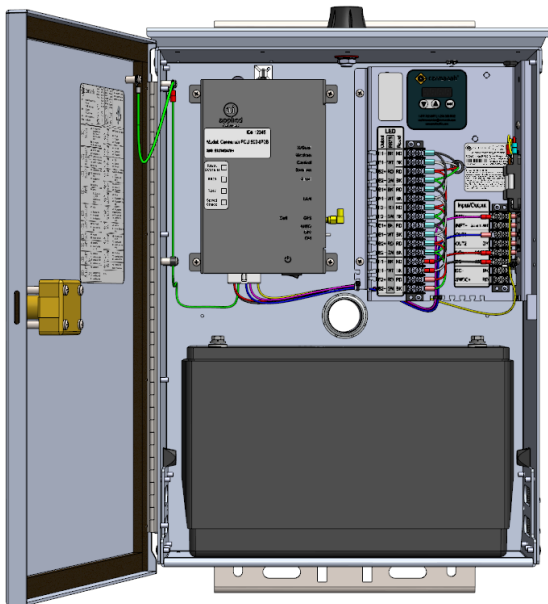




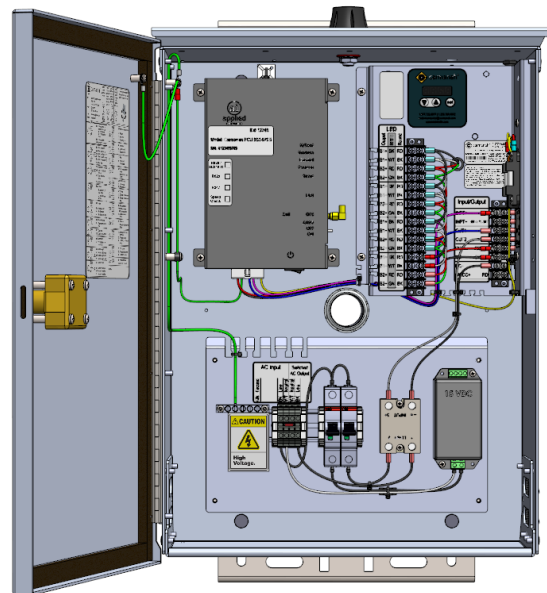
# G Series / SPEEDCHECK®

CABINET DOOR SWITCH RETROFIT GUIDE

For all solar-powered G Series systems



**Solar Versions**



**AC Versions**

89323\_RETROFIT\_GUIDE\_CABINET\_DOOR\_SWITCH\_REVB

---

## Table of Contents

<b>1.0 Warnings and Precautions</b> .....	<b>3</b>
1.1 Warranty Disclaimer .....	3
1.2 Standards .....	3
1.3 Safety and Usage Precautions .....	3
<b>2.0 System Components</b> .....	<b>5</b>
<b>3.0 Installation Procedure</b> .....	<b>5</b>
3.1 Door Switch Kit Mounting Holes .....	6
3.2 Installing Door Switch Kit .....	7
3.3 Wiring Door Switch Kit .....	7
3.4 Wiring Door Switch Terminal .....	8
3.5 Testing Door Switch .....	8

---

## 1.0 Warnings and Precautions

The following symbols indicate important safety warnings and precautions throughout this guide:



WARNING indicates that serious bodily harm or death may result from failure to adhere to the precautions.



CAUTION indicates that damage to equipment may result if the instructions are not followed.



NOTE suggests optimal conditions and provides additional information.

---

### 1.1 Warranty Disclaimer

This guide will familiarize you with the features and installation of the Carmanah cabinet door switch retrofit kit. Failure to comply with the use, storage, maintenance, installation or placement instructions detailed in this guide could void the warranty.

---

### 1.2 Standards

Perform all installation, wiring, grounding and maintenance in conformance with local building and electrical codes. Adherence to the National Electrical Code (NEC) is mandatory to comply with any certification markings. Non-adherence to code may void the warranty.

---

### 1.3 Safety and Usage Precautions



Use extreme caution when handling the batteries as they can generate hazardous short-circuit currents. Remove all jewelry (bracelets, metal-strap watches, etc.) before entering the cabinet.



