## Product principle

RMF30 gear flow sensor has built-in double gear operation, and calculates the volume of medium passing through the high-precision gear volume to achieve the measurement of micro fluid medium. It is a new type of volumetric flow sensor for precise continuous or intermittent measurement of liquid flow or instantaneous flow in pipelines.

## Application field

The RMF30 gear flow sensor is widely used in various industries for accurate measurement of low flow rates, suitable media: additive fuels, flotation cells for water treatment, corrosion inhibitors, catalysts, emulsifiers, oils, greases, fragrances, adhesives, solvents, Some high-viscosity media such as inks and pesticides. Application industries include automobile, aviation, mining, electric power, chemical, pharmaceutical, food, paint, petroleum, environmental protection, printing and other industries.

It is especially suitable for flow measurement of medium with high viscosity such as heavy oil, polyvinyl alcohol and resin. (It can measure fluids with viscosity up to 10000Pa.s) Small volume, light weight, low vibration noise and stable operation during operation. It can also be used to measure small Small flow measurement of pipe diameter. Small starting flow, wide range ratio, suitable for measuring liquid flow with large fluctuations, measurement accuracy is not affected by pressure and flow changes, stable performance, long life, and large flow capacity

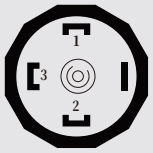
-Resin, glue measurement
-Hydraulic oil, lubricating oil, grease measurement
- Fuel oil measurement
-Ink, pitch measurement
- Liquid nitrogen, cryogen, solvent measurement
- Edible oil, fish oil and food filling measurement
-Chemical and anti-corrosion requirements fluid measurement
-Fluid quantitative control system

## Features

- Pulse/analog dual output
- High pressure resistance (1.0-45MPa)
- High and low temperature resistance (-196℃-200℃)
- Can measure various viscous media
- High precision and high repeatability
- Wide turndown ratio (1:100)
- Wide measurement range
- Strong anti-corrosion and anti-fouling ability (acid and alkali)

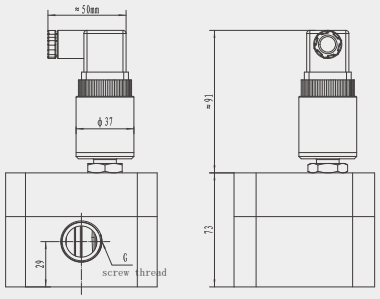
| technical parameter |
| --- |
| ◇Measurement range: 2~350 L/min (support customized range) |
| ◇Output signal: pulse output, 4-20mA, PNP/NPN |
| ◇Measurement accuracy: 0.5%F.S |
| ◇Repeatability: 0.1%F.S |
| ◇Power supply: 16~30VDC |
| ◇Medium temperature: -30~80℃ |
| (high temperature customized 150℃) |
| ◇Pressure resistance: Aluminum (150bar) |
| Stainless steel (400bar) |
| ◇Material: Shell: aviation aluminum/alumina/stainless steel |
| Display: Stainless Steel |

## Hessman Plug/Dimensional Drawing/Wiring Diagram

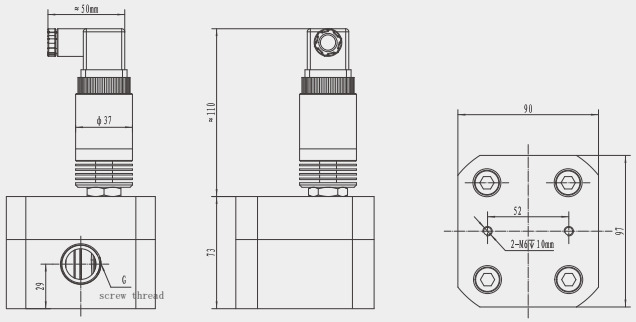



| illustrate | 4-20mA | pulse |
|---|---|---|
| positive electrode | 1 | 1 |
| negative electrode | | 2 |
| output | 2 | 3 |

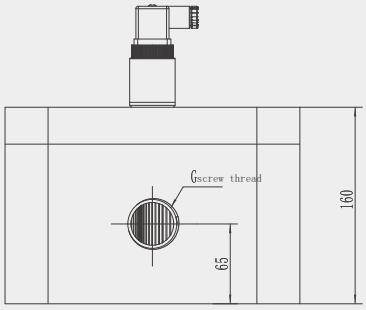
### Standard(-20~100℃)



