OPTO 22

RACKS
CLASSIC G4
16-CHANNEL

DATA SHEET

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Form 460-010201

Description

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

The G4PB16I I/O mounting rack accommodates up to 16 G4 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.
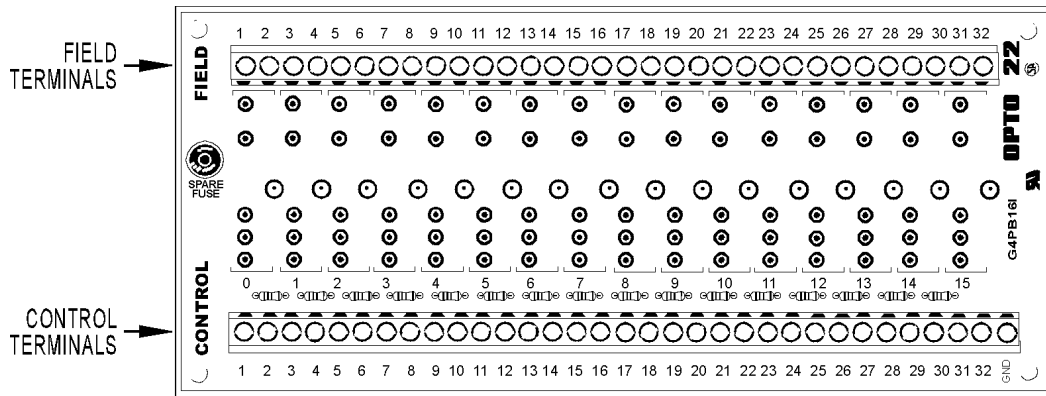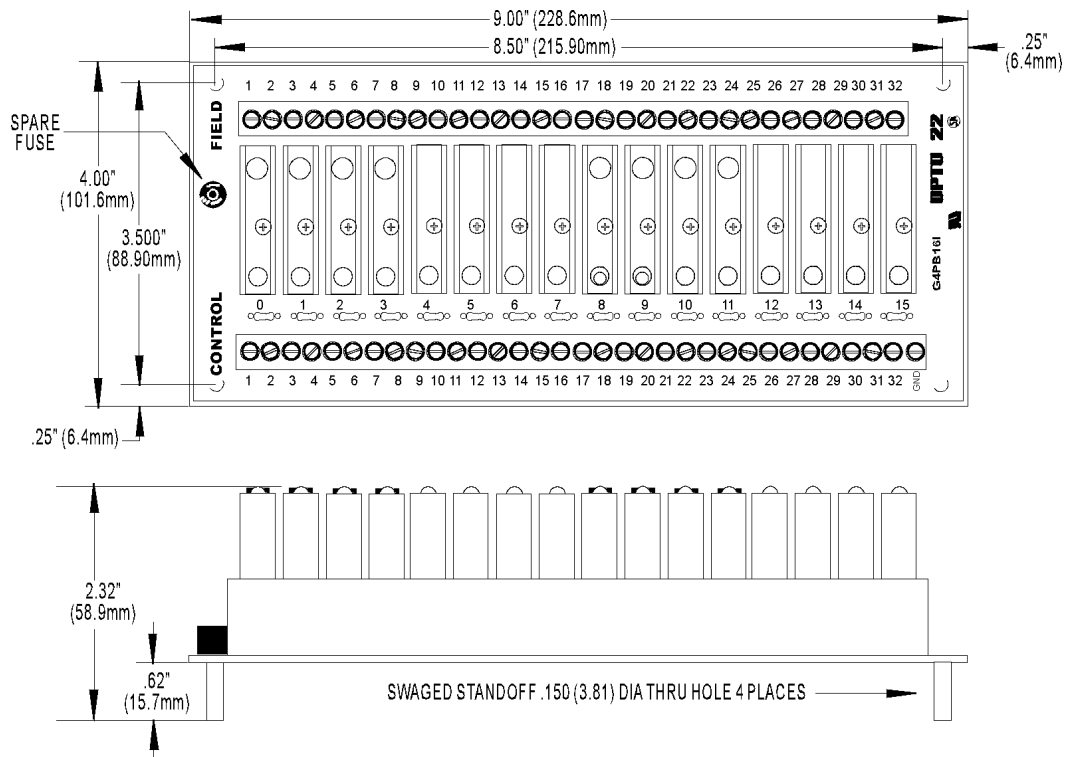

