

High-Precision Gauss Meter/Tesla Meter CYGM999B

The CYGM999B Gauss Meter/Tesla Meter is a high-precision, high-resolution, and highly reliable intelligent benchtop magnetic field measuring instrument. It has a maximum magnetic field measurement range of ± 10 T, a basic accuracy of $\pm 0.2\%$ of the reading, and a measuring frequency range covering DC to 50 kHz AC. The CYGM999B is equipped with a 7-inch VGA color touchscreen that displays measurement data and graphical curves in real time. It features a 5½-digit readout with a resolution of $0.01 \mu\text{T}$ (when connected to a low-field sensor), and display units can be selected from mT, Gs, A/m, and Oe. The CYGM999B features automatic zero calibration and automatic range switching, making the measurement process simpler and more intelligent, thereby significantly improving measurement efficiency. The display interface shows multiple parameters, with options to view maximum and minimum values. The rear of the instrument includes a BNC analog output port as well as digital interfaces such as CAN, RS-232C, RS-485, and USB to meet measurement needs in various scenarios. The CYGM999B is a high-end digital measuring instrument that integrates multiple functions, including testing, data storage, communication, graphing, and remote control. The product is widely used in metrology institutes, universities, aerospace and defense research institutes, and magnetics-related enterprises.

Product Features



Optimized circuit design for complex production line environments, significantly improving the equipment's resistance to interference



The intuitive and streamlined color touchscreen design greatly enhances the user experience.



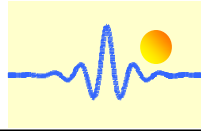
CAN and RS-485 industrial buses have been added as communication interfaces, and Modbus-RTU has been added as a communication protocol. Customers can select industrial control, analog, or digital communication interfaces as needed.



The digital signal transmission speed has been increased to 1 kHz, and it now supports uploading data in trigger-based acquisition mode.



Testing capabilities have been comprehensively expanded, with the addition of practical features such as Chinese-English interface switching, FFT spectrum analysis, peak hold, four-mode threshold alarms (open-loop and closed-loop), waveform display, and automatic data saving, significantly enhancing overall usability and adaptability to various scenarios.



Main Features

Main Screen



Menu Interface

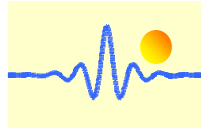


Plotting Curves



Main Features

- 7-inch capacitive touchscreen with user-friendly UI design
- Unit display switching: Gs, mT, A/M, Oe
- 5½-digit reading resolution
- Automatic zero calibration, automatic/manual range selection
- Relative value measurement mode, maximum/minimum value measurement mode
- Chinese and English interface display
- Trigger and high-speed data acquisition modes
- Capable of measuring high-frequency magnetic fields
- Automatic detection and recognition of probes of various specifications
- Threshold setting and alarms
- Supports Ethernet interface and TCP/IP communication
- Industrial control interface
- Local data storage and recall
- Supports Modbus RTU protocol via RS485 interface
- Analog signal BNC output
- Universal command set (supports multiple programming languages)
- Time-domain curve plotting
- FFT spectrum analysis
- Peak capture mode



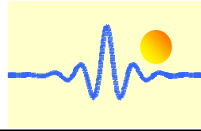
Technical Data:

Measuring range:	0-30mT, 0~300mT, 0-3T and 0-10T
Basic Accuracy:	DC— $\pm 0.2\%$ of reading $\pm 0.005\%$ of range (0–2.5 T) DC— $\pm 0.5\%$ of reading $\pm 0.005\%$ of range (2.5–5 T) DC— $\pm 1.0\%$ of reading $\pm 0.005\%$ of range (5–10 T) AC— $\pm 1.0\%$ of reading $\pm 0.5\%$ of range (0–30 kHz)
Resolution:	DC x1: 0~ 30.00mT, 0.0001mT DC x10: 0~ 300.0mT, 0.001mT DC x100: 0 ~ 3T, 0.01mT DC: 0-10T, 0.1mT AC: 0.01mT
Measuring magnetic field:	DC/ DC/AC (static and dynamic magnetic field)
Frequency range:	DC, 10Hz ~ 50 kHz
Probe Temperature Coefficient:	$\pm (0.02\% \pm 1 \text{ count}) / ^\circ\text{C}$
Probe Temperature Coefficient:	$\pm (0.007\% \pm 1 \text{ count}) / ^\circ\text{C}$
After compensation	
Unit Conversions:	1T=1000mT, 1Gs=10e, 1mT=10Gs, 1Gs=79.8A/m
Analog Interface:	BNC- $\pm 3\text{V}$ (1mT/mV)
Communication Interfaces:	RS-232, Type-C, RS-485, Ethernet, CAN bus interface
Compatible Power Supply:	AC 110~220V 50-60Hz
Ambient Temperature:	+5°C ~ +50°C
Storage Temperature:	-20°C ~ +70°C
Relative Humidity:	20% ~ 80%
Product Dimensions:	276 x 242.4 x 128.4(mm)
Unit Weight:	2.3Kg

