



**Note:** Actual product may vary from image

## Description

Lightweight and completely self contained, the easy to use 4100 Series ELF Meters are ideal for commercial or home use. The 4100 Series accurately measures Extremely Low Frequency Magnetic Fields generated by electrical equipment. Applications include detecting magnetic field emissions from a wide variety of sources, including video display terminals, AC power lines, office equipment, household appliances, and all types of electronic equipment.

This new meter represents the most recent design from the world leader in magnetic measuring equipment. Key features include Min./Max./Peak Hold, Auto Range and Relative Mode. Both models allow the user to select Gauss or Tesla Readings.

The 4100 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 with instruction manual, soft carrying case, and four AAA batteries.

## Features

- Low Cost, Small, Lightweight, and Portable
- High Accuracy
- Gauss or Tesla Display Units
- 0.1 mG / 0.01  $\mu$ T resolution
- Low Battery Detection
- Waveform and RMS Analog Output (4190)
- Selectable X, Y, or Z Axis plus Vector Summation
- Min/Max Hold
- True RMS Reading
- Relative Mode
- Universal Serial Bus Interface

## Applications

- AC Power Lines
- Office Equipment
- Plant Surveys
- Power Line Surveys
- VDT - Video Display Terminals
- Household Appliances
- Electrical and Electronic Equipment
- Home and Building Inspection

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



**SYPRIS**  
TEST & MEASUREMENT

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Gaussmeters

# 4100 Series Specifications

	Model 4180	Model 4190
Basic Accuracy (> .4 mG, 40-80Hz)	± (2% + 1 digit) typical	± (1% + 1 digit) typical
Frequency Response ±5%	30 to 2kHz	30 to 2kHz
Update Rate (display)	1000 msec single axis, 1200 msec 3- axis mode	
Sampling Rate (Analog Output)	None	8K samples/sec
Measuring Range	0.1 to 599 mG 0.01 to 59.9 µT	0.1 to 1999 mG 0.01 to 199.9 µT
Minimum Resolution	0.1 mG /.01µT	0.1 mG /.01µT
Display	LCD	LCD
Digits	3 1/2	3 1/2
Readings	Gauss, Tesla	Gauss, Tesla
Analog Output	None	2V FS DC or 1V FS AC RMS
Communication Port	USB	USB
Data Logging	No	Yes – Software Data Logging

## General Information

Battery Life (Typical)	30 hours
Battery Type	4 AAA Alkaline
Operating Temperature	-10°C to 50°C
External Power Supply	Yes
Weight (with batteries installed)	177 g
Size	4.7" x 3.0" x 1.75" (120 x 76 x 37 mm)

## Standard Features - Model 4190 (Formerly options on 4090)

**A – Analog Output-** This 4190 feature provides a buffered output for viewing analog waveform on an oscilloscope, spectrum analyzer, or similar test equipment. This is useful for determining harmonic content and other waveform properties. Output scaling is 1V FS (200 mG or 2000 mG).

**D – DC Output –** This 4190 feature provides a voltage level proportional to the displayed level of the magnetic field. It is useful for driving chart recorders, data loggers, and other data acquisition equipment. 10 mV/mG; 2V FS (200 mG or 2000 mG). (User activated through sequence of key strokes).

## Standard Features - Models 4180 / 4190 (Formerly options on 4080 / 4090)

**X – Switchable Single Axis Mode –** This 4190/4180 feature allows users to display the vector components of the magnetic field. This option should be specified in applications that require the direction of the magnetic field be known as well as the level. (User activated through sequence of key strokes).

**F20 – Extended Bandwidth –** This feature extends the -3dB frequency response of the instrument from 20 to 2,000 Hz and is included with all 4180 and 4190 Elf meters. This is useful if the measurements are required for sources with high harmonic content. Standard calibration frequency of 55Hz covers both 50Hz and 60Hz with a .2% variation.

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