# ODC5R Reed Relay Digital Output Module

## Description

The ODC5R is a Form A mechanical relay I/O module. This module is suited to applications such as multiplexing of communication lines or analog signals where a low-contact resistance is needed.

This module was designed for low-voltage DC loads that are purely resistive (no inrush current). Because of its low 10 VA rating, this module is not recommended to use with inductive loads, capacitive loads (even very small loads) or 120 VAC loads.

Contact our Product Support Group to determine the best module for your application.

**ODC5R**

## Part Numbers

| Part | Description |
|------|-------------|
| ODC5R | Reed Relay Output, 5VDC Logic |

Opto 22 • 43044 Business Park Drive • Temecula, CA 92590-3614 • **www.opto22.com**
**SALES** 800-321-6786 • 951-695-3000 • FAX 951-695-3095 • sales@opto22.com • **SUPPORT** 800-835-6786 • 951-695-3080 • FAX 951-695-3017 • support@opto22.com

# ODC5R Reed Relay Digital Output Module

## Specifications

| Item | Description |
|---|---|
| Contact type | Form A SPST-normally open |
| Line Voltage - Range | 0–100 VDC<br>0–130 VAC<br>(see Note) |
| Current Rating | 0.5 Amps Switching<br>(see Note) |
| Contact Rating | 10 VA (see Note) |
| Switching current | 0.5 amperes maximum[1] |
| Carry current | 1.5 amps maximum |
| Contact on-resistance | 200 milliohms |
| Turn-on time | 500 microseconds |
| Turn-off time | 500 microseconds |
| Contact bounce | 250 microseconds |
| Mechanical life | $5 \times 10^6$ cycles |
| Logic voltage range | 4.8–6 volts |
| Logic droupout voltage | 0.8 volts |
| Logic input current<br>@ Normal logic voltage | 14 milliamperes |
| Isolation voltage Input-to-output | 1500 VDC |
| Temperature Operating | 0 to 70 °C |

NOTE: The application of the dry contact module must not exceed 10 VA under steady-state or momentary in-rush conditions.
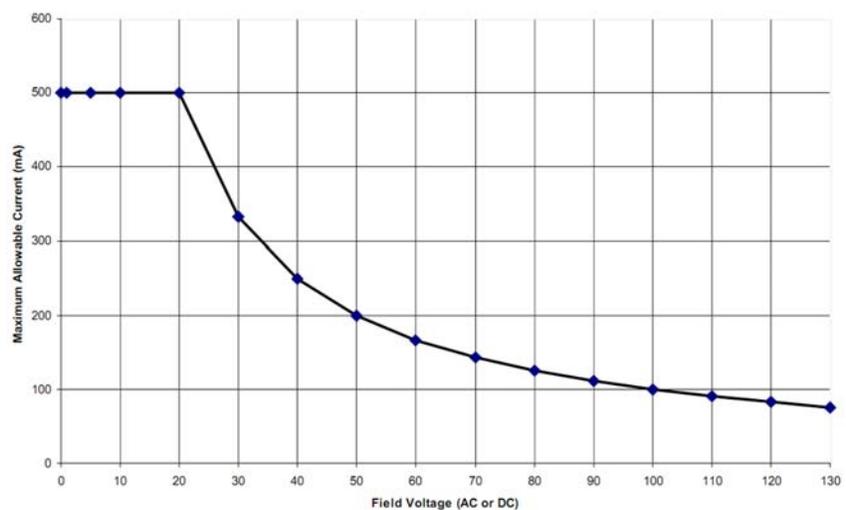For voltages at or below 20 volts, the current limit is 0.5 amps. For voltages above 20 volts, the maximum allowable current is determined by the following equation:
Maximum Current = 10 VA / Voltage

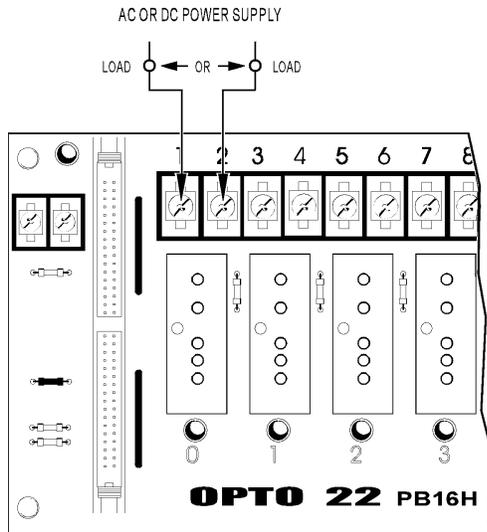| Current Limit at Key Voltages | |
|---|---|
| V | mA |
| 5 | 500 |
| 12 | 500 |
| 24 | 416 |
| 100[1] | 100 |
| 120 | 83 |
| 130[2] | 76 |

