



## Description

The 5100 Series Hall effect portable gaussmeters represent the most recent design from the world leader in magnetic measuring equipment. This new design incorporates the use of digital signal processing technology making it the world's first hand-held gaussmeter to have a digital signal processor (DSP) on board. F.W. Bell's exclusive Dynamic Probe Connection allows measurements from 0 to 30 kG with a basic accuracy of 1%.

Key features include Auto Zero, Min./Max./Peak Hold, Auto Range and Relative Mode. Both models allow the user to select Gauss or Tesla readings. The Model 5180 also has a selection for readings in Ampere/Meters and features a corrected analog output ( $\pm 3V$  FS) and a USB communications port.

The 5100 Series Hand-Held Gaussmeter's built-in software eliminates the need for complex calibration procedures. User prompts on the custom formatted LCD allow fast, simple push button operation. All models come equipped with a detachable transverse probe, zero gauss chamber, instruction manual, hard carrying case, and four AA batteries. Axial and other style probes are available as options.

Applications for the 5100 Series range from the most sensitive laboratory environment to the most rugged industrial setting. All instruments are CE compliant.

## Features

- The best accuracy in it's class
- Data logging capability
- 20X lower resolution
- Frequency Response 2X better than competitor
- The only handheld meter with DSP  
(Digital Signal Processing)
- Auto Zero
- Min/Max/Peak Hold
- Auto Range
- Relative Mode
- Universal Serial Bus Interface

# 5100 Series Specifications

Model	5170	5180
<b>Basic Accuracy</b>	2%	1%
<b>Frequency Bandwidth</b>	DC-20 kHz	DC-40 kHz
<b>Sampling Rate</b>	5/sec	5/sec
<b>Ranges</b>		
Low Range	200 G	300 G
Mid Range	2 kG	3 kG
High Range	20 kG	30 kG
<b>Resolution</b>		
Low Range	0.1 G (10 $\mu$ T)	0.1 G (10 $\mu$ T)
Mid Range	1.0 G (100 $\mu$ T)	1.0 G (100 $\mu$ T)
High Range	10 G (1 mT)	10 G (1 mT)
<b>Display</b>	LCD	LCD
<b>Digits</b>	3 1/2	3 1/2
<b>Readings</b>	Gauss Tesla    Amps / Meters	Gauss Tesla    Amps / Meters
<b>Analog Output</b>	-	$\pm$ 3V FS
<b>Communication Port</b>	-	USB

## General Information

### All Models

<b>Temperature</b>	
Operating	0°C to 50°C
Storage	-25°C to 70°C
<b>Power</b>	4 AA batteries
<b>Size</b>	6.9 in x 3.9 in x 1.44 in.

## Probes and Accessories

Model Number	Description
--------------	-------------

### Model 5180 Probes

HTD18-0604	4" Transverse Probe
STD18-0404	4" Transverse Probe (incl. w/5180)
STD18-0402	2" Transverse Probe
SAD18-1904	4" Axial Probe
SAD18-1902	2" Axial Probe

### Model 5170 Probes

HTH17-0604	4" Transverse Probe
STH17-0404	4" Transverse Probe (incl. w/5170)
STH17-0402	2" Transverse Probe
SAH17-1904	4" Axial Probe
SAH17-1902	2" Axial Probe

### Models 5170/5180 Gaussmeter Probes

STB1X-0201	Ultra Thin Transverse Probe (0.020")
MOS51-3204	Low Field Probe (0.020")

### Shipping Weight

Domestic 12 lbs 5.5 kgs  
 International 17 lbs 8.0 kgs  
 Net 11 lbs 5.0 kgs  
 International 16 lbs 7.5 kgs

**Note:** Due to continuous process improvement, specifications subject to change without notice.



**SYPRIS**  
 TEST & MEASUREMENT

6120 Hanging Moss Road • Orlando, Florida 32807  
 Phone (407) 678-9748 • Fax (407) 677-5765 • [www.fwbell.com](http://www.fwbell.com)



Rev. date 09/2004

Hall Effect Gaussmeters