VNER

ELECTROMAGNETIC FLOWMETER

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JIANGSU VNER ELECTRONIC TECHNOLOGY LTD

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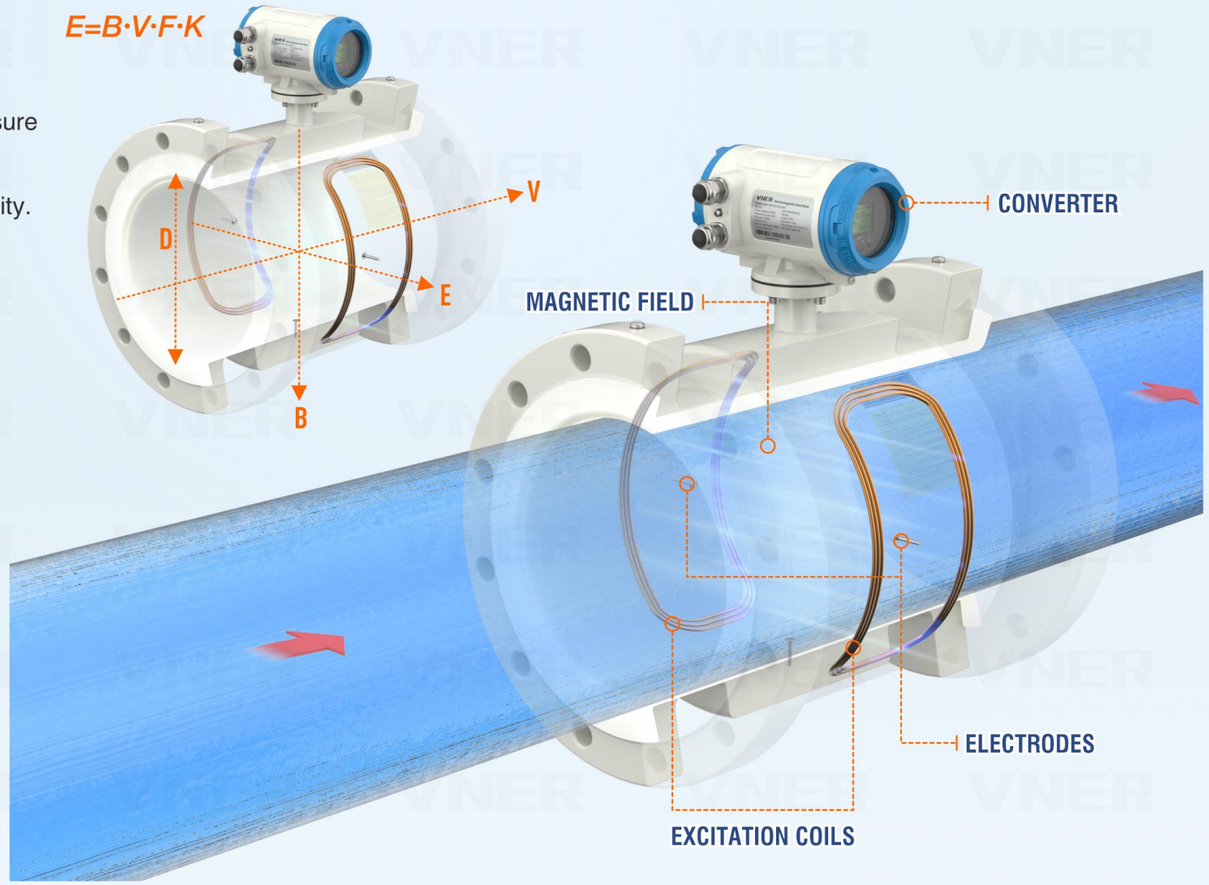
PRODUCT DESCRIPTION

The electromagnetic flowmeter operates based on Faraday's Law of Induction, which states that an electromotive force (EMF) is induced in a conductor when it moves through a magnetic field. This measurement principle can be applied to conductive fluids. When such a fluid flows through a pipe perpendicular to the direction of a magnetic field, an induced EMF is generated in the fluid. This induced EMF can be measured using two symmetrically placed electrodes.

The signal voltage Ue is directly proportional to the magnetic flux density B, the distance between the electrodes D, and the average velocity of the fluid V. Since the magnetic flux density B and the distance between the electrodes D are constants, the signal voltage Ue is directly proportional to the average flow velocity V.
The equation used to calculate the volumetric flow rate indicates that the signal voltage Ue is linearly proportional to the volumetric flow rate.
The induced signal voltage is converted into scaled, analog, as well as digital output signals in the converter.

PRODUCT FEATURES

- No moving parts or obstructive components inside the pipeline, resulting in almost no additional pressure loss during measurement.
- Measurement results are almost independent of the fluid's pressure ,temperature, density, and viscosity.
- Suitable for measuring the flow of various conductive liquids, such as water, wastewater ,beverages, chemical raw materials, viscous liquids, pulp, mud, slurry, etc.
- Uses SMD components and SMT technology for high circuit reliability and low power consumption.
- Embedded microprocessor for fast computation and programmable low-frequency rectangular wave excitation, improving the stability of flow measurements.



Technical Features

- Nominal Size: DN (3-3000mm)
- Measured Medium: Conductive Liquids, Slurry and Abrasives
- Process Temperature: -20~+180°C
- Nominal Pressure: Standard ≤ 4.0MPa
- Flow Measurement Accuracy: ±0.2%, ±0.5%
- Repeatability: ≤ 0.1%
- Output: (4~20)mA, HART, Modbus RS485, Pulse, Optional

We adapt to local regulations, we strive to deliver quality solutions and we are constantly trying to reduce our environmental impact.

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