

Vector/Magnitude Gaussmeter Model VGM (AlphaLab, USA)

Now Available With
USB
UNIVERSAL SERIAL BUS



Displays X,Y,Z and magnitude of magnetic field, for rapid mapping and measurement of magnetized materials. Range is 799.99 gauss.

Includes NIST traceable calibration certificate

***The probe is hard wired to the meter via a 100 cm (40 inch) flexible cable.**

Optional Add-On: Zero Gauss Chamber (to obtain near absolute zero magnetic field).

Product Description:

The Vector Gaussmeter displays the true magnitude of the field at any location as well as the X, Y, Z components of up to 800 gauss. Also separately displays peak values of X, Y, Z, and magnitude. There is a sound alarm that determines the locations where the field magnitude exceeds user-set threshold. Because magnitude is measured, the orientation of the sensor (E-W, N-S, and up-down) is not important; this is unlike a 1-axis gaussmeter. With the VGM the user can set the alarm to 15 gauss (for example) and it will sound (simultaneous with a red light) whenever the field exceeds 15 gauss for at least 5 milliseconds. Using the meter this way, it is easy to make a map of the 15 gauss line (or for whatever threshold is set) around a strong magnet. When using the alarm, of a steel part can be rapidly scanned to show if any areas exceed the set threshold. Then the “peak hold” function can be interrogated, showing the peak values of X, Y, Z (including polarity) and magnitude that occurred during the scan. Peak hold also has a 5 millisecond response time. The “reset” button resets all peak hold registers to the present values of X, Y, Z and magnitude, which are displayed in real time when the knob is set to “measure.” Offsets can be manually applied to X, Y, and Z, or a “relative zero” can be applied to all three. This subtracts out the field at the time the button was pressed. ([Full Length Description](#))

VGM Output Jack Description:

An alarm output jack is on the side of the VGM. Included is a plug terminating two wires, which is a 1/8" (3.25 mm) phone jack, similar to a small headphone jack. Output is 3.5 V when the alarm sounds (but only if the alarm is active) and 0V when the alarm is not sounding.

Features

- Displays the magnitude of magnetic field regardless of probe orientation. Also can display X, Y, or Z components.
- When set to "Peak Hold", displays the highest magnitude since the last time "Reset" was pressed. Also remembers and can display peak value of X, Y, Z (including polarity) since the last "Reset."
- Continuous sampling and magnitude calculation every 5 milliseconds; the peak of X, Y, Z and magnitude will be accurate even if they occurred at different times.
- Sound alarm and light for rapid feedback if the field exceeds threshold you set.
- Relative zero and manual offset functions independently for X, Y, Z.
- Includes battery, AC Adapter, alarm output (open/closed switch)
- CE Compliant.

Application:

- Very fast screening of parts for residual magnetism. By using the alarm and peak hold functions, partially magnetized parts can be characterized with a minimum of effort, regardless of whether the field is oriented in an unexpected direction.
- Rapid mapping of magnetic field, such as from an MRI. Use the alarm functions, for example, to find the 5 gauss contour without worrying about the probe orientation.
- Use as a laboratory X, Y, Z and magnitude magnetometer. Also measures transient field, even if a pulse occurs once for 5 milliseconds within a period of days.

SPECIFICATIONS: 3-axis DC Gaussmeter VGM	
Range/Resolution:	0-799.99 G/ 0.01 G. Includes polarity of X, Y, Z. Magnitude = is sqrt of sum of squares.
Accuracy:	1° of reading (16° to 29° C), 2% of reading (-4° to 65° C) Pointing accuracy 1% of arc.
Offsets:	Relative zero (subtracts present field from X, Y, Z); Unlimited manual offset of X, Y, Z.
Probe:	3-axis nondetachable 6.3 x 6.3 x 50 mm long. All three sensors are within 1.5 mm of probe end.
Peak Hold:	0.005 sec time constant. Peaks in X, Y, Z and magnitude are recorded and stored separately.
Alarm:	Associated with magnitude only, 5 millisecond response time; Simultaneous red light.
Alarm Levels:	100 levels can be selected, from 1.00 to 790.00 G
Meter Size:	5.8 x 3.8 x 2.0 inches (includes boot); 147 x 97 x 51 mm
Weight:	11.7 oz
Battery:	9 volt alkaline (~ 10 hour life) / "Low Battery" indicator.