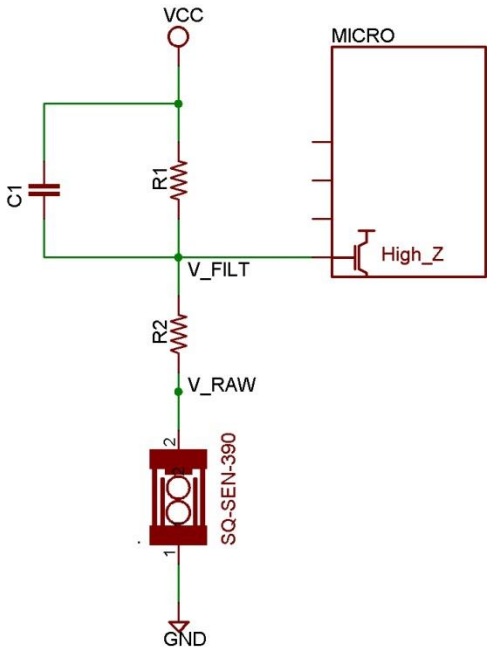
SEN-390 APPLICATION CIRCUIT

FLEXIBLE FILTER CIRCUIT

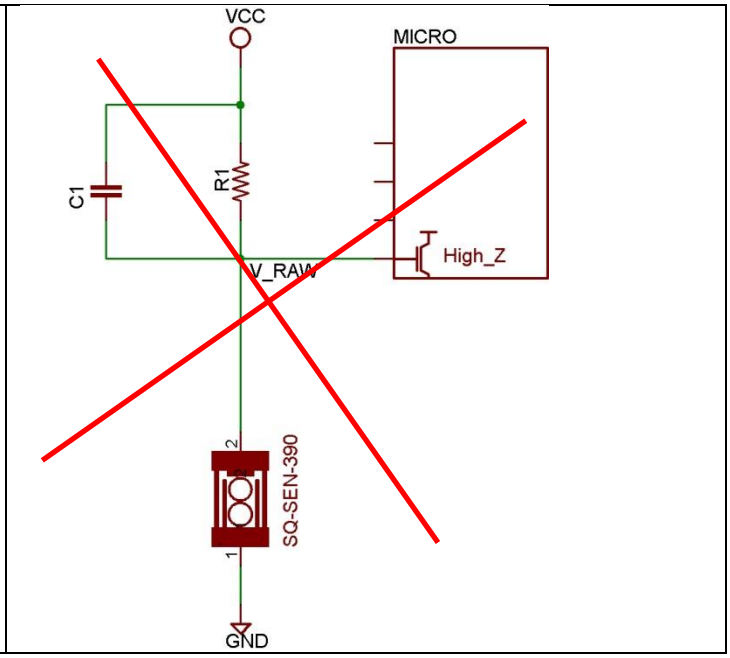
- Best choice for a simple, flexible interface circuit. Provides opportunity for filtering if needed. For most applications, this is the recommended circuit.
- For low power applications a good starting value for R1 is 4.7M. R2 can be 100K – 1M to depending on the desired output swing.
- Using R1 of 4.7M and R2 of 1M, the current consumption will be about 0.5 uA (0.0005 mA) for a Vcc of 3.0 V.
- Higher values for R1 and R2 can be used to further limit the current, but board impedances must be considered if higher resistance is used.
- Experiment with C1 values for various filtering options. Generally 10 – 100 pF is sufficient for general signal edge clean up. A larger C1 value i.e. 1000 pF will turn the digital output into an analog average value. A low leakage capacitor should be used.
- **Note**: It is recommended to use a 10x probe for circuit debugging. If a 1x probe is used, the series resistance will cause a large voltage droop.



10 Water St.
Lebanon, NH 03766 USA
Tel: 603.448.6266
Fax 603.218.6426
www.signalquest.com
info@signalquest.com

BAD CIRCUIT

- Do not connect a capacitor from any supply directly to the sensor. A large inrush current will occur when the sensing mechanism opens and closes, potentially damaging the sensor's contacts and reducing life of the device.
- **Note**: It is recommended to use a 10x probe for circuit debugging. If a 1x probe is used, the series resistance will cause a large voltage droop.



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