



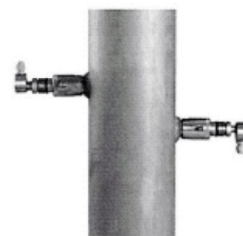
Introduction

FLOVEL FUM-1000-I series measures the velocity of the fluid by time difference. By adding temperature sensor, it also measure calories. It can inserts or attaches sensor by socket weld or band. It has algorithm to measure the sensor signal strength and align the distance between sensor precisely. So we can attach the sensor easily.



Features

- ✓ Display flow rate, accumulated flow, signal status of sensor by 2 line LCD
- ✓ Easy operation by menu
- ✓ A wide range of flow measurement : Min. 0.01 ~ Max. 30m/s (Forward & Reverse)
- ✓ Applicable tubing Size : 50 ~ 2,000mm(2 ~ 80 inch)
- ✓ Measurement accuracy : $\pm 1.0\%$ (R.D)
- ✓ 64 bit Data Logger Function (Option), Display date
- ✓ Response rate : Less than 1 second
- ✓ Measure and Display the distance between sensor automatically by signal rate of sensor
- ✓ Depending on pipe and properties of fluid, it can be installed in four ways like 'V'



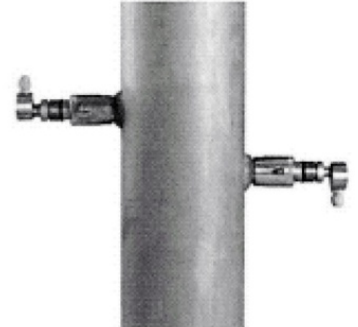
Specification

- | | | | |
|---------------------|---|--------------------------|---|
| ● Principle | : Transit time difference | ● Keypad | : 16 Key with tactile action |
| ● Pipe size | : IWWS; DN50 ~ 2,000 / Flow temp. Max. 160°C | ● Response time | : less than 1 second |
| | : ICIB ; DN50 ~ 2,000 / Flow temp. Max. 160°C | ● Velocity | : 0.01 ~ 30m/s(Forward & Reverse) |
| | : ICPB ; DN100 ~ 2,000 / Flow temp. Max. 160°C | ● Resolution | : 0.0001m/s |
| ● Pipe material | : Cast iron, Stainless steel, Soft iron, Copper, PVC, Aluminium, Asbestos, Glass fiber | ● Ambient Temperature | : -20 ~ +70°C |
| ● Display | : 2 Line LCD | ● Transmitter Mounting | : Wall mounting |
| | Flowrate : 5 digit with decimal point | ● Max. Cable length | : 150m |
| | Totalizer : 8 digits, forward, reverse & accumlate values | ● Power consumption | : less than 12W |
| ● Measurement unit: | M ³ , Liter, FT ³ , Gallon(US, Imperial, Million), Barrels(US, Imperial, Oil) | ● Power supply | : 90 ~ 260VAC 50/60Hz, 12 ~ 36VDC |
| | Time unit : Second, Minute, Hour, Day | ● Data storage | : Operation parameters and totalization date are stored by EEPROM for more than 10years |
| | other : Velocity, Date, Time, Signal Condition | ● Output | : 4 ~ 20mA or 0 ~ 20mA |
| ● Accuracy | : $\pm 1 \sim \pm 2\%$ of reading (0.5~30m/s) | ● Pulse Output | : 1 ~ 9,999Hz |
| | : $\pm 0.5\%$ of reading (option) | ● Data Logger (Option) | : 64 data include Flowrate, Totalizer, Time, Date |
| ● Repeatability | : 0 ~ 30m/s(R.D) | ● Alarm | : High or Low Buzzer |
| | ($\pm 0.2 \sim 0.5\%$ of measurement value) | ● Communication | : RS-485 |
| ● Linearity | : $\pm 0.5\%$ | ● Dimension | : 213W×184H×105Dmm |
| | | ● Weight | : 3kg |
| | | ● Enclosure Construction | |
| | | Converter | : IP65 |
| | | Sensor | : IP68(Water-proof) |