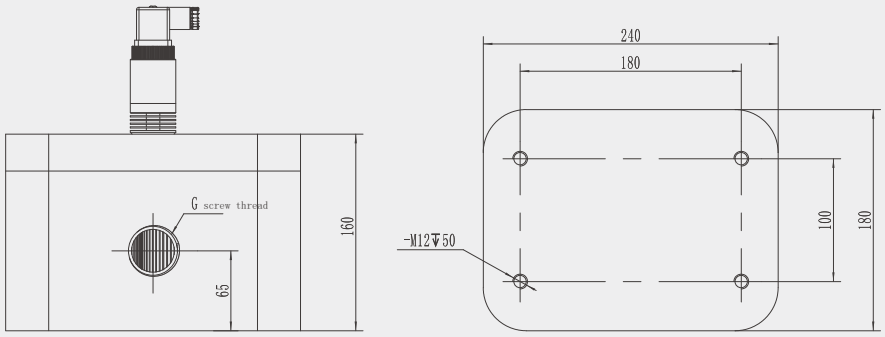

### High temperature(-40~150℃)



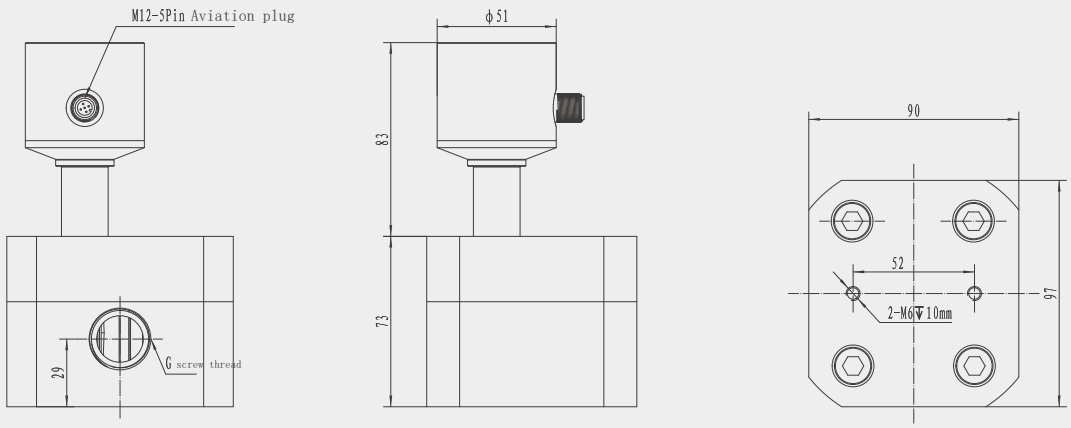

### 30-350L/min(-20~100℃)



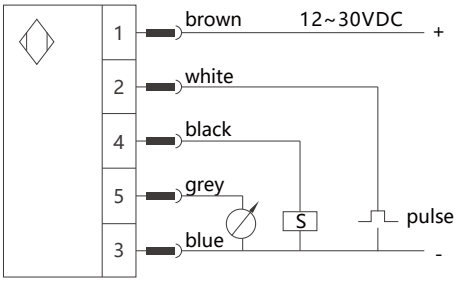

### High temperature 30-350L/min(-40~150℃)



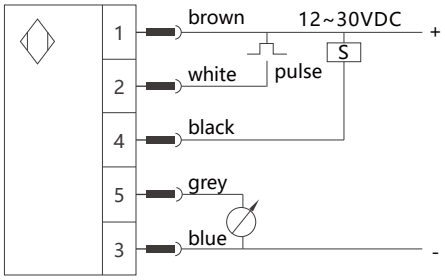

## Hessman Plug/Dimensional Drawing/Wiring Diagram



### PNP+pulse+analog

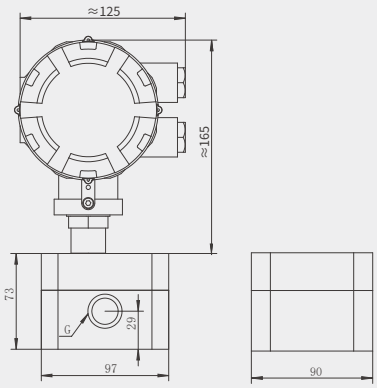



### NPN+pulse+analog

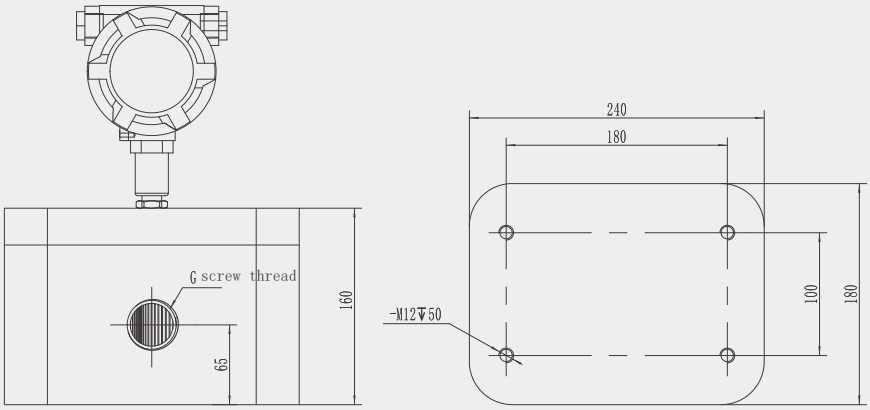



## Full function explosion-proof type/dimension drawing/wiring diagram

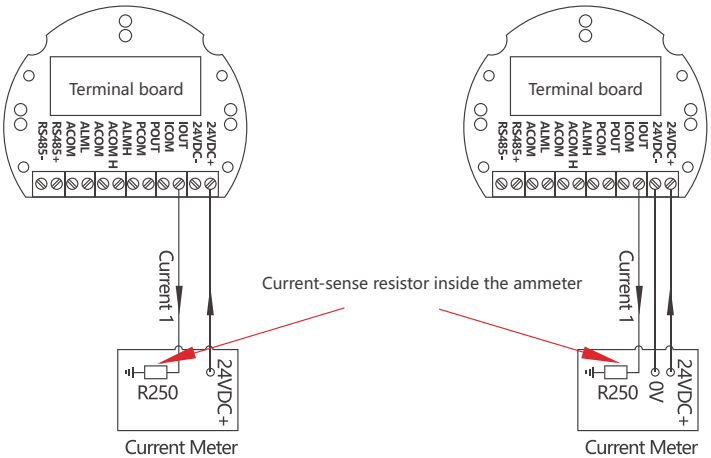
### Standard




### Flow range: 30-350L/min



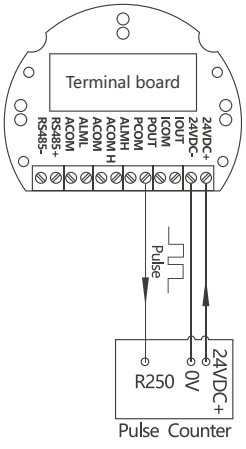

### 4-20mA Current output wiring diagram




Two-wire wiring diagram

Three-wire wiring diagram

### Pulse output wiring diagram

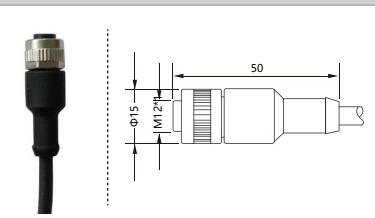
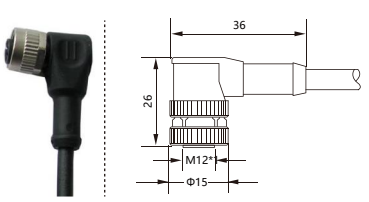


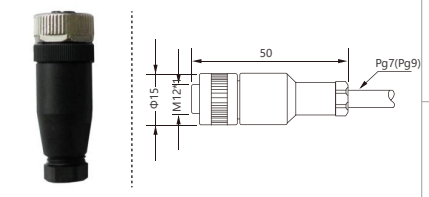
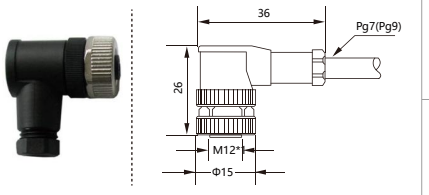

Three-wire wiring diagram

## Selection table

| RFM30- | M25 | PAF | F | L | -- | illustrate | |
|---|---|---|---|---|---|---|---|
| RFM30 | | | | | | RFM30 New and upgraded version of high-precision gear flowmeter | |
| | M25 | | | | | Measuring range: 2-25L/min (Standard thread G1/2 internal thread) | |
| | M50 | | | | | Measuring range: 5-50L/min (Standard thread G3/4 internal thread) | |
