SG-Link-200-OEM®

Utilizing the Hall Effect Sensor

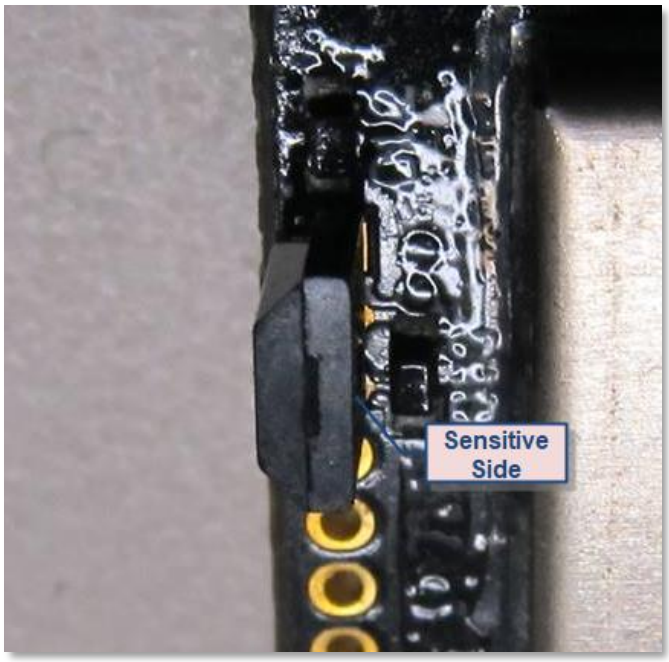
Component Overview

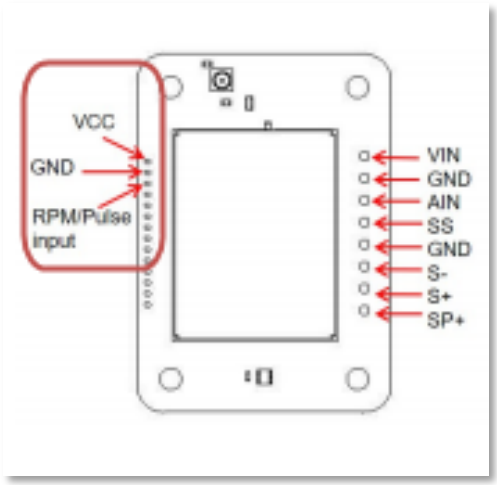
The SG-Link®-200-OEM allows users to remotely collect data from a range of sensor types, including strain gauges, pressure transducers, and accelerometers. The node supports high resolution, low noise data collection from 1 differential and 1 single-ended input channels at sample rates up to 1 kHz. A digital input allows compatibility with a hall effect sensor for reporting RPM and total pulses, making the sensor ideal for many torque sensing applications.

Allegro A3214 Hall Effect sensor, the A3214 integrated circuits are ultra-sensitive, pole independent Hall-effect switches with a latched digital output (supplied with SG-Link-200-OEM).

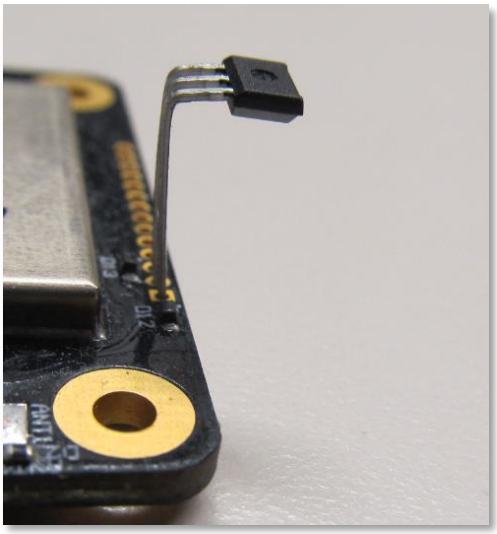
Connecting the Hall Effect Sensor to the SG-Link-200-OEM

1. **Connect the leads of hall effect sensor to VCC, GND and RPM/Pulse input of SG-Link-200-OEM, with the orientation shown in the below image.**



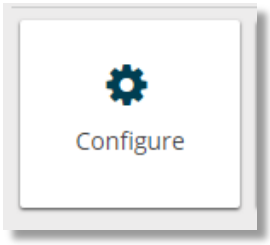


Note: The leads of the hall effect sensor can be used to lift the sensor from the board and/or carefully bent to better position the sensor. However, care will have to be taken to support the hall effect sensor if the SG-Link-200-OEM is rotating or moving (see below image for an example).

