

# Quad Pak AC Output Module

## Features

- Contains four, single channel I/O circuits.
- Each module can be divided into two pairs with each pair sharing a common connection.
- used for controlling or switching AC loads.
- Provides up to 4,000 Vrms of optical isolation between the field devices and the control logic.
- Features zero voltage turn-on and zero current turn-off

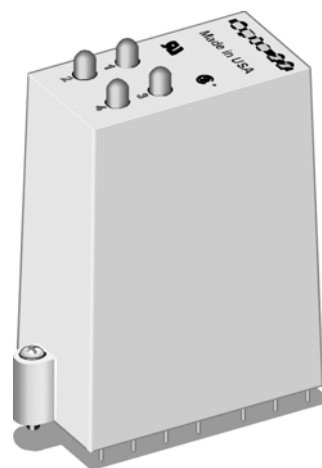
## Description

Quad Pak modules contain the equivalent of four, single channel I/O circuits in a single high-density package. Each Quad Pak module can be divided into two pairs with each pair sharing a common connection. The Quad Pak modules are designed to plug into the Quad Pak high-density I/O mounting racks only and cannot be plugged into single channel racks. Quad Pak modules are designed to work with a 5 VDC logic voltage only and can be used with Optomux, Pamux, and Mystic protocol brain boards and mounting racks as well as racks using a direct cable connection to a computer.

AC output modules are used for controlling or switching AC loads. Each module provides up to 4,000 Vrms of optical isolation between the field devices and the control logic. The Quad Pak AC output module features zero voltage turn-on and zero current turn-off.

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

- Relays
- Solenoids and Contactors
- Motor Starters
- Heaters
- Lamps or Indicators



OAC5Q

## Part Numbers

Part	Description
OAC5Q	4-Channel AC Output 12-280 VAC, 5 VDC Logic

# Quad Pak AC Output Module

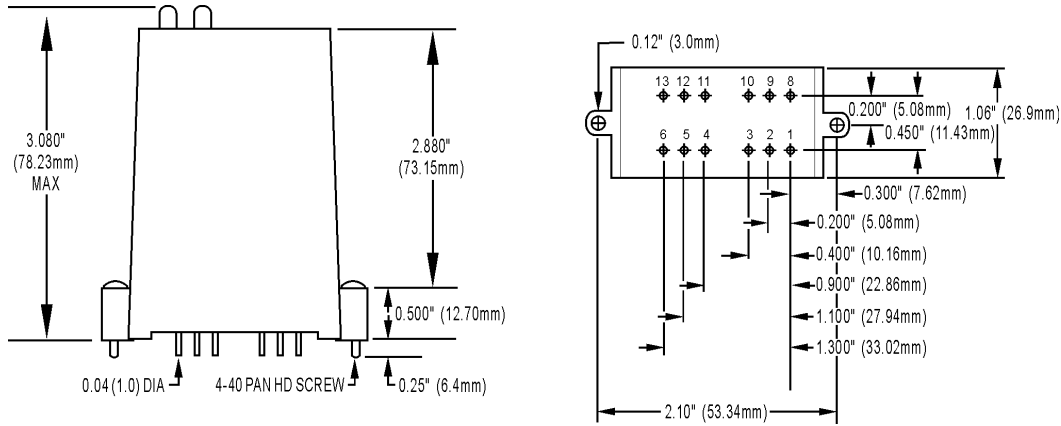
## Specifications

Line Voltage—Nominal	120/240 VAC
Operating Voltage Range	12–280 VAC
Current Rating @ 20° C Ambient @ 45° C Ambient	3 amps 2 amps
One Cycle Surge	80 amps
Logic Voltage—Nominal	5 VDC
Logic Voltage Range (Vcc)	4–8 VDC
Logic Pickup Voltage	4.0 VDC
Logic Dropout Voltage	2.3 VDC
Logic Input Current @ Nominal Logic Voltage (I <sub>out</sub> in Schematic Diagram)	12 mA
Control Resistance (R <sub>c</sub> in Schematic Diagram)	220 ohms

