

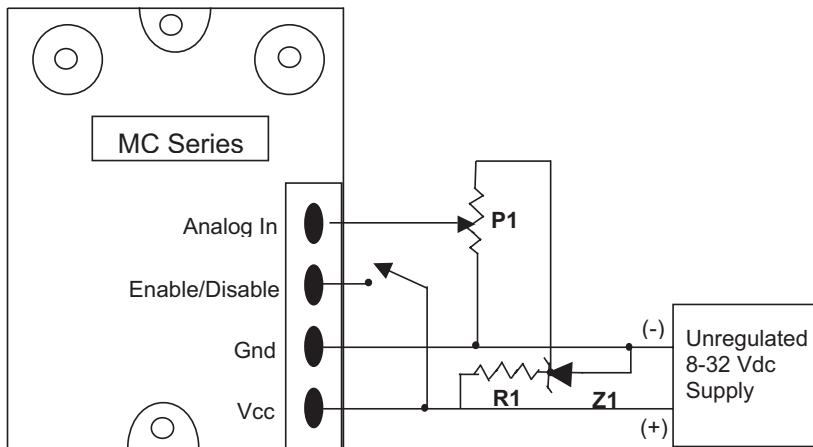
How to Easily get an Accurate Analog Input Signal for your MC Series Controller

– Fuse Selection

The Crydom MC Series of integrated controls provides an all-in-one solution that combines both the control and the power SSR normally needed for a typical temperature, proportional, or soft-start/stop control. By utilizing the well proven Crydom SSR technology, and state of the art microcontrollers, Crydom incorporates both into a single solid state relay package that makes a basic control system easily implemented.

Since there is no need to have a highly regulated Vcc supply for the MC products, users that want to also utilize the same unregulated supply for use in providing the analog input setpoint signal, (vs. for example, having to provide a calibrated PLC analog output), might experience a slightly varying power output as the Vcc supply drifts. The technique to produce a very stable voltage for the setpoint use is very simple and requires only 2 inexpensive components.

Since the analog input current requirement of the MC series for any of the voltage options, (0-5, 0-7, & 0-10), is typically less than 1ma, the use of a 10k to 50k potentiometer with a ¼ watt resistor and a single zener diode having a low current rating at slightly above the maximum value of the input voltage range is all that is needed. Per the diagram below, the wiring is very simple.



Example: Using a 12 Vdc supply with a 0 – 5 Vdc analog input MC unit, a 5.1 volt 1N4625 Zener Diode can be used with a 1.2 kohm ¼w resistor as R1.

Analog Input Range with Z1 Value		Power Supply Values		
		9-11 V	12-23 V	24-32 V
0 - 5 volt	5.1 V	620	1.2K	3.3K
0 - 7 volt	7.5 V	240	750 *	2.7K
0 - 10 volt	10 V	Not recommended	330 *	2.4K

Recommended R1 Values, ¼ Watt
(Note * For supply V>18 volts, ½ Watt)