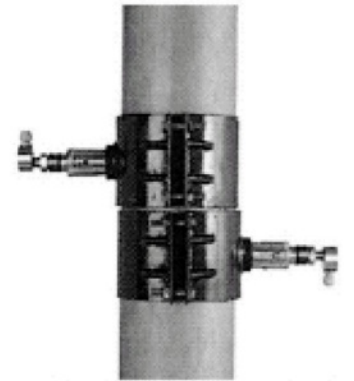


Sensor Specification

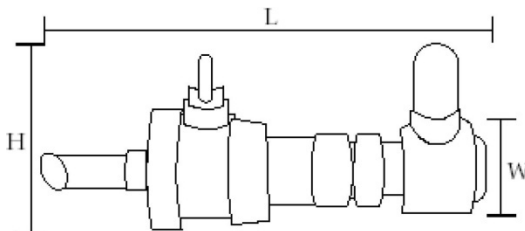
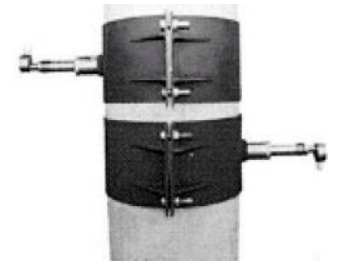
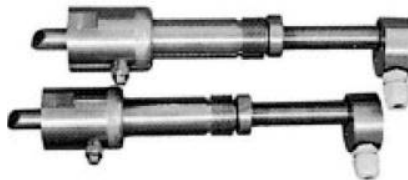
- Type : IWWS
- Wetted Welding Type Sensor
- Temperature : Max. 160°C
- Pipe size : DN50 ~ 2,000
- Material
 - ◆ Sensor : 316SS
 - ◆ Mounting Part : 316SS
 - ◆ Welding Socket : C.S



- Type : ICIB
- Cast Iron Pipe Band Type Sensor
- Temperature : Max. 160°C
- Pipe size : DN50 ~ 2,000
- Material
 - ◆ Sensor : 316SS
 - ◆ Mounting Part : 316SS
 - ◆ Band : C.S

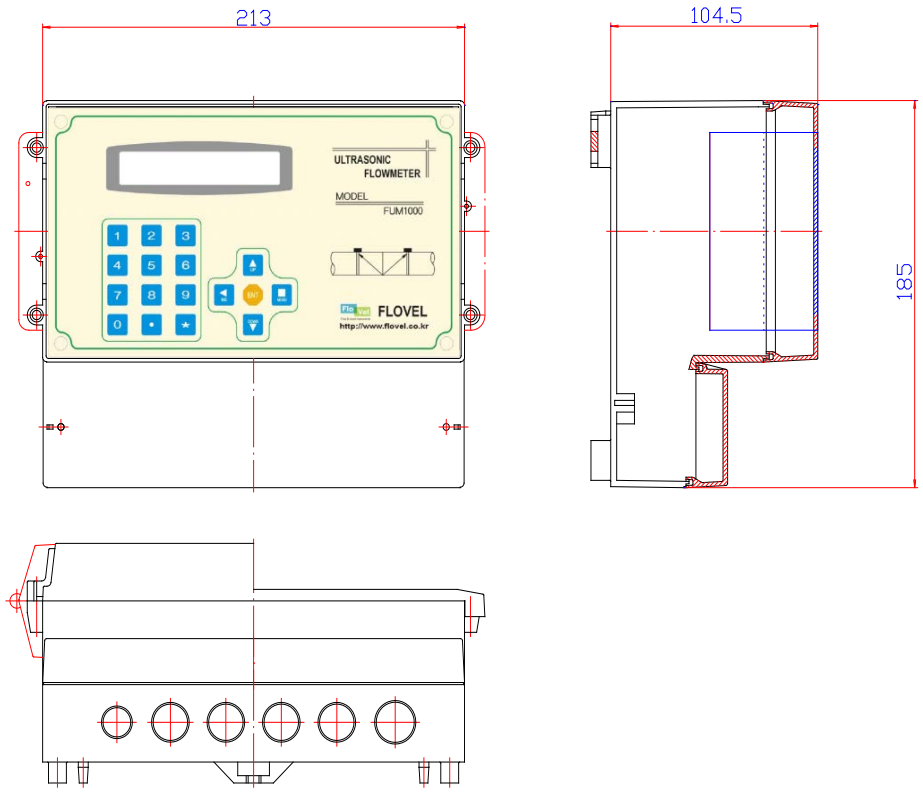


- Type : ICPB
- Cement Pipe Band Type Sensor
- Temperature : Max. 160°C
- Pipe size : DN100 ~ 2,000
- Material
 - ◆ Sensor : 316SS
 - ◆ Mounting Part : 316SS
 - ◆ Band : C.S

