

*Insertion Type
Ultrahigh Accuracy Ultrasonic Flowmeter*

NINJA



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Ultrahigh Accuracy Ultrasonic Flowmeter



NINJA Characteristics...

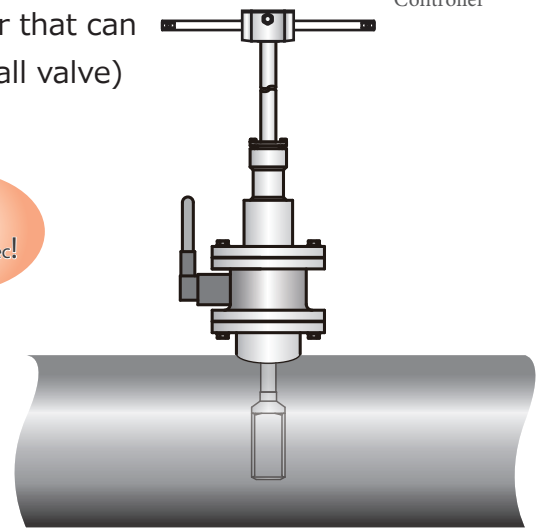
"NINJA" is a direct insertion type ultrasonic flow meter that can be installed to a pipeline using a maintenance valve (Ball valve) without stopping water flow.



Temperature Measurement



Ultrahigh Resolution
0.003m/sec!



Point 1

Installation Cost is Extremely Low

The **NINJA** can easily be *installed onto a Ball valve* without construction. There is ***no need to stop water flow.***

Point 2

Fast and Easy Calibration

Adjustment and **Calibration** is fully *automated*.

Start measuring, after just one push of the Calibration button.

Point 3

High Accuracy with Latest Ultrasonic Technology

Transit-time measurement accuracy has improved greatly with the newest technology. With a flow **resolution of 0.003m/sec**, the highest in the industry, **accurate** measurement of **micro flow** is also possible.

Point 4

Settings

The Parameter settings necessary for measurement, can easily be set through an **interactive LCD screen**.

Point 5

Temperature Measurement

The **NINJA** can measure fluid temperature. With accuracy of $\pm 1\text{ }^{\circ}\text{C}$, continuous **monitoring of temperature** is possible. (standard function)

Point 6

Portability

The **NINJA** may be **battery operated** when portability is required. Any battery that has appropriate voltages can be used. The easily attachable and detachable **NINJA**, can be productive as a **portable type** ultrasonic flowmeter.