Before lifting any heavy or bulky equipment, ensure the load is secured so moving parts do not shift, and that it can be lifted as far as needed without back strain or loss of grip. Installation may require more than one person.



Ensure the equipment is not powered during installation and wiring of the system.



Recheck all completed wiring for proper polarity prior to energizing the system.

**NOTE**

Changes or modifications to Carmanah equipment not expressly approved by Carmanah could void both the user's authority to operate the equipment and the warranty.

**NOTE**

All Carmanah traffic products use a constant-current LED output circuit. Not all traffic beacons are compatible with this output. Please contact Carmanah for additional information and guidance when adding or replacing beacons or other hardware.

 **WARNING**

Product can have sharp edges. Accidental movement of hinged components can cause injury.

**NOTE**

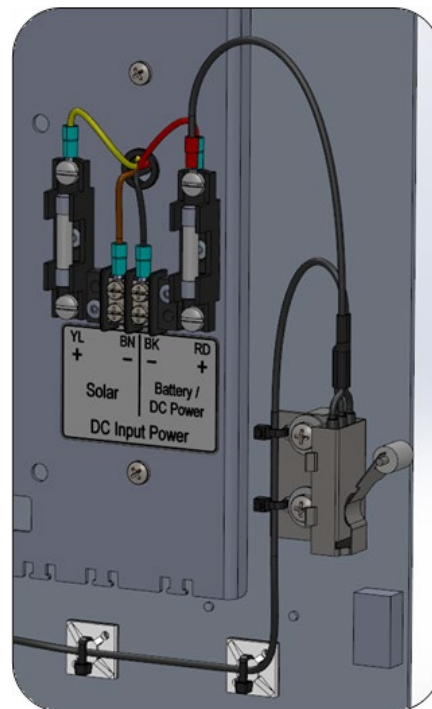
**This guide is specific to retrofitting a door switch into a G Series beacon system or SpeedCheck radar speed sign and is not a replacement for the complete product user manual for each system respectively.**

Visit [support.carmanah.com](https://support.carmanah.com) to download the complete product user manual.

## 2.0 System Components

The retrofit kit includes:

- Door switch and harness (1)
- Standoffs (2)
- Cap screws, pin-in hex, #10-32 (2)
- Cap screws, Phillips pan head, #10-32 (2)
- Washer, flat, #10 (4)
- Washer, lock, #10 (2)
- Cable ties (4)
- Cable tie bases (2)



## 3.0 Installation Procedure

This guide is for installing the cabinet door switch retrofit kit into one of the following compatible Carmanah systems:

- G Series – SC315-G, R820-G, R247-G, R829-G

**NOTE**

This retrofit is for systems that contain an Applied Information (AI) remote monitoring solution.

Refer to the individual product user manual for more details at [support.carmanah.com](http://support.carmanah.com). There are many different options available for the G Series cabinet so your product may look different than shown throughout this guide.

The cabinet door switch retrofit kit is intended to be installed into an existing Applied Information (AI) installation for monitoring the cabinet door position status using the Glance portal.