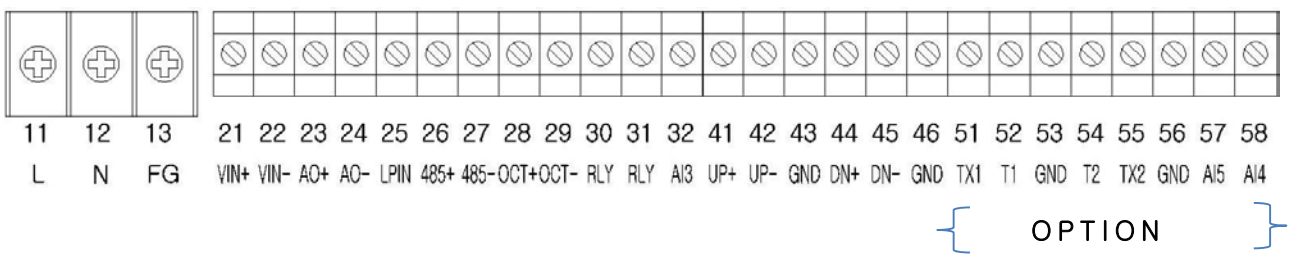


Size mm	Length	Height	Width
	189	77	43

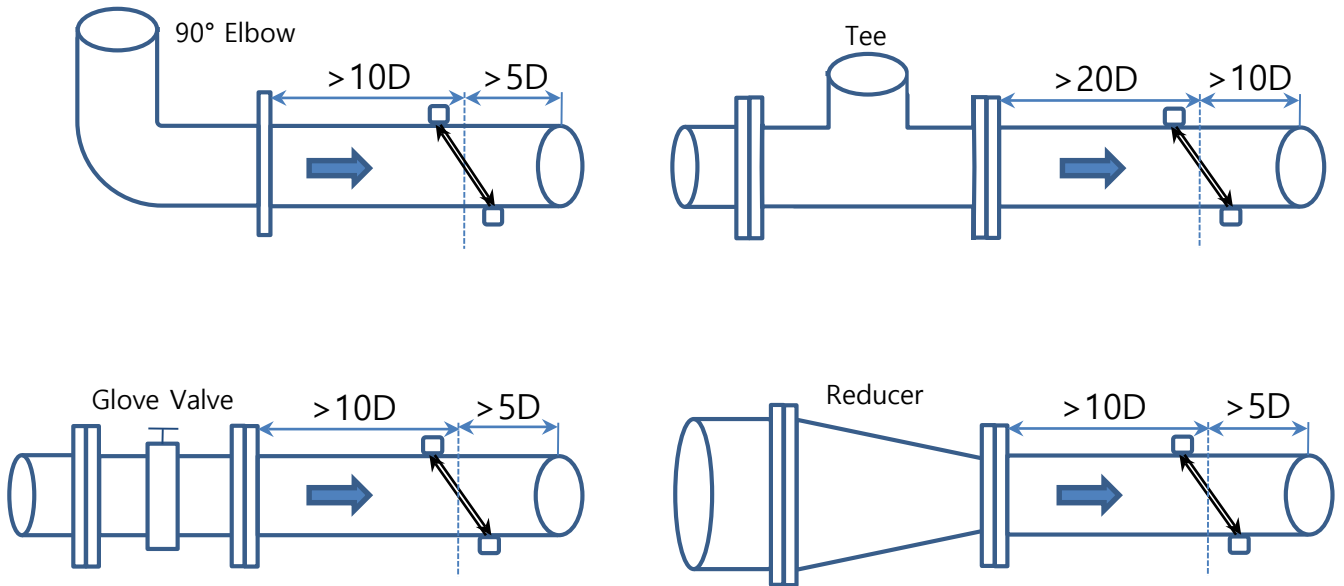
 **FUM-1000 Dimension**



 **FUM-1000 Wire Connection**



Straight pipe requirements



Product Selection

FUM-1000-IWWS-020-AC		
Ex.) FUM-1000 -IWWS-020-AC (FUM-1000 +IWWS+Cable 10m+90~260VAC Power)		
Basic	FUM-1000	<ul style="list-style-type: none"> • FUM-1000 Main Convertor : 1 • Sensor : 2 • Mounting Hardware : 2
Sensor	IWWS	Wetted Welding Sensor / DN50 ~ 2,000
	ICIB	Cast Iron Pipe Band Sensor / DN50 ~ 2,000
	ICPB	Cement Pipe Band Sensor / DN100 ~ 2,000
Signal Cable	length	5m Option Max. 150m
Power Options	AC	90 ~ 260VAC 50/60Hz
	DC	24VDC