

GF-AM1 Electromagnetic Flow Sensor V1.0

Introduction

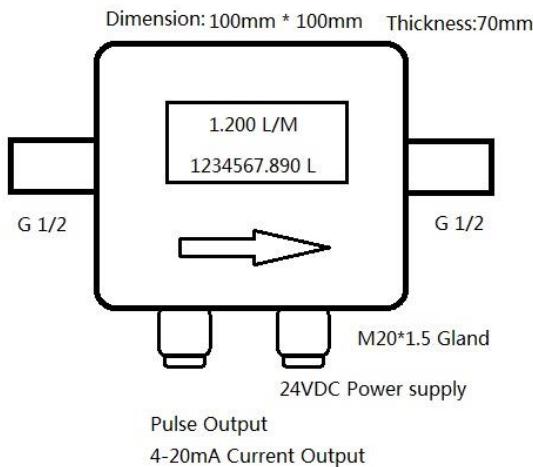
The GF-AM1 series is a mini flow meter that integrates a converter and a sensor into one. It is compact and exquisite, with no movable parts and no mechanical wear and tears. The screw connection and installation are very convenient. It is powered by 24VY DC and is available in two options: display screen and no display screen. It features both pulse and communication output.



Specification

Item	Parameter
Size	DN6, DN12, DN25, DN50
Flow Range	DN6: 3L/h~300L/h; DN12: 50L/h~1500L/h; DN25: 0.5m ³ /h~10m ³ /h; DN50: 1.5m ³ /h~40m ³ /h
Velocity Range	0.01m/s ~ 10 m/s
Accuracy	±0.5% of RS (Velocity>0.6m/s) ±3mm/s(Velocity≤0.6m/s) ±0.5%FS
Repeatability	1/3 of accuracy
Temperature	PT1000, 0.1°C resolution (Optional)
Media Conductivity	20 us/cm
Measuring Direction	Bi-directional measurement
Working Pressure	0.6~1.6MPa
Max Working Temperature	70°C
Liner	PEEK
Electrodes	SS316L, Ti, HC or Ta
Enclosure	Aluminum, IP65
Connection	G1/2 or NPT 1/2, G1, G2
Power Supply	24VDC, ≤100mA
LCD Display	Flow rate and total flow
Analog Output	4 ~ 20mA
Pulse Output	0 ~ 5K Hz
Relay Output	Optional, 1 Relay 2A/30VDC
RS485 MODBUS	Optional for Display version, Standard for Blind version

Dimensions



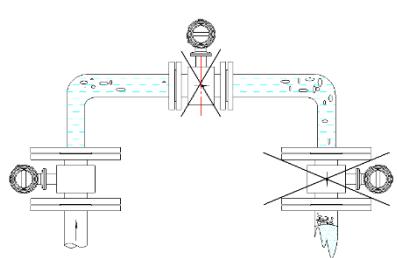
Connection

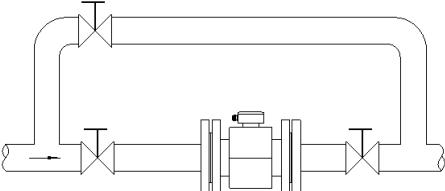
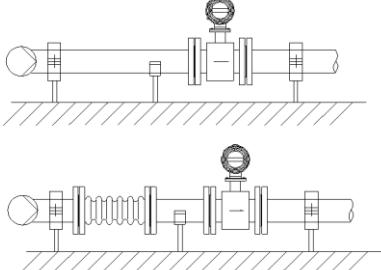
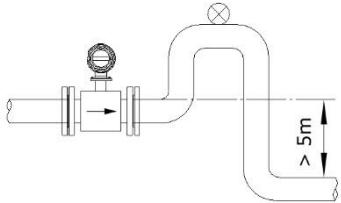
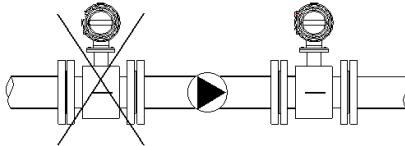
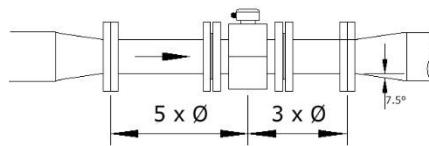
Label	Wire Color	Definition	Descriptions
7	Gray	+24V DC	The external 24V DC Power +
8	Blue	COM	Common Ground
6	White	P+	Pulse +
5	Brown	I+	4-20mA Current Output +
3	Green	NO1	Relay NO Contact 1
4	Black	NO2	Relay NO Contact 2
1	Red	A	RS485 A
2	Yellow	B	RS485 B

Installation Guide

GF-AM1 can be installed horizontally or vertically. It is recommended that the meter is installed with the electrodes in or close to the horizontal plane to ensure that any passing air or bubbles do not interfere with the measurement. If installed in a vertical pipe, it is highly recommended that flow direction is upwards to guarantee that the pipe remains full at all times. Ensure upstream and downstream straight pipe run requirements are met.

There are some general precautions for installation:

	<p>Avoid Areas Where Air Accumulates and Open Pipe Outlets The meter must remain full of liquid to operate correctly. Avoid high points in pipes where air may tend to accumulate vertical outlet legs.</p>
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	<p>Bypass Line for Easier Maintenance</p> <p>It is good practice to install a bypass around a meter to allow maintenance access without the need to shut down the line. Ensure upstream and downstream straight pipe run requirements are met.</p>
	<p>Avoid Strong Vibration</p> <p>Piping should be securely fixed where there are vibrations present. It is recommended that the transmitter be mounted remotely in these installations. For installations with severe vibration, a flexible coupling is recommended to prevent the transmission of vibration through the pipe to the flow tube. In all cases, the flow meter should be properly supported upstream and downstream to prevent undue stress being placed upon the meter and flanges. NEVER supports a meter on its casing as this can cause internal damage to the meter coils.</p>
	<p>Avoid Negative Pressure Situations</p> <p>Where the pipe system has a fall of over 5m after a meter installation, it is advisable to install a vent or vacuum breaker above the meter to prevent damage to the meter liner.</p>
	<p>Avoid Installing Upstream of a Pump</p> <p>Avoid installing a mag flow meter on the suction side of a pump as this may create negative pressure in the line and damage the meter lining. Wherever possible, always install downstream of a pump.</p>
	<p>Ensure Straight Pipe Run Requirements are met when Reducing Pipe Diameter</p> <p>When the pipe diameter is reduced to accommodate a flow meter, it is recommended that straight run pipe length requirements both upstream and downstream are built into the installation. It is further recommended that reducers with a center cone angle no greater than 15° be used to ensure the consistency of the liquid flow profile.</p>