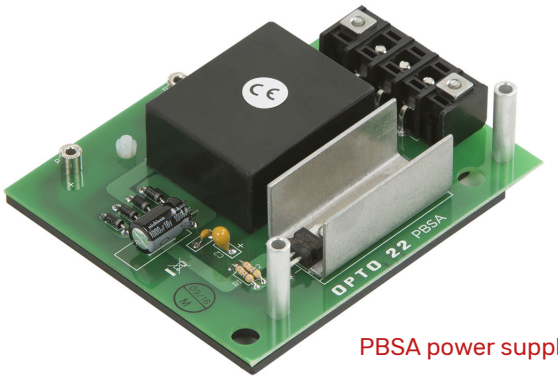
POWER SUPPLIES FOR DIGITAL I/O MOUNTING RACKS

Features

- 5 VDC output
- Ideal for powering Optomux or *mistic* brain boards and I/O
- Compatible with Raspberry Pi
- Mounts directly on digital I/O rack
- Brain mounts on top of the power supply
- Operating temperature range: -25 to 65 °C



PBSA power supply

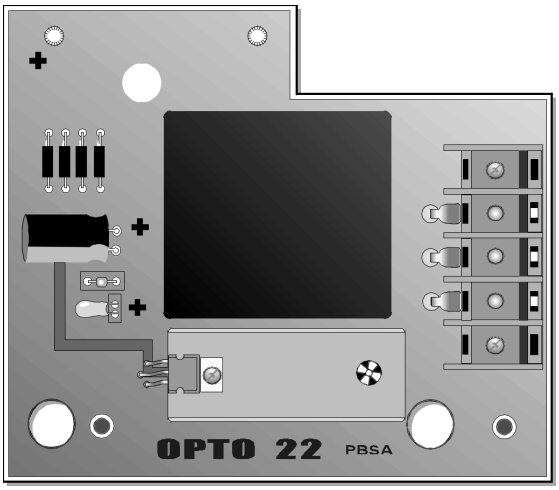
DESCRIPTION

The PBSA, PBSB [Obsolete], and PBSC [Obsolete] 5 VDC power supplies are designed to work with an Opto 22 digital I/O mounting rack connected to an Optomux® E1 or B1 brain board, or a *mistic*™ B100 brain board. Each power supply is sized to provide power for the brain board and logic power for 16 digital I/O modules.

The PBSC can also be used with a Pamux® B5 brain board and is sized to provide power for the brain, 16 modules, and a Term1 Pamux bus terminator.

The brain board mounts directly on top of the power supply and the power supply mounts directly to the mounting rack. Two screws on the power supply make the electrical connection to threaded contacts on the mounting rack.

For the complete list of supported mounting racks, brain boards, and carrier boards, see "Specifications" on page 2.



Compatible with Raspberry Pi

The PSBC can also be used with a Raspberry Pi® and Opto 22's Digital I/O Carrier Board for Raspberry Pi (part number OPTO-P1-40P) to monitor and control industrial devices.

To ensure sufficient, consistent, and reliable power to the Pi and I/O modules, we recommend that you attach the power supply to the mounting rack (and not directly to the Pi).

NOTE: If your Pi uses USB-powered peripherals like hard drives or WiFi dongles, the PBSC may not provide sufficient current. We recommend instead a 5 V power supply rated 2.5 A to 5 A; for example, Opto 22's SNAP-PS5.

