



**2024
PRODUCT
INTRODUCTION**

Portable Velocity Meter

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Company Profile

Weifang AOBO Instrument Technology Development Co., Ltd., founded in 2002, with registration capital of 10 million RMB, is a "High-Tech" and "Double-Software Certification" enterprise specialized in "flow measurement and intelligent measurement & control" industry, integrating R&D, production, sales and service.

The company has a core R&D team for computer software and technology, automatic intelligent control, HVAC engineering design and flow measurement. It has the ability to provide customers with specific solutions and complete sets of products according to their different needs, based on years of practical experience. Especially in the heating industry, by the customer's recognition, has a high reputation in the industry.

The products are mainly used in the measurement and control of "steam, liquid, gas, sewage and tap water"; and especially suitable for energy monitoring and energy-saving control in many industries, such as thermal power plants, thermal companies, residential heating, petroleum, chemical industry, papermaking, food, coating, printing & dyeing and HVAC.

Since its foundation, based on self-developed and leading technology, reliable quality, high-quality service and good reputation, our company has been warmly accepted by customers, and become a designated supplier for many central enterprises and listed companies.

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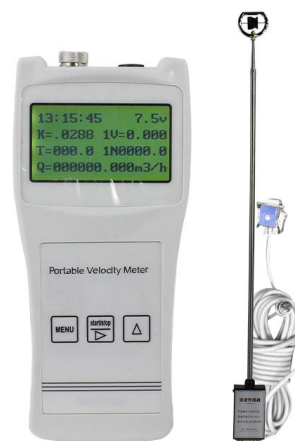
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I. Product Overview

ABDT-1306A portable velocity meter is developed for the specific measurement of the flow rate for the hydrometric station, factories and mines, environment-protection monitoring station, irrigation and drainage on the farmland and hydrogeology survey, etc.

ABDT-1306A intelligent velocity meter can be equipped with the new sensor of the flow rate rotating propeller. The sensor is developed by the advanced technology at the end of 2004. The helical angle, thread pitch, craftsmanship and materials are all been redesigned., the initial velocity $\leq 1\text{cm/s}$. Indicators like initial velocity, measurement range, linearity, concentricity, the Calibration coefficients and mean variance are been greatly improved. The measurement range of the flow velocity: $1\sim 400\text{cm/s}$ and that of sampling time: $1\sim 99$ seconds.

The device is simple and convenient, energy saving, stable and reliable. It possesses complete functions and a high automaticity in accordance with the national measurement standard of open channel. Equipped with a rotating propeller which can endure 80°C , it is a new portable velocity meter in China.



II. Technical Requirement of the Device

Velocity measurement formula:

$$V = \frac{KN}{T} + C \quad (\text{m/s}) \quad (\text{automatic calculation})$$

Serial number: _____、K_____、C _____

Range of the velocity measurement: $0.01\sim 5.00\text{ m/s}$

Error in current measurement: $\leq 1.5\%$

Working depth: $< 20\text{m}$; Test Rod: 0.45m ;

Display screen: 4×16 liquid crystal display

Measurement mode: Dip stick location measurement

Temperature range: $-20^\circ\text{C} \sim 60^\circ\text{C}$

Power supply: DC8.4V Li-ion rechargeable battery, continuous operation of above 40 hours after complete charge.

III. Measurement Principal

The device was developed with the flow velocity-area method in the open channel measurement. After obtaining the flow velocity, the flow quantity can be obtained through the formula $Q=V \cdot S$ (S is the section area)

3.1 The measurement of the flow Velocity

In the measurement, the rotor current meter was rotated by the water power, the signal device generates the revolution signal, and the flow velocity can be calculated by the following formula:

$$V = \frac{KN}{T} + C \quad (\text{m/s})$$

In it :

V: The mean flow velocity during the measurement(m/s)

K: Screw pitch

C: Constant of the current meter

T: the amount of time of the measurement(unit: s)

N: The number of signals during T

During the use of the device, K and C both are constants. The flow velocity can be calculated once the value of T and N are obtained.

3.2 The calculation of volume of flow

By the flow velocity-area method, the volume of flow can be obtained by multiplying the flow velocity and section area which were obtained in the measurement.

IV. Maintenance of the Device

Unplug the device if not to be in use for a short time. Charge the device every 3 months if the time is too long.

Rinse the current meter and the measuring stick with clean water at the end of

measurement every time. Dry them with a towel and keep them in the right place.

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