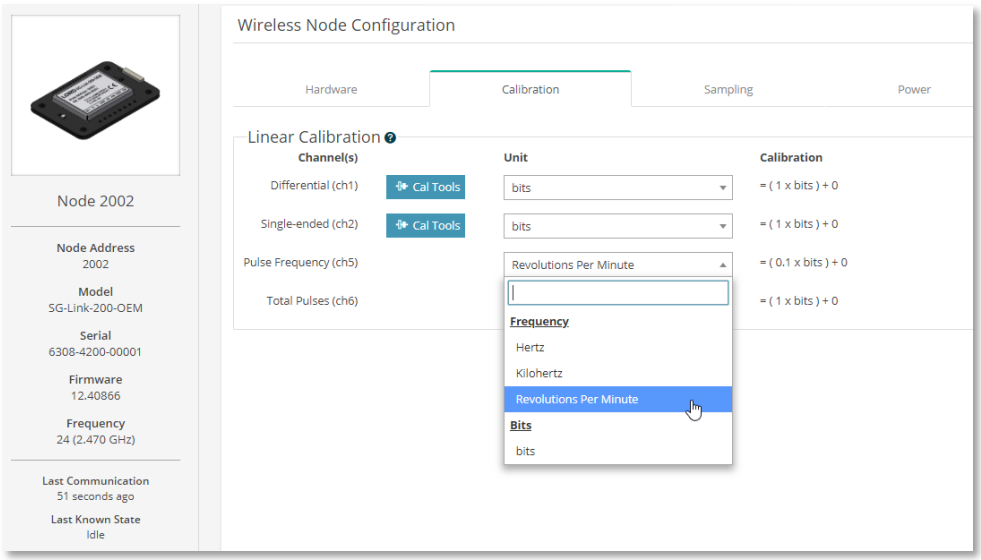


Configuring the SG-Link-200-OEM in SensorConnect

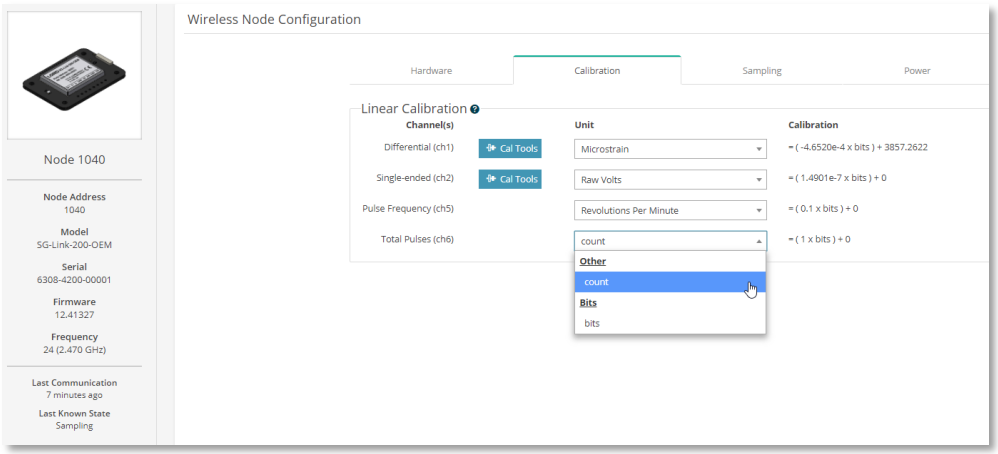
1. Open SensorConnect and power on the SG-Link-200-OEM.
2. From the node list select the node being tested.
3. Click on the **Configure** tile under the Control options.



4. Under the Calibration tab, from the Pulse Frequency (ch5) drop down window select Revolutions Per Minute (or Hertz or Kilohertz if frequency is desired)

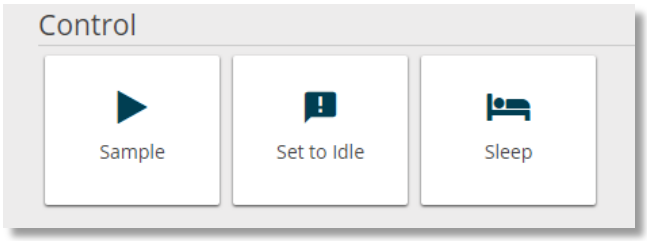


5. If number of pulses data is desired select Count from the Total Pulses (ch6) drop down window.



6. Click Apply Configuration

7. Click on the node in the device list and select the Sample Tile



8. The distance the magnet will need to be away from the hall effect sensor will vary depending on the size and strength of magnet itself. Some experimentation may need to be done to verify that the magnet is close enough to properly activate the hall effect sensor. Below is an example of data taken from a magnet rotating on a shaft. RPM (green trace) is steady at ~1430 RPM and the count (red trace) is constantly increasing as expected.