WS2100 Flow Meter Kit

PRODUCT DESCRIPTION

The WS2100 Flow Meter Kit provides everything necessary to measure the water level and water flow on a standard well all in an easily carried industrial case. It combines the static sensing capability of the Well Sounder 2010 PRO, the flow measurement technology of the WS 131 Flow Meter and all the accessories needed to complete the job.

The system is based on the Eno Scientific Well Sounder 2010 PRO, a powerful handheld meter and data logger all in one. The 2010 PRO is battery operated and accepts inputs from a sonic depth probe for measuring the static water level, as well as a flow meter to measure the water flow with a simple plug-in setup. The 2010 PRO displays real time data as well as record time stamped depth and flow measurements at user selected intervals from 1 second to 1 hour. The data is then easily transfered to a computer using a USB connection.

The kit also includes the WS 131 Flow Sensor and housings for mounting in 1", 1 1/2", and 2" PVC pipes. The flow sensor is modular and mounts in the housing with an o-ring seal and a hand tightened ring nut. The Housings can mount directly in line or set up with removeable fittings. Plugs are provided so that the housing may be left in place for future testing while the sensor is removed.

The WS 131 Flow Sensor is a paddle wheel type sensor which produces electrical pulses for the 2010 PRO for each partial revolution of the paddle wheel at rates ranging from 175 pulses per gallon for the 1" flow housing to 48 pulses per gallon for the 2" housing.

Additional accessories are available including replacement housings and plugs as well as extension cables to allow the probe or flow meter to be located up to 50 feet away from the 2010 PRO.

The WS2100 Flow Meter Kit is also available without the Well Sounder 2010 PRO, if you already own the 2010 PRO.

Key Features:

- Automate well drawn-down testing
- Measure both depth and water flow
- Automatically log data as fast as 1 sec
- Battery operated
- Simple installation
- USB connectivity

eno scientific®

SPECIFICATIONS

Well Sounder 2010 PRO

Measurement:
Units- English (decimal ft or ft & in), Metric
Resolution- .05 ft (1 cm)
Accuracy- .1 ft (3 cm)
Range- 9 to 4000 ft (3 to 1200 M)
Update time- ~1 sec @ 500 ft (150M),
~ 4 sec @ 200 ft (600M)
Time to first fix- ~4 sec @ 500 ft (150M)

Logging:
Memory- nonvolatile flash memory for 13,000 data points in addition to calibration and user data.
Extended Memory- 2GB nonvolatile flash memory for 25 million data points in a window compatible file system. USB connection appears as a mass storage device showing ASCII data files sorted by well ID.
Automatic Logging Rates- 1 sec to 60 min per sample
Manual Logging- on key press

Power:
Internal Power- 6 AA Alkaline batteries
Battery Life- up to 80 hours continuous, up to 21 days in power save mode.
External Power (optional)- 6.5 to 12VDC at 80ma max.
Do not exceed 16V.
Connector 5.5mm x 2.1mm center post positive.
Real Time Clock- Li Ion 3V battery CR2032

Enviromental:
Temperature- -10 to 110 F (-20 to 45 C)
Humidity- 10 to 90% non- condensing

Physical:
Meter Dimensions- 3.5 x 7.5 x 1.5" (19 x 9 x 4cm)
Weight- 14 oz (390g)
Probe Dimensions- 6x3x3" (16 x 8 x 7cm)
Probe Tip Diameter- 5/8" (1.7cm)
Cable Length- 70" (1.8M)
Weight- 13 oz (355g)
Shipping Dimensions- 13 x 17 x 5" (33 x 44 x 13cm)
Weight- 5 lb (2.3Kg)

Input/Output:
Acoustic Probe.
Serial Port- bi-directional 300-57600 baud, 8 data bits, one stop bit.
USB port for file system access.
Flow Meter Input (with adapter)- pulse counting
External Temerature Sensor (with adapter)

WS 131 Flow Meter

Materials:
Housings – Type 1 PVC
Paddle Wheel – HDPE
O-ring – Buna N
Axle – Tungsten Carbide

Plumbing:
Pipe size – Schedule 40 PVC
Pressure - 240PSI

Physical:
Pipe size – Schedule 40 PVC
Test Pressure – 240 PSI
Temperature: 32 – 140 F (0 – 60 C)

Dimensions:

1”	5.75 x 4.5 x 2.4”
1.5”	6.25 x 5.25 x 2.4”
2”	7.11 x 5.75 x 3”

Clearance for sensor removal: 3.5”

Electrical:
Power: 5 – 24V @ 500 uA max
Output signal: Pull-to-ground (+V – 0V)
Pulse width: ~5mS
Frequency: .3 – 200 Hz

Characteristics:

Pipe Size	1"	1.5"	2"
Min Flow (gal/min)	.86	1.8	2.8
Max Flow (gal/min)	52	108	170
Press Drop (PSI) @Max Flow	.25	.18	.15
Scale Factor (gal/pulse)	.0057	.0121	.0209

For more information, contact your local distributor.