



principle characteristics

The FM500 gear flow sensor is built with double gears, which can calculate the volume of medium through the volume of high precision gear wheel and measure the fluid medium with small size. It is a new type of volumetric flow sensor, which is used to measure the flow or instantaneous flow of liquid in a pipe precisely continuously or intermittently.

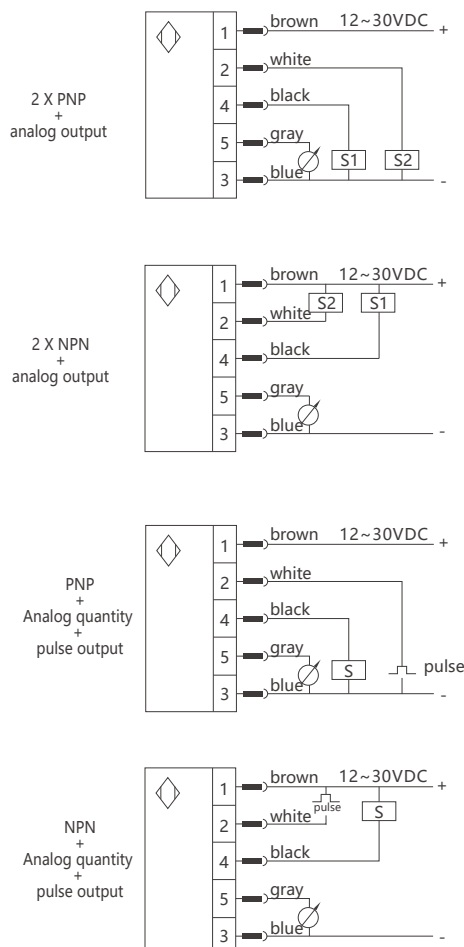
- analog switch double output
- pnp /NPN switch arbitrarily
- LED liquid crystal display
- high pressure (1.0-45mpa)
- high and low temperature resistance (-40°C-150°C)
- various viscous media can be measured
- high precision and repeatability
- range specific width (1:100)
- wide measurement range
- strong anti-corrosion and anti-pollution ability (acid and alkali)

product application

The FM500 gear flow sensor is widely used in various industries for accurate measurement of low flow, suitable for media: additive fuel, water treatment flotation tank, corrosion inhibitors, catalysts, emulsifiers, oils, oils, spices, adhesives, solvents, inks and pesticides and other parts of high viscosity media. Application industries include automobile, aviation, mining, electric power, chemical, pharmaceutical, food, paint, petroleum, environmental protection, printing and other industries. . Particularly suitable for heavy oil. Polyvinyl alcohol resin, etc. The flow measurement of high viscosity medium. (can measure the viscosity is as high as 10000 pa. S fluid) small volume, light weight, runtime vibration noise and stable operation. Can also be used for measuring the small flow of small diameter measurement. Pick up small flow rate, range than wide, suitable for use in measuring conform to the changes of fluid flow, measuring accuracy is not affected by pressure and flow change, stable performance and long service life, large flow capacity.

- resin and glue measurement
- measurement of hydraulic oil, lubricating oil and grease
- fuel oil measurement
- ink and asphalt measurement
- measurement of liquid nitrogen, freezing liquid and solvent
- measurement of edible oil, fish oil and food filling
- fluid measurement for chemical and anticorrosion requirements
- fluid quantification control system

