

G4 DIGITAL DRY CONTACT OUTPUT MODULES

Features

- > Used to switch low-voltage resistive loads
- > Contact resistance of 200 milliohms 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)

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).

Factory Mutual-approved versions of these modules are also available.

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

Because of their low 10 VA rating, these modules are not recommended for inductive or capacitive loads (even very small loads), because the inrush current is likely to exceed the 10 VA rating.

IMPORTANT: Applications using 120 VAC are typically NOT suited to these modules. If you are considering using one of these modules for any application other than low-voltage purely resistive loads, see the detailed notes and rating curve on [page 2](#), and call Pre-sales Engineering for specific guidance.



G4 Dry Contact
Output Modules



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

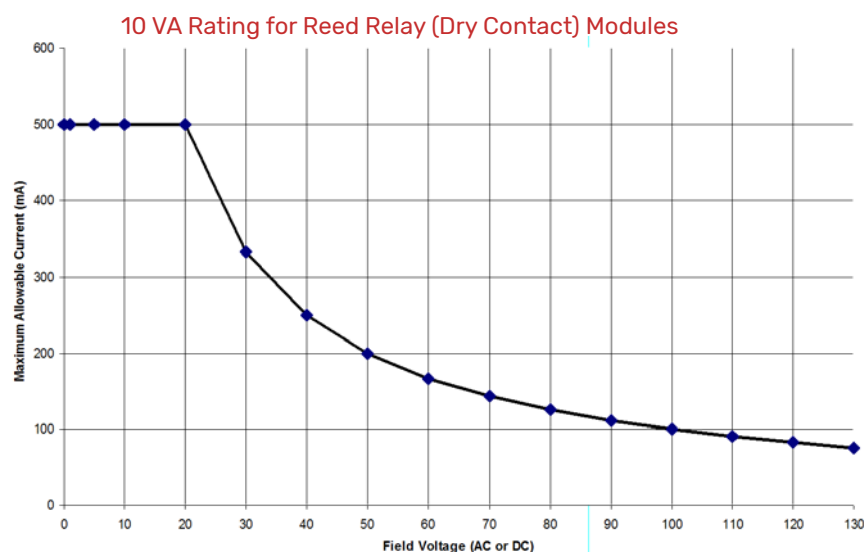
	Units	G4ODC5R G4ODC5RFM*	G4ODC5R5 G4ODC5R5FM*
Contact form		Form A SPST mechanical relay	Form B SPST mechanical relay
Normal position		Open	Closed
Contact rating	VA	10	10
Maximum switching voltage (see NOTE)	VDC	100	100
	VAC	130	130
Maximum switching current	A	0.5 (see NOTE)	0.5 (see NOTE)
Contact resistance	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	°C	0 to 70	0 to 70
Storage	°C	-60 to +105	-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:

$$\text{Maximum Current} = 10 \text{ VA} / \text{Voltage}$$

*Part numbers ending in FM are Factory Mutual approved.



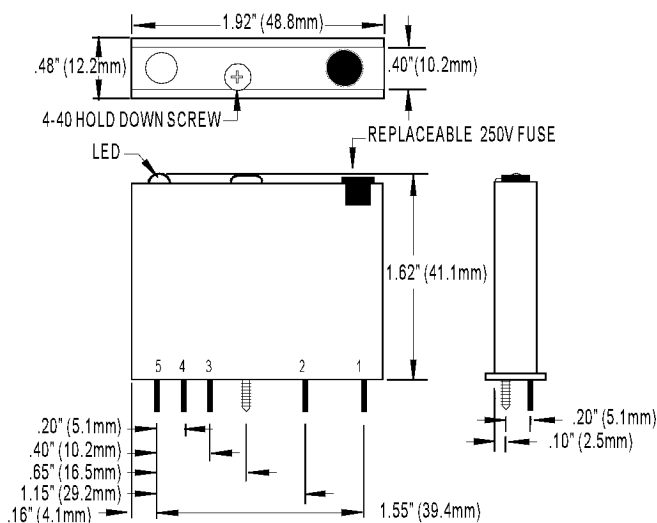
Current Limit at Key Voltages	
V	mA
5	500
12	500
24	416
100 ¹	100
120	83
130 ²	76

¹ Maximum DC voltage is 100 VDC.

² Maximum AC voltage is 130 VAC.



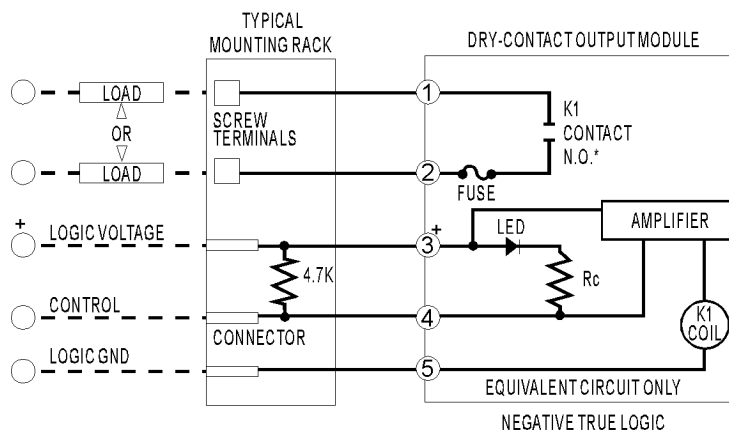
DIMENSIONS



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.



TYPICAL WIRING EXAMPLES

NOTE: Commutating diode* must be used on inductive loads (Typical: 1N4005)

