	Product Specifications	Ver. 5		1/3
Reliability Creativity Service	Ultrasonic Flow Meter for Fuel Gas (External Power Supply 24 VDC Type)	Model UX [Nominal diameter] [Flow direction]		ODC /

Specifications

■ Nominal diameter	15 mm (UX15-0DC-L/R)
	25 mm (UX25-0DC-L/R)

■ Flow direction \Box Left to right(L), \Box Right to left (R)

Flow-rate range 0.12 to 6 m³/h (Actual flow)

(accuracy guaranteed range)

Accuracy Flow measurement accuracy (Actual flow)

± 2%RD (0.6 to 6 m³/h) ± 0.5%FS (0.12 to 0.6 m³/h)

Simple NORMAL conversion accuracy ± 1.5%RD

Low flow cutoff In case the measurement flow-rate is 0.024 m/h or less, 0 m/h is displayed for

instantaneous flow-rate.

Response-ability Update interval: 0.5 second

Smoothing by moving average method (initial setting value: 4 times)

Display Main display: The following is switched and selected using the "left button".

Accumulated flow volume (m³)-Trip accumulated flow volume (m³)

Sub display: The following is switched and selected using the "right button".

Instantaneous flow-rate (m³/h). Set pressure (kPa) (gauge pressure). Temperature (°C)

Number of digits displayed

Main display

Accumulated flow: Flow volume m³

Accumulated flow volume 10 digits (0000000.00 m³)

Trip accumulated flow volume 9 digits (0000000.00 m³)

Sub display

Instantaneous flow-rate : 5 digits m³/h

 $000.00 \text{ m}^3/\text{h}$ (less than $1000 \text{ m}^3/\text{h}$)

0000.0 m^3/h (1000 m^3/h or more and less than 10000 m^3/h)

 $00000 \text{ m}^3\text{/h}$ (10000 m $^3\text{/h}$ or more)

Temperature : 3 digits (00.0°C)
Pressure : 5 digits (000.00 kPa)

"■" are selectable.

Pulse unit : 1000 L/P (Initial setting value) (Can be changed by button operation)

(can be changed to 1, 10, 100, 1000 and 10000 L/P)

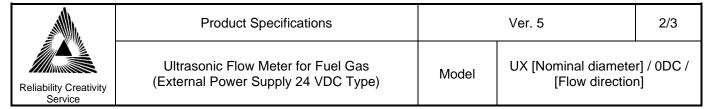
Maximum load : 26.4 VDC-50 mA

Duty : 20 to 80%

Saturated voltage when ON: 1.5 V or less

Current when OFF $: 50 \mu A$ or less

Maximum frequency: 10 Hz



Alarm output Open drain output 1 channel

Accumulated value upper limit alarm or Flow-rate upper and lower limit alarm (Either one is

selected by button operation)

Accumulated value upper limit alarm

When the accumulated flow volume for 1 h becomes higher than the set accumulated flow volume limit value, an alarm signal is output. (The accumulated flow volume upper limit value can be set by communication.)

*The 1 h measurement is started when the power supply is turned on.

Flow volume upper and lower limit alarm output

When the instantaneous flow-rate becomes higher or lower than the set flow-rate, an

alarm signal is output.

(The alarm output upper and lower limit flow volume and alarm judgment value

hysteresis width can be set by button operation.)

Current output Output method : Discharge method

Output accuracy : ±0.1 mA for display value

Load resistance : 400Ω or less When instantaneous flow-rate is selected

Zero output current : 4 mA (reverse flow to low flow cutoff)

Output current upper limit : 22 mA (clip at 22 mA) Full scale flow rate setting : 6 m³/h (settable)

When temperature is selected

Output method : 4 mA: -10°C, 20 mA: +60°C

Output current lower limit : 2 mA (clip at 2 mA)
Output current upper limit : 22 mA (clip at 22 mA)

Communication Communication method : Half duplex communication method (RS485 communication)

Communication speed : 4800 bps, 9600 bps (Allowable range: ±1.0%)

Synchronization method : Asynchronous

Bit configuration : 8 bits, no parity, stop bit length 1 bit

Bit transmission order : Order from b1 to b7 (low order prioritized sending)

Error control : CRC

*Register and download the detailed communication specifications from the following URL.

http://www.aichitokei.co.jp/products/14_s_sonic/ux/

Measurable fluid City gas (13A), butane (butane 70%, propane 30%),

Propane (propane 98%, butane 2%), nitrogen

Working fluid temperature -10 to +60°C

Working pressure 0 to 100 kPa (Gauge pressure)

Working ambient temperature -10 to +60°C 90%RH or less (There must be no condensation)
Storage ambient temperature -20 to +70°C 90%RH or less (There must be no condensation)

Power supply 24 VDC (21.6 to 26.4 VDC) Power consumption: 2 W or less

Flow direction The right to left or left to right to the display portion can be selected.. It must be determined

at the time of order placement and not able to be changed by a customer. (The direction

indicated by an arrow is the forward flow.)

Installation position Horizontal or vertical (Cannot be installed with the position that the display portion faces

downward or the cable introduction portion faces upward)

Pressure drop 200 Pa or less (City gas 13A, standard atmospheric pressure +2.5 kPa, at maximum

low-rate)

Protection structure IP 64 (JIS C0920: dust-proof, splash-proof type) which can be installed outdoors

Reliability Creativity Service	Product Specifications		3/3
	Ultrasonic Flow Meter for Fuel Gas (External Power Supply 24 VDC Type)	Model	UX [Nominal diameter] / 0DC [Flow direction]

Mass 1.6 kg

Material O Measurement portion Engineering plastic (Such as PPS), aluminum alloy

Outer casing Aluminum alloy

Display portion case Aluminum alloy

*O symbol indicates the gas contacting parts.

Standard working period 10 years

(At ambient temperature of 20°C and ambient humidity of 65%RH)

* 10 years is not the warranty period.

Others CE marking, UKCA marking, RoHS Directive compliant

2. Precautions in handling

2-1. Installation environment

- (1) Although the high weather-proof electronic display is adopted, in case of installation at a place subjected to direct sunlight, provide a sunshade.
- (2) Do not install the flow meter at a place with much electromagnetic noise, in corrosive atmosphere, or with high humidity liable to cause dew condensation
- (3) This product is designed for outdoor installation, but avoid areas where there is a risk of water submergence and water always splashes.
- (4) The meters do not conform to ATEX (explosion-proof) directive (2014/34/EU).

2-2. Piping conditions

(1) In case large amount of dust, etc., are contained in the fluid, install the flow meter by vertical piping. Even though the meter is installed indoor, it cannot be installed with the position that the display portion faces downward or the cable introduction portion faces upward.