

TMF-2011m Mini Magnetic Inductive Flow meter

Summary

The TMF-2011m **Mini Magnetic Inductive flow meter** extremely compact, low cost, inductive magnetic flow meter (including Transmitter and sensor), **the Mini Inductive Magnetic flow meter** is the perfect solution for measuring the flow of conductive liquids in applications where reliability and low-pressure loss. The magmeter are desired at an economical price compared to higher end models. This Magmeter measures flow using the magnetic-inductive principle. According to Faraday's law of magnetic induction, current is induced into a conductor as it moves through a magnetic field. The amount of current induced is directly proportional to the velocity of the moving conductor. A conductive liquid passing through the flow meter body acts as the conductor. The flow meter body contains a set of electromagnetic coils that generate the magnetic field. Electrodes mounted in the flowmeter body collect the current, whose magnitude is proportional to flow rate.

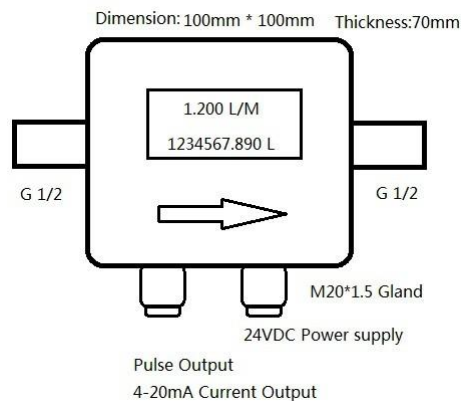


Fig. 1,2 The Structure of TMF-2011m Mini(Blind)

Technical Specification

- Size: DN1.5, 3, 6, 8, 10, 15, 20
- Velocity range: 0.01m/s – 10 m/s
- Accuracy: $\pm 0.5\%$ of RS (Velocity >0.6 m/s) or ± 3 mm/s (Velocity ≤ 0.6 m/s)
- Repeatability: 1/3 of accuracy
- Temperature: PT1000, 0.1°C resolution
- Media Conductivity: 20 ms/cm
- Measuring Direction: Bi-directional measurement
- Max Working Pressure: 1.0MPa
- Max Working Temperature: 90°C for PEEK or Ceramic liner
- Liner: PEEK, Ceramic
- Electrodes: SS316L or HC
- Enclosure: Aluminum, IP65 for Blind version
- Connection: G1/2 or NPT 1/2
- Power supply: 24VDC, ≤ 100 mA
- LCD display: flow rate and total flow
- Analog output: 4 – 20mA
- Pulse output: 0 – 5K Hz
- Relay Output: optional, 1 Relay 2A/30VDC for flow switch
- RS485 MODBUS: Optional for Display version, Standard for Blind version

Mini Magnetic Inductive Flow Meter Model Selection

TMF-2011m Mini Magnetic Inductive Flow Meter Model Selection

Pipe Size	
1.5	DN1.5
3	DN3
6	DN6
8	DN8
10	DN10
15	DN15
20	DN20
Power	
D	18-36VDC
Display	
N	Blind
NH	Blind + Handheld (RS485 communicator)
D	With Display
Electrode	
S	SS316L
H	HC
Liner	
PK	PEEK
C	Ceramic
Output	
A	4-20mA
P	Pulse
R	Relay
M	RS485
S	Others, pls clarify
Input	
N	Without temperature sensor
T	With temperature sensor
Temperature	
1	90°C for PEEK or Ceramic liner
2	Special, clarify
Connection Type	
G1/2	G 1/2"-ISO 228 external
G1/4	G 1/4"-ISO 228 external
NPT1/4	NPT1/4 "
DIN	DIN Flange(SS304)
ANSI	ANSI Flange (SS304)
S	Others, pls clarify
Flow range	
1	0.3 to 0.6m/s
2	More than 0.6m/s

Remark:

1. RS485 Standard for Blind version; Display is optional;
2. Handheld RS485 communication is for optional;
3. Special demands, pls inquire, can be customized.

DN Flow Rate Table:

Nominal Size (mm)	Flow Range (m3/h)	Accuracy Range (m3/h)
3	0.001-0.305	0.008-0.254
6	0.005-1.221	0.031-1.018
8	0.009-2.171	0.054-1.810
10	0.014-3.393	0.085-2.827
15	0.032-7.634	0.191-6.362

Applications

Special are designed for Flow monitoring, flow measuring, dosing and counting:

- Food & Beverages industry:
 - Water
 - Soft drinks
 - Milk and Dairy
 - Beer
 - Fruit juices and other fluids with fibers
- Chemical Process Control industry;
- Cooling systems and cooling circuits
- Pharmaceutical Dosing system;
- Plumbing applications;
- Plant construction
- For Automated Animal (such as Calf, pig and chicken) Feeding Systems
- flow or temperature monitoring
- Mechanical engineering