



## DESCRIPTION

The submersible, battery-powered METER-MASTER MODEL 50 Flow Sensor uses a magnetic sensor to digitize a meter's magnetic drive signal. The square wave output is available for input into data logging, SCADA, and other equipment. It is compatible with large and small meters worldwide and small enough to fit inside any meter box. The Model 50 is internally powered by four AA batteries (total of 6 volts) and is suitable for permanent or portable applications.

Meter-Master set-up in the field is simple, requiring only a velcro strap to secure the sensor in position. Typically, the sensor is placed on the side of the water meter's register with the sensor cable going straight up or down. No electrical or mechanical connection to the meter is required.

The square wave output has two built-in (and one optional) wire lead configurations for maximum logger compatibility and battery life. A membrane switch keypad enables the user to turn the Model 50 power on and off, to check the sensor's digital output signal (red LED), and to check the battery charge status (green LED).

## FEATURES

- **Quick/Easy Setup**
- **Digital Output**
- **Low Power**
- **Internal Batteries**
- **High Resolution**
- **Submersible**
- **Rugged**
- **Portable**
- **Wall Mountable**
- **Signal/Power Indicators**
- **Universal Compatibility**

## APPLICATIONS

- **Data Logging**
- **SCADA**
- **Telemetry**
- **Resource Management**
- **Demand Monitoring**
- **Flow Profiling**
- **Hydraulic Modeling**
- **Cost of Service Studies**
- **Water Audits**

*Wiring Instructions & Specifications on page 2 ...*

# MODEL 50 SPECIFICATIONS

The Model 50 has 2 built-in output configuration options based on the wire lead combinations shown in the table below. In all cases, the green wire is ground (common, negative). When two signal wires are indicated, both wires are to be connected to the same signal input of the data logger or other external device.

If you are unclear which option to choose, the first option will work as long as the logger circuit accepts a 5 volt signal. However, the first option consumes more battery power. Most loggers are equipped with a pull-up capability, which will extend the Model 50's battery life, but may shorten a logger's battery life if it is not AC powered. If a logger has a 1 thru 60 volt pull-up capability and is externally AC powered, you should use this option in order to maximize the Model 50's battery life. A 5 volt logic (CMOS to CMOS) no pull-up option can also be factory installed if desired.

After turning the Model 50 ON, wait 3 minutes for the signal to begin.

Output Options	Signal Wire(s)	Ground Wire
Internal 5 volt pull-up. Minimum MM50 battery life.	Red wire and White wire	Green
External 1 to 60 volt pull-up. Moderate MM50 battery life.	Red wire	Green

- **Size:** 7.0" x 4.3" x 1.5" (178mm x 108mm x 38mm).
- **Weight (including batteries):** 1.75 lbs. (.8 kg).
- **Case:** Submersible, ABS/polycarbonate blend.
- **Integral Handle:** May be used to chain unit for security and/or suspend unit above the ground.
- **Integral Sensor And Signal/Power Cables.**
- **Square Wave Output:** Square wave with approximately 50% duty cycle. One digital pulse output for each magnetic pulse input. (Each North-South pole combination generates one pulse.)
- **2 Built-In Output Signal Configurations:** (a) internal 5 volt pull-up and (b) external 1 thru 60 volt pull-up. Configuration is selected according to wire lead combinations.
- **Internal Power:** 4 user-replaceable, 1.5 volt, "AA" alkaline batteries (requires 6 volts).
- **Data Logger Connection:** Flying wire with tinned leads. (Customer specified connectors may be factory installed.)
- **Strap-On Magnetic Sensor:** Fastens to outside of water meter with velcro straps provided.
- **Battery Operating Life (alkaline):** 6+ months, depending on output configuration.
- **"ON" and "OFF" Buttons.**
- **"SENSOR" Button:** Press and release. LED flashes with each digital pulse output and continues for approximately 64 pulses.
- **"BATTERY" Button:** Press and hold. LED will flash while button is pressed down. Flash speed indicates battery charge status; the faster the flash, the greater the charge. Replace batteries when the flash rate slows to 1 flash per second.
- **Two Year Warranty.**



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