Rear Panel



- | | |
|---|--|
| 1. Power connector and power switch | 2. CAN bus interface, RS-485 interface |
| 3. Industrial control interface | 4. BNC analog output |
| 5. Ethernet port | 6. USB Type-C port |
| 7. RS-232C serial communication interface | 8. Probe connector |
| 9. Antenna connector (not included as standard) | |

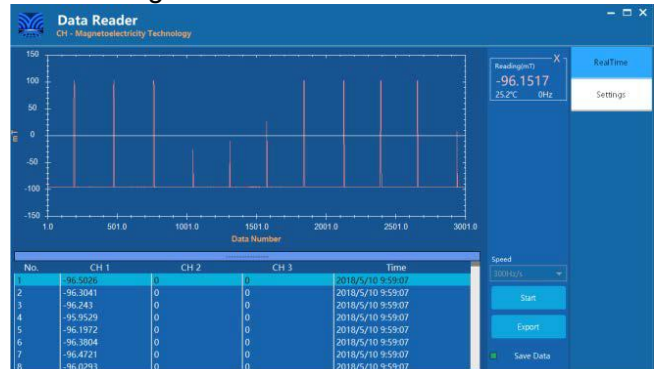


Software Interface

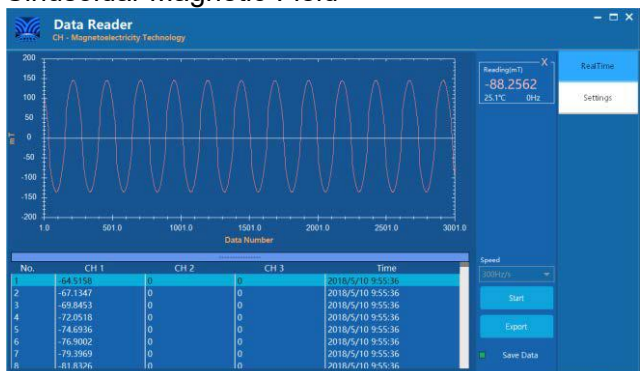
Square-wave magnetic field



Pulsed Magnetic Field



Sinusoidal Magnetic Field

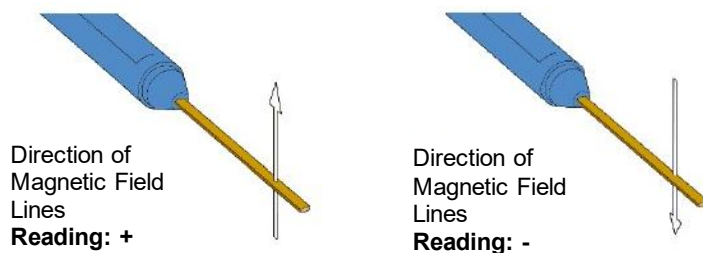


DC magnetic field

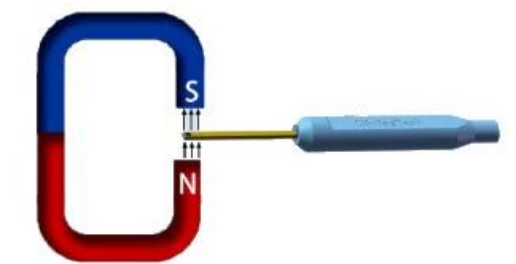


Schematic Diagram of a Magnetic Field

Transverse Probe

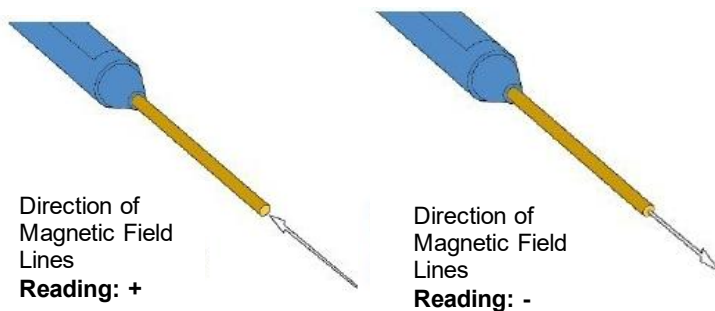


Magnetic Field Under Test



North Pole: +(display), South Pole: -(display)

