G4 Digital Dry Contact Output Modules

Features

- Contact switching voltage of 100 VDC or 130 VAC maximum
- Contact resistance of 200 milli-ohms maximum
- Mechanical life of 5 million cycles
- Coil 5 VDC at 14 mA
- Operating temperature: -30 °C to 70 °C
- CE approved
- Passes NEMA Showering Arc Test (ICS 2-230)
- Meets IEEE Surge Withstand Specification (IEEE-472)

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

G4 Dry Contact Output Modules

Description

Opto 22's G4 family of modules includes two dry-contact, low-contact-resistance DC output modules, the G4ODC5R and the G4ODC5R5.

The G4ODC5R is a single-pole, single-throw, normally open mechanical relay (Form A, SPST-NO). The G4ODC5R5 is a single-pole, single-throw, normally closed mechanical relay (Form B, SPST-NC).

Typical applications for these modules include analog signal and communication line multiplexing.*

Part Numbers

Part	Description
G4ODC5R	G4 Dry Contact Output, 5 VDC Logic, Normally Open
G4ODC5RFM	G4 Dry Contact Output, 5 VDC Logic, Normally Open, Factory Mutual Approved
G4ODC5R5	G4 Dry Contact Output, 5 VDC Logic, Normally Closed
G4ODC5R5FM	G4 Dry Contact Output, 5 VDC Logic, Normally Closed, Factory Mutual Approved

Specifications

	Units	G4ODC5R G4ODC5RFM*	G4ODC5R5 G4ODC5R5FM*
Contact form		Form A SPST mechanical relay	Form B SPST mechanical relay
Normal position		Open	Closed
Contact rating	VA	10	10
Maximum switching voltage (see Note)	VDC	100	100
	VAC	130	130
Maximum switching current	A	0.5 (see Note)	0.5 (see Note)
Contact resistance	Milliohms	200	200
Turn-on time	microseconds	500	500
Turn-off time	microseconds	500	500
Contact bounce	microseconds	250	250
Mechanical life	cycles	5 million	5 million
Logic voltage range	VDC	4.8–6	4.8–6
Logic OFF voltage range	VDC	0.0–0.8	0.0–0.8
Logic ON voltage range	VDC	3.8–6	3.8–6
Indeterminate range	VDC	0.8–3.8	0.8–3.8
Logic input current at nominal logic voltage	milliamps	14	14
Isolation voltage (transient) input-to-output	VDC	1,500	1,500
Ambient temperature: Operating Storage	°C °C	0 to 70 -60 to +105	0 to 70 -60 to +105

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

*Part numbers ending in FM are Factory Mutual approved.

10 VA Rating for Reed Relay (Dry Contact) Modules
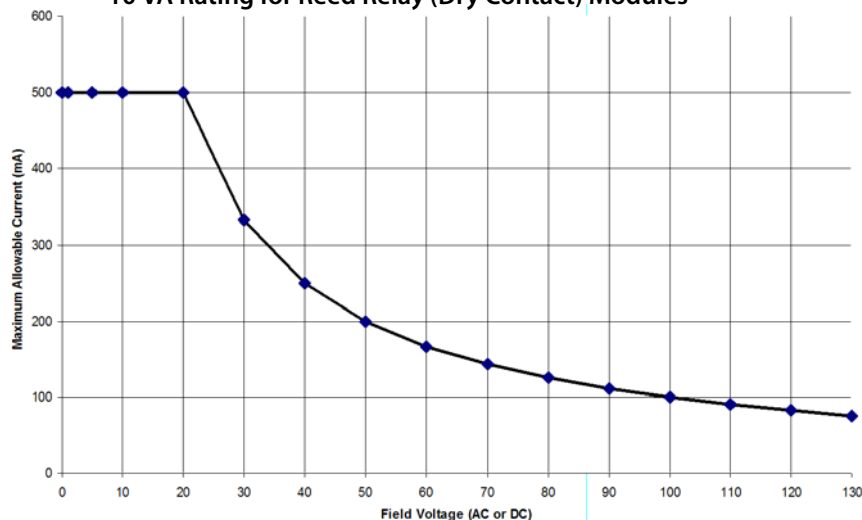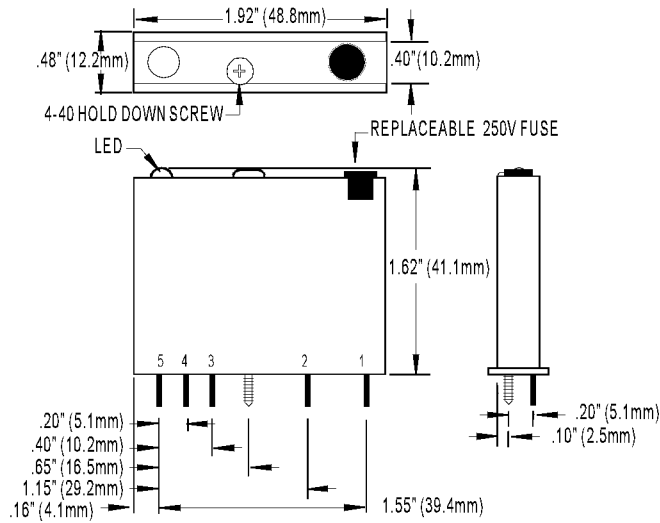
Current Limit at Key Voltages:

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.

