



## Miniature Fluxgate Magnetometer

3 axis Fluxgate Magnetometer to measure fields  $< \pm 5$  Gauss or  $\pm 30$  Gauss

Model WFG-130

### Features:

- Complete 3-axis system
- Low noise level:  $< 0,02$  milligauss rms @ 1 Hz
- Measures fields up to 5 Gauss or 30 Gauss
- Operates from  $\pm 15$  VDC
- Active monitor assures system operating fitness (optional)

### Descriptions:

The Model WFG-130 magnetometer is a complete 3 Axis Fluxgate Magnetometer system packaged in a rectangular package of dimensions 1.5" x 1.5" x 2.775".

With low noise and relatively small size, the instrument from the sensor is 3 analog voltages proportional to the magnetic field in three orthogonal directions. Full scale output is  $\pm 10$  volts, which represents a magnetic field of  $\pm 5$  Gauss. (call for units up  $\pm 30$  Gauss)

The system is simple to set up and operate can be used wherever relatively small magnetic fields (.02 milligauss to 5 Gauss) need to be measured. Output

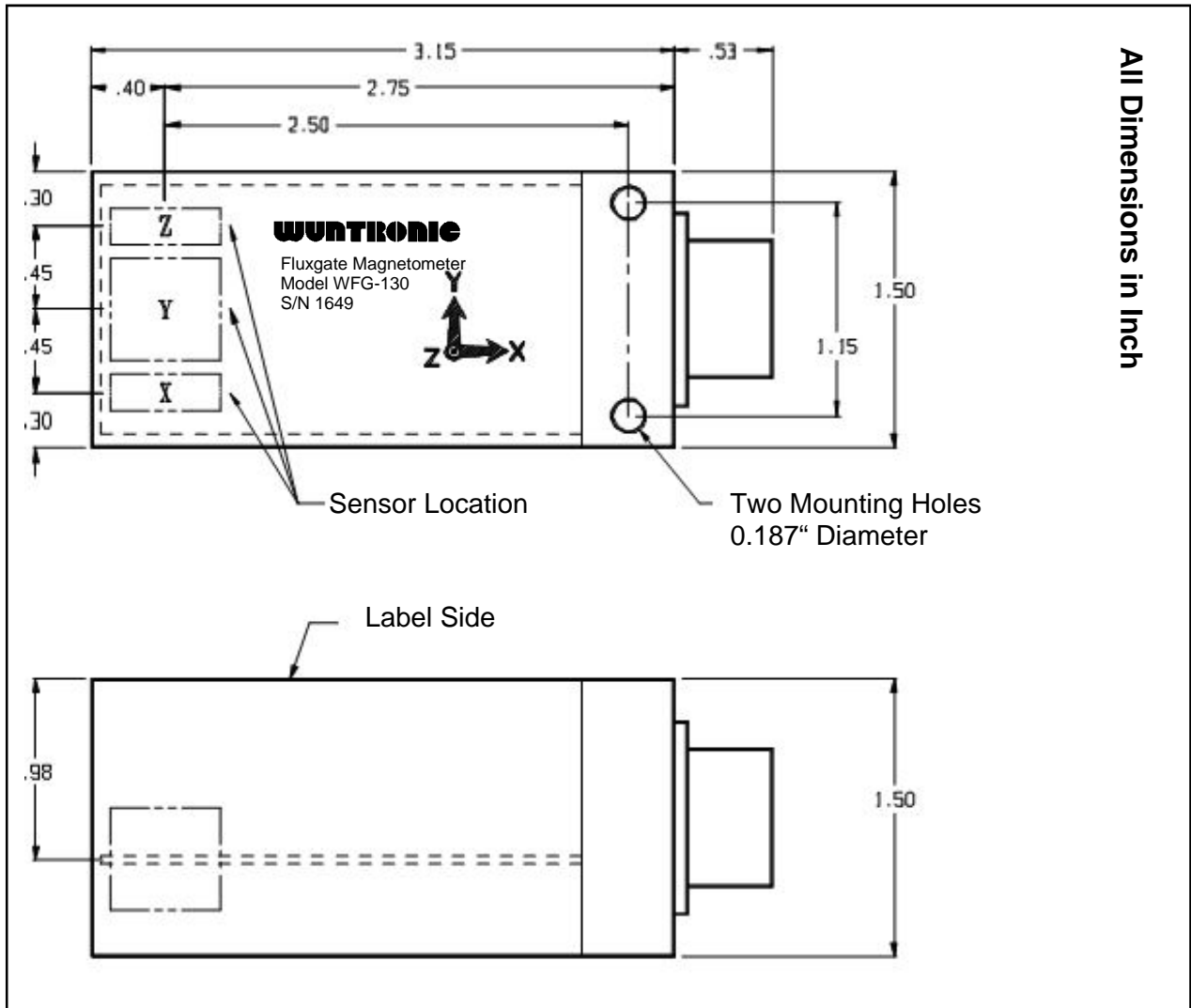
The Fluxgate Magnetometer Model WFG-130 system employs an optional active failure recognition system to detect when any of the three fluxgate sensors stops performing properly. The failure system functions by applying a low-level magnetic signal to each fluxgate sensor and then detecting the presence of the signal in each of the fluxgate output channels. A failure output logic signal is provided to alert the user should any of the fluxgate sensors stop functioning. This feature is useful for applications such as magnet automobile guidance systems where correct operation of the sensors is critical.



### Applications:

- OEM and Systemintegration
- Package inspection
- Classroom demonstrations
- Residual field measurements (shielding effectiveness)
- Solenoid/Helmholtz coil calibration
- Field Mapping
- Vehicle magnetic signature measurements
- Measure Earth's field vector components
- Magnetic environment monitoring
- Measure weak fields in rocks
- Fluxgate compass systems
- Measurement of magnetic signatures
- Magnetic fuses
- Measurement of magnetic fields generated by power lines

## Dimensions:



## Specifications:

Sensitivity .....	2V/Gauss
Dynamic range .....	±5 Gauss or ±30 Gauss
Linearity .....	±0.2%
Orthogonality and alignment with reference surface .....	±0.2°
Noise level .....	< 3x10 <sup>-6</sup> G RMS/Hz <sup>1/2</sup>
Frequency response .....	DC to 400 Hz (-3 db)
Active fitness monitor tone .....	0.05 Gauss @ 1000 Hz
Fitness monitor output .....	TTL high for OK
Power requirement .....	±15V
Power consumption .....	+55 ma @ 15V, -43 ma @ -15V
Size (excluding connector) .....	1.5" x 1.5" x 2.775"
Connector .....	10 pin Bendix

Order number	Model	Description
WFG-130-100	WFG-130	3 axis Fluxgate Magnetometer ±5 G range
WFG-130-110	WFG-130-30G	3 axis Fluxgate Magnetometer with ±30 G range
WFG-131-100	Fail tone	Self test fail tone option