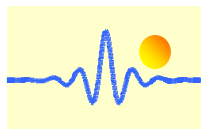
Axial Probe



Magnetic Field Under Test

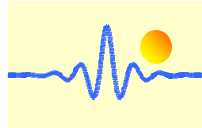


North Pole: +(display), South Pole: -(display)



Parts List

Item	Name	Parts Picture	Type	Description	Remark
1	High-Precision Hall Probe		See probe tables	magnetic field measurements; customizable lengths (Transverse, axial)	Includes 1 standard probe
2	Data Reading Software		CH-1	Software installed on a computer to communicate with the Gauss meter; it can be used for functions such as saving and exporting test data.	Standard Part
3	Communication cable			RS232 Communication cable	Standard part
4	Zero-Gauss Probe		YA-111	Provide a small zero-magnetic environment for the zero-reset after power on	Must be purchased separately



Probe Options

Fine-Pitch Series 1D
Probe



Carbon Fiber Series 1D
Probe



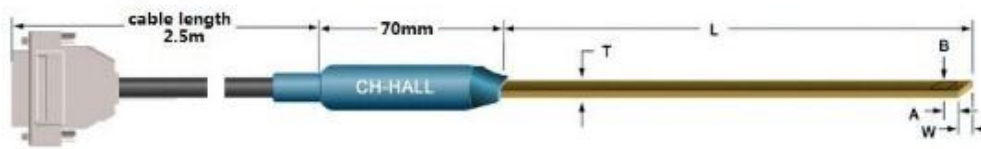
Standard 1D Transverse
Probe



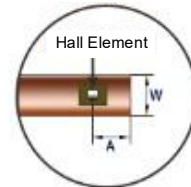
Standard 1D Axial
Probe



Standard 1D Transverse Probe



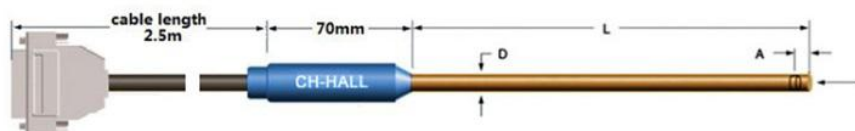
Top View of the
Probe



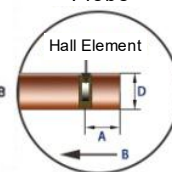
Probe Type	L(cm)	T(mm), max	W(mm)	A(mm)	Active Zone Diameter (mm)	Frequency range	Packaging Materials
MCHD800F	6/8/10	1.00	2.6	1±0.1	0.15	DC-1kHz	Gold-Plated Copper
MCHD801F	6/8/10	0.80	2.2	1±0.1	0.15	DC-1kHz	Gold-Plated Copper
MMHD802F	6/8/10	0.50	1.2	1±0.1	0.15	DC-1kHz	Brass
MMHD803F	6/8/10	0.35	1.2/0.8	1±0.1	0.15	DC-1kHz	Synthetic grease

Probe Type	Measuring range	Accuracy (Linear range)	Temperature range	Zero-field temperature coefficient	temperature coefficient	Remark
MCHD800F	30T	±0.2% (0-3T)	-10°C ~ +75°C	±0.008mT/°C	±0.015%/°C	Optional
MCHD801F	30T	±0.2% (0-3T)	-10°C ~ +75°C	±0.008mT/°C	±0.015%/°C	Standard
MMHD802F	30T	±0.2% (0-3T)	-10°C ~ +75°C	±0.008mT/°C	±0.015%/°C	Optional
MMHD803F	30T	±0.2% (0-3T)	-10°C ~ +75°C	±0.008mT/°C	±0.015%/°C	Optional