Features

- 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
- UL recognized, CSA certified, CE approved

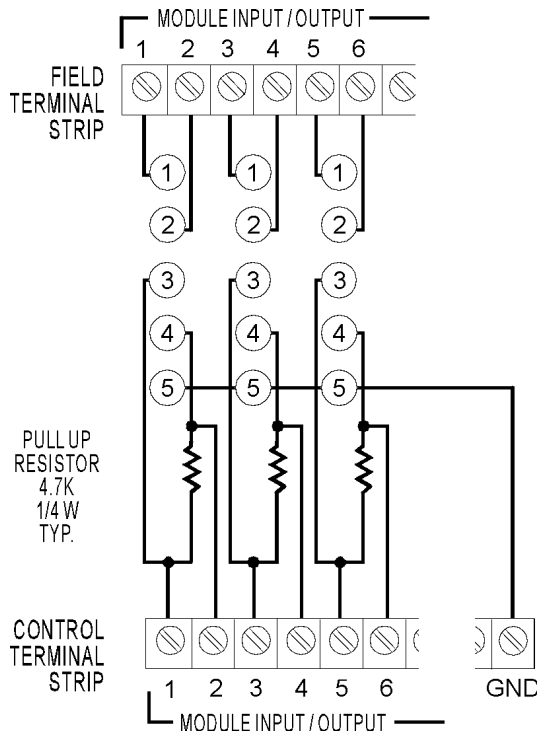Opto 22 • 43044 Business Park Drive • Temecula, CA 92590-3614 • Phone: (951) 695-3000 • (800) 321-OPTO • Fax: (951) 695-3095 • www.opto22.com

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Specifications

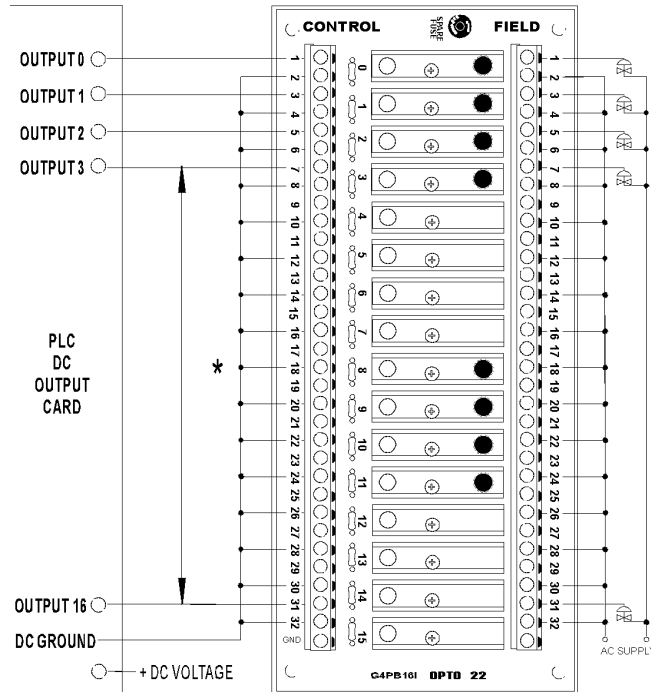| Operating temperature:	0 to 70° C 95 percent relative humidity, non-condensing
Interface connector: Field: Control:	 Screw-type barrier strip accommodates up to 10 AWG wire Screw-type barrier strip accommodates up to 10 AWG wire

