

Settings

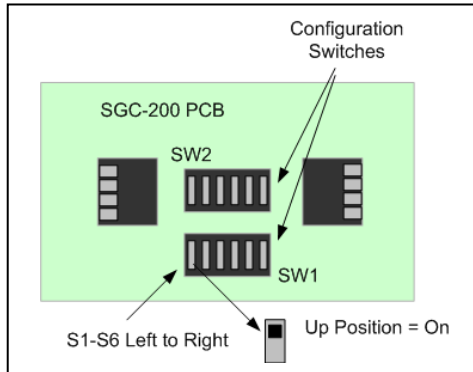
The SGC-200 has two versions: the SGC-200A with fixed gain and filtered outputs and the SGC-200 with adjustable gain and low-pass filter cutoffs. The SGC-200 contains internal switches for gain and filter cutoff settings.

Referring to the illustration at right, the cover may be removed to expose the top of the SGC-200 circuit board. SW1 is used to set the output gain. SW2 is used to set the filtered output low-pass cut-off frequency. Set the switches according to the tables below. Do not apply switch settings other than those shown in the table. Contact APM, Inc. for other available gains and low-pass filter cut-offs or customizations.

| SGC-200 Gain (SW1) x = off | | | | | | |
|---------------------------------|----|----|----|----|----|----|
| Vout = gain * current in * 0.1 | | | | | | |
| Gain | S1 | S2 | S3 | S4 | S5 | S6 |
| 10 | on | x | on | x | on | x |
| 12.5 | x | x | on | x | x | on |
| 20 | x | x | x | x | x | on |
| 25 | x | x | x | on | on | x |
| 40 | x | x | x | on | x | x |
| 50 | x | x | x | on | x | on |
| 70 | x | on | x | on | on | x |
| 100 | x | on | x | x | x | x |

default setting = Gain of 10

Note: the SGC-200A has no switches (fixed gain and filter cutoff).
1V out = 0.5A in, 4Hz low-pass filter



SGC-200 Filter Cutoff (SW2) x = off

| Hz | S1 | S2 | S3 | S4 | S5 | S6 |
|----|----|----|----|----|----|----|
| 80 | x | x | on | x | x | on |
| 16 | x | on | x | x | on | x |
| 4 | on | x | x | on | x | x |

default setting = 4 Hz

Support

Support for your application is available by contacting APM, Inc.

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NOTICE !

Read This Before Proceeding

INSTALLATION GUIDE

MODEL SGC-200 / SGC-200A

CURRENT SENSE AMPLIFIER

The purpose of this guide is to ensure proper installation and usage of the Model SGC-200 Current Sense Amplifier for your application.

This guide will:

- illustrate how to connect the SGC-200
- describe how to configure the SGC-200 gain and internal filter

What you will need to set up your application with the SGC-200:

- the target device (solenoid, actuator, DC motor, etc.) for which current is to be measured by the SGC-200
- the equipment (PWM or DC source) to drive your target device
- a nominal 12V DC power supply for the SGC-200
- wire – 18 or 16 AWG preferred

General Description

The SGC-200 Current Sense Amplifier provides two amplified voltage outputs proportional to the current sensed across an internal, non-inductive sense resistor. One output is an amplified voltage output allowing for current waveform pick-up, the other a low-pass filtered voltage output which provides an average current of a pulsed load. The SGC-200 is intended for PWM solenoid applications where an average current measurement is desired.

Connection

Typical installations using the SGC-200 are shown as follows. Any configuration may be used, the SGC-200 will measure in any case. The SGC-200 will also operate with a DC or on/off switched source for transient analysis. Choose the wiring connection that best suits your application.

Note that all connections are electrically isolated. Common ground connections are not required and are not made internally by the SGC-200. The current sense input (SIG+/-) provides high common mode rejection and is electrically isolated from both the power input (PWR+/-) and the 2 signal outputs (UNF/GND and FLT/GND).

