QUAD PAK DC OUTPUTS MODULES

Features

- Four single channel I/O circuits in a single high-density package
- Designed to plug into the Quad Pak high-density I/O mounting racks
- Can be used with Optomux, Pamux, and *mistic* protocol brain boards and mounting racks as well as racks using a direct cable connection to a computer
- Each module provides up to 4,000 Vrms of optical isolation between the field devices and the control logic.

DESCRIPTION

Quad Pak modules contain the equivalent of four single- channel I/O circuits in a single high-density package. Each Quad Pak module is divided into two pairs of channels 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 Mistic protocol brain boards and mounting racks as well as racks using a direct cable connection to a computer. Quad Pak modules can also be used with a Raspberry Pi, the Digital I/O Carrier Board (part number OPTO-P1-40P), and the PB16HQ mounting rack.

DC output modules are used for controlling or switching DC loads. Each module provides up to 4,000 Vrms of optical isolation between the field devices and the control logic.

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

- DC Relays
- DC Solenoids
- DC Motor Starters
- DC Lamps or Indicators

All Quad Pak DC outputs are current sourcing outputs. The module connection to the load is the positive connection.

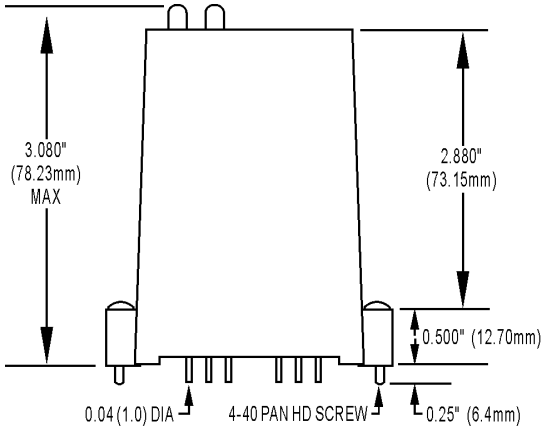
Part Numbers

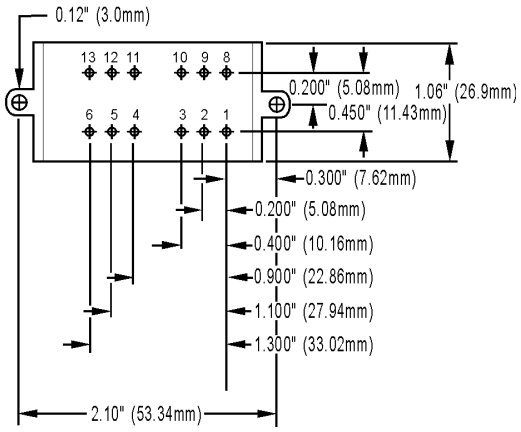
Part	Description
ODC5Q	4-Channel DS Output 5-60 VDC, 5 VDC Logic
ODC5AQ	4-Channel DS Output 5-200 VDC, 5 VDC Logic

SPECIFICATIONS

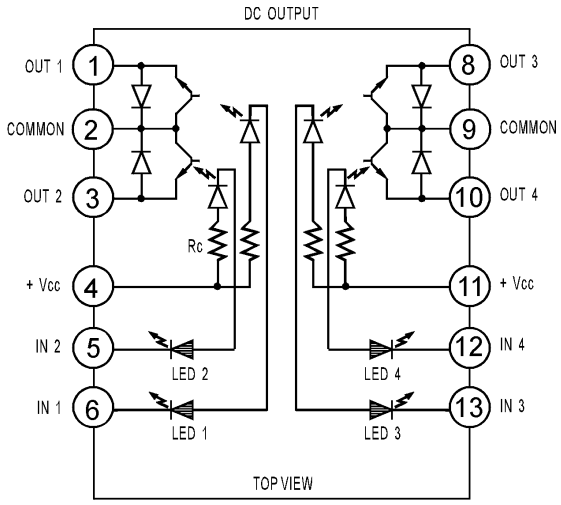
	Units	ODC5Q	ODC5AQ
Line Voltage - Maximum	VDC	60	200
Operating Voltage Range	VDC	5–60	5–200
Current Rating (per channel) @ 20 °C Ambient @ 45 °C Ambient @ 70 °C Ambient	 Amps Amps Amps	 3 2 1	 1 1 0.55
Off-state Leakage @ Maximum Voltage	mA	1	2
Logic Voltage - Nominal	VDC	5	5
Logic Voltage Range (Vcc)	VDC	4–8	4–8
Logic Pickup Voltage	VDC	4.0	4.0
Logic Dropout Voltage	VDC	2.3	2.3
Logic Input Current @ Nominal Logic Voltage	mA	12	12
Control Resistance	Ohms	220	220
One-Second Surge Amps	5	5	
Operating Ambient Temperature	°C	-30 to 70	-30 to 70
Isolation Input-to-Output	Vrms	4,000	4,000
Turn-on Time	µs	100	100
Turn-off Time	µs	750	750
Output Voltage Drop Maximum	Volts	1.6	1.6
Agency Approvals		UL, CE, CSA; UKCA	UL, CE, CSA; UKCA

