

G80 Handheld Gaussmeter

- Bypass Zero Technology
- Accuracy <2%
- Cost-effective



Description:

The third-generation semiconductor gallium nitride (GaN) Hall sensor has the characteristics of good temperature stability, unaffected by light, high linearity, and low noise, and its performance is ahead of the second-generation semiconductor gallium arsenide (GaAs) sensor technology. Adopted COLIY's Bypass Zero Technology and high-stability GaN hall sensor, Gaussmeter G80 has low zero drift, no need to zero adjustment, which improves the accuracy of data and the convenience of use.

The G80 Handheld Gaussmeter can be used to measure the surface magnetic field of permanent magnet materials, DC motors, speakers, magnetic separators, permanent magnet separators, and workpiece remanence measurement. It is widely used in magnetic material manufacturers and permanent magnet motor production. Manufacturers, permanent magnet iron separator manufacturers and application units, power industry and railway industry.

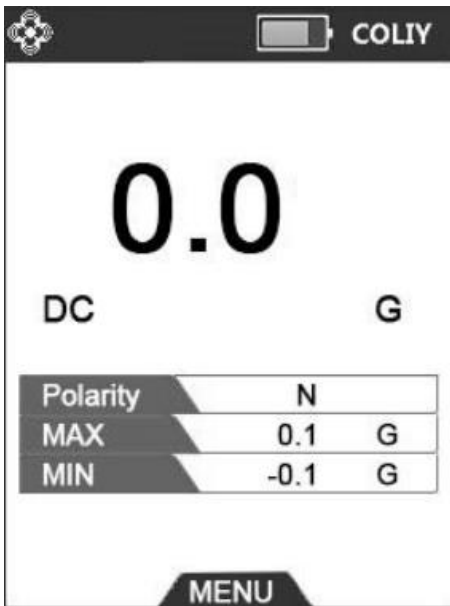
The Gaussmeter G80 uses a 3.2-inch color industrial resistive touch screen and a menu and display that conform to the smart phone habit. It is easy to operate, and users can use it without reading the manual. Gaussmeter G80 allows measurements up to 2T (20kG) with a basic accuracy of $\pm 2\%$, the resolution of 0.01mT (0.1G), and the frequency response of DC~ 100Hz. Gaussmeter G80 could be equipped with Axial Probe and Transverse Probe.

Besides, Gaussmeter G80 is powerful, with DC/AC measurement mode, magnetic field polarity (N/S) display function and maximum/minimum measurement function. Gaussmeter G80 uses Fourier analysis method to measure AC magnetic field (RMS value), which is very suitable for measuring AC magnetic field of various waveforms (sine wave, square wave, triangle wave, trapezoidal wave, sawtooth wave, etc.).

Gaussmeter G80 has passed the CE certification and EMC (Electromagnetic Compatibility) test.

Features

- Bypass Zero Technology
- GUI Operation System
- Gallium Nitride (GaN) Hall Sensor.
- 3.2 inches color touch LCD
- Max/Min/Hold Function
- S or N Polar indication
- Range: 2T (20kG)
- DC Basic Accuracy: $<\pm 2\%$
- Resolution: 0.01mT (0.1G)
- Frequency Response DC- 100Hz
- AC magnetic field measurement (RMS)
- Temperature Coefficient $\pm 300\text{ppm}/^\circ\text{C}$



Bypass Zero Technology

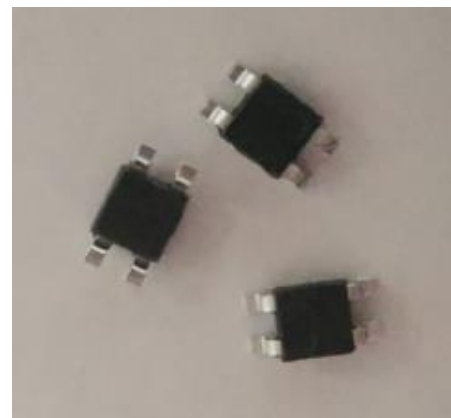
During the use of an ordinary gaussmeter, the host and probe will have zero drift due to changes in temperature and hysteresis. Therefore, the probe must be frequently placed in the zero-gauss chamber for zero calibration.

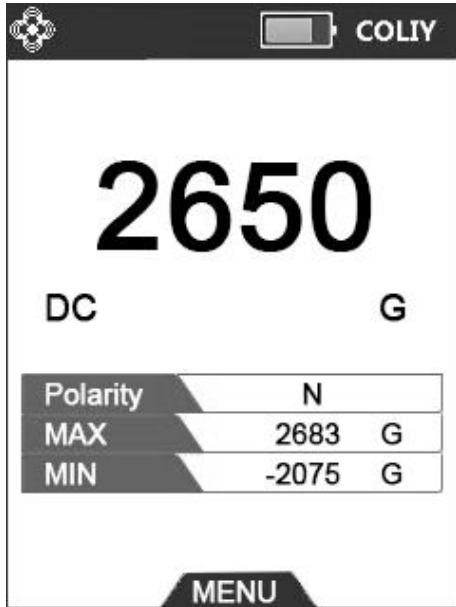
The Gaussmeter G80 adopts unique Bypass Zero Technology and high stability GaN Hall sensor. Both the host and probe have low zero drift error and extremely low noise. Temperature and hysteresis do not affect the zero drift of the gaussmeter. There is no need for zero calibration, which greatly improves the accuracy and convenience of use.

GaN Hall Sensor

GaN materials have the characteristics of strong atomic bonds, high thermal conductivity, good chemical stability and strong radiation resistance. GaN is known as the third-generation semiconductor materials, after the first generation of Ge, Si semiconductor materials and the second generation of GaAs, InP semiconductor materials.

