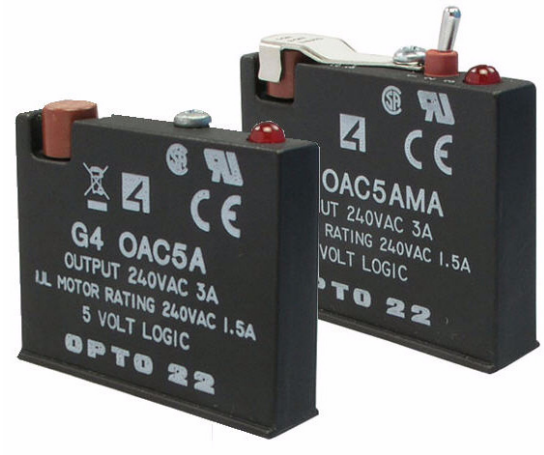
G4 Digital AC Output Modules

Features

- 4,000 V_{rms} optical-isolation
- Built-in LED status indicator
- Logic levels of 5, 15, and 24 VDC
- Removable fuse
- Current rating: 3 amps at 45° C
- UL Motor Load rating: 1.5 amps
- Ability to withstand one-cycle surge of 80 amps
- Operating temperature: -30 °C to 70 °C



G4OAC5A and G4OAC5AMA Modules

Description

Opto 22's G4 AC output modules are used to control or switch AC loads. Each module provides up to 4,000 Vrms of optical-isolation between field outputs and the control side of the circuit, and each features zero voltage turn-on and zero current turn-off. All AC output modules are equivalent to single-pole, single-throw, normally open contacts (Form A, SPST-NO) except the G4OAC5A5, which is equivalent to a single-pole, single-throw, normally closed contact (Form B, SPST-NC).

The G4OAC5MA and the G4OAC5AMA are special modules featuring a manual-on/manual-off/automatic switch, ideal for diagnostic testing of control applications.

Typical applications for AC output modules include switching loads such as AC relays, solenoids, motor starters, heaters, lamps, and indicators.

Part Numbers

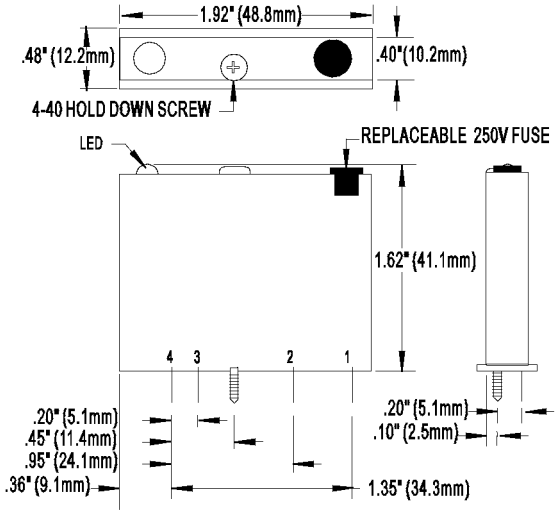
Part	Description
G4OAC5	G4 AC Output 12-140 VAC, 5 VDC Logic
G4OAC5A	G4 AC Output 24-280 VAC, 5 VDC Logic
G4OAC5A5	G4 AC Output 24-280 VAC, 5 VDC Logic NC
G4OAC5MA	G4 AC Output 12-140 VAC, 5 VDC Logic With Manual/Auto Switch
G4OAC5AMA	G4 AC Output 24-280 VAC, 5 VDC Logic With Manual/Auto Switch
G4OAC15	G4 AC Output 12-140 VAC, 15 VDC Logic
G4OAC15A	G4 AC Output 24-280 VAC, 15 VDC Logic
G4OAC24	G4 AC Output 12-140 VAC, 24 VDC Logic
G4OAC24A	G4 AC Output 24-280 VAC, 24 VDC Logic

