

## FMG520 Explosion-proof high-precision gear flowmeter

### PRINCIPLE & FEATURES

FMG520 explosion-proof gear flow sensor built-in dual gear operation, through the high-precision gear volume calculation medium through volume, to achieve the measurement of tiny fluid medium. Is a new type of volumetric flow sensor. For precise continuous or intermittent measurement of liquid flow or instantaneous flow in pipelines

- Multi-function signal output-LCD liquid crystal display
- High pressure resistance <1.0-45MPa)
- High and low temperature resistance <-196C-200C)
- A variety of viscous media can be measured:
- High precision and high repeatability
- Wide range ratio
- Strong anti-corrosion and anti-fouling ability (acid and alkali)



### APPLICATION

FMG520 gear flow sensor is widely used in low flow precise measurement of various industries, applicable media: additive fuel, flotation cell for water treatment, corrosion inhibitor, catalyst, emulsifier, oil, grease, perfume, adhesive, solvent, ink and insecticide and some high viscosity media. Application industries include automobile, aviation, mining, electric power, chemical industry, pharmaceutical industry, food industry, coating industry, petroleum industry, environmental protection industry, printing industry, etc. Especially suitable for flow measurement of heavy oil, polyvinyl alcohol, resin and other medium with high viscosity Small volume, light weight, small vibration and noise and stable operation. It can also be used to measure small flow of small diameter. Small initial flow, wide range ratio, suitable for measuring liquid flow with large variation. The measurement accuracy is not affected by pressure and flow change, stable performance, long service life and large flow capacity

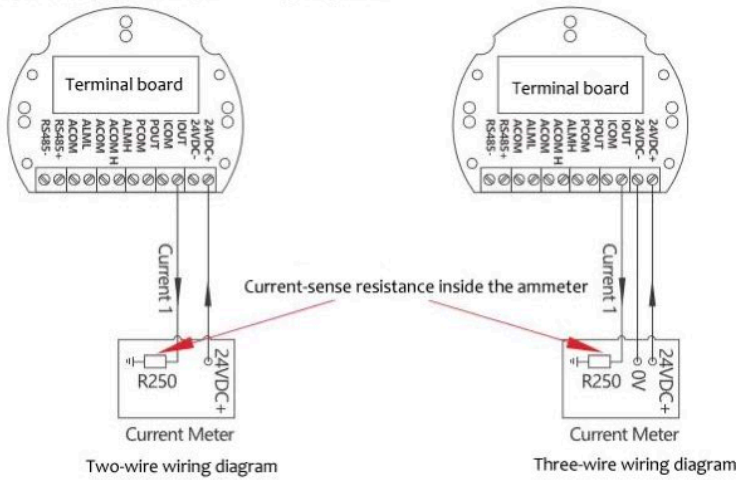
- Resin and glue measurement
- Measurement of hydraulic oil, lubricating oil and grease
- Fuel oil measurement
- Ink and asphalt measurement
- Liquid nitrogen, freezing liquid and solvent measurement
- Filling measurement of edible oil, fish oil and food
- Chemical engineering and anti-corrosion requirements fluid measurement
- Fluid quantitative control system

### TECHNICAL PARAMETER

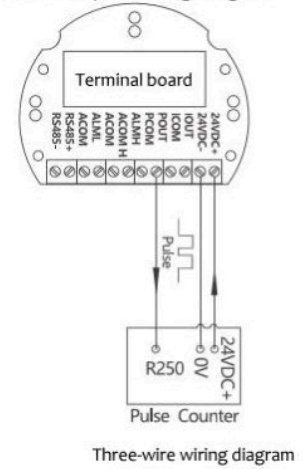
Range	0.005 ~ 330 L / min (support customized range)
Output signal	4-20mA, RS485, pulse, high and low alarm switch
Accuracy	0.5% F.S
Repeatability	0.1%F. S
Power supply	16~ 30VDC
Medium temperature	- 30 ~ 80 ° C (high temperature customized 150 ° C)
Pressure resistant	Aluminum (150bar), Stainless steel (400bar), PP (withstand voltage 50bar)
Material	Shell: aluminum, stainless steel, Display: stainless steel

### WIRING DIAGRAM

#### 4-20mA Current output wiring diagram



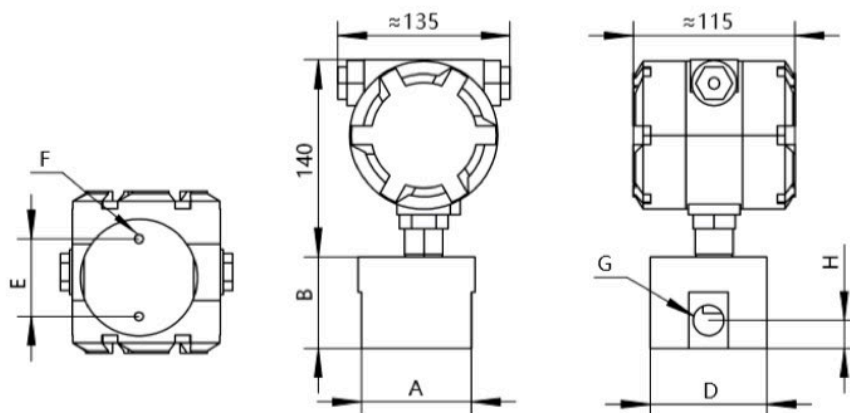
#### Pulse output wiring diagram



### TERMINALS

Terminal screen printing	Features	Remarks
24V +	DC18~36 +	Power supply 24V +
24V -	DC18~36 -	Power supply 24V -
IOUT	4-20Ma+	Load power <= - 500 ohm
ICOM	4-20Ma-	
POUT	Frequency & pulse output+	It is recommended to use 24VDC intermediate relay with load current
PCOM	Frequency & pulse output common	
ALM H	High alarm+	
ACOM	High alarm common	
ALM L	Low alarm+	
ACOM	Low alarm common-	RS485 terminal
RS+	RS485 +	
RS-	RS485 -	

### DIMENSION



**SIZE & FLOW RANGE**

Model	A	B	D	H	E	F	G	Measuring range
M2	80	55	83	16	40	2 * M6	G 1/4	5-300mL/min
M4	80	55	83	16	55	2 * M6	G 3/8	0.1-3L/min
M6	80	62	83	14	55	2 * M6	G 1/2	0.15-8L/min
M10	80	65	83	14	55	2 * M6	G 1/2	0.8-20L/min
M15	110	65	113	28	90	2 * M6	G 3/4	3-50L/min
M25	140	85	158	40	110	2 * M8	G 1	20-200L/min
M32	160	100	218	45	180	2 * M8	M35 * 1.5	30-330L/min

**ORDER CODE**

FMG520	M15	S	F	L	--	Explanation
FMG520						FMG520 explosion-proof high-precision gear flowmeter
	M15					Measuring range: M2-M32 optional
		S				No explosion protection
		E				Explosion-proof (ExdIICT6)
			F			Sealing material FKM (standard type)
			P			Sealing material PP (anti-corrosion type)
			G			Sealing material silicone (low temperature resistance - 50°C)
				L		Body material: alumina
				S		Body material: 304SS
				P		Body material: PP
					--	T: High temperature 150°C

**FLOW CALCULATION METHOD**

The K-factor (flow factor) of FMG200 gear flow sensor precisely defines the number of pulses per liter per unit flow.

$$Q = f \times 60 / K$$

Q = instantaneous flow rise / min

f = output pulse frequency Hz

K = coefficient pulse of gear flowmeter / min