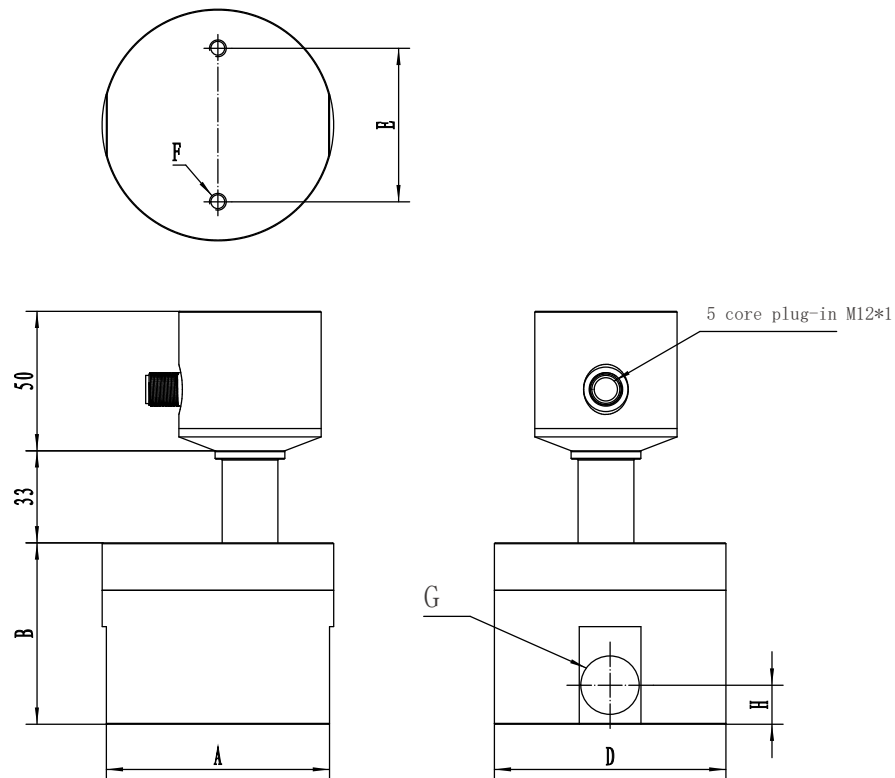
wiring diagram



Technical parameters

- ◇ Measuring range: 5-300mL/min, 0.1-50L/min(customized range is supported)
- ◇ output signals: 4-20ma,PNP/NPN
- ◇ measurement accuracy: 0.5% f.s.
- ◇ repeatability: 0.1% f.s.
- ◇ power supply: 16~30VDC
- ◇ medium temperature: -30~80°C (high temperature customized 150°C)
- ◇ Withstand pressure: aluminum (100bar), stainless steel(400bar), PP (50bar)
- ◇ Material: shell: aluminum, stainless steel, display: stainless steel

Size chart (mm)



model	A	B	D	H	E	F	G	Measuring range
M 2	80	55	83	16	40	2*M 6	G 1/4	5-300m L/m in
M 2S	83	43	88	10	44	2*M 5	G 1/4	2-2000m L/m in
M 4	80	55	83	16	55	2*M 6	G 3/8	0.1-3L/m in
M 6	80	62	83	14	55	2*M 6	G 1/2	0.15-8L/m in
M 10	80	65	83	14	55	2*M 6	G 1/2	0.8-20L/m in
M 15	110	65	113	28	90	2*M 6	G 3/4	3-50L/m in

Selection table

FM 500	M 15	S2	F	L	--	detailed
FM500-						High precision gear flowmeter
	M15					Measurement range: M2-M15 optional
		PAF				PNP+Analog quantity + pulse output
		NAF				NPN+Analog quantity + pulse output
		S2				Two way switch
		SF				Two way switching volume + pulse output
		A3				Output signal 2 channels PNP/NPN+4-20mA
			F			Sealing material FKM (Standard type)
			P			Sealing material PP (anti-corrosion type)
				L		Body material: alumina
				S		Body material: 304SS
				P		Body material: PP
					--	T: High temperature resistant 150°C

Flow calculation method

The K coefficient (flow coefficient) of the FM500 gear flow sensor accurately defines the number of pulses per liter per unit flow.

$$Q = f * 60 / K$$

Q= instantaneous flow litres per minute

F= output pulse frequency HZ

K= coefficient pulse of gear flowmeter/min

Optional accessories - electrical accessories

name	Outline drawing/dimension drawing (mm)	material	model
M12*1-5Pin (2m cable)		PUR	ZL05-PU02G
M12*1-5Pin (5m cable)			ZL05-PU05G
M12*1-5Pin (10m cable)			ZL05-PU010G
M12*1-5Pin (2m cable)		PUR	ZL05-PC02G
M12*1-5Pin (5m cable)			ZL05-PC05G
M12*1-5Pin (10m cable)			ZL05-PC010G
M12*1-5Pin (2m cable)		PVC	ZL05-PU02W
M12*1-5Pin (5m cable)			ZL05-PU05W
M12*1-5Pin (10m cable)			ZL05-PU010W
M12*1-5Pin (2m cable)		PVC	ZL05-PC02W
M12*1-5Pin (5m cable)			ZL05-PC05W
M12*1-5Pin (10m cable)			ZL05-PC010W

M12* 1-4pin /5Pin self-connector/size drawing (mm)	model
	GL04 (4Pin joint)
	GL05 (5Pin joint)
	WL04 (4Pin joint)
	WL05 (5Pin joint)