

# AVFM-II

ULTRASONIC AREA-VELOCITY FLOW METER



A SENSOR CAN MEASURE BOTH FLOW RATE  
& WATER-LEVEL AT A TIME, CONTINUOUSLY



After mounting a sensor on the bottom of a channel without a flume or weir, you can measure the flow volume only by entering the pipe diameter or channel width. As it measures the actual flow rate and water-level in a real time, it can come up with the highly accurate measurement.

## ■ FEATURES

- A single ultrasonic sensor continuously measures both velocity and level.
- No flume or weir is needed.
- The sensor can easily be mounted with a setscrew and a mounting bracket.
- For calibration, just enter the pipe diameter or channel width, and there is no other special requirement.
- It can measure flow velocity up to 6m/second.

## ■ PRINCIPLE OF OPERATION

It continuously measures velocity (on Doppler effect) and level (on time flight) with ultrasonic waves transmitted from the sensor to compute the flow volume in calibrating by entering the pipe diameter and channel width.



Monitoring for agricultural water-intake



Darin flow-volume monitoring



River inflow monitoring

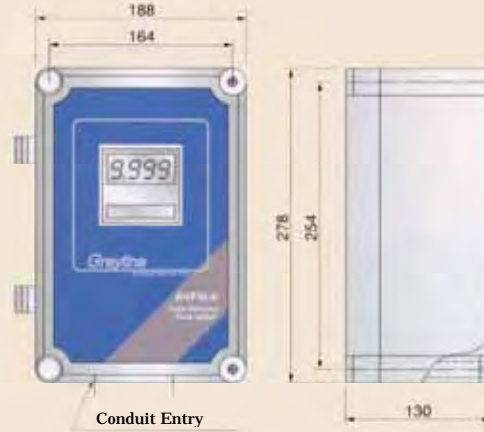


Predicting river-flood

## SPECIFICATION/ OUTLINE DIAGRAM

### CONTROLLER

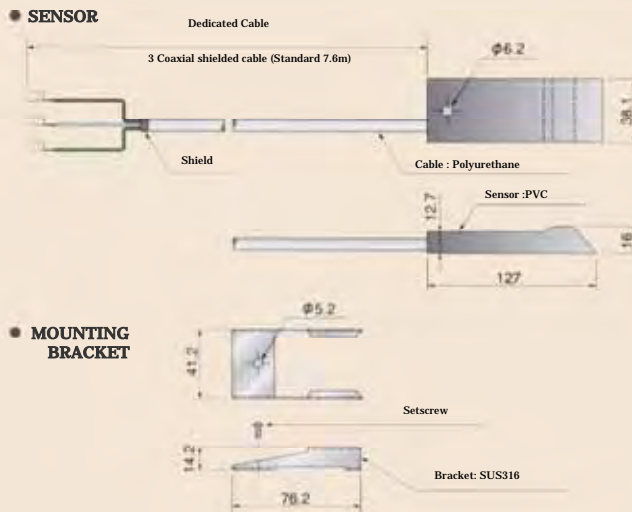
Power	: 100-130VAC 50/60Hz (Max 6.2W) * OPTION 200-250VAC 50/60Hz (Max 6.2W) 9 – 36VDC (Max 4.2W)
Output	: 4 – 20mA (Allowable load resistance 1000 $\Omega$ x 3 (Flow,, Level & Velocity)
Contact	: 2 Contact-point (SPDT)
Contact capacity	: 250VAC 5A
Display	: 4 digit LCD (upper) 16 digit LCD(lower)
Temperature	: -20 – 60 (no freezing, no condensation)
ENCL. rating	: NEMA4X IP66
Housing material	: ABS
[OPTION]	
Intrinsic Safety Barriers	: CSA Explosion-proof/ Class I, Grp C, D Class II, Grp E,F,G Class III



\* Be sure to install at a safety zone or Div. 2 area.

### SENSOR

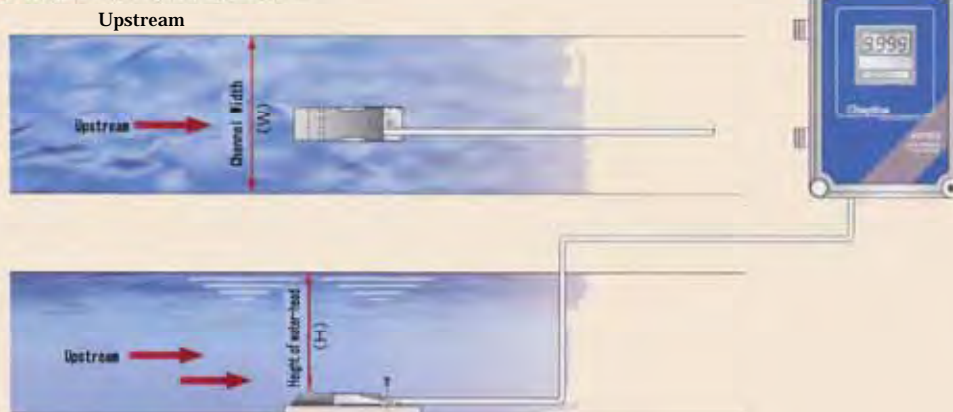
Sensor material	: PVC / Epoxy resin
Temperature	: -15 – 65
Accuracy	: Level / $\pm 0.25\%$ of range Velocity / $\pm 2\%$ of readings
Measuring range	: Velocity / Min 0.03m /sec. Max 6m /sec Level / Min 25.4mm Max 4.57m
Cable material	: Polyurethane
Cable length	: About 7.6m



