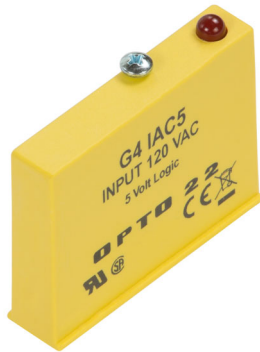


## DIGITAL AC INPUT MODULES



## Description

Opto 22's G4 AC input modules are used to detect on/off AC voltage levels. Each module provides up to 4,000 volts of optical isolation between field inputs and the logic output of the circuit.

All AC input modules are designed with filtering on the input and a hysteresis amplifier, providing high noise rejection and transient-free "clean" switching. The G4IAC5MA is a special module featuring a manual-on/manual-off/automatic switch, ideal for diagnostic testing of control applications.

Typical applications for AC input modules include sensing the presence or absence of voltage with devices such as proximity switches, limit switches, float switches, selector switches, push buttons, toggle switches, and thermostats. All modules include a built-in LED status indicator.

## Specifications—AC Input Modules

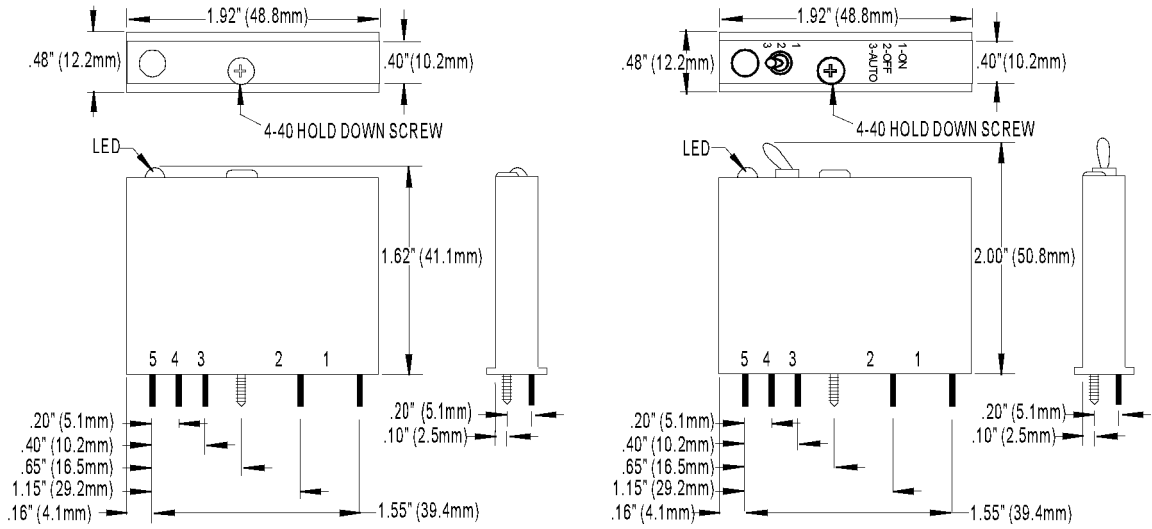
	Units	G4IAC5*	G4IAC5L*	G4IAC5A*	G4IAC5MA*
Input voltage range	VAC or VDC	90–140	90–140	180–280	90–140
Key feature	--	--	Low R in	--	Diagnostic switch
Input current at maximum line	mA	5	11	5	5
Isolation, input-to-output (transient):					
1 ms	V	4000	4000	4000	4000
1 minute	V	1500	1500	1500	1500
Turn-on time	ms	20	20	20	20
Turn-off time	ms	20	20	20	20
Input allowed for off-state	mA, V	1.4, 40	3, 45	0.7, 45	1.4, 40
Nominal output voltage supply	VDC	5	5	5	5
Output supply voltage range	VDC	4.5–6	4.5–6	4.5–6	4.5–6
Output supply current at nominal logic voltage	mA	12	12	12	12
Input resistance (R <sub>1</sub> in schematic)	ohms	28 K	14 K	70K	28 K
Control resistance (R <sub>c</sub> in schematic)	ohms	220	220	220	220
Output voltage drop	V @ 50 mA	0.4	0.4	0.4	0.4
Output current (sinking)	mA	50	50	50	50
Output leakage with no input	microamps @ 30 VDC	100	100	100	100
Transistor	V breakdown	30	30	30	30
Temperature					
Operating:	°C	-30 to +70	-30 to +70	-30 to +70	-30 to +70
Storage:	°C	-30 to +85	-30 to +85	-30 to +85	-30 to +85
Agency Approvals		UL, CE, CSA, RoHS; UKCA	UL, CE, CSA, RoHS; UKCA	UL, CE, CSA, RoHS; UKCA	UL, CSA, CE; UKCA

\* Compatible with Raspberry Pi

## Specifications—AC Input Modules (continued)

	Units	G4IAC15*	G4IAC15A*	G4IAC24*	G4IAC24A*
Input voltage range	VAC or VDC	90–140	180–280	90–140	180–280
Key feature	--	--	--	--	--
Input current at maximum line	mA	5	5	5	5
Isolation, input-to-output (transient):					
1 ms	V	4000	4000	4000	4000
1 minute	V	1500	1500	1500	1500
Turn-on time	ms	20	20	20	20
Turn-off time	ms	20	20	20	20
Input allowed for off-state	mA, V	1.4, 40	0.7, 45	1.4, 40	0.7, 45
Nominal output supply voltage	VDC	15	15	24	24
Output supply voltage range	VDC	12–18	12–18	20–30	20–30
Output supply current at nominal logic voltage	mA	15	15	15	15
Input resistance (R1 in schematic)	ohms	28 K	70 K	28 K	70 K
Control resistance (Rc in schematic)	ohms	1 K	1 K	2.2 K	2.2 K
Output voltage drop	V @ 50 mA	0.4	0.4	0.4	0.4
Output current (sinking)	mA	50	50	50	50
Peak repetitive voltage	VAC	500	500	500	500
Output leakage with no input	microamps @ 30 VDC	100	100	100	100
Transistor	V breakdown	30	30	30	30
Temperature					
Operating:	°C	-30 to +70	-30 to +70	-30 to +70	-30 to +70
Storage:	°C	-30 to +85	-30 to +85	-30 to +85	-30 to +85
Agency Approvals		UL, CSA, CE; UKCA	UL, RoHS, CSA, CE; UKCA	UL, CSA, CE; UKCA	UL, CSA, CE; UKCA
* Not for use with Opto 22 brains.					

Dimensions—AC Input Modules



Schematics—AC Input Modules

