

# OPTO 22

## DATA SHEET

Form 480-240627

**RACKS  
CLASSIC  
INTEGRAL**

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### Description

---OBSOLETE---

**NOTE:** The PB16J and PB16K are obsolete and no longer available as of August 2012, due to the unavailability of essential parts.

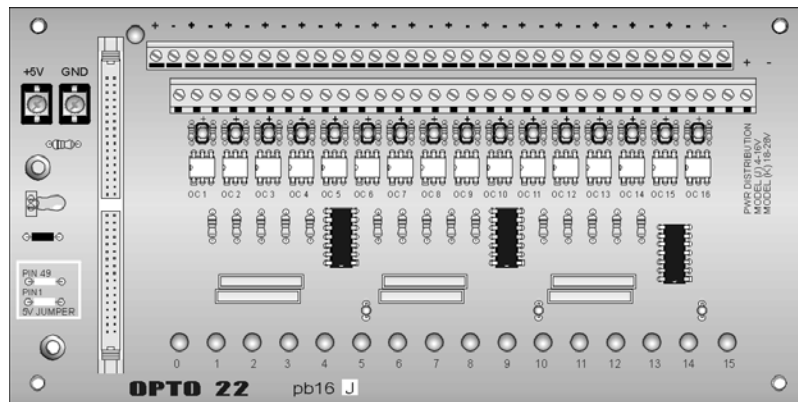
Part Numbers	Description
PB16J	DC Input 4–6VDC 16-Channel Integral
PB16K	DC Input 16–28VDC 16-Channel Integral

The PB16J and PB16K DC input racks provide 16 channels of optically-isolated inputs for sensing ON/OFF DC voltage levels. All input circuitry is on the board and all channels are identical. There is no provision on the board for plug-in modules. Both models feature an extra row of terminal strips for power distribution. The PB16J and PB16K racks are smaller than a standard PB16H I/O mounting rack; the result is a 40 percent savings in cabinet space. Indicators are provided for all input channels and power.

Both the PB16J and PB16K racks feature a 50-pin header connector for easy interface to computer parallel I/O ports via 50-conductor ribbon cables. The 50-pin connector also allows direct connection to Mystic, Optomux, and Pamux brain boards.

The PB16J and PB16K DC Input racks are useful for connecting to the following devices:

- BCD Devices
- TTL Level Devices
- Thumbwheel Switches
- Bar Code Readers



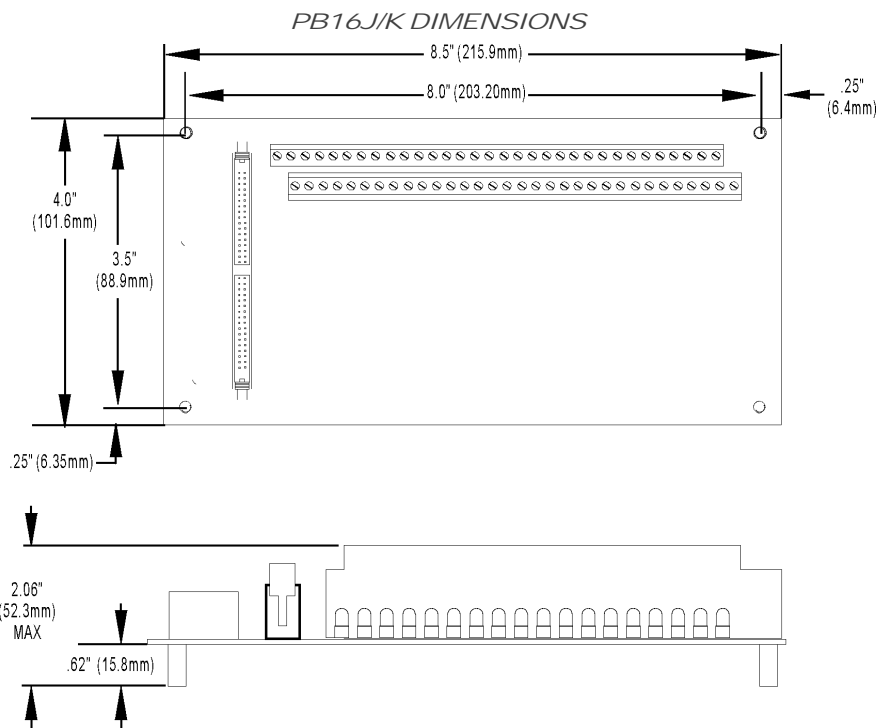
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### Specifications