### 3.1 Door Switch Kit Mounting Holes

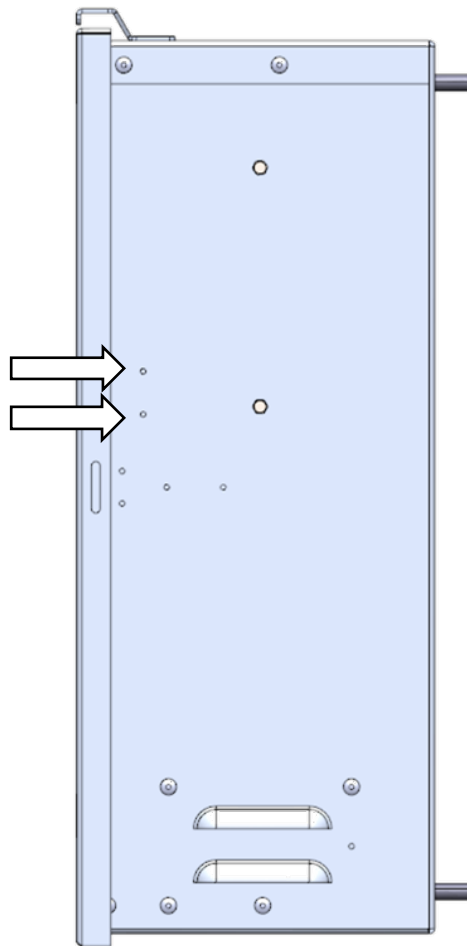


Ensure the equipment is not powered during installation.  
Ensure all metal chips are removed to prevent system damage caused by short circuits.  
Recheck all wiring prior to energizing the system.

**NOTE**

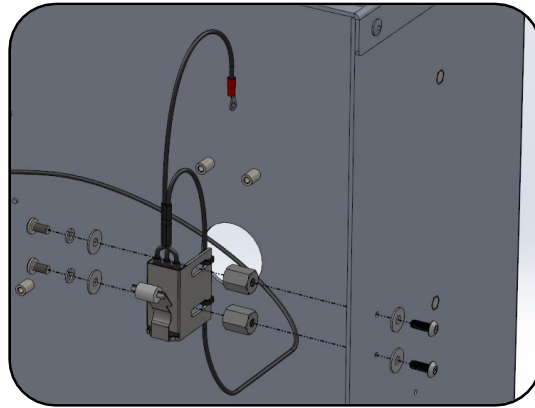
If you do not see the indentation marks below on the side of the cabinet you have an older G Series/SpeedCheck cabinet. Contact Carmanah for location guidance. Some legacy cabinets may not be suitable for this installation.

1. Access the inside of the cabinet and remove the solar and battery fuses or turn off the circuit breaker.
2. Use the indentation marks below to locate the drill holes.
3. Drill two 0.196" diameter holes as noted using a #9 ANSI drill bit.
4. Deburr the holes on the outside and inside to remove all aluminum chips.



### 3.2 Installing Door Switch Kit

1. Apply Loctite 220 threadlocker to two standoffs.
2. Assemble standoffs to the inside of the cabinet using two security screws and two flat washers.
3. Fasten the long wire from door switch to slots with two cable ties. Leave loose/untrimmed for now.
4. Install door switch to the standoffs using two screws, two lock washers, and two flat washers.
5. Center switch front/rear in slots and tighten. No Loctite threadlocker is required for this step.

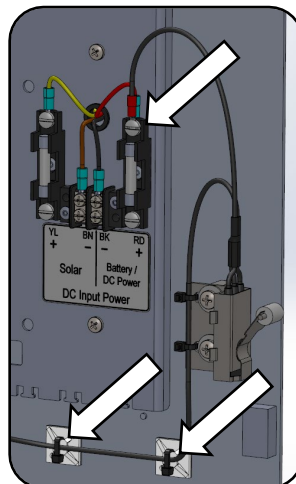


### 3.3 Wiring Door Switch Kit

**NOTE**

The terminal on the end of the long door switch wire gets installed into the Applied Information (AI) harness connector in a later step.

1. Install ring terminal from door switch onto top Battery/DC Power RD + fuse holder terminal.
2. Install two cable tie bases as shown below. Fasten the long wire from door switch to the two cable tie bases. Leave loose/untrimmed for now.

