

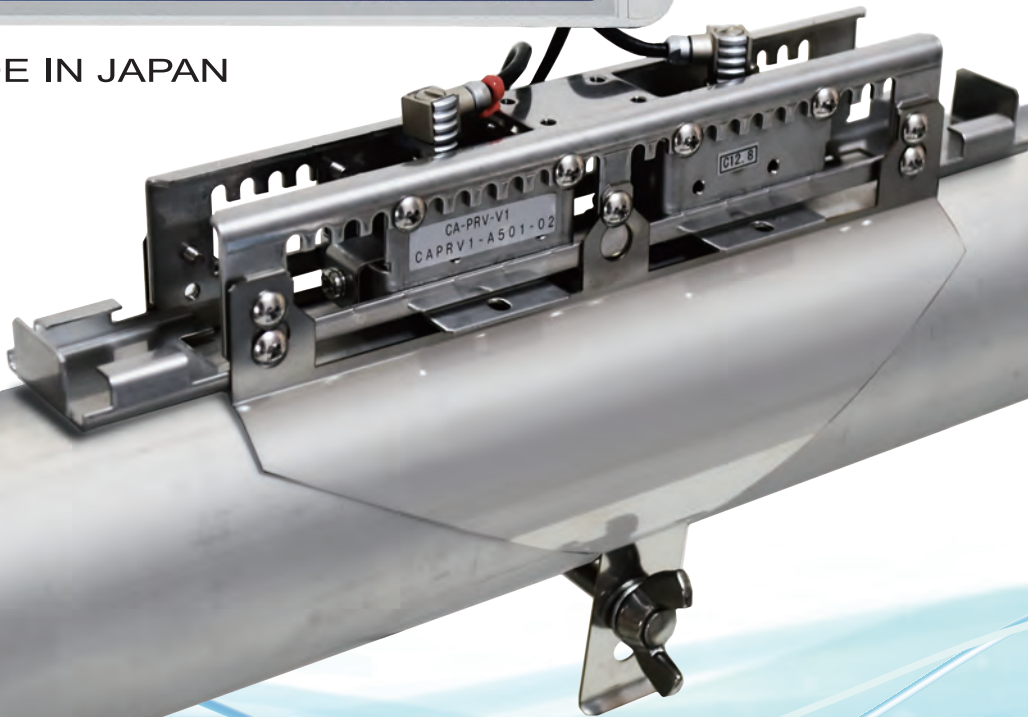
Ultra-high Accuracy &
Temperature Measurement

Caloriena R2[®]

The Clamp-on Type Ultrasonic Flow Meter



● MADE IN JAPAN



Caloriena R2

Ultra-high Resolution

Even more accurate with minute flows.

(From 0,001m/sec at >DN200, 0.6% for RD at >0.5m/sec)

Temperature Measurement Possible

The 'Caloriena' is able to simultaneously measure flow rate (ve liquid temperature within the piping, from outside the pipeline.

Fast and Easy Installation

Installation is simple. Just clamp the device onto the pipe with only 1 screw or velcro strap, cutting the installation time in half.

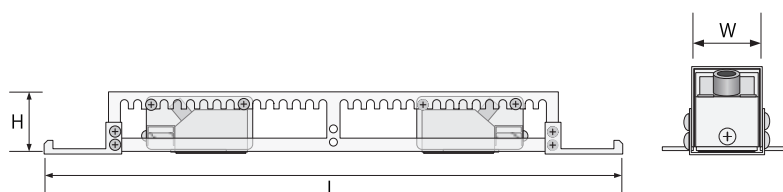
7" Color LCD with Touch Panel

All parameter settings can be set by following the guide on the LCD screen. The piping standard and pipe material are also listed for your convenience.



Extremely Compact

V1-type:	V2-type:
L:211.0	L:255.0
H:29.5	H:29.5
W:25.5	W:25.5
(mm)	(mm)

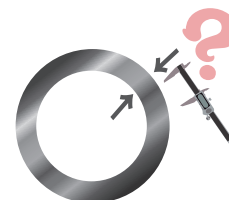


Auto Calibration

When water flow cannot be stopped, use 'Dynamic Calibration' for best tuning.

Auto Wall Thickness Detection

When thickness is unknown or cannot be measured due to corrosion, this feature will let you automatically detect the pipe wall thickness.



Battery Operable

For water flow tests and short term installation at test sites.

Compatible Controller

The controller is compatible with all four types of sensors. (V0, V1, V2, Z1)

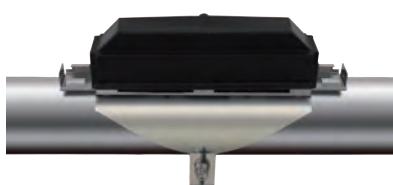
MODBUS

Store data onto a microSD card or connect directly to a computer by MODBUS(RS485).