【Specifications】



Controller / Display



Main Unit / Sensor

Connection Box



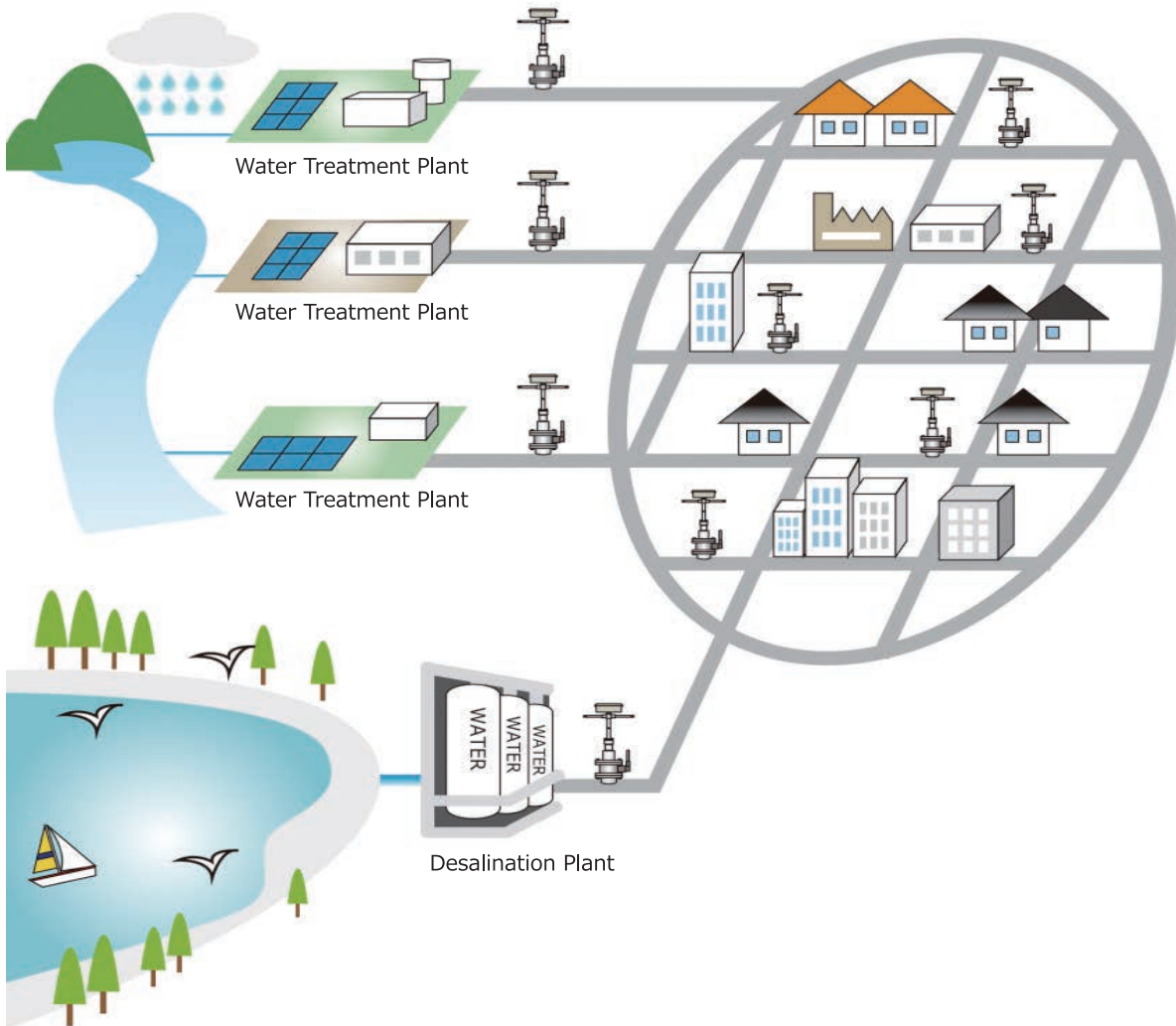
Sensor Part

■ General Specifications	
Measurable Fluids	Water, Pure Water, Industrial Water, etc.
Measurement Method	Transit-time Method
Applicable Pipe Sizes	DN80 ~ DN300
Measurable Velocity	0.000 ~ ±30.000 [m/sec]

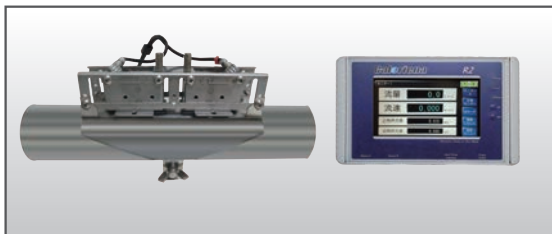
■ Controller / Display and Settings Specifications	
Supply Voltage & Power Consumption	DC24V (DC9V-DC26V Battery Operational) < approx. 7W
Analog Output	Ch 1 Flowrate DC 4-20mA (DC0-24mA) (Resistance 500Ω)
	Ch 2 Temperature, Flow velocity, Negative flowrate (selectable) DC 1-5V
Analog Input	Ch 1 Pressure DC 4-20mA (DC0-24mA)
	Ch 2 Temperature DC 4-20mA (DC0-24mA)
Digital Output	Ch 1 Positive Flowrate PhotoMOS Relay DC30V 500mA
	Ch 2 Negative Flowrate PhotoMOS Relay DC30V 500mA
	Ch 3 Measurement Error Non-voltage contact
Recording Medium	microSD Card (2GB MAX)
Communication	RS485 (Modbus RTU 9600-38400bps)
Calendar Clock	Built in Circuit board
Working Temperature	-5~55 °C (Controller)
Velocity Resolution	0.001 [m/sec] @300A
Measurement Accuracy	±0.6% for RD (at a flow rate > 0.5 [m/sec])
Man-machine Interface	4.3" LCD Color Touch Panel
Indication	Current flow rate [L/sec] [L/min] [L/hour] [m³/sec] [m³/min] [m³/hr] Current flow velocity [m/s] Positive flow rate pulse 0 to 999999.999 [m³] Negative flow rate pulse 0 to 999999.999 [m³]
Waterproof Performance	Controller IP65

■ Sensor / Main Unit Specifications	
Sensor	Ultrasonic Oscillator
Installation Method	Flange mounting
Material	AISI 316 (Insertion shaft) AISI 304 (Connection box, handle)
Weight	15Kg or more (depends on shaft length)
Waterproof Performance	Sensors IP68 Connection Box IP68

Application [Smart Water Grid]



■ You may also be interested in...



Calorienna R2[®]
Clamp Type
Ultrasonic Flowmeter

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