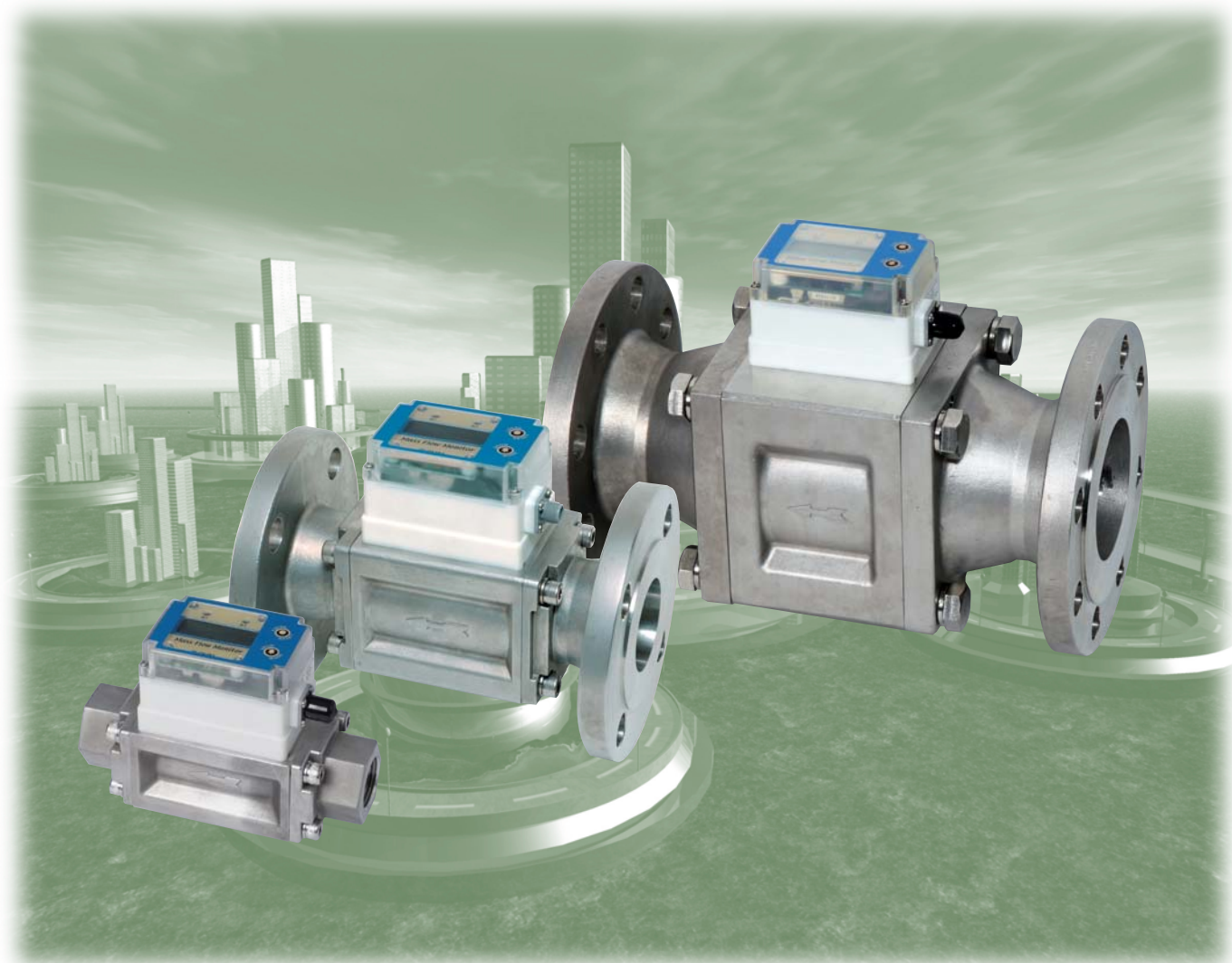




# High-accuracy MASS FLOW MONITOR

## City Gas Measurement



### ■ GENERAL

Here is a low-cost flowmeter developed by OVAL for city gas measurement and control.

Operating on the thermal dispersion principle, it directly measures mass flow without the need for temperature and pressure corrections.

From an energy saving point of view, we see today an ever-increasing demand for city gas flow control applications in furnaces, boilers, air conditioning equipment and the like.

OVAL is committed to supply the market with products that are accurate, cost effective, and of long life.

