SNAP PAC SYSTEM ENCLOSURES

Features

- Sturdy enclosures provide protection and convenience for your SNAP PAC System
- Just add the I/O modules and processor (brain or rack-mounted controller) needed for your application
- Mounting rack and power supply are already wired
- Easy to install and use

SNAP-IT-RM16 [OBSOLETE]

DESCRIPTION

SNAP-IT enclosures make it easy to install Opto 22 I/O where you need it. With a choice of rack, panel, and wall mounting, these enclosures provide convenience and protection for your processor and I/O.

Each enclosure includes an I/O mounting rack and a power supply, already wired. You add the I/O processor, either a SNAP PAC R-series controller or a SNAP PAC Ethernet brain, and the SNAP input and output (I/O) modules needed for your application.

Adding a Processor

For the processor, if you need programming capability, choose a SNAP PAC R-series programmable automation controller. The PAC Project Basic Software Suite is a free download from our website and provides full-featured control programming plus HMI (human-machine interface) development and runtime.

If you don't need programmability, choose a SNAP PAC Ethernet brain. These brains provide local intelligence and communication and can be used with a SNAP PAC controller, with an Allen-Bradley PLC or a Modbus/TCP system, or for PC-based control.

Controllers and brains communicate over a standard 10/100 Mbps wired Ethernet network. In some enclosures you can also use a Wired+Wireless™ model, which communicates over a wired Ethernet network, over an 802.11a, b, or g wireless LAN, or both ways simultaneously.

Adding I/O

For I/O, you can choose the mix of analog, digital, and serial modules you require. Modules range from one to 32 points per module, and a wide variety of signal types is available. All SNAP I/O modules work with any SNAP PAC brain or R-series controller and all can be mixed in the same enclosure.

See the Products tab on the Opto 22 website (www.opto22.com) to choose your processor and I/O and to download the free PAC Project software.

Enclosure Models

Three SNAP-IT enclosures are available:

SNAP-IT-RM16 [Obsolete]—This rack-mounted metal enclosure is a standard 3U box and can also be used as a tabletop unit. It holds one processor and up to 16 I/O modules. A typical application would be monitoring and controlling facilities and interior equipment.

Part Numbers

Part	Description
SNAP-IT-RM16 **[Obsolete]**	**[Obsolete]** SNAP PAC System 16-module enclosure, metal, rack-mounted
SNAP-IT-PM12 **[Obsolete]**	**[Obsolete]** SNAP PAC System 12-module enclosure, NEMA 3R, metal, panel-mounted
SNAP-IT-WM4	SNAP PAC System 4-module enclosure, NEMA 4, 4X, 6; IP66, IP67; polycarbonate, wall-mounted
POWERCABLE-US	120 VAC power cord (United States) for the SNAP-IT-RM16
POWERCABLE-UK	240 VAC power cord (United Kingdom) for the SNAP-IT-RM16
POWERCABLE-INTL	240 VAC power cord (International) for the SNAP-IT-RM16

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SNAP-IT-PM12 [Obsolete]
This panel-mounted enclosure is a NEMA3R metal housing for mounting on interior or exterior walls or equipment. It holds one processor and up to 12 I/O modules and includes a 24 V loop power supply.

SNAP-IT-PM12 units are ideal for use in industrial environments, for example manufacturing and processing machinery, communication towers, tanks, and pipelines.

SNAP-IT-WM4—The NEMA 4/4X/6 wall-mounted WM4 is a sturdy polycarbonate industrial enclosure that holds one processor and up to four I/O modules. It includes a 24 V loop power supply.

The SNAP-IT-WM4 has a transparent cover. It is a handy size for small areas and mounts on any wall.

