Mini Impeller Flowmeter GTJ

Combined Temp & Flow sensor

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TFT Color Screen High-Resolution Display

EN + GUI Intuitive Menu

Digital & Analog Integrated Signals

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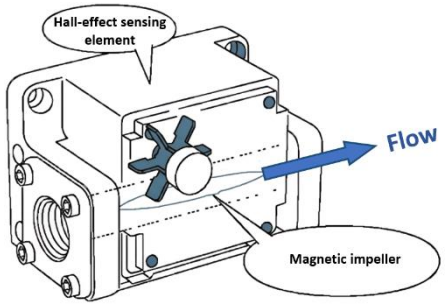
1. Product Description

GTJ_Mini Impeller Flowmeter as shown in the schematic diagram of the flow-temperature sensor.
An impeller is centrally installed in the pipeline and supported by bearings.
When fluid passes through the pipeline, it impacts the impeller blades, causing rotation.
The impeller's angular velocity is proportional to the fluid flow velocity.



The liquid flow drives the impeller rotation, and the rotating impeller generates a flow-proportional frequency signal through the Hall-effect switch.
The transmitter then converts this frequency signal into an electrical signal.

2. Product Features

- Temperature & flow integrated sensor
- LED digital display high-visibility
- Flow smart display alarm contact output
- Temperature smart display alarm contact output
- Wide measuring range low minimum flow rate
- 4-20mA signal pulse output
- High accuracy stable & reliable
- Scale-resistant corrosion-resistant
- Low pressure loss high repeatability

The **GTJ_Mini Impeller Flowmeter** features structural simplicity, high accuracy, and ease of installation/ maintenance.

It enables real-time monitoring of liquid flow and temperature in pipelines, providing 4-20mA signals for both flow and temperature, along with alarm switch outputs.

Equipped with an LED digital display for real-time fluid velocity and temperature readouts, it delivers integrated flow-temperature monitoring. Widely applied in semiconductors, photovoltaic, petrochemicals, power generation, metallurgy, steel plants, paper manufacturing, food processing, water treatment, and battery production facilities.

- **High precision, up to 0.5% accuracy**

  Excellent stability with no drift

- **Simple structure, stable and reliable**

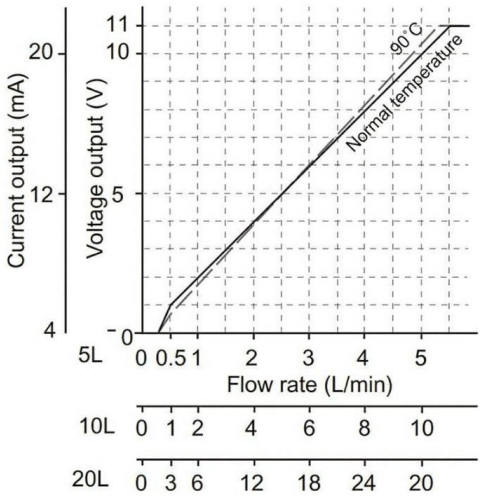
  Suitable for mass deployment on equipment to reduce costs

3. Technical Specifications and Parameters

Flow	**Measuring Range**	0.5 ~ 15 L/min
	Accuracy	Class 0.5, Class 0.3
Temp.	**Measuring Range**	0 ~ 100°C (customizable)
	Resolution	≤ 0.1°C

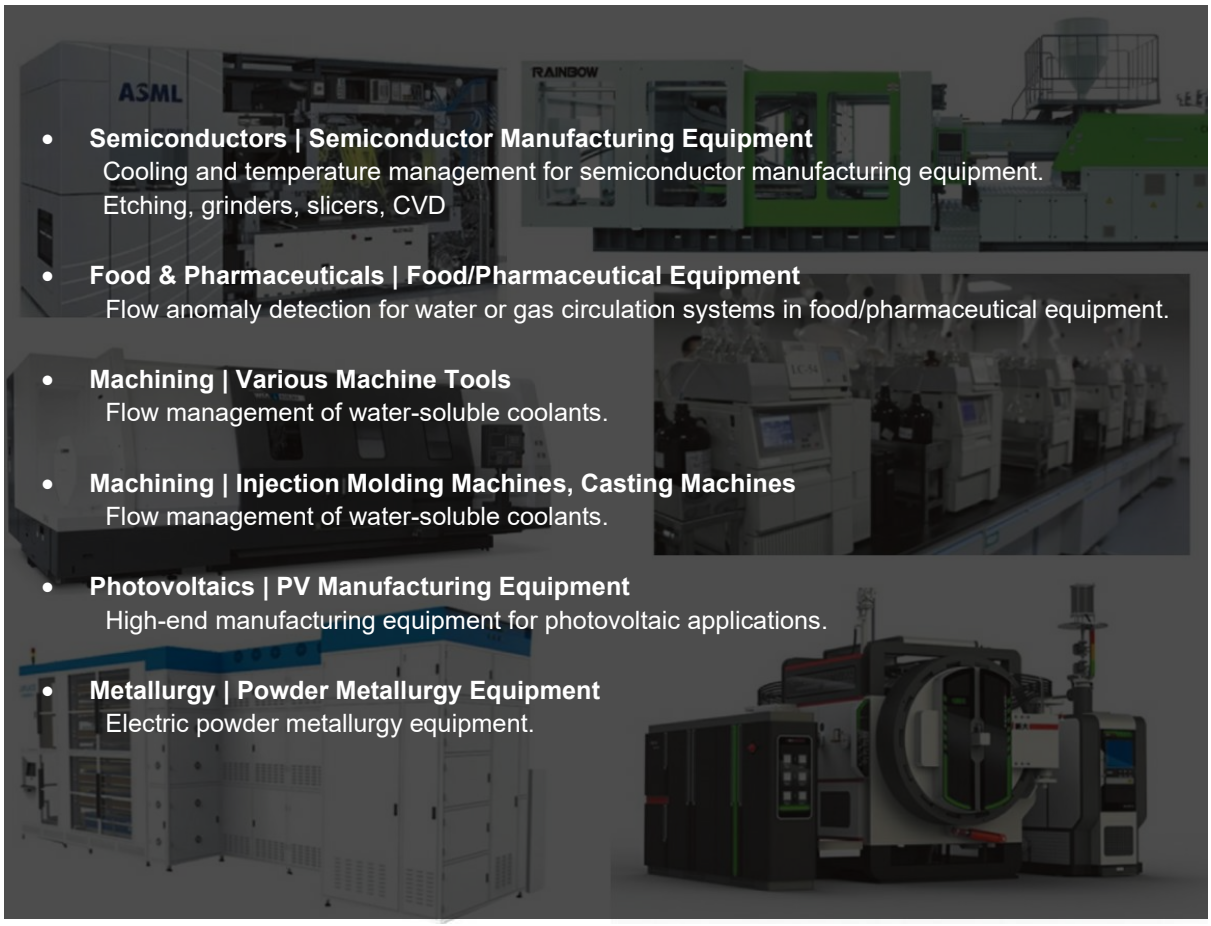
Display Type & Resolution	3-digit LED
Power Supply & Consumption	24VDC / 3W
Switching time	On: < 2s (1~3s) / Off: < 2s (1~2s)
Output Supply & Consumption	Two alarm contacts/ 4-20mA analog / Pulse
Alarm contact type	NPN / PNP
Insulation resistance	50MΩ @ 100VDC
Contact Capacity	24V, 50mA
Interfaces	G3/8", G1/2" internal thread
Housing material	ABS
Base material	SUS304
Environmental conditions	-20 ~ 85°C, <85% RH