### MOUNTING BRACKET

Bracket Material : SUS316

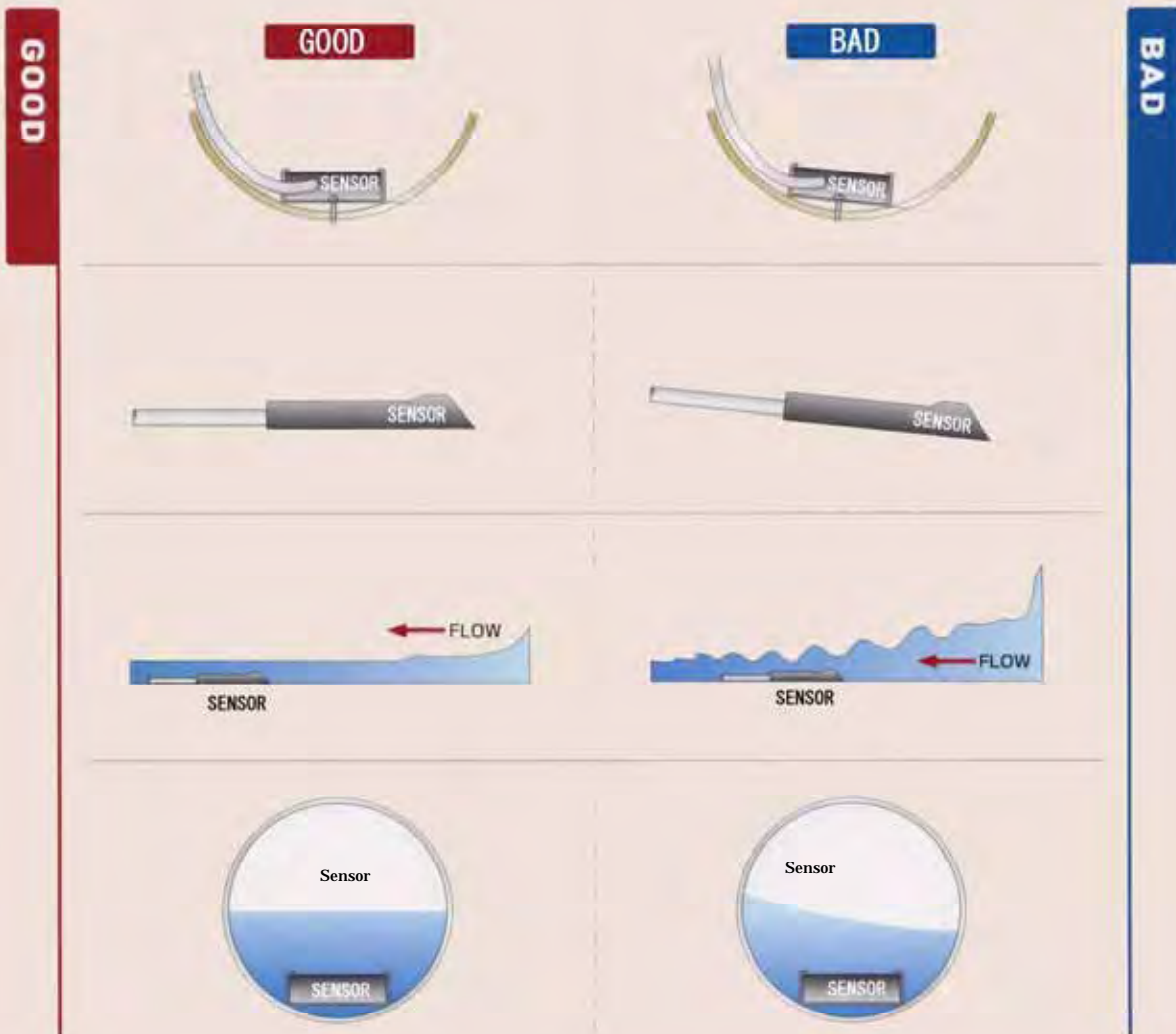
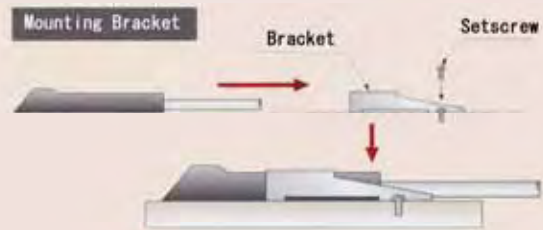
### Recommended Mounting Diagram



## NOTES ON MOUNTING

Mount the sensor so its tapered-end points upstream and the sensor cable does downstream.  
Mount the sensor at such a place that there is least fine-sand or fouling.

Where there are some obstructions (interfering flowing), mount the sensor at a point of the maximum range to waterhead away from the obstruction, or 10 times as away as the channel width.



### Line of business

- 回転式レベルスイッチ
- 振動式レベルスイッチ
- 振子式レベルスイッチ
- 音波式レベルスイッチ
- 静電容量式レベルスイッチ
- 静電容量式近接センサ
- 静電容量式レベルメータ
- ダイアフラム式レベルスイッチ
- チルトスイッチ
- リーク式レベルスイッチ
- マイクロウェーブスイッチ
- ザウニング式レベルメータ
- フロースイッチ
- 電機式レベルスイッチ
- フロートスイッチ
- フロート式レベルメータ
- 超音波式レベルメータ
- コンベア周辺機器
- ダストモニタ
- ジルコニア酸率濃度計
- レーザー式レベルメータ
- 電波式レベルメータ
- 液体濃度・濁度計
- 超音波流量計

\* Please be sure to read USER'S GUIDE, Installation & Operation Instructions when using the instrument.  
\* The specifications herein may be subject to change without advance notice

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