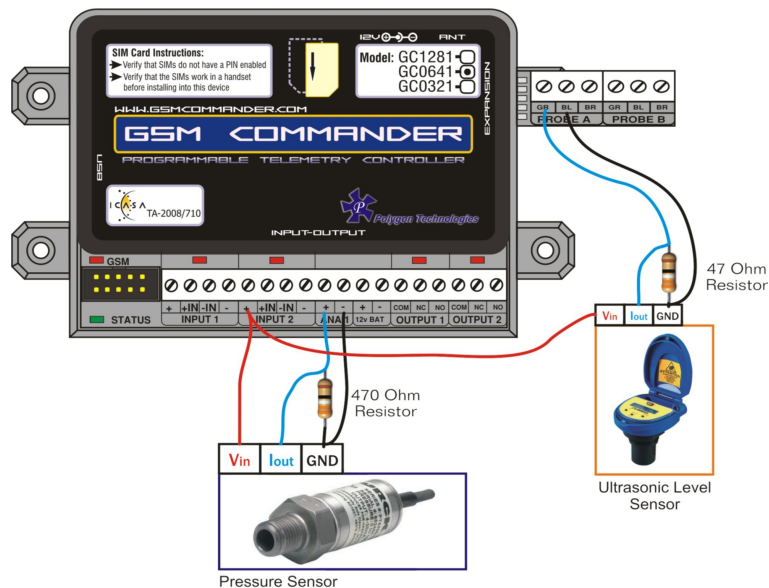


# GSM Commander Application Note

## 4-20mA Analog Input

### Goal

To connect a 4-20mA instrument / sensor to your GSM Commander.



### GSM Commander Wiring

Connect a wire from the (+) terminal(12V) of any Input from the GSM Commander to the supply voltage input of the sensor. Then connect a wire from the output(4-20mA) of the sensor to the (+) terminal of the Analog Input. Connect GND of the sensor to the (-) terminal of the Analog Input. Very important, connect a 470 ohm resistor in parallel with the output signal of the sensor and GND as illustrated above. This resistor together with the internal voltage divider resistors ensures that the voltage across the Analog Input is between 0 – 10V as required. To be more specific, the minimum voltage would be 1.8V when the output signal is 4mA, and the maximum voltage would be 9V when the output signal is 20mA.

Have a look at a detailed example in chapter 8 of the [GSM Commander Advanced Manual](#).

### Further Clever Ideas (The MacGyver Move)

The possibility too exists, that the Temperature Interface module could be used to make an extra 2x Analog Inputs available. The slight drawback would be that you would have to make use of the temperature monitoring features in the software to control these inputs. The a 4mA output signal of the sensor would be equivalent 19°C and a 20mA output signal would be equivalent to 94°C. Convert this temperature reading in the Setup Software in order to SMS a “value” instead of a temperature. Eg: If temperature at probe A stays below 36C, then send “Alarm: 200-Lit in reservoir-1” via SMS to .....

It may not be pretty, but it works! (we will launch a 5x Analog expansion during 2011)