



**2024
PRODUCT
INTRODUCTION**

Multi-parameter Smart Energy Valve



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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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All of the catalogue and company information can be found at:

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I. Application Scenario

This product is an integrated product that helps heating enterprises to measure flow, temperature, calculating heat and valve control, and other metering data in front of and inside the building at the same time, it can also be used to measure and control air conditioning cooling.



Due to the limited space in front of the building and inside the building, it is impossible to install multiple transmitters in order to measure multiple parameters at the same time, and it is difficult to maintain. This multifunctional all-in-one product is specially designed to overcome the problem.

One valve but multiple skills, seven modes available

Valve controlling, flow controlling, heat controlling, temperature controlling, differential temperature controlling, pressure controlling, and differential pressure controlling.

Stable and convenient:

It has an adaptive fast control algorithm to quickly control the flow rate, temperature difference, pressure difference, and other parameters to stabilize them. The control menu can be called out using shortcut keys to change the target value and switch control mode;

Intelligent and efficient:

The current progress will be kept during power failure and it will self-learn the control mode when power is restored to effectively avoid control instability.

Replaces 7 types of measurement and control combination units

Flow meter, cooling/heat meter, PLC controller, temperature measurement, pressure measurement, flow Mechanical balance valve, touch screen

II. Product Features

1. Use ultrasonic waves to measure flow, use the patented flow measurement technology to improve the accuracy of flow measurement, and reduce the sensitivity of valve disturbance.
2. Flow, heat, and cold are independently measured and independently stored in the unit, supplying temperature, returning temperature, supplying pressure, and returning pressure channels can be selected through parameter setting, and support access to remote temperature and pressure sensors.
3. Built-in large historical data memory which can store 1 year of historical data (one historical record is stored every 1 hour)
4. DC24V power supply or AC220V power supply can be used, valve action current $\leq 1A$, average working current $\leq 0.2A$.
5. Select the built-in NB-IoT module or 4G communication module, and the device comes with network and server connection diagnosis function.
6. Nominal pressure: 1.6MPa.

III. Autonomous Innovation

1. Use the patented flow measurement technology to improve the accuracy of flow measurement and reduce the sensitivity of valve disturbance.
2. Adaptive fast control algorithm which can quickly adjust the fluid state, so that the target parameters reach the set value and quickly enter the stable state;
3. The current progress will be kept during power failure and self-learns the control mode when power is applied, control is stable;
4. Regularly open mode, anti-rust, anti-blocking to avoid inability of rotation function;
5. One-piece cable-free structure design, compact installation, easy maintenance, and disassembly;
6. Fully sealed design, using infrared keys, high protection level;
7. Multi-function device, can avoid the disturbance of dirt and bubble on the orifice of the flow balancing valve/differential pressure balancing valve.

IV. Six Advantages

1. Valve regulation and control: Electric adjustment of valve opening to achieve real-time flow regulation and control;
2. Flow measurement: Completely independent operation, can measure the flow in real-time;
3. Heat (cold) measurement: Has both heat and cold measurement;
4. Supply and return water temperature measurement: Can access the temperature signal to achieve supply and return water temperature measurement;
5. Supply and return water pressure measurement: Can access the pressure signal to achieve supply and return water pressure measurement;
6. 3 kinds of communication functions (NB-IoT, 4G, RS485): A variety of communication options, flexible communication.

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