

# Standard AC Output Modules

## Features

- Rugged construction
- 4000 volts of optical isolation between the field devices and the control logic (transient)
- Zero voltage turn-on and zero current turn-off



OAC5 Module

## Description

AC output modules are used for controlling or switching AC loads. Each module provides up to 4000 volts (transient) of optical isolation between the field devices and the control logic.

With the exception of the OAC5A5 module, all AC output modules are equivalent to a single pole, single throw, normally open contact (FORM A, SPST-NO, Make). The OAC5A5 is equivalent to a single pole, single throw, normally closed contact (FORM B, SPST-NC, Break). All AC output modules feature zero voltage turn-on and zero current turn-off.

Typical uses and applications for AC output modules include switching the following loads:

- Relays
- Solenoids
- Motor starters
- Heaters
- Lamps or indicators

## Part Numbers

Part	Description
OAC5	AC Output 12-140 VAC, 5 VDC Logic
OAC5A	AC Output 24-280 VAC, 5 VDC Logic
OAC5A5	AC Output 24-280 VAC, 5 VDC Logic, NC
OAC15	AC Output 12-140 VAC, 15 VDC Logic
OAC15A	AC Output 24-280 VAC, 15 VDC Logic
OAC24	AC Output 12-140 VAC, 24 VDC Logic
OAC24A	AC Output 24-280 VAC, 24 VDC Logic

# Standard AC Output Modules

## Specifications

### General

Current Rating @ 45 °C Ambient @ 70 °C Ambient	3 amps 2 amps
UL Motor Load Rating	1.5 amps
One Cycle Surge	80 amps peak
Peak Repetitive Voltage	500 Volts
Operating Ambient Temperature	-30 to 70 °C
Isolation, Input-to-Output (Transient)	4,000 Vrms
Minimum Load Current	20 milliamps
Operating Frequency	25 - 65 Hz
Turn-on Time	1/2 cycle maximum-zero voltage
Turn-off Time	1/2 cycle maximum-zero current
DV/DT - Off-State	200 volts/microseconds
DV/DT - Commutating	Snubbed for rated 0.5 power factor load
Output Voltage Drop Maximum Peak	1.6 volts
Off-State Leakage @ Nominal Voltage - 60 Hz	5 milliamps rms 2.5 milliamps rms for OAC5A OAC15A, and OAC24A @120 VAC

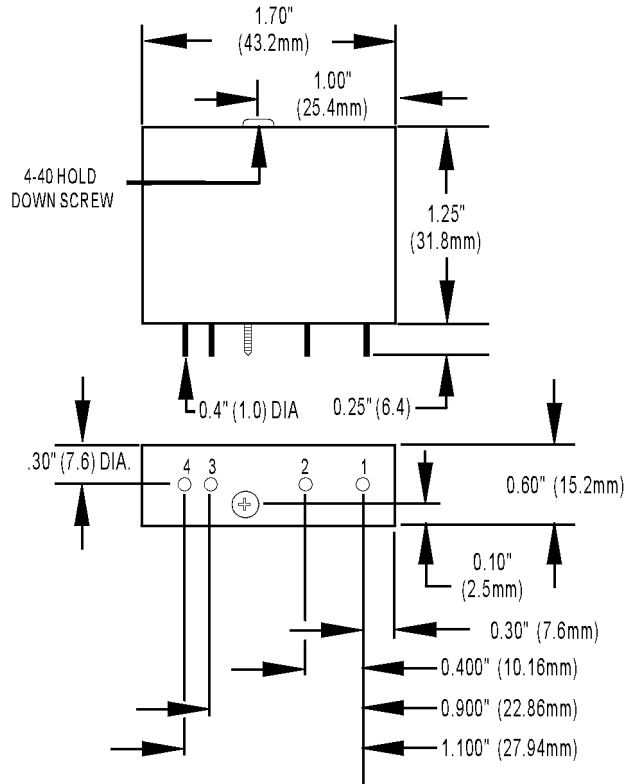
### Module Specifications

	Units	OAC5	OAC5A	OAC5A5 (NC)	OAC15	OAC15A	OAC24	OAC24A
Line Voltage - Nominal	VAC	120	240	120/240	120	240	120	240
Operating Voltage Range	VAC	12-140	24 - 280	24 - 280	12 - 140	24 - 280	12 - 140	24 - 280
Logic Voltage - Nominal	VDC	5	5	5	15	15	24	24
Logic Voltage Range (Vcc)*	VDC	2.5-8	2.5 - 8	2.5 - 8	9 - 16	9 - 16	18 - 32	18 - 32
Logic Pickup Voltage*	VDC	2.5	2.5	2.5	9	9	18	18
Logic Dropout Voltage	VDC	1	1	1	1	1	1	1
Logic Input Current-@ Normal Logic Voltage (I <sub>out</sub> in schematic diagram)	mA	12	12	12	15	15	18	18
Control Resistance (R <sub>c</sub> in schematic diagram)	Ohms	220	220	220	1K	1K	2.2K	2.2K