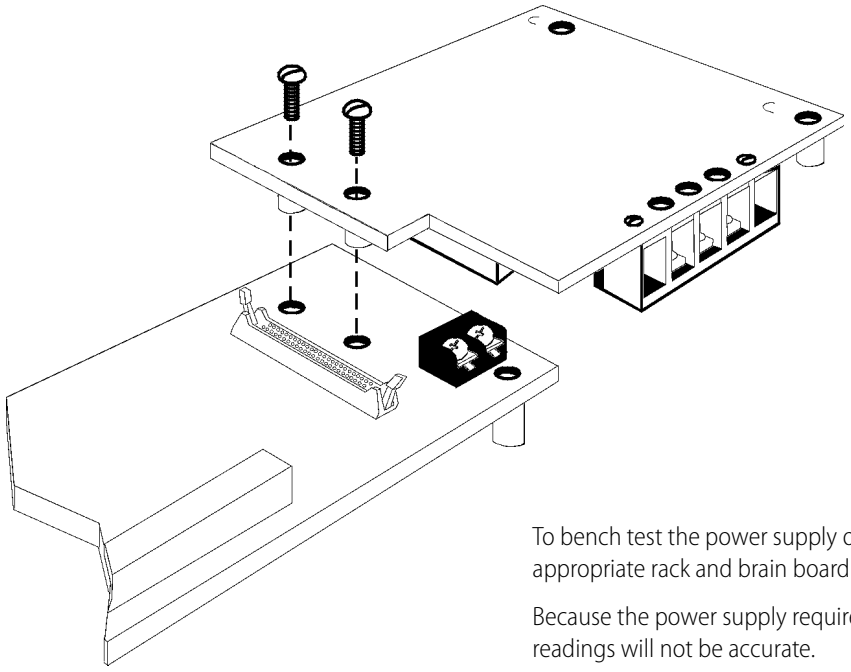
Part Numbers

Part	Description
PBSA	5 VDC Power Supply, 120 VAC Input
PBSB **[OBSOLETE]**	**[OBSOLETE]** 5 VDC Power Supply, 220 VAC Input
PBSC **[OBSOLETE]**	**[OBSOLETE]** 5 VDC Power Supply, 12/24 VDC Input

SPECIFICATIONS

	PBSA	PBSB [OBSOLETE]	PBSC [OBSOLETE]
Input Range	105–125 VAC	200–240 VAC	10–28 VDC
Output Voltage	5 VDC	5 VDC	5 VDC
Output Current	0.5 amps	0.5 amps	1.5 amps
Operating Temperature	-25 to 65 °C	-25° to 65 °C	-25° to 65 °C
Isolation Breakdown Voltage	2,500 VAC	2,500 VAC	500 VAC
Power Dissipation	3–9 Watts	3–9 Watts	3–10 Watts
Humidity (non-condensing)	0–95%	0–95%	0–95%
Compatible Brain Boards and Carrier Boards	E1, B1, B100	E1, B1, B100	E1, B1, B5, B100, OPTO-P1-40P
Agency Approvals	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA	DFARS
Compatible digital I/O mounting racks (All 3 power supplies are compatible with these racks)	**Standard**: PB4H, PB8H, PB16H, PB16HC **Quad Pak**: PB16HQ **G4**: G4PB8H, G4PB16H, G4PB16HC		
Warranty	30 months from date of manufacture		

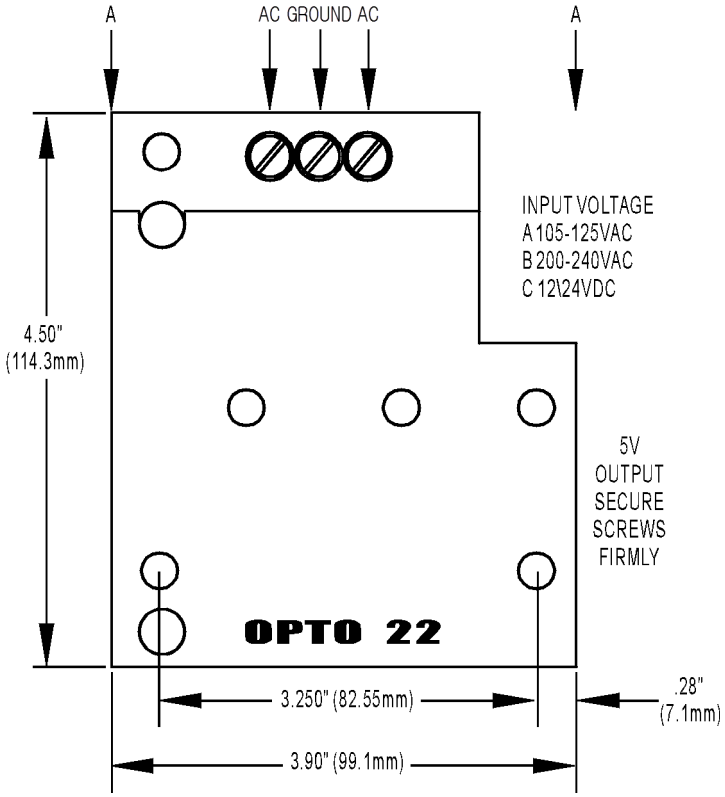
INSTALLATION



To bench test the power supply or check the voltage, connect the appropriate rack and brain board to the power supply.

Because the power supply requires a load to regulate the voltage, no-load readings will not be accurate.

DIMENSIONAL DRAWINGS



More about Opto 22

OPTO 22

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.

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