COLIY's third-generation semiconductor gallium nitride (GaN) Hall sensor has the characteristics of good temperature stability, high linearity and low noise, and its performance is ahead of the second-generation semiconductor gallium arsenide (GaAs) sensor technology.





Display Style

Black and white LCD shows magnificent data: DC/ AC RMS measurement mode, real-time magnetic flux density, N/S magnetic polarity, Maximum and Minimum.

Metal Protector of Probe

All probes of COLIY gaussmeter are protected by non-magnetic metal protectors (protective sleeves).

The non-magnetic metal protector can be tightened with the probe grip to protect the probe from strong impacts, squeezing, etc. It can prevent the probe from falling damage from a height of 10 meters, and even resist hammer strikes. It is recommended that users tighten and fix the non-magnetic metal sleeve after completing the magnetic field measurement to protect the probe from damage to the greatest extent.



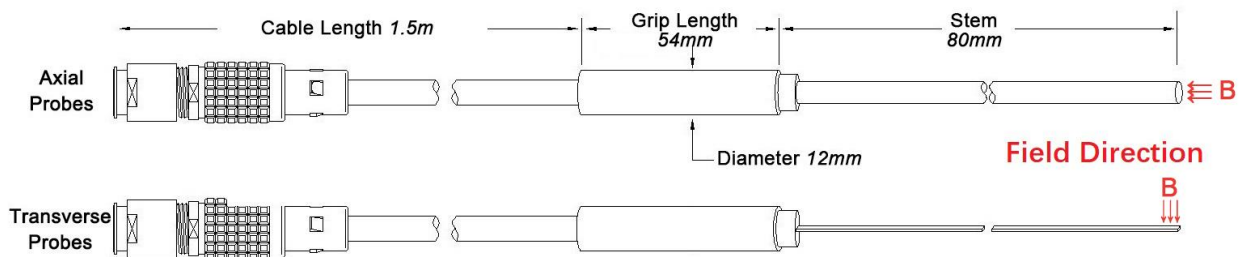
G80 Gaussmeter Specification:

| Model | G80 |
|----------------------------------|--------------|
| Measurement Specification | |
| Accuracy(DC) | <±2% |
| Range | 20kG (2T) |
| Resolution | 0.1G(0.01mT) |
| Display Digits | 4 |

| | |
|--|---|
| Frequency Response [f _T] | DC- 100Hz |
| Typical Temperature Coefficient of Probe | ±300ppm/°C |
| AC Measurement Mode | AC frequency response range 10Hz-100Hz RMS value, suitable for measuring AC magnetic field of various waveforms (sine wave, square wave, triangle wave, trapezoidal wave, sawtooth wave, etc.) |
| Zero Drift | Using Bypass Zero Technology, there is no zero drift, and temperature and hysteresis have no effect on the zero drift of the magnetic field. |
| Front Panel | |
| Screen | 3.2 inches color resistive touch LCD, 320x240 Pixel |
| Units | Gauss(G), Tesla(T) |
| Display Update Rate | 4 readings/second |
| Display Mode | DC, AC, MAX., MIN, Alarm, N/S Polarity Indication |
| Probe | |
| Hall Sensor | COLIY's third-generation semiconductor GaN Hall sensor |
| Probes | See " Probe Specifications " for details. |
| Connector | Non-magnetic ultra-light 6-core waterproof connector |
| Probe Grip and Protector | Non-magnetic aviation aluminum alloy, resistant to 10m drop |
| Probe Cable | 6 shielded twisted pair core flexible cable; Standard CAT5e |
| Probe Cable Length | Standard 1.5m; Customizable longest length of 30 m |
| USB Interface | |
| Function | only for Charging interface: Used to connect a 5VDC charger or mobile power supply |
| Analog Output | |
| Analog Output Function | N/A |
| Host Specification | |
| Operating Temperature | -20°C to +60°C |
| Warm-up time | Can be used immediately after the device is turned on 30 min to meet the best performance |
| Host Temperature Coefficient | <±50ppm/°C; Negligible impact on accuracy within the operating temperature range |
| Storage Temperature | - 20°C to +80°C |
| Ambient Magnetic Field | <1kG(0.1T) |
| Battery | Rechargeable 4400mAH Li-ion |

| | |
|------------------------|--|
| Operating Battery Life | >15 hours (Test in standard test environment, working time will be reduced in low temperature environment) |
| Power Supply | 5VDC; could be charged by a mobile power supply |
| Dimension | 238 mm W x 95 mm H x 42 mm D |
| Weight | 350g |
| Certification | CE Certification, EMC Certification |

Probes Specification



| Probe Model | Range | Frequency Response | Stem Dimension (mm) | Operating Temperature (°C) | DC Accuracy (25°C) | Stem Surface Material |
|-----------------------|-----------|--------------------|---------------------|----------------------------|--------------------|-----------------------|
| Transverse T08M150G80 | 20kG (2T) | DC-100Hz | 80*2.2*1 | -10 - +60 | ±2% | Metal |
| Axial A13M150G80 | 20kG (2T) | DC-100Hz | 130*Φ6 | -10 - +60 | ±2% | Metal |

The most popular Package

Package Product No. G8001: Gaussmeter G80 + Probe T08M150G80

Description of Probe Type Selection

| T | 08 | M | 150 | G80 |
|-----------------------------|------------------|--------------------------|--------------------|--------------------|
| PROBE TYPE | STEM LENGTH | PROBE STYLE | CABLE LENGTH | GAUSSMETER MODEL |
| A - AXIAL T - TRANSVERSE | 08 - 8 cm ... | M – METAL P – PLASTIC | 150 – 150cm ... | G80 – G80 probe |

