

# Quad Pak DC Output Modules

## Features

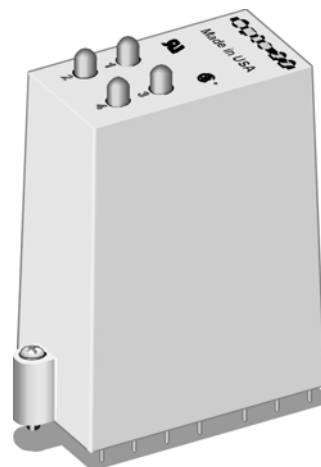
- Four single channel I/O circuits in a single high-density package
- Designed to plug into the Quad Pak high-density I/O mounting racks
- Can be used with Optomux, Pamux, and *mistic* protocol brain boards and mounting racks as well as racks using a direct cable connection to a computer
- Each module 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 |

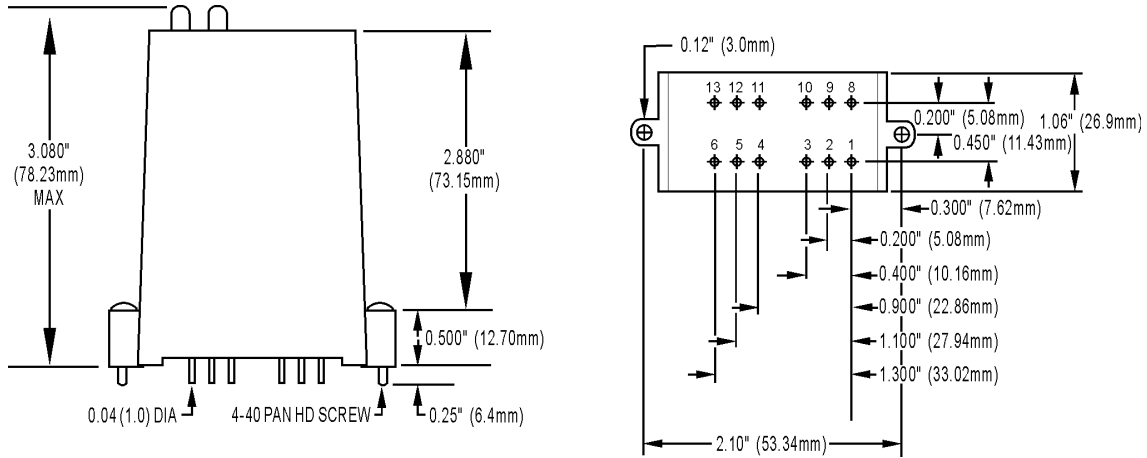
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## Specifications

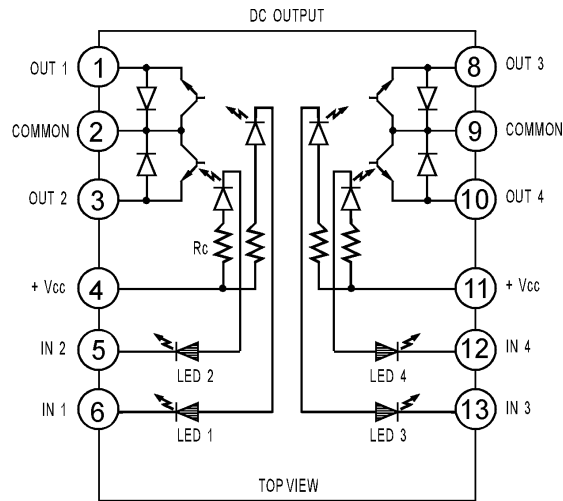
|  | Units | ODC5Q     | ODC5AQ    |
|--|-------|-----------|-----------|
| Line Voltage - Maximum                         | VDC   | 60        | 200       |
| Operating Voltage Range                        | VDC   | 5-60      | 5-200     |
| Current Rating (per channel)                   |       |           |           |
| @ 20 °C Ambient                                | Amps  | 3         | 1         |
| @ 45 °C Ambient                                | Amps  | 2         | 1         |
| @ 70 °C Ambient                                | Amps  | 1         | 0.55      |
| Off-state Leakage @<br>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<br>@ 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       |

# Quad Pak DC Output Modules

## Dimensions



## Schematics



- RED INDICATOR LED
- INFRARED COUPLER LED
- EQUIVALENT CIRCUIT ONLY
- NEGATIVE TRUE LOGIC
- INDUCTIVE LOADS MUST BE DIODE SUPPRESSED

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## Connections

