

FMI300-Mini electromagnetic flow meters

- Compact design saves installation space
- Corrosion resistance sensor technology
- All electronic design with no moving parts
- Automatic viscosity temperature compensation
- Pulse output/analog output is optional
- ▶ Low pressure loss
- Strong anti-fouling ability
- Air traffic control measurement function
- Temperature resistance -40~100 degrees Celsius



FLOW

According to Faraday's principle of electromagnetic induction when a conductor passes vertically through magnetic field B, it will induce a voltage. U In the measurement of the flowmeter, the moving conductor is a flowing conducting medium, and the magnetic field B is emitted from the direction perpendicular to the flowing medium. The induced electromotive force U on the two electrodes E1 and E2 is directly proportional to the velocity V of the medium.

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

K-meter constant

D-Internal probe spacing

The induced electromotive force U is further processed and converted into a standard electrical signal for output or display

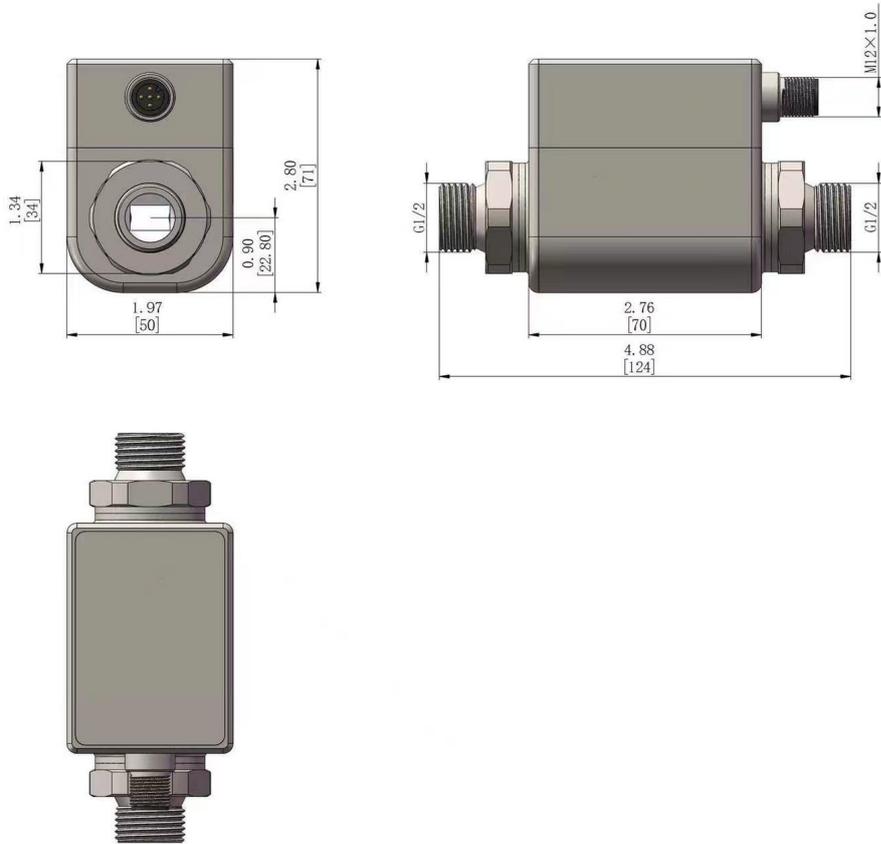
Specifications

| | |
|-----------------------|-------------------------------------------------------|
| Measuring Range | 0.04...120L/Min |
| Nominal diameter | DN6...DN15 |
| Applicable medium | Liquid with conductivity > 10us /cm |
| Accuracy | ± 1% range, 0.5% range (optional) |
| Repeatability | ± 0.2% range |
| Proof pressure | 16 bar |
| Operating voltage | 24 ± 10%Vdc |
| Current consumption | 80mA |
| Electrical Protection | Reverse polarity protection, short circuit protection |
| Output | |
| Pulse output | NPN output, pull up resistor 2K |
| Analog output | 4... 20mA, current limit 26mA, load resistance < 250? |
| Response Time | < 500ms |
| Ambient Temperature | -25...85 |
| Medium Temperature | -40...100 |
| Materials | |
| Electrode | Stainless Steel 316TI |
| Process Connection | Stainless Steel 316TI |
| Measuring tube | PEEK |
| Seal | EPDM |
| HousingHousing | Stainless Steel 304 |
| Electrical Connection | M12×1 Plug |
| Process Connection | G External thread, 25.4 chuck, 50.5 chuck |

Applications

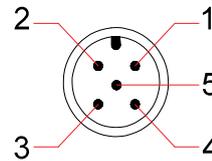
- Circulating water detection
- Coolant monitoring
- Other conducting liquid monitoring

External thread connection



Wiring

| Signal | Plug | Cable |
|---------------------------------------|------|-------|
| U+ | 1 | Brown |
| U- | 3 | Blue |
| Pulse output | 4 | Black |
| Analog output (voltage or current) | 2 | White |



Flow Range L/min

| Optional procedure connection | | | Measuring range l/min | DN |
|-------------------------------|----------|--------------------|-----------------------|------|
| G1/4 | 1/4" NPT | 25.4Sanitary chuck | 0.05-15 | DN6 |
| G1/2 | 1/2" NPT | 25.4Sanitary chuck | 0.2-50 | DN10 |
| G3/4 | 3/4" NPT | 50.5Sanitary chuck | 0.5-120 | DN15 |

Model Number

| OrderNO. | Type | Process connection G External thread/chuck | Measuring range L/Min | DN |
|----------|-------------|-----------------------------------------------|--------------------------|----|
| FM3006 | FMI300GM06 | G1/4 | 0.04-15 L/min | 6 |
| FM3010 | FMI300GM10 | G1/2 | 0.1-50L/min | 10 |
| FM3015 | FMI300GM15 | G3/4 | 0.24-120L/min | 15 |
| FM3106 | FMI300TR106 | 25.4 Sanitary chuck | 0.04-15 L/min | 6 |
| FM3110 | FMI300TR110 | 25.4 Sanitary chuck | 0.1-50L/min | 10 |
| FM3115 | FMI300TR215 | 50.5 Sanitary chuck | 0.24-120L/min | 15 |