Aichi tokei

Clamp-on Ultrasonic Flow Monitor

ATZTA CU

Easy Installation

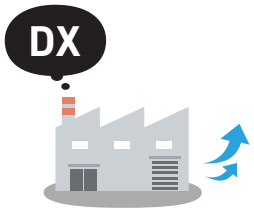
Easy Setting

Temperature Measurement

Space-saving Installation

Improving production efficiency,

stabilizing quality, and reducing costs

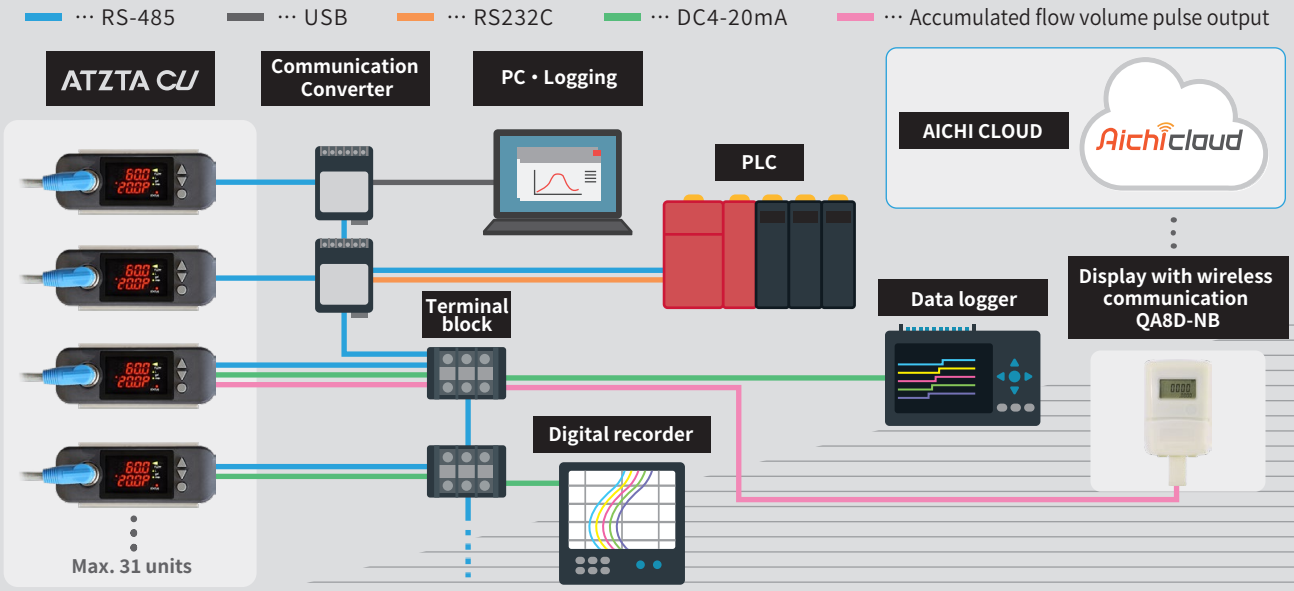


through digital transformation (DX) at manufacturing sites.

▶ ATZTA CU **Models** CU08 , CU15 , CU25

By visualizing the operating status of equipment,
waste and inefficiencies in the process can be identified.
Based on the consideration of specific improvement measures,
initiatives for labor reduction through automation and efficiency improvement can be promoted.

System Configuration Example

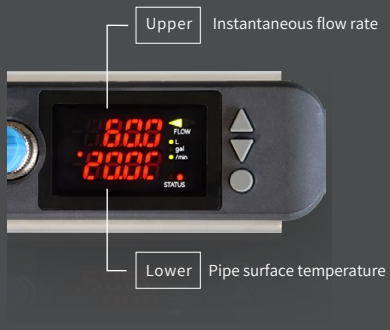


Features

Easy installation with a single screwdriver

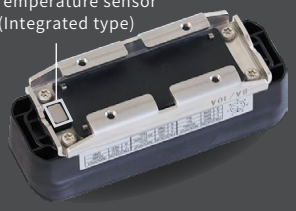
※No grease application required

Simultaneous measurement of flow and temperature



Back side

Temperature sensor (Integrated type)



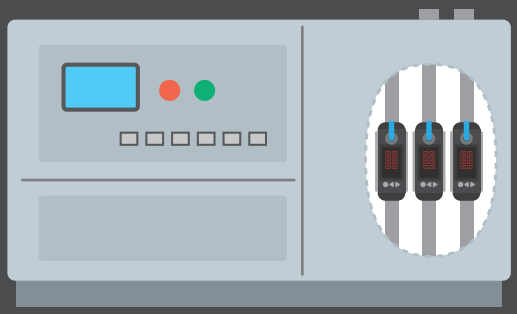
Easy setting

Flow measurement can be started immediately by simply setting 4 items.

Setting items

1. Pipe material
2. Pipe wall thickness
3. Pipe outside diameter
4. Fluid to be measured

Space-saving installation



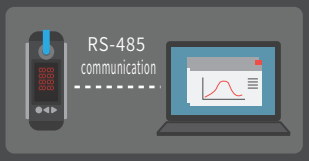
Installation in a machine

Compatible with various pipe materials and a wide variety of fluids

Pipe material	Metals (stainless steel, steel pipe, copper pipe), plastics (PVC, PP, PTFE)
Liquid type	Ultrapure water, oil, chemical solutions, organic solvents, plating solutions, highly viscous liquids, high pressure fluids, etc...