#### PB16J/K Specifications

	PB16J	PB16K
Input Line Voltage	4–16 VDC	16–28 VDC
Input Current	3.3 mA @ 4 VDC 16 mA @ 16 VDC	3.4 mA @ 16 VDC 6.3 mA @ 28 VDC
Isolation Input-to-Output Channel-to-Channel	4,000 Vrms 300 Vrms continuous	4,000 Vrms 300 Vrms continuous
Capacitance Input-to-Output	8 pF/channel	8 pF/channel
Input Allowed For No Output	1 VDC (0.2 mA)	1 VDC (0.2 mA)
Turn-on Time	2.5 ms maximum	3 ms maximum
Turn-off Time	3.5 ms maximum	4.5 ms maximum
Logic Supply Voltage	4.5–6 VDC	4.5–6 VDC
Logic Supply Current	190 mA @ 5 VDC	190 mA @ 5 VDC
Operating Ambient Temperature	- 30° to 70° C	- 30° to 70° C

### Dimensions



These products are obsolete.

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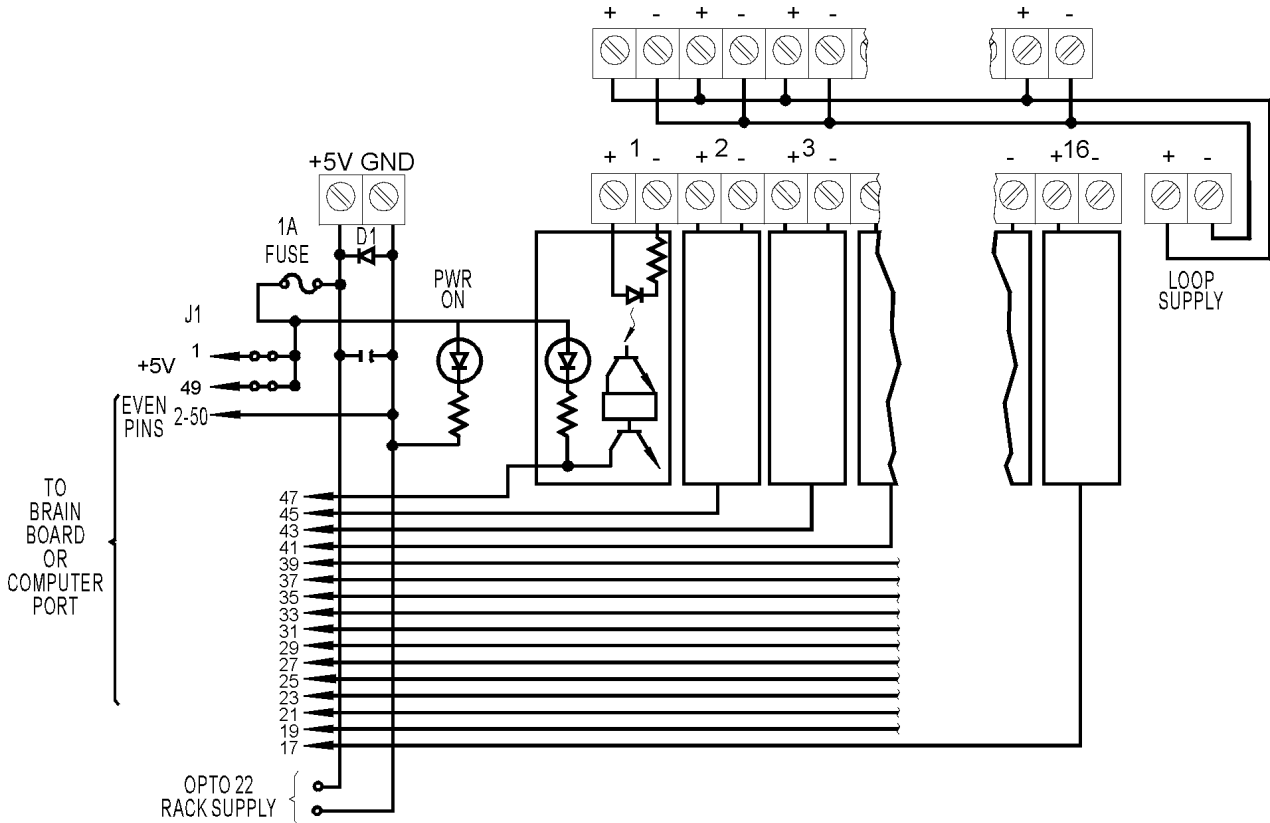
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### Connections



## 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 even write an IEC 61131-3 compliant control program to run on groov RIO, using CODESYS. 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).