DIMENSIONS

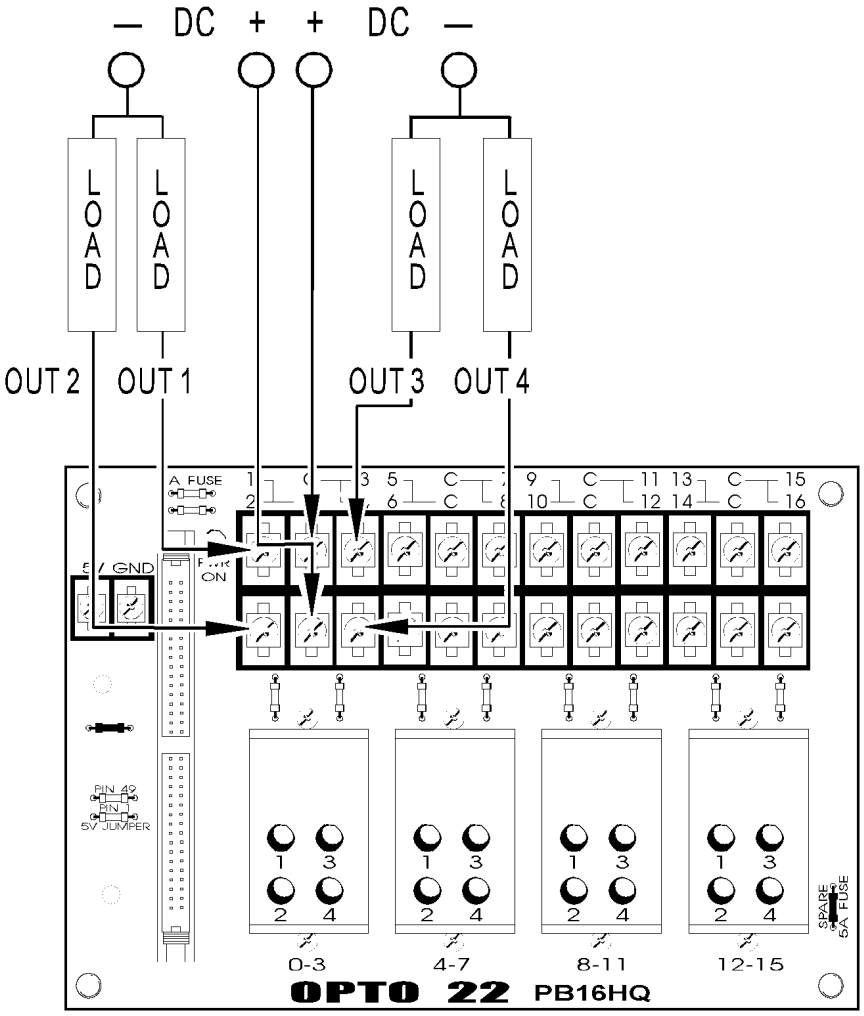




SCHEMATICS



CONNECTIONS



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 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
- 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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