SPECIFICATIONS

	SNAP-IT-RM16 [Obsolete]	SNAP-IT-PM12 [Obsolete]	SNAP-IT-WM4
Mounting	Rack mounted	Panel mounted	Wall mounted
Enclosure	Standard 19-inch metal rack-mount enclosure, 3U	Metal enclosure; meets NEMA 3R.[1]	Polycarbonate industrial enclosure, transparent cover; meets NEMA 4, 4X, 6 and IP66, IP67
Dimensions	17.25" W x 5.22" H x 7.5" D (43.8 cm x 13.3 cm x 19.1 cm) Depth includes modules, which extend 0.88" (2.3 cm) out the back of the box for wiring convenience.	16.19" W x 18.25" H x 6.57" D (41.1 cm x 46.4 cm x 16.7 cm)	9.84" W x 6.89" H x 5.9" D (25.0 cm x 17.5 cm x 15.0 cm)
Items included	Enclosure, SNAP PAC mounting rack, and power supply	Enclosure, SNAP PAC mounting rack, power supply, and 24 V loop power supply	Enclosure, SNAP PAC mounting rack, power supply, and 24 V loop power supply
I/O module slots	16	12	4
Power supply	UL rated 120-250 VAC Manufacturer rated 100-250 VAC	UL rated 120-250 VAC Manufacturer rated 100-250 VAC Loop power supply: 24 VDC	100–240 VAC (50/60 Hz) Loop power supply: 24 VDC
Power consumption	30 W	30 W	10 W
Power cord (order separately)	120 VAC United States, 240 VAC United Kingdom, or 240 VAC International	n/a	n/a
LED indicators[2]	On front panel, 64 LEDs indicate point status for 4-channel digital I/O modules; brain or controller LEDs are also visible on front.	Status LEDs on I/O and status/communication LEDs on brain or controller are not visible outside the enclosure.	Status LEDs on I/O and status/communication LEDs on brain or controller are visible through transparent cover.
Operating temperature[3]	0° to 70° C (32 to 158° F)	0° to 70° C (32 to 158° F)	–40 to 80°C (–40 to 176° F)
Storage temperature[3]	–30° to 85° C (–22 to 185° F)	–30° to 85° C (–22 to 185° F)	–40 to 80 °C (–40 to 176° F)
Humidity	0–95% humidity, non-condensing	0–95% humidity, non-condensing	0–95% humidity, non-condensing
Warranty	30 months	30 months	30 months

[1] NEMA 3 or NEMA 4 is recommended for exterior use.

[2] See I/O, brain, or controller data sheets for details on LEDs.

[3] Operating and storage temperatures listed are for the enclosure only. Temperature limitations for the processor and I/O you install inside the enclosure are more limiting. See the processor's and I/O modules' data sheets for their specifications.

