

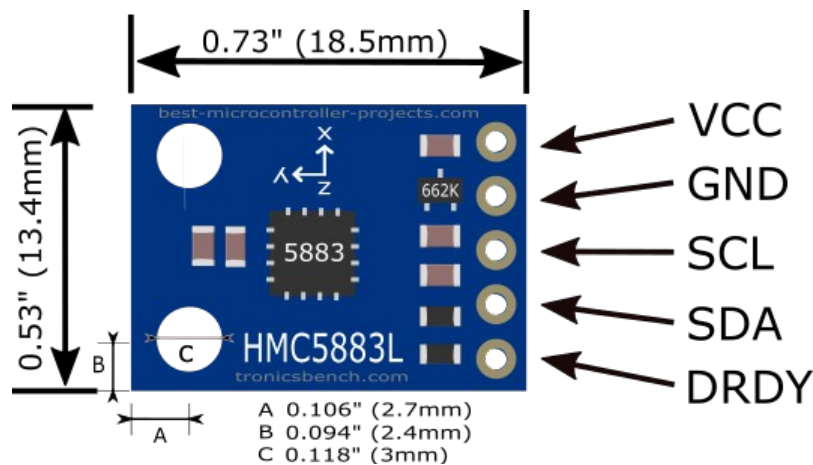
HMC5883L Digital Compass

The HMC5883L chip is a three axis magnetic sensor or digital compass, made by Honeywell. I bought a breakout board from ebay, and was a bit confused as the markings on the chip did not match this device. It's time for some investigation!

Warning: Three axis Magnetometers are sensitive to their orientation. When not

level, the output bearing will be incorrect. The solution is to compensate for the

orientation using an [accelerometer](#).



There are five major sections to this page:

- 1.HMC5883L and QST specification and capabilities.
- 2.How to use and calibrate a magnetometer.
- 3.How to use a Magnetometer as a compass, with example code.
- 4.The difference between breakout boards.
- 5.Differences between the HMC and QST chip versions.

In fact there are two chip versions: HMC (made by Honeywell) and the QMC (Made by QST Corporation).

Note: HMC and QMC versions use different I2C addresses.

Note: HMC and QMC versions use different register addresses.

Note: HMC and QMC chips output essentially the same data.