Output Characteristics and Temperature Stability by Flow Type



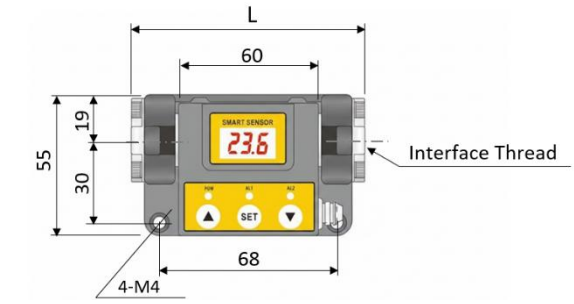
Note: This data represents measurements under standard environment and high-temperature (90°C) conditions.

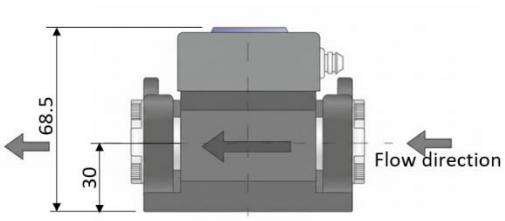
4. Application Notes

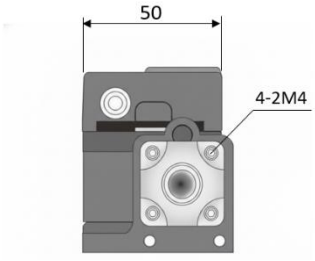


- **Semiconductors | Semiconductor Manufacturing Equipment**
  Cooling and temperature management for semiconductor manufacturing equipment.
  Etching, grinders, slicers, CVD
- **Food & Pharmaceuticals | Food/Pharmaceutical Equipment**
  Flow anomaly detection for water or gas circulation systems in food/pharmaceutical equipment.
- **Machining | Various Machine Tools**
  Flow management of water-soluble coolants.
- **Machining | Injection Molding Machines, Casting Machines**
  Flow management of water-soluble coolants.
- **Photovoltaics | PV Manufacturing Equipment**
  High-end manufacturing equipment for photovoltaic applications.
- **Metallurgy | Powder Metallurgy Equipment**
  Electric powder metallurgy equipment.

5. Structural Diagram

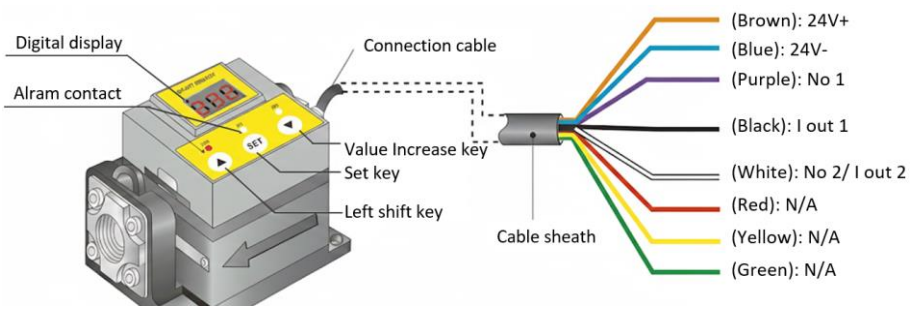






Interface Thread	L
Rc 3/8” (F)	98
R 1/2” (M)	115

6. Wiring diagram



7. Ordering model selection

Code		Description
Model: GTJ		**Mini Impeller Flowmeter**
Flow rate range	**5L**	0.5 ~ 5 L/min
	10L	1.5 ~ 10 L/min
	15L	5 ~ 15 L/min
Flow/temperature alarm mode	**P**	3-wire DC PNP output
	N	3-wire DC NPN output