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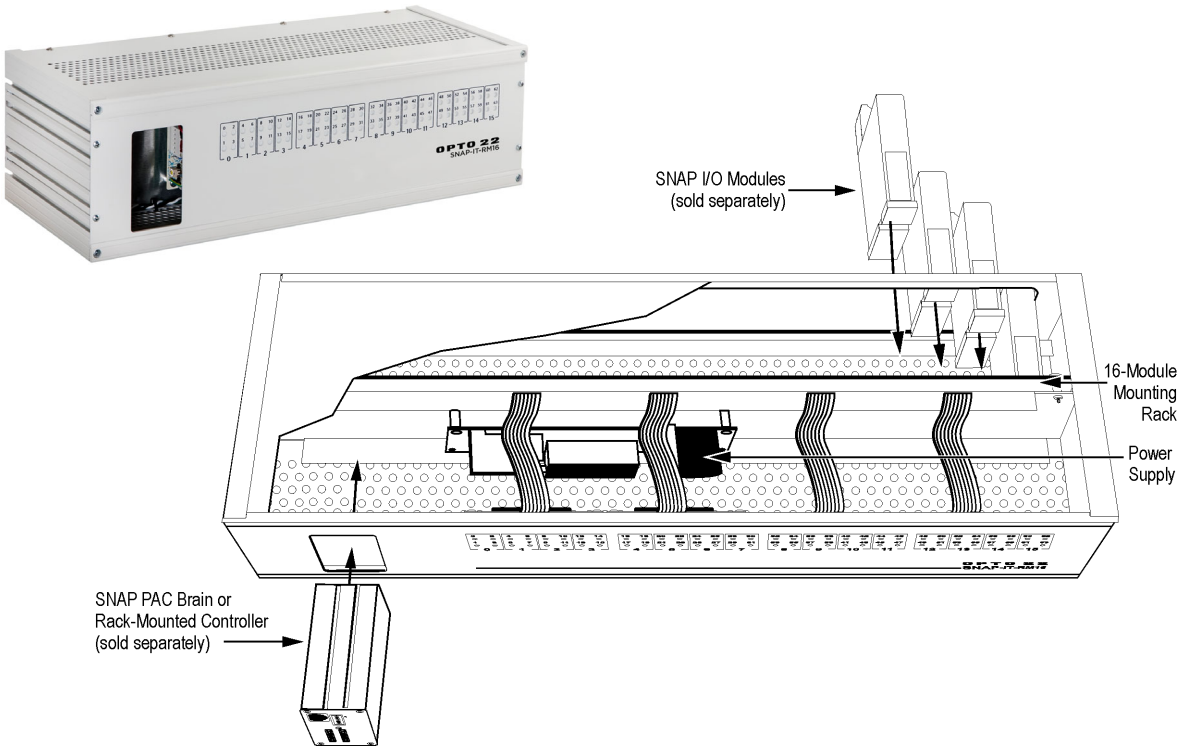
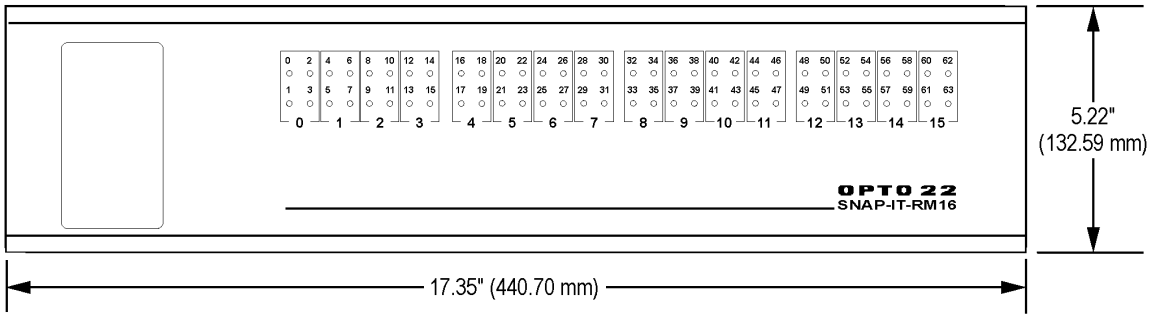
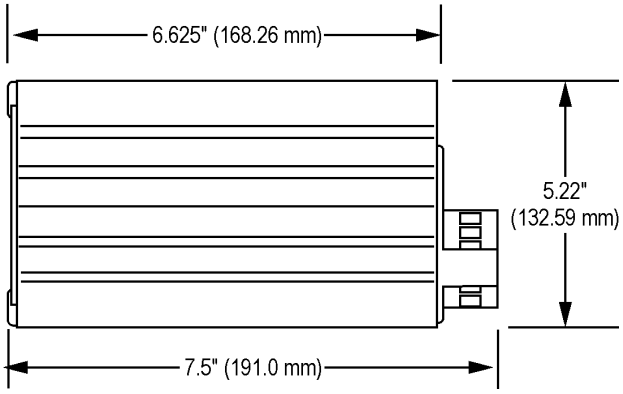
DIMENSIONAL DRAWINGS—SNAP-IT-RM16 [OBSOLETE]





NOTE: I/O modules extend beyond the back edge of the enclosure for easier wiring.