| | M100 | | | | | Measuring range: 10-100L/min (Standard thread G1 internal thread) | |
| | M200 | | | | | Measuring range: 20-200L/min (Standard thread G1/4 internal thread) | |
| | M350A | | | | | Measuring range: 30-350L/min (Standard thread G2 internal thread) | |
| | M350B | | | | | Measuring range: 30-350L/min (Standard thread M42*2 internal thread) | |
| | | HP | | | | pulse type | Hessman plug |
| | | HA | | | | Analog 4-20mA | |
| | | MP | | | | pulse type | M12 aviation plug |
| | | MA | | | | Analog 4-20mA | |
| | | PAF | | | | PNP+analog+pulse output | OLED liquid crystal display |
| | | NAF | | | | NPN+analog+pulse output | |
| | | E | | | | Full-featured explosion-proof type | |
| | | | F | | | Sealing material: Viton | |
| | | | T | | | Seal Material: PTFE Teflon | |
| | | | | L | | Body Material: Alumina | |
| | | | | H | | Body material: aviation aluminum | |
| | | | | S | | Body material: 304ss stainless steel | |
| | | | | S1 | | Body material: 316L stainless steel | |
| | | | | | - | T: high temperature resistance 150℃ | |

## 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 |
| | | PVC | ZL05-PC02G |
| | | | ZL05-PC05G |
| | | | ZL05-PC010G |
| M12*1-5Pin (2m cable) |   | PUR | ZL05-PU02W |
| M12*1-5Pin (5m cable) | | | ZL05-PU05W |
| M12*1-5Pin (10m cable) | | | ZL05-PU010W |
| | | PVC | ZL05-PC02W |
| | | | ZL05-PC05W |
| | | | ZL05-PC010W |

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