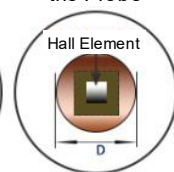
Standard Axial Probe



Top View of the
Probe

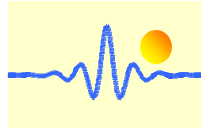


Side View of the
Probe



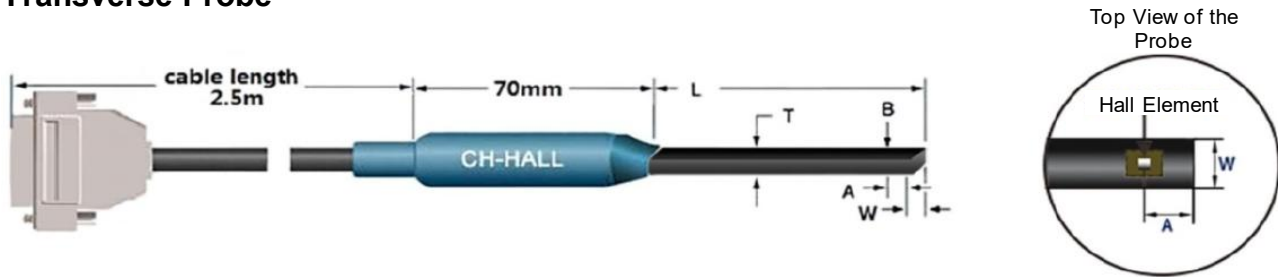
Probe Type	L(cm)	D(mm), max	A(mm)	Active Zone Diameter	Frequency range	Packaging Material
1AHD800F	10/25/50	5.00	1±0.1	0.15 mm	DC-1kHz	Brass
1AHD801F	10/25/50	3.00	1±0.1	0.15 mm	DC-1kHz	Brass
1AHD802F	10/25/50	2.00	1±0.1	0.15 mm	DC-1kHz	Brass
1AHD804F	10/25/50	1.20	0.5±0.1	0.15 mm	DC-1kHz	Brass

Probe Type	Measuring range	Accuracy (Linear range)	Temperature range	Zero-field temperature coefficient	temperature coefficient	Remark
1AHD800F	30T	±0.2% (0-3T)	-10°C ~ +100°C	±0.008mT/°C	±0.015%/°C	Optional
1AHD801F	30T	±0.2% (0-3T)	-10°C ~ +100°C	±0.008mT/°C	±0.015%/°C	Optional
1AHD802F	30T	±0.2% (0-3T)	-10°C ~ +100°C	±0.008mT/°C	±0.015%/°C	Optional
1AHD804F	30T	±0.2% (0-3T)	-10°C ~ +100°C	±0.008mT/°C	±0.015%/°C	Optional



High-Precision, Low-Magnetic-Field Probes

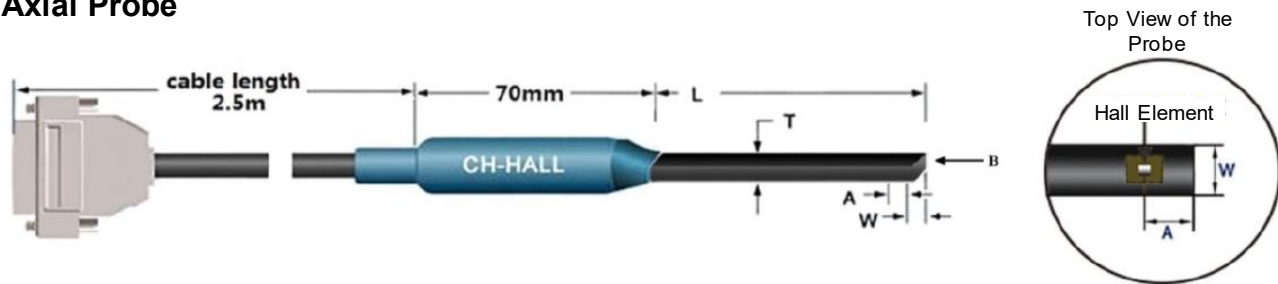
Transverse Probe



Probe Type	L(cm)	T(mm), max	W(mm)	A(mm)	Resolution	Measuring range	Packaging Material
LHD801F	7	2.8	7.2	2±0.1	0.01μT	600μT	Plastic Packaging

Probe Type	Accuracy (Linear range)		Temperature range	Zero-field temperature coefficient	temperature coefficient	Remark
LHD801F	±0.2%(0-100μT)	±0.2%(0-600μT)	-10°C ~ +75°C	±0.00008mT/°C	±0.02%/°C	Optional

Axial Probe



Probe Type	L(cm)	T(mm), max	W(mm)	A(mm)	Resolution	Measuring range	Packaging Material
AHD801F	7	2.8	7.2	2±0.1	0.01μT	600μT	Plastic Packaging

Probe Type	Accuracy (Linear range)		Temperature range	Zero-field temperature coefficient	temperature coefficient	Remark
AHD801F	±0.2%(0-100μT)	±0.2%(0-600μT)	-10°C ~ +75°C	±0.00008mT/°C	±0.02%/°C	Optional