



Datasheet

Battery powered

Electromagnetic flow meter

LDG-SUP

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Battery-powered electromagnetic flow meter

The battery-powered electromagnetic flow meter converter adopts internal battery power supply without external power supply. It is suitable for working conditions where the field power grid cannot be reached and the power grid is difficult to lay. It is especially suitable for the monitoring, metering and settlement of the tap water supply system. The battery-powered electromagnetic flow meter converter adopts ultra-low power circuit technology to design efficient and reliable excitation and signal processing circuits to achieve measurement functions to ensure that the converter has high reliability and stability. At the same time, it adopts highly efficient system management technology. The system power consumption is reduced, power supply cost is saved, and accurate measurement is realized at the same time.

Application

- Sewage treatment
- Printing and dyeing
- Chemical industry
- Environmental protection
- Metallurgy
- Medicine
- Paper making
- Tap water supply

Features

- 0.5%F.S measuring accuracy
- Low power consumption
- Dual power supply
- Multiple network interfaces
- Multiple work mode
- Wide measuring range
- Data saving function



Electromagnetic flow meter

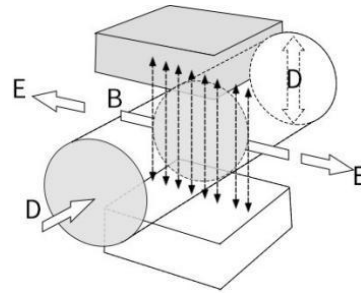
Principle

The measurement principle of magnetic flowmeters can be described as follows: when the liquid goes through the pipe at the flow rate of v with a diameter D , within which a magnetic flux density of B is created by an exciting coil, the following electromotive E is generated in proportion to flow speed v :

$$E = K \times B \times V \times D$$

Where:

- E – Induced electromotive force
- K – Meter constant
- B – Magnetic induction density
- V – Average flow speed in cross-section of measuring tube
- D – Inner diameter of measuring tube



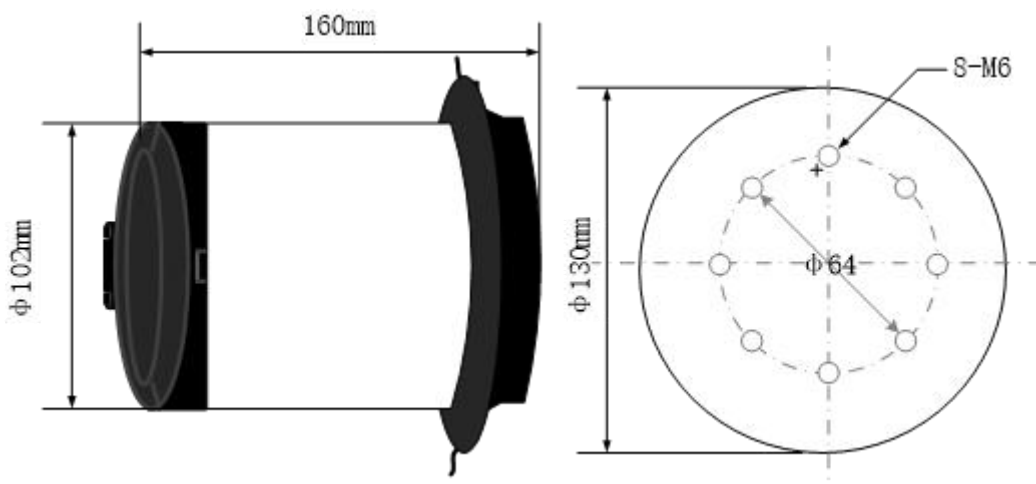
The sensor uses the induced potential E as a flow signal and transmits it to the converter. After a series of digital processing by amplifying, transforming and filtering, the instantaneous flow and cumulative flow are displayed by a dot matrix liquid crystal with backlight.

Parameter

Details	
Diameter	DN3---DN2100
Accuracy	0.5%
Environmental temperature	-20℃-- 50℃
Relative humidity	≅ 95%
Ingress protection	IP65,IP68(optional)
Flow range	0-15m/s
Conductivity	Clean water >20 μs/cm
Communication	RS485 (modbus protocol), GPRS
Lining material	PTFE, PFA, F46, neoprene, polyurethane rubber, high temperature rubber
Electrode material	SS316, Hastelloy B/C, titanium, tantalum, platinum-iridium alloy, tungsten carbide
Electrode type	Standard , scraper, replaceable
Connection	Flange, plug-in, clamp ,clip-on

Medium temperature	-20℃~+60℃
Nominal pressure	0.6~4.0Mpa (other can be customized)
Measurement parameter	Instantaneous flow, instantaneous flow rate
Record parameter	Accumulated total Flow
Detection and alarm parameters	Fluid empty pipe detection alarm, excitation current detection alarm
Test mode output signal	Unit volume flow pulse

Dimension



Battery Working Time

Cycle Measuring Time	50mA Excitation Use Time	20mA Excitation Use Time
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30S	74months	103months
25S	62months	87months
20S	49months	69months
15S	37months	52months
14S	34months	48months
13S	32months	45months
12S	30months	42months
11S	27months	38months
10S	24months	34months
9S	21months	31months
8S	18months	27months
7S	15months	24months
6S	13months	21months
5S	10months	17months
3S	7months	10months