FLOWGENIX

OVAL GEAR FLOWMETER

The ABFlowgenix **Oval Gear Flowmeter** is a precision-engineered positive displacement type flowmeter designed for accurate measurement of clean, viscous, and lubricating liquids. As the fluid passes through the measuring chamber, it drives two intermeshing oval gears that trap a fixed volume with each rotation. The number of rotations is directly proportional to the total flow volume, providing exceptional accuracy and repeatability even at low flow rates.

Built with durable stainless-steel construction and advanced signal electronics, it's ideal for oils, fuels, chemicals, and other industrial fluids that require reliable and repeatable flow measurement

Image is not real .Just for reference

KEY FEATURES

- **High Accuracy**: Up to ±0.5% of reading with excellent repeatability.
- **Viscosity Versatility**: Perfect for measuring oils, fuels, resins, and other viscous fluids.
- **Compact & Rugged Design**: Engineered for long-term use in demanding environments.
- **Minimal Pressure Drop**: Smooth gear rotation allows stable and efficient flow.
- **Digital Outputs**: 4–20mA, Pulse, and RS485 (Modbus-RTU) for process integration.
- **Flexible Mounting Options**: Compact or remote installation to suit all setups.

USER BENEFIT

- **Exceptional Accuracy**: Ensures consistent, precise volumetric measurement for all fluid types.
- **Reliable in Viscous Media**: Handles thick oils, lubricants, and heavy fluids without performance loss.
- **Low Maintenance**: Few moving parts mean reduced wear and long operational life.
- **Easy System Integration**: Compatible with control systems, batching, and PLC setups.
- **Durable Build**: Resistant to corrosion and suitable for harsh industrial environments.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Measuring Medium	Clean liquids including oils, fuels, chemicals, and viscous fluids
Line Size	DN4 to DN100 mm
Accuracy	±0.5% to ±0.1% of reading
Range Ratio (Turn Down)	1 : 20
Instrument Material	SS304 / SS316 / Aluminium Anodized
Medium Temperature	−100°C to +150°C
Ambient Temperature	−30°C to +60°C
Pressure Rating	Up to 16 bar (higher models available)
Power Supply	12−24V DC / 230V AC
Protection Class	IP65 / IP67
Repeatability	±0.05% − ±0.2%
Mounting Type	Compact / Remote
Connection Type	Flanged / Threaded / Clamp / Insertion
Communication Protocol	RS485 / Modbus
Viscosity Range	Up to 1000 cP (higher on request)

MATERIAL OPTIONS

Component	Material Options
Flow Body	SS304 / SS316
Gears	SS316 / Aluminium / PEEK
Bearings	PTFE / Carbon / Ceramic
Housing	Aluminium Anodized / SS304
Display Cover	Polycarbonate (IP67 rated)

TYPICAL APPLICATIONS

- Lubricating oil and fuel monitoring
- Hydraulic oil dispensing systems
- Polymer and resin metering
- Chemical batching and blending
- Paints,coatings,andadhesive manufacturing
- Custody transfer and process measurement

DISPLAY & INTERFACE

- Integral or remote LCD display showing:
- Instantaneous Flow Rate
- Totalized Volume
- Temperature and Diagnostic Info
- User-friendly keypad configuration
- Backlit screen for low-light visibility
- Password protection for configuration

ELECTRICAL CONNECTIONS

- 4–20mA analog output (isolated)
- RS485 digital output (Modbus RTU)
- Pulse output for totalized flow
- Power: 24V DC or 230V AC
- Relay output for batching or alarm (optional)

INSTALLATION GUIDELINES

- Ensure 5D upstream and 3D downstream straight pipe runs.
- Mount horizontally for best accuracy.
- Avoid bubbles or entrapped air in the line.
- Check arrow marking for correct flow direction

COMMUNICATION PROTOCOL

- Modbus RTU – for PLC and SCADA integration
- HART – for diagnostics and configuration
- Pulse Output – for batch control or totalizing

MAINTENANCE & WARRANTY

- Low maintenance design — only periodic inspection recommended.
- Calibrate annually for best accuracy.
- 12-month manufacturer warranty covering material and manufacturing defects.

ACCESSORIES OPTIONS

Accessory	Description
Remote Display Unit	Up to 50 m cable length
Flow Totalizer Panel	6-digit LED with relay output
Data Logger	RS485 / USB data recording
Mounting Kit	Includes flanges and fasteners
Cable Gland Set	IP68-rated, waterproof sealing

ORDERING INFORMATION

Code / Option	Description
Model	FLOWGEN – OGFM
Line Size	Specify (DN4 to DN100 mm or as required)
Material of Construction (MOC)	1 – SS304 / 2 – SS316 / 3 – Aluminium Anodized
Protection Class	1 – IP65 / 2 – IP67
Pressure Rating	1 – Up to 16 bar / 2 – Other (specify)
Explosion Proof	1 – Yes / 2 – No
Connection Type	1 – Flanged / 2 – Threaded / 3 – Clamp / 4 – Insertion
Output Signal	1 – 4–20mA / 2 – RS485 / 3 – 4–20mA + RS485 / 4 – Pulse
Operating Temperature	1 – 80°C / 2 – 120°C / 3 – 150°C / 4 – Above 150°C
Relay Option	1 – Switching / 2 – Batching / 3 – NA
Power Supply	1 – 24V DC / 2 – 230V AC / 3 – Other
Test Certificate	1 – Factory Calibration / 2 – NABL Lab Calibration
Display Type	1 – Without Display / 2 – Integral / 3 – Remote Type
Additional Details	Mention any specific installation requirements

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