RS-485 communication as standard

Simultaneous output of instantaneous flow rate, accumulated flow volume, temperature, etc., is possible through RS-485 communication.



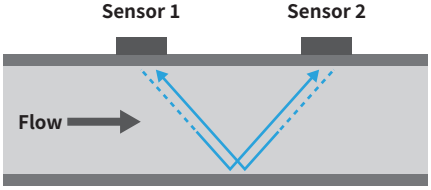
No need to apply grease the sensor

No grease application is required, which was previously necessary, making installation easy.

Measuring principle

Flow measurement using proprietary digital signal processing (Propagation time difference method)

Flow is measured by detecting the time difference caused by the flow, with ultrasonic pulses being propagated diagonally from both the upstream and downstream sides by sensors attached to the outside of the pipe.



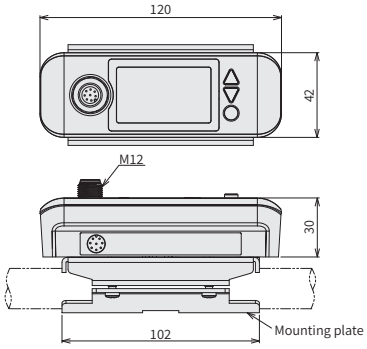
Specifications

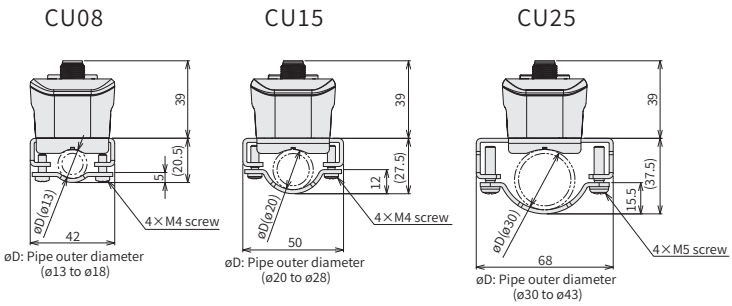
Model		CU08	CU15	CU25
Nominal diameter		8A / 10A	15A / 20A	25A / 32A
Measured flow velocity range [m/s]		0 ～ ±5　※1		
Flow rate range [L/min] *2		0.8 ～ 20 / 1.5 ～ 38	2.4 ～ 61 / 4.4 ～ 110	7.2 ～ 179 / 12.0 ～ 300
Low flow cutoff [L/min]		0.15	0.5	1.5
Repeatability accuracy *3		±0.3%FS (Damping time 5 seconds)		
Pipe surface temperature measurement range		-15 ～ 85°C		
Pipe surface temperature measurement accuracy		±2°C (at an ambient temperature of 20°C)		
Fluid to be measured		Uniform liquid through which ultrasonic waves pass (water, pure water, oil, etc.)		
Piping material		Metals (stainless steel, steel pipe, copper pipe), plastics (PVC, PP, PTFE)		
Pipe wall thickness		1.2 ～ 4.9mm		
Fluid temperature range	Ambient temperature 50°C or less	-15 ～ +85°C		
	Ambient temperature 50 ～ 55°C	-15 ～ +75°C		
	Ambient temperature 55 ～ 60°C	-15 ～ +60°C		
Ambient working temperature and humidity range		-15 ～ +60°C・95%RH or less (no condensation)		
Output	Analog (1 point)	4 ～ 20mADC　Allowable load resistance: 550Ω or less		
	Open collector (2 points)	Maximum load: 27.5VDC 100mA Maximum output frequency: 100Hz Minimum pulse width: 5ms		
	RS-485 communication	Transmission speed: 9600bps 19200bps 38400bps Number of connected units: max. 31 units		
Dedicated cable (option)		3 m or 10 m		
Display		LED 4-digit 7segment 2-row display (instantaneous. accumulated. pipe temperature. instantaneous value unit L/min, gal/min. accumulated value unit L, gal)		
Main setting functions		Piping conditions (material, wall thickness, outer diameter) , measured fluid, flow direction, analog output (unit, damping, FS value, etc.) , zero adjustment		
Protective structure		IP65 / IP67 (waterproof when connected to dedicated cable)		
Power supply		20 ～ 27. 5 VDC		
Power consumption		2.5 W or less		
Piping conditions		Upstream: 10D or longer　Downstream: 5D　or longer *4		
Compatible standards		CE		
Weight		Approx.400g	Approx.500g	Approx.600g

*1 It depends on flow direction setting.　*2 This is a value converted from the measured flow velocity range to flow rate.　*3 Accuracy is guaranteed for the flow velocity.
*4 Please contact us in case of T-shaped pipe, bent pipe, expanded pipe, or contracted pipe, etc., as the piping conditions will differ.
*5 Stable measurement may not be possible if foreign matter, bubbles, etc. are mixed in, which may interfere with ultrasonic flow measurement.

External dimension

Unit：mm





Technical specifications in this catalog are up-to-date as of March 2025.

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To Our Customers

Please understand that product specifications may be changed without notice in order to improve performance. We are always happy to provide the latest catalogs and brochures, and respond to inquiries made to our offices.

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