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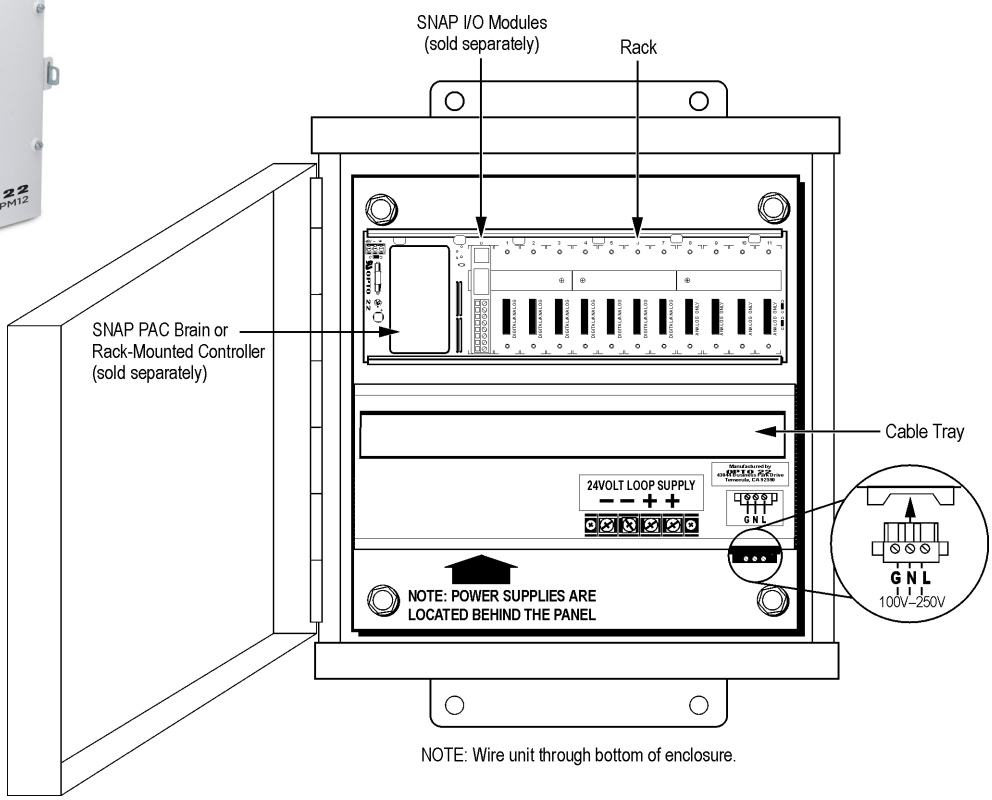
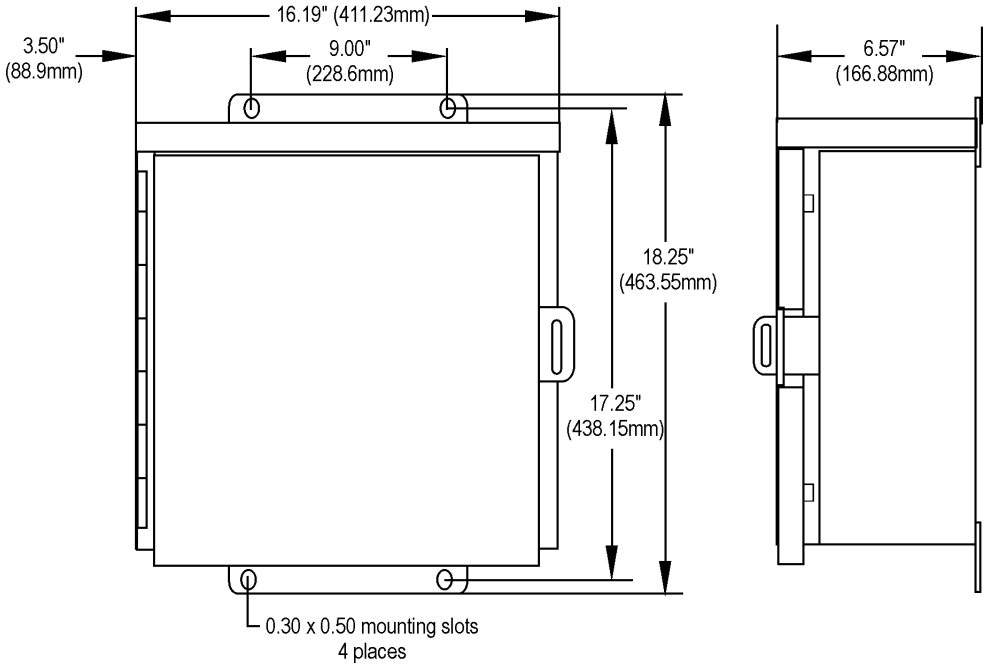
DIMENSIONAL DRAWINGS—SNAP-IT-PM12 [OBSOLETE]



NOTE: Wire unit through bottom of enclosure.