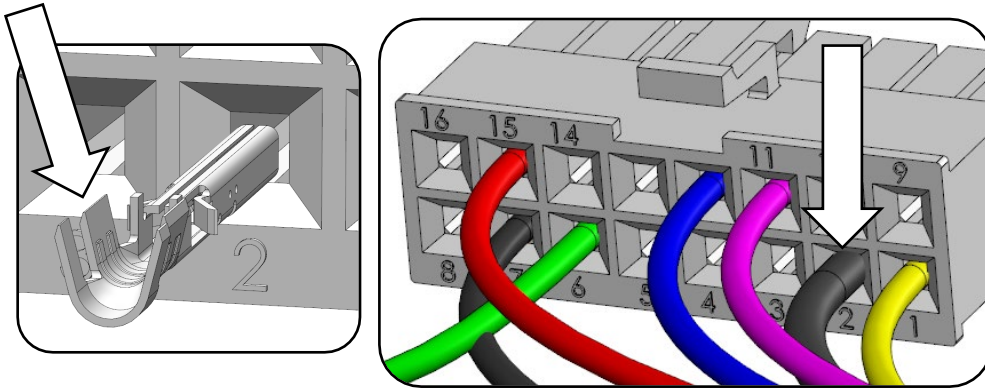


### 3.4 Wiring Door Switch Terminal

**NOTE**

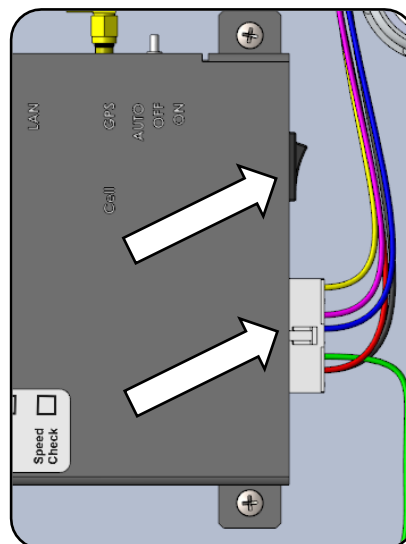
Connect terminal shown uncrimped. Crimp wings will be bent over wire strands.

1. Insert terminal from door switch harness into Position 2 of AI harness connector. Orient terminal same way as other terminals present in connector. Tug to confirm it's fully inserted.
2. Tighten and trim all cable ties from previous steps.



### 3.5 Testing Door Switch

1. Ensure all connectors are properly mated on the bottom of the AI unit.
2. Confirm correct wiring and power-up system by connecting the DC power, installing fuses, and turning on AI power switch.
3. On your PC, open a web browser and navigate to the Glance website: [glance.appinfoinc.com](http://glance.appinfoinc.com).
4. Log in using the credentials provided by AI.
5. On the upper left side of the browser, select the device name that matches the Device ID (the ID number labelled on the AI unit).



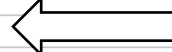


6. Ensure that the “Cabinet Door” status reflects the current position of the door. Open and close the door to change the switch state and confirm Glance reflects the change.
  - a. Door open = Open
  - b. Door closed = Closed
7. Contact Applied Information to arrange the firmware in the AI unit to be programmed correctly, if this hasn’t already been done.
  - a. Phone: 678.830.2170
  - b. Email: [support@appinfoinc.com](mailto:support@appinfoinc.com)
  - c. Web: [appinfoinc.com](http://appinfoinc.com)

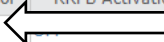
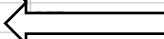
« Prev | Next »  
 ■ Carmanah 9876

Current Status :	Online
Current Alarms :	
Current Schedule:	Schedule 1
Power Status :	No AC
Current Device Status :	OK
Timezone :	-7 Hours
Time Since Last Contact :	24 Minutes 6 Seconds 7/8/2019 9:47:54 AM

	Now
System Voltage (V DC)	13.3
Solar Array Voltage (V DC)	23.4

	Status
Cabinet Door	Closed 
Lamp Fault	OK
Beacon Status	Central Override - ON
<b>Inputs</b>	

	■ Status - Override is Active
Beacon Control	<input checked="" type="radio"/> On
	<input type="radio"/> Off
	<input type="radio"/> Schedule

Date	Analog		RRFB Activations	Temperature	Inputs	
	System Voltage	Solar Array Voltage			Cabinet Door	RRFB Activation State
July 22, 2020 15:45:22	12.3	0.0	0	25	OPEN	
July 22, 2020 15:42:51	12.3	0.0	0	23	Closed	



© 2021 Carmanah Technologies Corporation

**Technical Support:**

Email: [customersupport@carmanah.com](mailto:customersupport@carmanah.com)

Toll Free: 1.877.722.8877 (US & Canada)

Worldwide: 1.250.380.0052

Fax: 1.250.380.0062

Web: [carmanah.com](http://carmanah.com)