

DC GAUSSMETER GSMT 01592

With Flexible probe tip



- Accurate measurement up to 19,999.9 Gauss (1.99T)
- Simple to use
- Very portable and robust
- Small flexible probe on the end of a 1m length cable
- Shows Polarity (+ North or – South)
- Offset dial for zeroing/biasing +/-10 Gauss.

Price: £475.00 each

Carriage £11.00
+ VAT

The GSMT01592 DC Gauss meter is a simple to use yet very accurate measuring instrument. It reads magnetic field strength ("flux density") up to +/- 19,999.9 gauss (1.99T) and is designed to measure magnets and DC solenoids. With its high range it can measure the strength of any type of magnet in any configuration. Because of the high 5.5 digit dynamic range (100 times wider range than typical 3.5 digit meters), it can measure small changes of as little as 0.1 gauss in any field less than 20,000 gauss (20 kG). This precision allows the user to track tiny changes in magnetization.

The meter has been optimized for easy use. It begins reading 1/2 second after it is turned on and updates four times a second. Stability is excellent, with noise level of only 0.1 gauss. Reproducibility at constant temperature is better than one part in 5000, and is generally only limited by the user's ability to position the sensor on the same part of the magnet as was originally measured (field strength varies across the face of most magnets). Full response time to a rapid field change is only 1/4 second. No setup is needed, and there is only one range (display reads from 0.0 to 19,999.9 gauss, with negative sign if polarity is negative). Therefore, artifacts due to auto ranging do not occur. These features make the unit faster to use than any other digital gauss meter, while still very easy to use. The only control is the "OFFSET", which allows subtraction of ambient field up to +/- 10 gauss. (Turn this knob to the center position if not needed).

Accuracy of the Gauss meter is +/- 1% of the reading at room temperature (16°C to 29°C), and +/-2% of reading in the full temperature range of -4°C to 65°C. The meter is a "vector component" meter, as are most Hall-Effect gauss meters. That is, they detect the component of the field that points in the same direction as the sensor. If the sensor is flipped 180 degrees, the reading will reverse polarity. Also, the meters will read zero if the sensor is oriented exactly perpendicular to the field. Therefore, to measure the correct magnitude of the field, the sensor direction must be parallel to the field direction. The parallel direction can be determined easily however, because "parallel" is the sensor orientation that produces the *highest* reading on the display. The sensor is at the end of a very flexible 1m cable and can be easily held flat against a magnet face. This correctly orients the sensor parallel to the field direction of most magnets for accurate readings. The ends of the sensors can be bent to a right angle (as shown above) and then back to straight thousands of times. This right angle bend is not required for most types of measurements but it is needed to measure the field inside a solenoid. It will truncate (blank) the zeros, so only the necessary digits are displayed. This meter measures DC only, and the probe with cable is not detachable.

The tip of the Meter external probe is slightly less than 1.5 mm thick and 4.3 mm wide. It can be placed precisely on any region of a magnet or inside a narrow gap. The sensitive area is 2 mm back from the end of the probe and the measurement direction is parallel to the thinnest dimension of the probe. The actual sensor area is a square only 0.2 mm on a side. When measuring the surface of magnets, magnetic gaps, or the field inside solenoids, a small external probe on a flexible cable is essential so that you can place the sensor exactly where you want to.

A calibration certificate is provided with the instrument, which is traceable back to National standards. We recommend that the instrument is re-calibrated on a bi-annual basis. Magnet Sales and Service Limited offer this as an additional service.

Warranty of the instrument is 12 months from date of purchase.

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