1. Maximum DC voltage is 100 VDC

2. Maximum AC voltage is 130 VAC
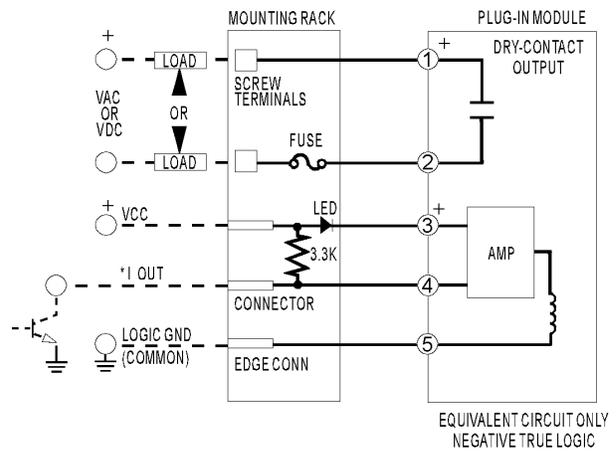
**10 VA RATING FOR REED RELAY (DRY CONTACT) MODULES**

# ODC5R Reed Relay Digital Output Module
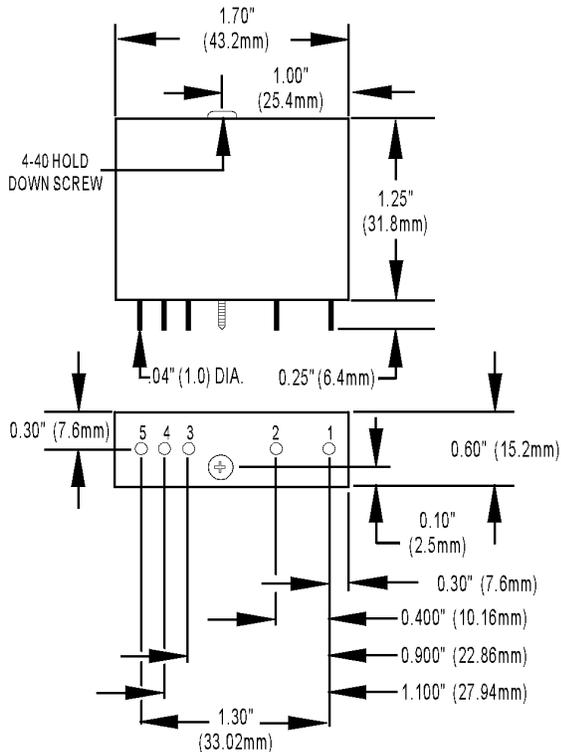
## Connections

AC OR DC POWER SUPPLY

LOAD ← OR → LOAD



OPTO 22 PB16H

## Schematics



MOUNTING RACK

PLUG-IN MODULE

LOAD

VAC OR VDC

OR

LOAD

SCREW TERMINALS

FUSE

VCC

LED

3.3K

*I OUT

CONNECTOR

LOGIC GND (COMMON)

EDGE CONN

DRY-CONTACT OUTPUT

AMP

EQUIVALENT CIRCUIT ONLY
NEGATIVE TRUE LOGIC

\* Control line is compatible with totem pole or tri-state output device.

## Dimensions



1.70" (43.2mm)

1.00" (25.4mm)

4-40 HOLD DOWN SCREW

1.25" (31.8mm)

.04" (1.0) DIA.     0.25" (6.4mm)

0.30" (7.6mm)

0.60" (15.2mm)

0.10" (2.5mm)

0.30" (7.6mm)

0.400" (10.16mm)

0.900" (22.86mm)

1.100" (27.94mm)

1.30" (33.02mm)

# 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. 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, for more information or email 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.

## www.opto22.com

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