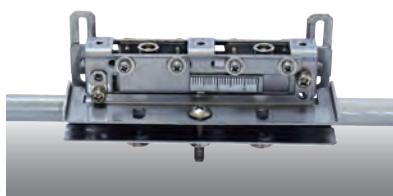


Controller
H170xW280xD60
(Excludes protusions)



Water Resistant Cover

V0 type



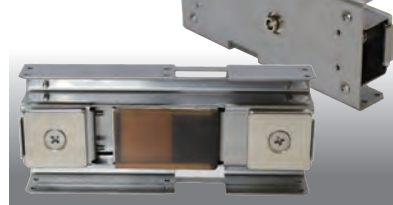
V1 type



V2 type



Z1 type



General Specifications

Category	Standard
Measurement Method	Transit-time
Measurable Fluids	Water, Pure water, fluids without air bubbles
Piping Material	Steel, Stainless Steel, Vinyl Chloride, Copper, Aluminium, Polyethylene, Acrylic, Cast Iron etc.
Applicable Pipe Size	DN6~DN1000
Flow Velocity	0.000~±20.000[m/sec]
Measurement Condition	Length of straight pipe (Up>10D, Down>5D)
Velocity Resolution	0.001[m/sec]@>DN200 / 0.003[m/sec]@<DN200
Accuracy	±0.6% RD (@>0.5[m/sec])
Fluid Temperature Measurement Range	0~80℃ (High temperature type 0~120℃)
Temperature Measurement	0.0~50.0[℃] (Accuracy±1℃)

Controller Specifications

Category	Standard	
Supply Voltage and Power Consumption	Dedicated Adapter (IN AC100-240V / OUT DC24V) Compatible Battery: (DC9V~DC26V) Power Consumption:3W	
Operation Interface	7" Color LCD with Touch Panel	
Analog Output	CH1 (Flow rate)	DC 4-20mA (DC0-24mA)
	CH2 (Temperature)	DC 0-5V
Digital Output (DC30V 1A max)	CH1 (PhotoMOS)	Positive flow rate pulse
	CH2 (PhotoMOS)	Negative flow rate pulse
	CH3 (Mechanical Relay)	Measurement error output
Analog Output	CH1 (Pressure)	DC 4-20mA
	CH2 (Temperature)	DC 4-20mA
Recording Medium	MicroSD card(2GB)	
Communication Port	RS485(MODBUS)	9,600~38,400 bps
Calendar Clock	Built-in	
Installation Method	With screws or DIN rail	
Operable Temperature	-5~50℃	

Sensor Specifications

Category	Standard	
Sensor	Ultrasonic wave oscillator	
Installation method	One-screw bracket or Velcro straps	
Fittings	Pipe Size	Sensor Type
	DN6~DN20	V0 type
	DN25(1″)	V1 type
	DN32(1¼″)	
	DN50(2″)	
	DN80(3″)	
	DN100(4″)	V2 type
	DN150(6″)	
	DN200(8″)	
	DN300(12″)	Z1 type
	DN300~DN1000	
Waterproof	IP65 (Under certain conditions)	

The Ultrasonic Flow Meter **Caloriena R2[®]**

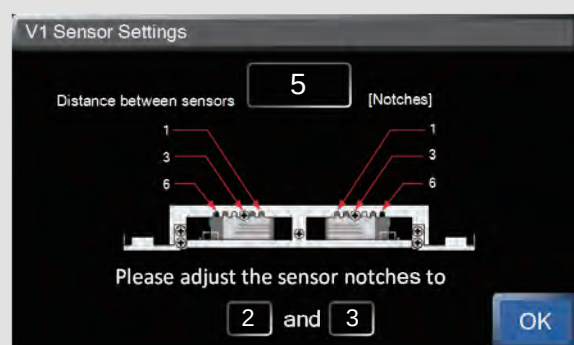
Useful Functions



Graph Display of Echo Received
Displays ultrasound signal strength.
Useful during setup and checking operation.



Measures Pipe Thickness
Useful when pipe inner diameter is unknown.



Sensor Position Guide
Automatically detects and displays optimum sensor positions for measurement.

The screen is titled 'Piping standard (Stainless) 1/2'. It displays a table of piping standards for JIS G 3459 TPS. The table includes columns for ND (mm, inch), OD (mm), and various schedule (Sch) standards (Sch 5S, Sch 10S, Sch 20S, Sch 40S, Sch 80S) with sub-columns for THICK and ID.

ND		OD	Sch 5S		Sch 10S		Sch 20S		Sch 40S		Sch 80S	
mm	inch	[mm]	THICK	ID	THICK	ID	THICK	ID	THICK	ID	THICK	ID
6	1/8	10.5	1.0	8.5	1.2	8.1	1.5	7.5	1.7	7.1	2.4	5.7
8	1/4	13.8	1.2	11.4	1.65	10.5	2.0	9.8	2.2	9.4	3.0	7.8
10	3/8	17.3	1.65	17.0	1.65	14.0	2.0	13.3	2.3	12.7	3.2	10.9
15	1/2	21.7	1.65	18.4	2.1	17.5	2.5	16.7	2.8	16.1	3.7	14.3
20	3/4	27.2	1.65	23.9	2.1	23.0	2.5	22.2	2.9	21.4	3.9	19.4
25	1	34.0	1.65	30.7	2.8	28.4	3.0	28.0	3.5	27.0	4.5	25.0
32	1 1/4	42.7	1.65	29.4	2.8	37.1	3.0	36.7	3.6	35.5	4.9	32.9
40	1 1/2	48.6	1.65	45.3	2.8	43.0	3.0	42.6	3.7	41.2	5.1	38.4
50	2	60.5	1.65	57.2	2.8	54.9	3.5	53.5	3.9	52.7	5.5	49.5
65	2 1/2	76.3	2.1	72.1	3.0	70.3	3.5	69.3	5.2	65.9	7.0	62.3

JIS G 3459 TPS

Piping Standards
Displays general piping standards.



Another product that may be of interest

NINJA
Direct-insertion
Ultrasonic Flow Meter

✉Contact:

ict co.,ltd.

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