

# MF-10D Microprocessor-Controlled Integrating Fluxmeter



The MF-10D Integrating Fluxmeter is a precision electronic instrument designed to measure the magnetic flux coupling within a coil or loop of wire. Average flux density thru the area of a coil, or the total flux within a coil can be measured and displayed. The large keypad makes it easy to select functions and setup parameters. The instrument can store up to 10 sets of coil parameters to simplify instrument set up.

The MF-10D Fluxmeter uses the latest in integrator amplifier designs to accurately integrate volt-second signals from flux measurement coils. Walkers' exclusive **LocLogic Auto Null** feature automatically removes uncompensated thermocouple voltages to minimize integrator drift without compromising measurement sensitivity. Measurement range and scale sensitivity are easily selected via easy to read display menus.

The broad range of features and fast response makes this fluxmeter suitable for DC and AC Hysteresis loop tracing. In the DC mode the MF-10D Fluxmeter provides accurate measurement of static and slowly changing fields. AC measurements are represented in true RMS from 5 Hz to 100 kHz.

The bright, easy to read, vacuum florescent display has four lines of 20 alphanumeric characters, and is readable from any viewing angle. User control and selection of the displayed data, measurement type and system status makes this instrument easy to use and set up. Corrected and uncorrected analog outputs, plus **USB, IEEE-488.2, and RS-232** interfaces, allow flexibility in interfacing to other equipment.

Walker LDJ Scientific continues to provide the latest in magnetic measurement products and leads the industry in complete measurement solutions. For more information on The MF-10D Integrating Fluxmeter or a catalog of all of our products call

800-962-4638 or go to the web: [www.walkerldjscientific.com](http://www.walkerldjscientific.com)

*Functionally and Technically the Best Fluxmeter in its Class*

## Features

- 16 Key Sealed Membrane Keypad
- Superior Stability
- LocLogic Auto Null
- Microprocessor Controlled
- Display Resolution to 5 $\frac{3}{4}$  digits
- Storage of 10 sets of Measurement Coil Parameters
- USB, RS-232 and IEEE-488 Interfaces
- Can be remotely operated by PC
- Corrected and Uncorrected Analog Outputs
- Peak Hold
- Hi, Lo, Inside/Outside Threshold Alarms
- Bright 4-Line Vacuum Fluorescent Display

## Applications

- AC and DC Magnetic Field Measurements
- Magnetic Circuit Analysis - Relays, Electromagnets, Motors, Generators, Loudspeakers, Linear Actuators
- Measure Residual Fields
- Measure Stray Magnetic Fields
- Measure Absolute and Differential Magnetic Fields
- Plot Field Uniformity or Field Gradients
- AC Flux Measurements of Closed Cores
- DC Flux Measurement for B-H Characterization of soft and hard materials



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# MF-10D Microprocessor-Controlled Integrating Fluxmeter

## General

Inputs	1, Two lead, Binding Post
Maximum Input Voltage	100 V
Keypad	16 Key, Tactile Touch, Sealed Membrane Keypad
Display	4 Line x 20 Character Vacuum Fluorescent
Display Update Rate	3 Hz
Display Units	Gauss, Tesla, kiloMaxwells, kiloMaxwells/Turns, uWebers, uWeber/Turns
Display Parameters	Measurement Mode (AC, DC), Display Type (NORM, PEAK, RMS), Alarm Status, Communication Mode

## Measurements

Ranges	3, 30, 300 kGauss 0.3, 3, 30 Tesla 3,30, 300 kMaxwells 30, 300, 3000 uWebers
Measurement Resolution	0.1 Gauss 0.00001 Tesla 0.1 Maxwells .001 uWebers
Display Resolution	4¾ Standard (Up to 5¾ digits for DC Normal measurements only)
DC Accuracy	±0.1% of range DC, ±1% of range AC RMS, ±2% of range Peak (up to 1kHz) (does not include error due to integrator drift)
Integrator Drift	±1 Maxwell Turn / minute (After warm-up, Drift Null, and thermal stabilization in stable environment)
Frequency Response	DC-100 kHz (DC mode), 5 Hz to 100 kHz (AC RMS), DC - 1kHz (Peak response)

## Interfaces

IEEE-488.2  
USB 2.0  
RS-232C  
Remote Integrator Reset  
Threshold Limit Relays

## Analog Outputs

Connectors Type BNC Minimum load 1000 Ω

### Uncorrected Analog

Scale ±3 V = ±Full Scale of selected range  
Accuracy 0.25% of Scaled Input range

### Corrected Analog

Range 0 - ±3 V  
Accuracy 0.5% of Range

## Physical

Power Requirements 100 - 120 VAC 50/60 Hz or 220-240 VAC 50/60Hz

Size 12.3" L x 10.1" W x 4.0" H Weight: Net 9.5 lbs. (4.31 kg) Shipping 15 Lbs. 6.8 kg  
312.4 mm L x 256.5 mm W x 101.6 mm H

## Operating Limits

The MF-10D Fluxmeter will remain within its linear operating range for input pulses having rise or fall times greater than 10 microseconds and crest currents less than 5 milliamps. To avoid damage to the input resistors, the input voltage should not exceed a crest value of 100 volts and the input current should not exceed 10 milliamps RMS.



Specifications Subject To  
Change Without Notice

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