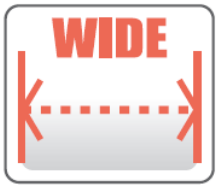
New Product

High Performance Ultrasonic Flowmeter
for Fuel Gas

model UX

Co-developed with Tokyo Gas



High performance over a wide range

Measures the flow accurately at lower rate than ever.
A wide range of 1:50 from min. to max. flow has been achieved.

Dust-proof, high durability

No filter is required.

Space saving with no straight pipe required

Measures the flow accurately even when attached to an elbow pipe, making the flowmeter suitable for installation at a small area.

Battery replaceable on site

Battery type (for five-year operation) is now available. The battery can be replaced on the site (with the dedicated lithium battery). AC power type (24VDC, 100VAC) is also available

Various output modes

In addition to the unit pulse, 4-20mA and RS485 (Modbus/RTU compatible) are provided.

Application

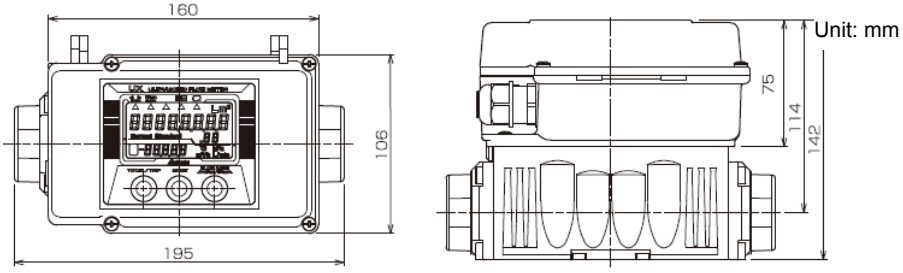
■ Measurement of low heat value (e.g. food) ■ Small-sized furnace (e.g. melting pot) ■ Flow monitoring of glass furnace (e.g. for ampoule, light bulb) ■ Atmosphere control in furnace

Specifications

Model		UX15(25)-ODC	UX15(25)-OAC
Power supply		External power supply 24VDC	External power supply 100VAC
Connection caliber		UX15:Rc1/2 UX25: Rc1	
Target gas type *2		City gas (13A), butane (butane 70% and propane 30%), propane (propane 98% and butane 2%), nitrogen	
Liquid temperature		-10 to +60 ℃(no condensation)	
Flow range		0.12 to 6 m³/h	
Precision	Actual flow rate *3	±2%RD (6m³/h or less to 0.6m³/h or more), ±0.5%FS (6m³/h or less to 0.12m³/h or more)	
	Temperature	±1.5℃	
Low flow cut		0.024m³/h (maximum flow rate/250)	
Maximum pressure		100 kPa	
Pressure loss		200Pa or less (city gas 13A, standard atmospheric pressure +2.5kPa, maximum flow rate)	
Rated voltage		21.6 to 26.4 VDC	85 to 115 VAC
Power consumption		2W or less (@26.4V/22mA)	10W or less (@22mA)
Environmental temperature		-20 to +70℃ *No condensation	
Output	Analog	4 to 20mADC (load resistance 400Ω or less) Choose from instantaneous flow rate and temperature.	
	Output 1 (flow rate pulse)	Unit pulse (Choose from 1, 10, 100, 1000, 10000L/P, default 1000L/P), duty 20 to 80% Nch open drain output (maximum load 24VDC, 50mA)	
	Output 2 (alarm)	Choose from upper and lower limit alarm and upper limit alarm for integrated value	
Communication *4		RS485 Modbus/RTU compatible (Choose from 4800/9600bps)	
Measurement interval *5		0.5 sec	
Display	Main	Integrated flow amount: 8-digit integer with 2 decimal places, integrated trip flow amount: 7-digit integer with 2 decimal places	
		Ultrasonic measurement error, temperature measurement error, battery voltage error (built-in battery only)	
	Sub	Instantaneous flow rate display: 5 digits, temperature display: 3 digits, pressure display: 4 digits	
Flow direction		Left to right or right to left facing the display *Choose upon order.	
Installation position		Horizontal or vertical (installation not available with display facing down and cable entry part facing up)	
Conversion function	Simple standard *6	Flow rate converted from actual flow rate at conversion reference temperature and 1 atmospheric pressure (with arbitrary fixed pressured entered)	
	Simple normal *6	Flow rate converted from actual flow rate at 0□ and 1 atmospheric pressure (with arbitrary fixed pressured entered)	
Main materials of gas connection part		Aluminum allow, PPS	
Protection structure		Indoor and outdoor IP64 (JIS C 0920) Direct sunlight should be avoided.	
Weight		1.6 kg	1.7 kg

*1 The battery life is five years (at average environmental temperature 20(C), and the battery can be replaced on the site. *2 The gas type can be changed on the site.
*3 The actual flow rate refers to the volume flow rate (flow rate before compensation). *4 The communications specifications are available on our web site.
*5 The moving average can be selected from 1 to 16 times (default: 4 times). *6 The term "simple" here means that the pressure value is compensated by an arbitrary value (fixed value).

External dimensions



Model code

Basic model	Caliber	–	Pressure sensor	Power supply	–	Flow direction	–	Gas type	Description
UX									UX
	15								15A
	25								25A
			0						Without pressure sensor
				DC					DC power
				AC					AC power
						L			Left to right
						R			Right to left
								13A	13A
								PRO	Propane
								BTN	Butane
								N2	Nitrogen