

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

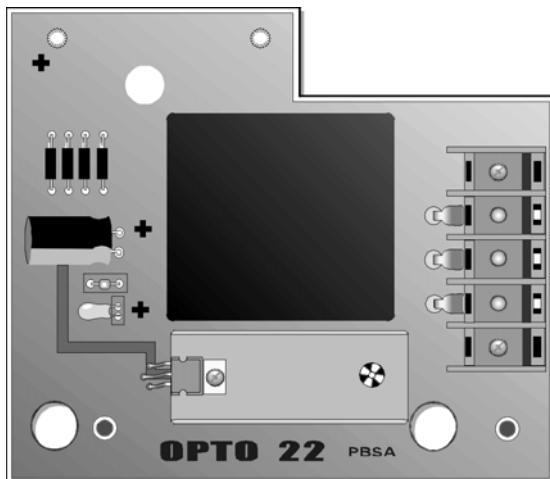
DESCRIPTION

The PBSA, PBSB, and PBSC 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 PSBA, PSBC, and 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 PBSA, PBSB, or 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-PSS.

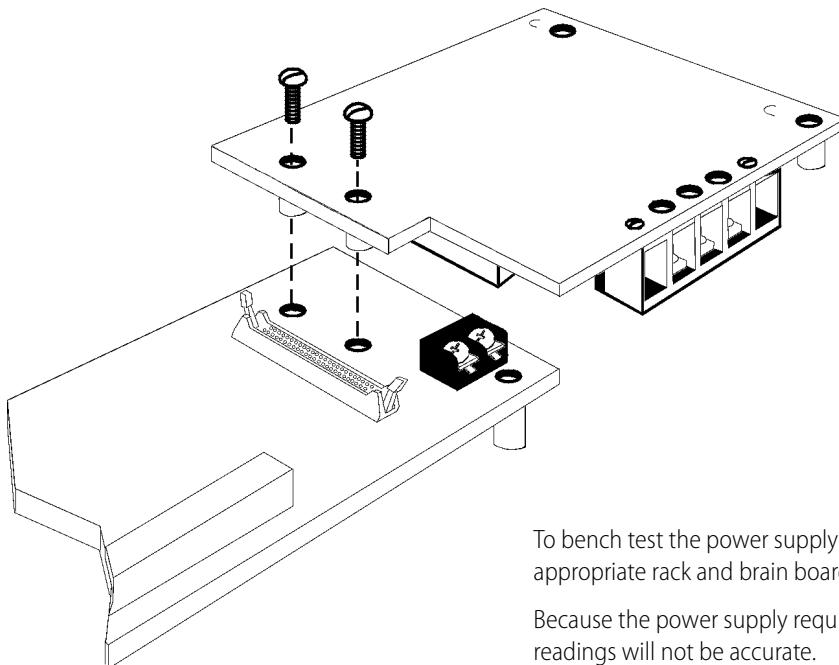
Part Numbers

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

SPECIFICATIONS

	PBSA	PBSB	PBSC
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, OPTO-P1-40P	E1, B1, B100, OPTO-P1-40P	E1, B1, B5, B100, OPTO-P1-40P
Agency Approvals	CE, RoHS, DFARS	CE, RoHS, DFARS	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		

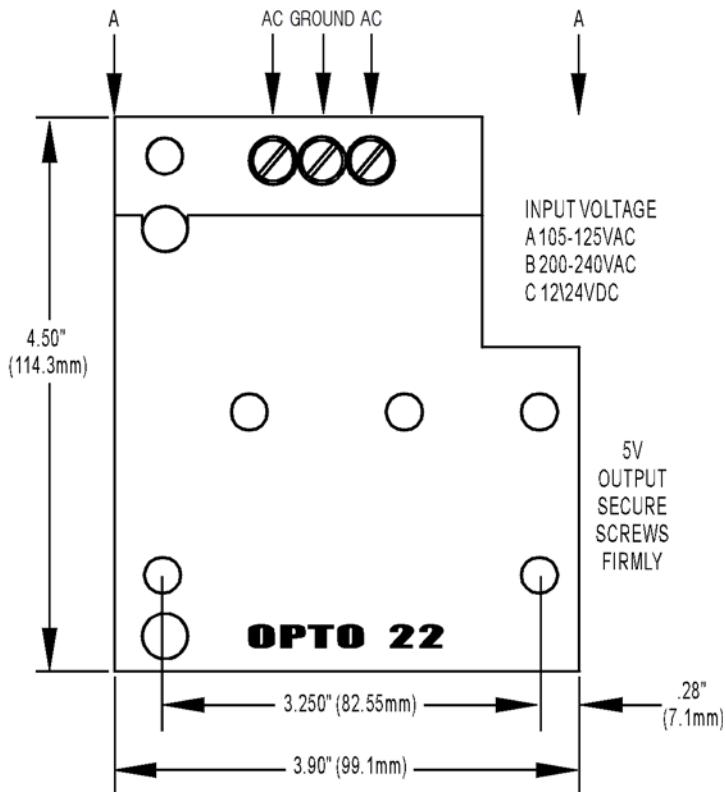
INSTALLATION



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



PRODUCTS

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

Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and Industrial Internet of Things (IIoT) 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.

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