G4 Digital Dry Contact Output Modules

Dimensions

1.92" (48.8mm)
.48" (12.2mm)
.40" (10.2mm)
4-40 HOLD DOWN SCREW
REPLACEABLE 250V FUSE
LED
1.62" (41.1mm)
5 4 3 2 1
.20" (5.1mm)
.40" (10.2mm)
.65" (16.5mm)
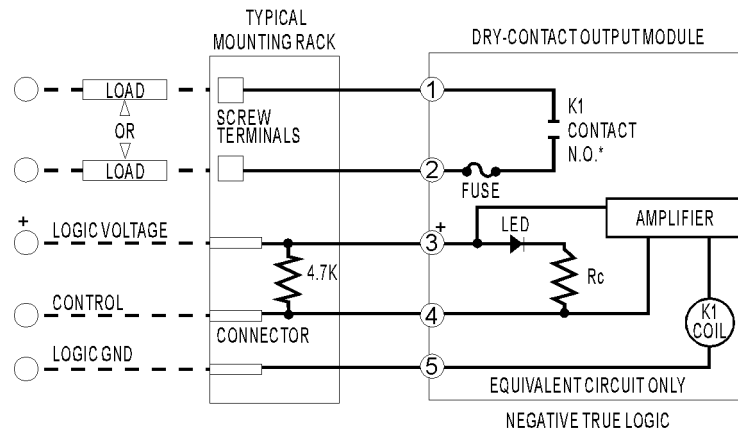1.15" (29.2mm)
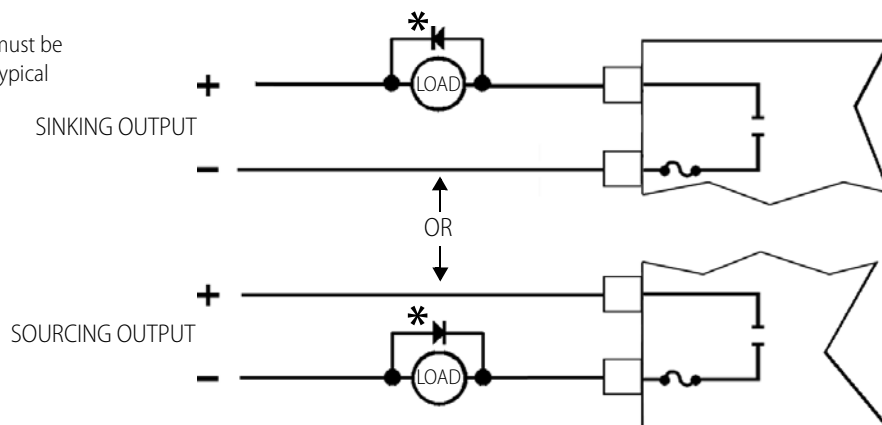.16" (4.1mm)
.20" (5.1mm)
.10" (2.5mm)
1.55" (39.4mm)

Schematics

NOTE: Also compatible with Totem Pole or Tri-State Output. Will not plug into G4PB4R mounting rack.

*Normally open for G4ODC5R. Normally closed for G4ODC5R5.

NOTE: Commutating diode* must be used on inductive DC loads. Typical wiring examples:

OPTO 22

G4 Digital Dry Contact Output Modules

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.

groov

groov puts your system on your mobile device. With zero programming, you can build mobile operator interfaces to monitor and control systems from Allen-Bradley, Siemens, Schneider Electric, Modicon, and many more. Web-based *groov* puts mobile-ready gadgets at your fingertips. Tag them from your existing tag database, and they automatically scale for use on any device with a modern web browser. See groov.com for more information and your free trial.

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, the rack-mounted SNAP PAC R-series, and the software-based SoftPAC™ all 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. Wired+Wireless™ models are also available.

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. PAC Project

Professional, available for separate purchase, adds one SoftPAC, 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 test each product twice before it leaves our factory, rather than only testing a sample of each batch, we can guarantee most solid-state relays and optically isolated I/O modules for life.
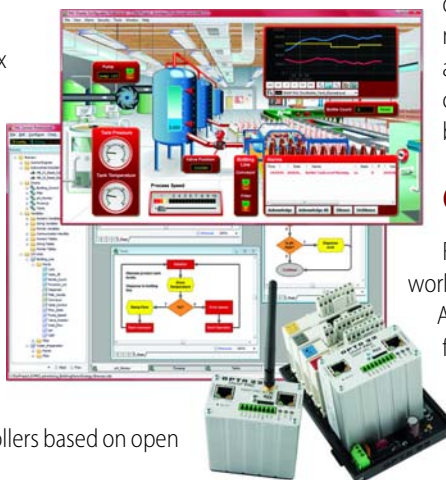
Free Product Support

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.

www.opto22.com