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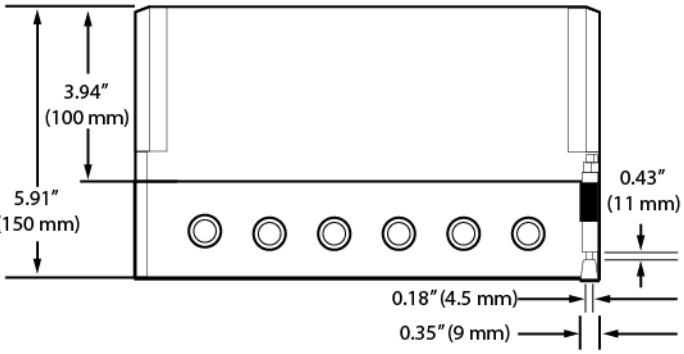
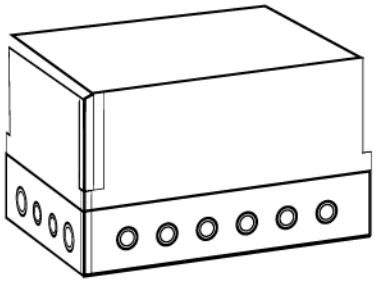
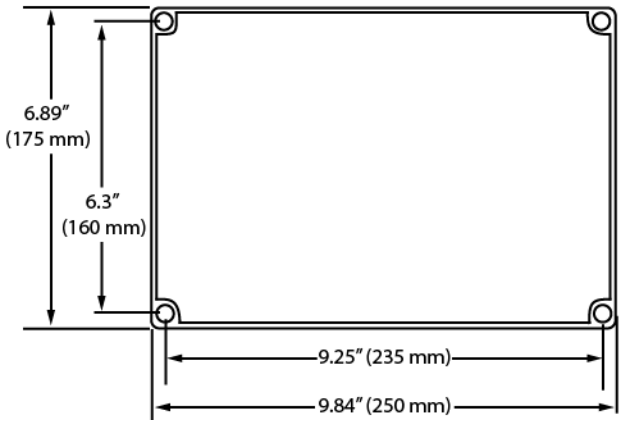
DIMENSIONAL DRAWINGS—SNAP-IT-WM4

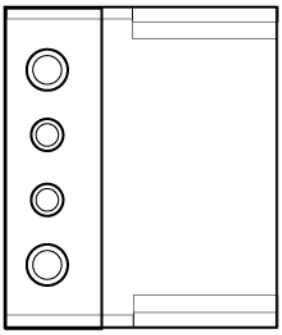
NOTE: If you are using the SNAP-IT-WM4 with a Wired+Wireless controller or brain, purchase a 90-degree right-angle bracket adapter for the antenna. Wired+Wireless models include the following:

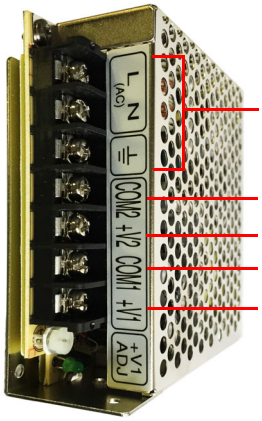
SNAP-PAC-R1-W
SNAP-PAC-R2-W
SNAP-PAC-EB1-W
SNAP-PAC-EB2-W











Wiring the 24 VDC loop power supply

AC

V1 = 4.0 A at 5 VDC
V2 = 1.4 A at 24 VDC

24 common

+ 24 VDC

5 common

5 VDC (wired to rack)

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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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