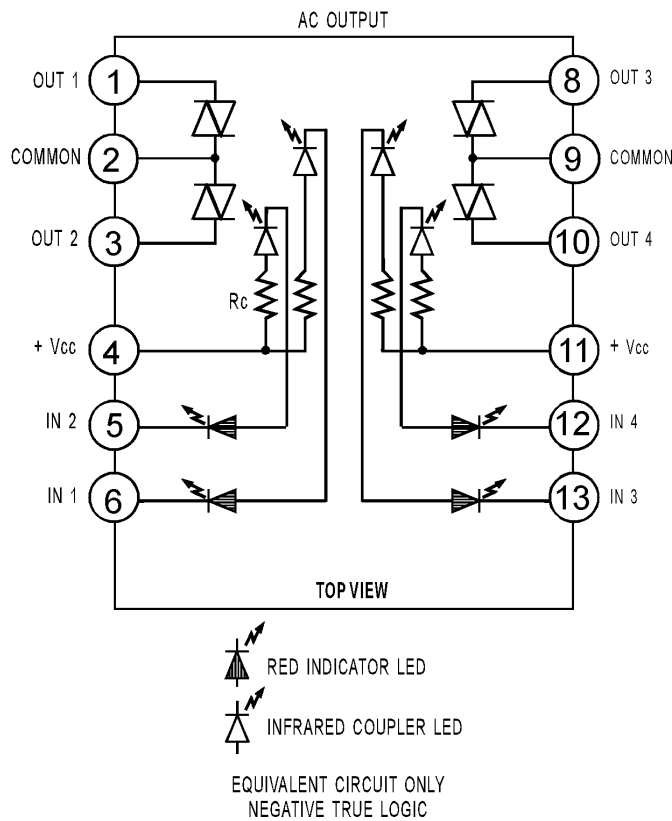
Peak Repetitive Voltage	500 volts
Operating Ambient Temperature	-30 to 70 °C
Isolation Input-to-Output	4,000 Vrms
Minimum Load Current	20 milliamps
Operating Frequency	25–65 Hz
Turn-on Time	1/2 cycle maximum-zero voltage
Turn-off Time	1/2 cycle maximum-zero current
DV/DT-Off-state	snubbed for rated 0.5 power factor load
Output Voltage Drop Maximum Peak	1.6 volts
Off-state Leakage @ Nominal Voltage-60Hz	5 milliamps, ms

# Quad Pak AC Output Module

## Dimensions

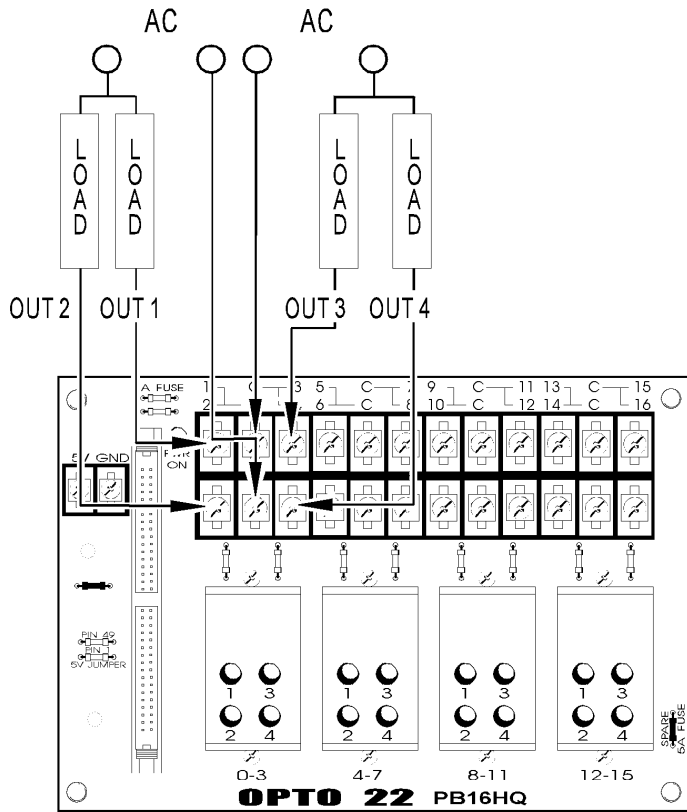


## Schematics



# Quad Pak AC Output Module

## Connections



# More About Opto 22

## Products

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

### OptoEMU Energy Management System

The easy-to-use OptoEMU Sensor monitors electrical energy use in your facility and delivers detailed, real-time data you can see and analyze. The Sensor can monitor energy data from pulsing meters, electrical panels or subpanels, and equipment. View energy data online using a software service or incorporate the data into your control system for complete energy management.

### SNAP PAC System

Designed to simplify the typically complex process of selecting 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, modular controllers based on open standards.

Opto 22 has been manufacturing PACs for over two decades. 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 for 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 easily, without the expense and limitations of proprietary networks and protocols.

### PAC Project Software Suite

Opto 22's PAC Project Software Suite provides full-featured, cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software for your SNAP PAC System.

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](http://www.opto22.com). PAC Project Professional, available for separate purchase, adds

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; 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, and serial 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, 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 California-based Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents 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.

Additional support is always available on our website: how-to videos, OptoKnowledgeBase, self-training guide, troubleshooting and user's guides, 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 or 951-695-3000, or visit our website at [www.opto22.com](http://www.opto22.com).

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