

- **+5 volt operation**
- **Three Terminal Devices**
- **DC to 20 KHz Bandwidth**
- **Low Temperature Sensitivity**
- **High Intrinsic Sensitivity**

Description

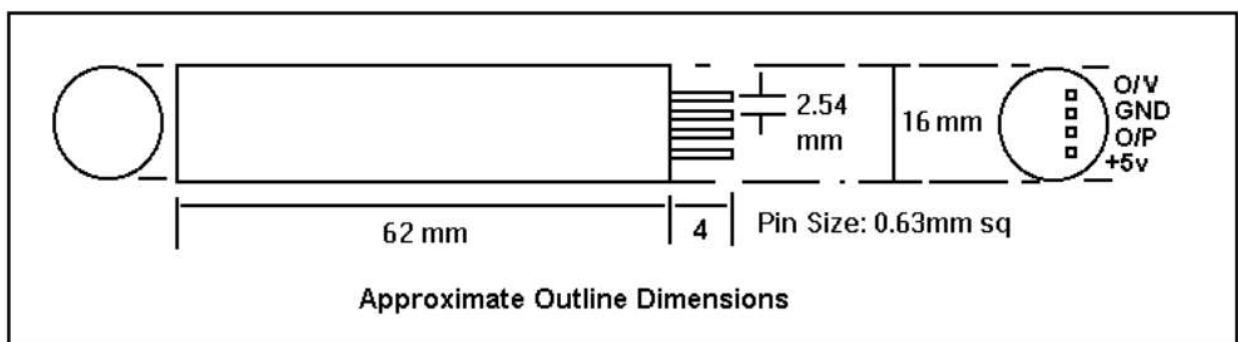
The FGM-3 series of devices are very high sensitivity magnetic field sensors operating in the ± 50 microtesla range (± 0.5 oersted). They are simple, essentially three terminal devices, operating from a single +5 volt supply, the connections being ground, +5v and output. The output is a robust 5 volt rectangular pulse whose period is directly proportional to the field strength, (giving a frequency which varies inversely with the field), making it very easy to interface to a computer or micro controller. The typical period swing for the full range of an FGM-3 is from 8.5 ms to 25 ms (~ 120 KHz to ~ 50 KHz), a clear indication of its high sensitivity.

Typical Applications

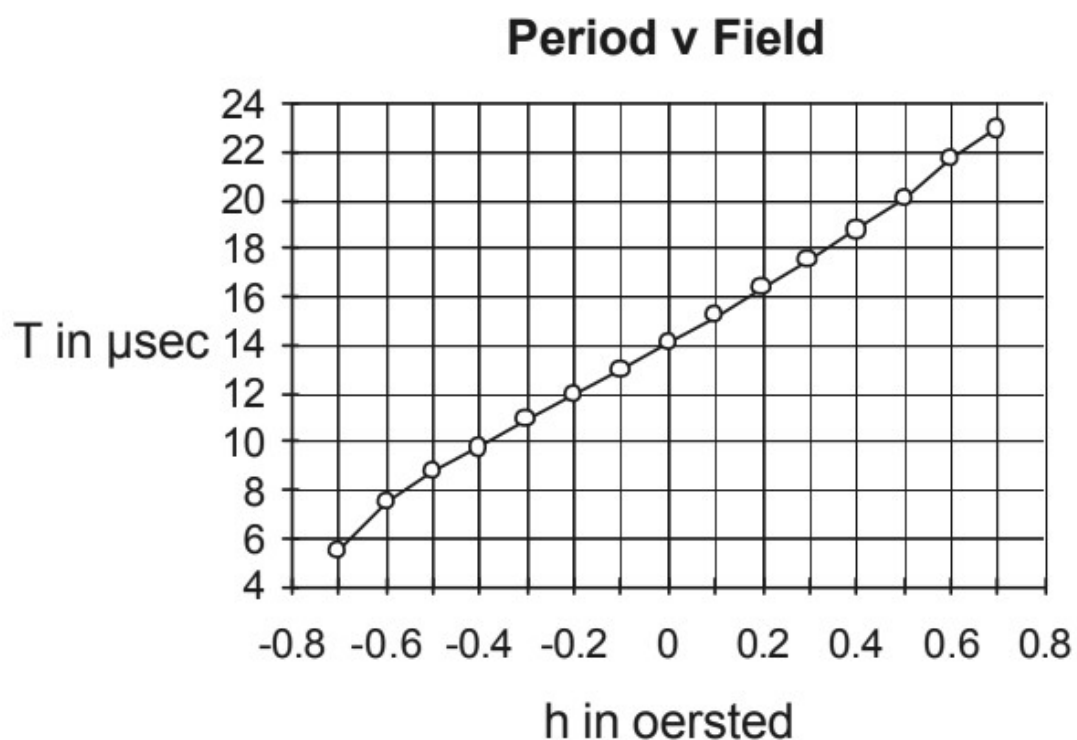
Since the range covers the earth's field magnitude, multiple sensors can easily be arranged to provide compass orientation or full three-dimensional orientation systems, using the local earth's field as a reference, (-gimballed compass or virtual reality helmet devices.) Other applications include conventional magnetometry, earth field magnetometry, ferrous metal detectors, internal vehicle re-orientation alarm sensors, external vehicle or ship passage sensors, wreckfinders, non-contact current sensing or measurement, conveyor belt sensors or counters and in conjunction with small permanent magnets, movement and proximity sensors and ferrous impurity detectors for non-magnetic alloys.

PHYSICAL CHARACTERISTICS

Sensor Outline - FGM-3



Output Period as a Function of Field Strength



Output voltage as a Function of Field Strength

