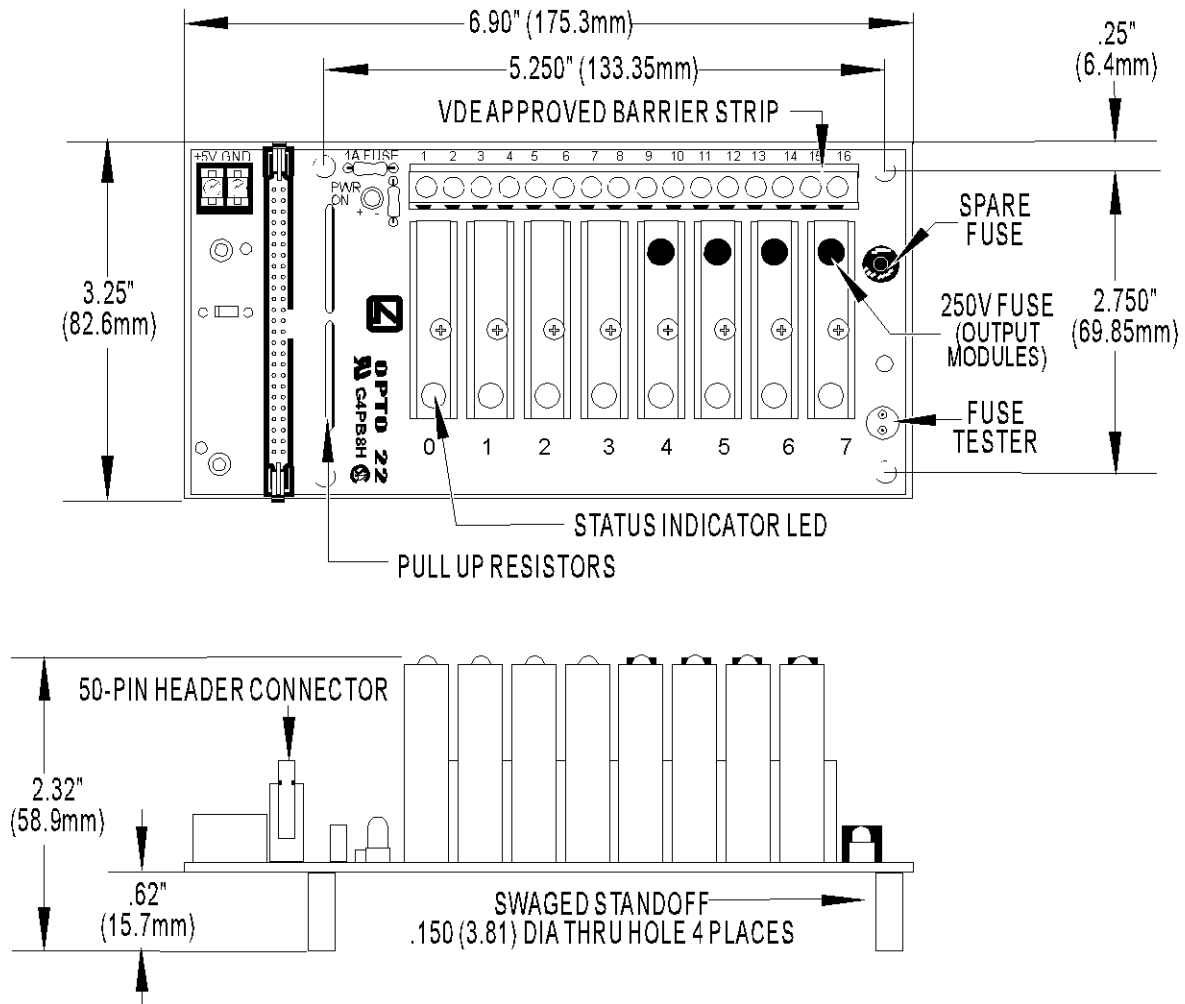
More About Opto 22

Products

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

Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, Industrial Internet of Things (IIoT), and information technology applications all rely on Opto 22.

groov

Monitor and control your equipment from anywhere using your smartphone or tablet with groov. Build your own mobile app easily—just drag, drop, and tag. No programming or coding. Visit groov.com for more information and your free trial.

SNAP PAC System

Developer- and IIoT-ready, the SNAP PAC System connects physical assets to databases and applications using open standards. The SNAP PAC System consists of four integrated components:

- SNAP PAC controllers
- PAC Project™ Software Suite
- SNAP PAC brains
- SNAP I/O™

SNAP PAC Controllers

SNAP PAC programmable automation controllers handle a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

For IIoT applications and easier integration with company systems, standalone and rack-mounted SNAP PACs include a built-in HTTP/HTTPS server and **RESTful API** (application program interface). The REST API gives you secure, direct access to I/O and variable data using your choice of programming languages. No middleware, protocol converters, drivers, or gateways needed.

Based on open Ethernet and Internet Protocol (IP) standards, SNAP PACs make it easier to build or extend a system without the expense and limitations of proprietary networks and protocols.

PAC Project Software Suite

Opto 22's PAC Project Software Suite offers full-featured, cost-effective control programming, HMI (human machine interface), OPC server, and database connectivity software.

Control programming includes both easy-to-learn flowcharts and optional scripting. Commands are in plain English; variables and I/O point names are fully descriptive.

PAC Project Basic offers control and HMI tools and is free for download on our website, www.opto22.com. PAC Project Professional, available for separate purchase, adds one SoftPAC software-based controller, OptoOPCServer, OptoDataLink, options for controller redundancy or segmented networking, and support for legacy Opto 22 serial *mistic*™ I/O units.

SNAP PAC Brains

While SNAP PAC controllers provide central control and data distribution, SNAP PAC brains provide distributed intelligence for I/O processing and communications. Brains offer analog, digital, and serial functions, including thermocouple linearization, local PID loop control, watchdog, totalizing, and much more.

SNAP I/O

I/O provides the local connection to sensors and equipment. Opto 22 SNAP I/O offers 1 to 32 points of reliable I/O per module. Analog, digital, and serial modules are mixed on one mounting rack and controlled by a SNAP PAC brain or rack-mounted PAC.

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 only 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.

Additional support is always available on our website: how-to videos, OptoKnowledgeBase, self-training guide, troubleshooting and user's guides, and OptoForums.

In addition, hands-on training is available for free 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 951-695-3000, or visit our website at www.opto22.com.