

# SNAP Power Supplies

## Features

- Built-in fuse, ON/OFF power switch, and LED indicator
- Convenient panel mounting; optional DIN-rail mounting
- Easy connections
- Wide input voltage range
- Factory Mutual approved (except SNAP-PS5U and SNAP-PS24U)

## Description

SNAP power supplies provide the best source of AC or DC power for your Opto 22 SNAP PAC hardware. Packaged in a compact and sturdy housing, SNAP power supplies include a built-in fuse, an LED status indicator, and an ON/OFF power switch for ease of use.

The **SNAP-PS24** and **SNAP-PS24U** power supplies are designed for either of two purposes:

- to provide primary power for a SNAP PAC S-series controller
- to provide 24 volts of DC loop power for SNAP analog modules mounted on a SNAP PAC rack

The **SNAP-PS5**, **SNAP-PS5-24DC**, and **SNAP-PS5U** power supplies are designed to provide 5 VDC power for a SNAP PAC rack with an I/O processor (SNAP PAC brain or R-series controller) and I/O modules mounted on the rack. The combination of a rack, processor, and modules is called an *I/O unit*.

Opto 22 recommends using one SNAP power supply for each I/O unit and for each controller. Choose the power supply based on the load required for the I/O unit. See the power requirements tables starting on [page 11](#) for help in determining the power supplies you need. Additional information on using power supplies can be found in the Opto 22 technical note *Using Power Supplies with Opto 22 Systems* (form #1271, available on our website, [www.opto22.com](http://www.opto22.com)).

All SNAP power supplies except the SNAP-PS5-24DC require AC input power. The SNAP-PS5U and SNAP-PS24U accommodate a wide range of AC input voltages, from 100 to 250 VAC.

The SNAP-PS5-24DC DC-to-DC power supply requires a 24 VDC input and is ideal for systems using DC backup power.



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Each SNAP power supply can be mounted in one of two ways: next to the controller or SNAP I/O unit it powers, using the standard panel-mounting base, or directly on a DIN rail using the optional DIN-rail adapter.

AC or DC input power connections, as required by the model, are made to a removable terminal strip on top of the power supply. DC output power is then ready to be hooked up to the controller or rack using the attached wiring harness.

SNAP power supplies work with Wired+Wireless™ PACs and I/O units as well as standard wired PACs and I/O.

**Notes for legacy hardware:** SNAP power supplies are also compatible with Ethernet-based SNAP Ultimate, SNAP Ethernet, and SNAP Simple I/O, and with serial-based SNAP I/O units such as those with a B3000, SNAP-HA, or SNAP-B3000-MODBUS brain.

## Part Numbers

Part	Description
SNAP-PS5	SNAP Power Supply 120 VAC input; 5 VDC, 4 A output
SNAP-PS5-24DC	SNAP Power Supply 24 VDC input; 5 VDC, 4 A output
SNAP-PS5U	SNAP Power Supply 100–250 VAC input; 5 VDC, 5 A output
SNAP-PS24	SNAP Power Supply 120 VAC input; 24 VDC, 3/4 A output
SNAP-PS24U	SNAP Power Supply, 100–250 VAC input; 24 VDC, 1-1/4 A output
SNAP-PSDIN	DIN-Rail Adapter for SNAP-PS5, SNAP-PS24, or SNAP-PS5-24DC
SNAP-PSUDIN	DIN-Rail Adapter for SNAP-PS5U or SNAP-PS24U

## Specifications

	SNAP-PS5	SNAP-PS5-24DC	SNAP-PS5U
Input Voltage	95–130 VAC, 47–63 Hz	18–32 VDC	100–250 VAC, 47–63 Hz
Output Voltage	5.1 ±0.1 VDC	5.1 ±0.1 VDC	5.1 ±0.1 VDC
Output Current	4.0 A	4.0 A	5.0 A
Maximum Input Current Draw	0.4 Amps at 120 VAC	1.3 Amps at 24 VDC	0.5 Amps at 120 VAC
Dimensions	See the drawings starting on <a href="#">page 7</a> .	See the drawings starting on <a href="#">page 7</a> .	See the drawings on <a href="#">page 9</a> .
Weight	15 oz. (425.25 g)	15 oz. (425.25 g)	1.9 lbs (863.63 g)
Operating Temperature	-20 to 70 °C	-20 to 70 °C	-20 to 70 °C
Storage Temperature	-30 to 85 °C	-30 to 85 °C	-30 to 85 °C
Torque, connector screws	4.5 in-lb (0.51 N-m)	4.5 in-lb (0.51 N-m)	4.5 in-lb (0.51 N-m)
Fuse	Opto 22 PN: SNAP-FUSE1AB Vendor PN: GDC-1A (Bussman)	Opto 22 PN: SNAP-FUSE2AB Vendor PN: GDB-2A (Bussman)	Internal fuse
Agency Approvals	FM, CE, RoHS, DFARS	FM, CE, RoHS, DFARS	CE, RoHS, DFARS
Warranty	30 months	30 months	30 months

	SNAP-PS24	SNAP-PS24U
Input Voltage	95–130 VAC, 47–63 Hz	100–250 VAC, 47–63 Hz
Output Voltage	24 ± 0.6 VDC	24 ± 0.1 VDC
Output Current	0.75 A	1.25 A
Maximum Input Current Draw	0.4 Amps @ 120 VAC	0.5 Amps @ 120 VAC
Dimensions	See drawings starting on <a href="#">page 7</a> .	See drawings on <a href="#">page 9</a> .
Weight	2.1 lbs (952.54 g)	1.9 lbs (863.63 g)
Operating Temperature	-20 to 70 °C	-20 to 70 °C
Storage Temperature	-30 to 85 °C	-30 to 85 °C
Torque, connector screws	4.5 in-lb (0.51 N-m)	4.5 in-lb (0.51 N-m)
Fuse	Opto 22 PN: SNAP-FUSE1AB Vendor PN: GDC-1A (Bussman)	Internal fuse
Agency Approvals	FM, CE, RoHS, DFARS	CE, RoHS, DFARS
Warranty	30 months	30 months

## I/O Unit Power Requirements

The tables starting on [page 11](#) will help you determine the power supply needs for your system. Copy the power requirements worksheet and complete one for each distributed I/O unit.

In addition, keep the following power recommendations in mind. For more help with power supplies, see Opto 22 form #1271, *Using Power Supplies with Opto 22 Systems*.

## Use a single power supply per rack

In general, we recommend you use an independent, isolated, regulated power supply locally with each rack. Local isolated supplies offer these advantages:

- Short supply conductors, which minimize losses
- Power redundancy, so the failure of a single supply causes only a single rack failure, not a total system failure
- Fewer voltage drops and ground loops (Voltage drops and subsequent ground loops may occur when power is distributed over a large system.)