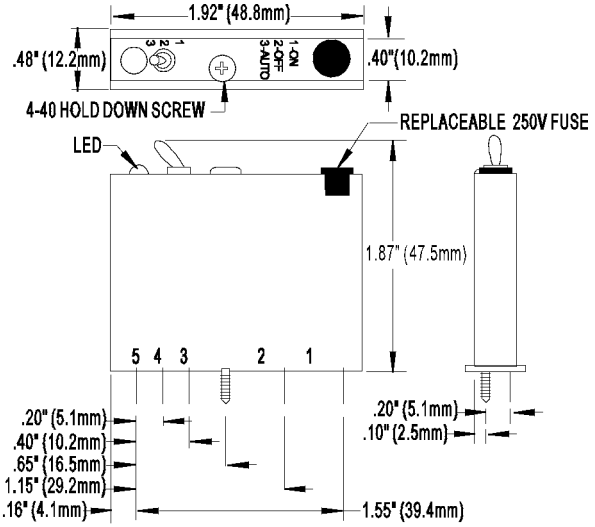
Specifications

	Units	G4OAC5*	G4OAC5A*	G4OAC5A5*	G4OAC5MA*	G4OAC5AMA*
Nominal line voltage	VAC	120	120/240	120/240	120	120/240
Output voltage range	VAC	12–140	24–280	24–280	12–140	24–280
Key feature	—	—	—	Normally closed	Diagnostic switch	Diagnostic switch
Current rating: At 45 °C ambient At 70 °C ambient	 A A	 3 2	 3 2	 3 2	 3 2	 3 2
UL Motor Load Rating	A	1.5	1.5	1.5	1.5	1.5
Isolation input-to-output	V_{RMS}	4,000	4,000	4,000	4,000	4,000
Off-state leakage at nominal voltage (60 Hz)	mA_{RMS}	5	1.25/2.5	1.25/2.5	5	1.25/2.5
Nominal logic voltage	VDC	5	5	5	5	5
Logic voltage range	VDC	4–8	4–8	4–8	4–8	4–8
Logic pickup voltage	VDC	4	4	4	4	4
Logic dropout voltage	VDC	1	1	1	1	1
Logic input current at nominal logic voltage	mA	12	12	12	12	12
Control resistance (Rc in schematic)	Ω	220	220	220	220	220
One-cycle surge	A peak	80	80	80	80	80
Turn-on time @ 60 Hz	ms	≤8.3**	≤8.3**	≤8.3**	≤8.3**	≤8.3**
Turn-off time @ 60 Hz	ms	≤8.3***	≤8.3***	≤8.3***	≤8.3***	≤8.3***
Peak repetitive voltage	VAC	500	500	500	500	500
Minimum load current	mA	20	20	20	20	20
Output voltage drop maximum peak	V	1.6	1.6	1.6	1.6	1.6
Operating frequency	Hz	25–65	25–65	25–65	25–65	25–65
dV/dT-off-state	V/µs	200	200	200	200	200
dV/dT-commutating	--	snubbed for 0.5 power factor load	snubbed for 0.5 power factor load	snubbed for 0.5 power factor load	snubbed for 0.5 power factor load	snubbed for 0.5 power factor load
Temperature Operating: Storage:	 °C °C	 -30 to +70 -30 to +85	 -30 to +70 -30 to +85	 -30 to +70 -30 to +85	 -30 to +70 -30 to +85	 -30 to +70 -30 to +85

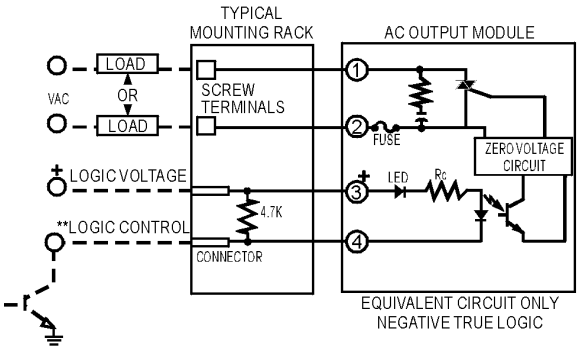
* Also available with an FM rating; add FM to the part number (example: G4OAC5FM).
** One-half cycle maximum. Module turns on at the zero volt crossing of the AC sine wave.
*** One-half cycle maximum. Module turns off at the zero current crossing of the AC sine wave.

Dimensions

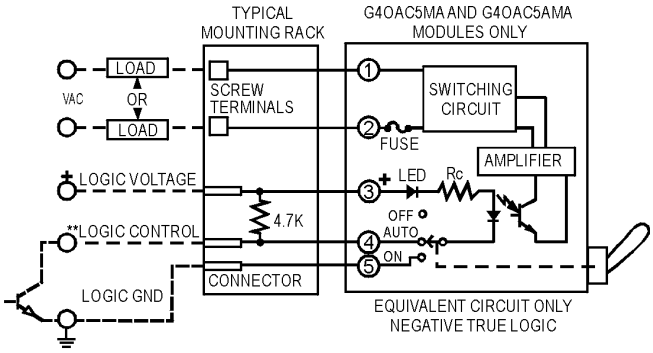




Schematics



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



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