Dimensions

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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.
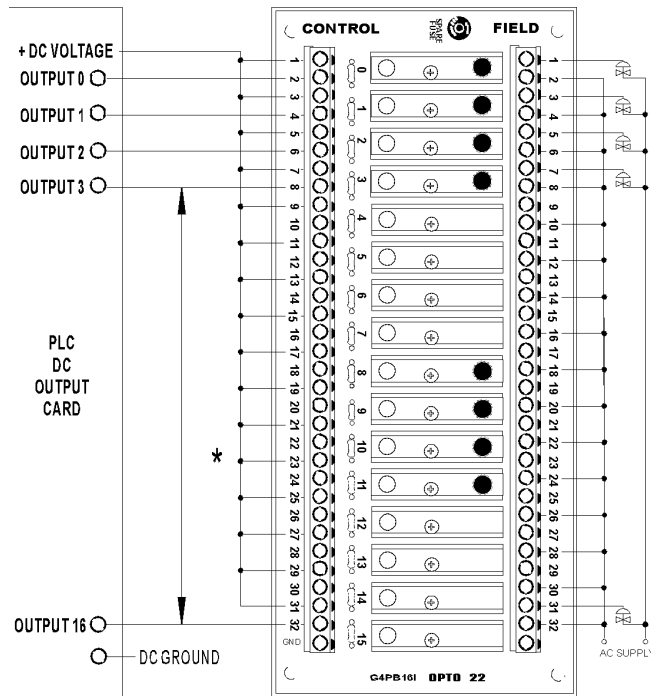
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Applications

POSITIVE TRUE LOGIC CONNECTION TO PC

OUTPUT 0
OUTPUT 1
OUTPUT 2
OUTPUT 3

PLC DC OUTPUT CARD

OUTPUT 16
DC GROUND
+ DC VOLTAGE

CONTROL FIELD

G4PB16I OPTO 22

AC SUPPLY

*

* This wiring can be done using a G4STRAP.

NEGATIVE TRUE LOGIC CONNECTION TO PC

+ DC VOLTAGE
OUTPUT 0
OUTPUT 1
OUTPUT 2
OUTPUT 3

PLC DC OUTPUT CARD

OUTPUT 16
DC GROUND

CONTROL FIELD

G4PB16I OPTO 22

AC SUPPLY

*

* This wiring can be done using a G4STRAP.

Products

Opto 22 produces a broad array of reliable, flexible hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications.

SNAP Ethernet Systems

Based on the Internet Protocol (IP), SNAP Ethernet systems offer flexibility in their network connectivity and in the software applications they work with. The physical network may be a wired Ethernet network, a cellular wireless network, or a modem. A wide variety of software applications can exchange data with SNAP Ethernet systems, including:

- Opto 22's own ioProject™ suite of control and HMI software
- Manufacturing resource planning (MRP), enterprise management, and other enterprise systems
- Human-machine interfaces (HMIs)
- Databases
- Email systems
- OPC client software
- Custom applications
- Modbus/TCP software and hardware.

SNAP Ethernet system hardware consists of controllers and I/O units. Controllers provide central control and data distribution. I/O units provide local connection to sensors and equipment.

SNAP OEM Systems

Opto 22 SNAP OEM I/O systems are highly configurable, programmable processors intended for OEMs, IT professionals, and others who need to use custom software with Opto 22 SNAP I/O modules.

Linux® applications running on these systems can read and write to analog, simple digital, and serial I/O points on SNAP I/O modules using easily implemented file-based operations. Applications can be developed using several common development tools and environments, including C or C++, Java, and shell scripts.

M2M Systems

Machine-to-machine (M2M) systems connect your business computer systems to the machines, devices, and environments you want to monitor, control, or collect data from. M2M systems often use wireless cellular communications to link remote facilities to central systems over the Internet, or to provide monitoring and control capability via a cellular phone.

Opto 22's Nvio™ systems include everything you need for M2M— interface and communications hardware, data service plan, and Web portal—in one easy-to-use package. Visit nvio.opto22.com for more information.

Opto 22 Software

Opto 22's ioProject and FactoryFloor® software suites provide full-featured and cost-effective control, HMI, and OPC software to power your Opto 22 hardware. These software applications help you develop control automation solutions, build easy-to-use operator interfaces, and expand your manufacturing systems' connectivity.

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 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, 7 a.m. to 5 p.m. PST.

Opto 22 Web Sites

- www.opto22.com
- nvio.opto22.com
- www.internetio.com (live Internet I/O demo)

Other Resources

- OptoInfo CDs
- Custom integration and development
- Hands-on customer training classes.

About Opto 22

Opto 22 manufactures and develops hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's input/output and control systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, and electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel.

Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability.

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