\* Module only

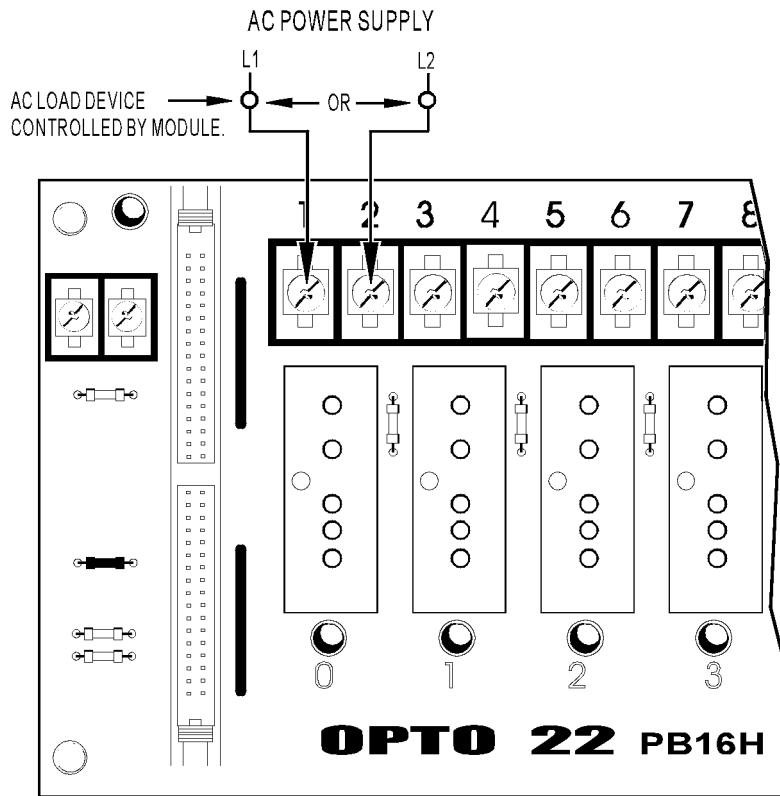
# Standard AC Output Modules

## Dimensions

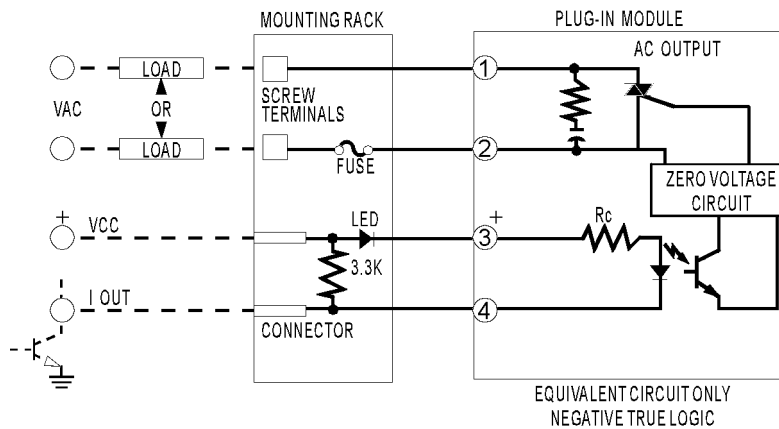


# Standard AC Output Modules

## Connections



## Schematics



\* SNUBBER circuit must be used on inductive loads.

# More About Opto 22

## Products

Opto 22 develops and manufactures reliable, flexible, easy-to-use hardware and software products for industrial automation, remote monitoring, and data acquisition applications.

### SNAP PAC System

Designed to simplify the typically complex process of understanding, selecting, buying, and applying an automation system, 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

Programmable automation controllers (PACs) are multifunctional, multidomain, modular controllers based on open standards and providing an integrated development environment.

Opto 22 has been manufacturing PACs for many years. The latest models include the standalone SNAP PAC S-series and the rack-mounted SNAP PAC R-series. Both handle a wide range of digital, analog, and serial functions and are equally suited to data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

SNAP PACs are based on open Ethernet and Internet Protocol (IP) standards, so you can 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 provides full-featured and cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software to power your SNAP PAC System.

These fully integrated software applications share a single tagname database, so the data points you configure in PAC Control™ are immediately available for use in PAC Display™, OptoOPCServer™, and OptoDataLink™. 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](http://www.opto22.com). PAC Project Professional, available for separate purchase, adds OptoOPCServer, OptoDataLink, options for Ethernet link 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; PID loop control; and optional high-speed digital counting (up to 20 kHz), quadrature counting, TPO, and pulse generation and measurement.

### 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, depending on the type of module and your needs. Analog, digital, serial, and special-purpose modules are all mixed on the same mounting rack and controlled by the same processor (SNAP PAC brain or rack-mounted controller).

## Quality

Founded in 1974 and with over 85 million devices sold, 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 do no statistical testing and each part is tested twice before leaving our factory, we can guarantee most solid-state relays and optically isolated I/O modules for life.

## Free Product Support

Opto 22's Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents decades of training and experience. Product support is available in English and Spanish, by phone or email, Monday through Friday, 7 a.m. to 5 p.m. PST.

## Free Customer Training

Hands-on training classes for the SNAP PAC System are offered at our headquarters in Temecula, California. Each student has his or her own learning station; classes are limited to nine students. Registration for the free training class is on a first-come, first-served basis. See our website, [www.opto22.com](http://www.opto22.com), for more information or email [training@opto22.com](mailto:training@opto22.com).

## 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 or 951-695-3000, or visit our website at [www.opto22.com](http://www.opto22.com).

[www.opto22.com](http://www.opto22.com)