### ■ FEATURES

- Long life and simple design thanks to the absence of moving parts.
- As no vane wheel is used, measurement error due to inertia rotation is not present.
- Broad flow range and high accuracy.
- Temperature and pressure compensation is not required.

## GENERAL SPECIFICATIONS

Item	Description			
Acceptable fluids	City gas (13A), air, and nitrogen			
Nominal size	25mm	40mm	50mm	80mm
Flow range (※1)	40 to 600L/min (normal)	167 to 2500L/min (normal)		500 to 7500L/min (normal)
Process connection	Rc1 (female) or 25A JIS 10K RF flange	Rc1·1/2 (female) or 40A JIS 10K RF flange	Rc2 (female) or 50A JIS 10K RF flange	80A JIS 10K RF flange
Fluid temperature	0 to 60 °C			
Ambient temperature	0 to 60 °C (non-condensing)			
Pressure range	0 to 0.7 MPa (Option: 0.98MPa)			0 to 0.7 MPa
Linearity (reproducibility incl.)	±1% of full scale or better			
Temperature characteristics	±0.1%/°C of full scale or better			
Pressure characteristics	City gas: ±0.5% of full scale/0.1MPa Air and nitrogen: ±0.3% of full scale/0.1MPa			
Pressure loss	City gas: 1.7kPa max. Air and nitrogen: 2.1kPa max.			4kPa max.
Effect of orientation	±0.5% of full scale max. (Standard orientation: Horizontal with display up)			
Reqd straight pipe length	Inlet side: 7D min. Outlet side: Not specified			
Major parts materials	Meter body: SCS13A (lost-wax) Process connection: SCS13A (lost-wax) Sensor: SUS316	Display: Mixed resin consisting of PC (polycarbonate) and PBT (polyethylene terephthalate) Transmitter housing: PBT (polybutylene terephthalate) O-rings: Viton		
Display	7-segment 8-digit LED (backlit and measuring units indicated) Display is rotatable in 90° increments. · Instant flowrate (m <sup>3</sup> /h (normal) ), (L/min (normal) ) · Resettable total, grand total (m <sup>3</sup> (normal) ) · Yen equivalent (grand total, instant flowrate, resettable total) · LEDx2 points (Lights up in alarming conditions.)			
Output (※2)	Flow pulse (Compensation pulse, open collector output, pulse width is adjustable from 1 to 240 ms) Flowrate analog (4 to 20mA DC) Alarm (2 points, open collector output)			
Power source	24V DC±10% 100mA max. (Excl. analog output 4 to 20 mA)			
Cable	4-conductor shielded cable with connector (Outer dim. 6 mm), 3m: Supplied with product code showing "With cable".			
Enclosure rating	Non-explosionproof and indoor use (IP65) (※3)			

※1: Flowrate in (normal) indicates the value converted at 0°C and 1 atm.

※2: Optional two points can be selected for output.

※3: Transmitter case complies with IP65. However, as gas-vent hole is provided between transmitter and monitor body (for preventing entry of gas into the transmitter), entry of water could cause effect on the accuracy. Instrumental error due to entry of water is not covered by the warranty.

## OUTLINE DIMENSIONS

### ● Flange connection type

Nom. size	H	A	B	C	Weight (※2)
25mm	152	62.5	89.5	25A JIS10K RF flange	5.8kg
40mm	171.5	70	101.5	40A JIS10K RF flange	7.6kg
50mm	179	77.5	101.5	50A JIS10K RF flange	9 kg

※2 : Cable (3 meters long) incl.

### ● Screw-in connection type

Nom. size	L	H	A	B	C	D	E	Weight (※2)
25mm	180	119	29.5	89.5	Rc1 (female)	71	59	3.3kg
40mm	180	143	41.5	101.5	Rc1·1/2 (female)	83	83	4.3kg
50mm	200	143	41.5	101.5	Rc2 (female)	83	83	4.7kg

※2 : Cable (3 meters long) incl.

### ● City Gas MASS FLOW MONITOR (Nom. size 80A)

Weight : 16kg  
※ : Cable (3 meters long) incl.

### ■ LCD DISPLAY

NOTES :

- Upon depression of the front panel button ( ), the LCD screen scrolls through variables.
- When Yen conversion factor is set to zero, variables marked \* are not shown.

The specification as of Feb., 2013 is stated in this catalog. Specifications and design are subject to change without notice.



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