TOKYO KEIKI

Open Channel Ultrasonic Flowmeter

for Agricultural water, River water or Industrial effluent

UFH-100

The UFH-100 ultrasonic flowmeter system for open channels employs the latest in ultrasonic technology.

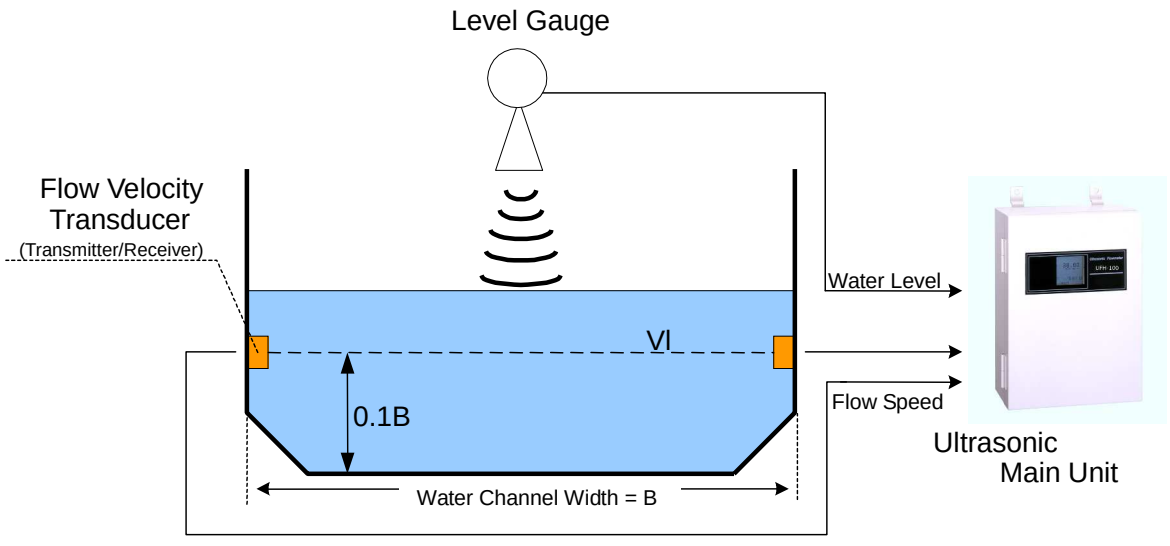
Utilizing our wealth of know-how and technical expertise, the UFH-100 system combines an ultrasonic flow rate meter with a 2 wire level gauge to provide accurate and stable flow measurements.

It is applicable for liquids with free surfaces such as agricultural water, river water and industrial effluents.

Features

- **Flow is calculated based on flow velocity data and water level data which enable precise monitoring of changes in flow.**
- **This non-intrusive system does not retain the water channel in any way so there is no head loss or build up of sediment on components.**
- **Flow measurements can be made from zero to full water levels.**
- **Sensing components are easy to install.**
  Water channel modifications are not necessary in the case of existing as well as new facilities.
- **System is low-maintenance as there are no moving parts in the flow velocity and water level sensing components.**
- **Up to 4 flow velocity measurement paths are possible. As each measurement line is set independently, effective multiple line measurement even including diverse water channel profiles such as rectangular, inverted trapezoid, and horseshoe, is possible.**
- **Water level measurement can be performed with any 2-wire level gauge.**

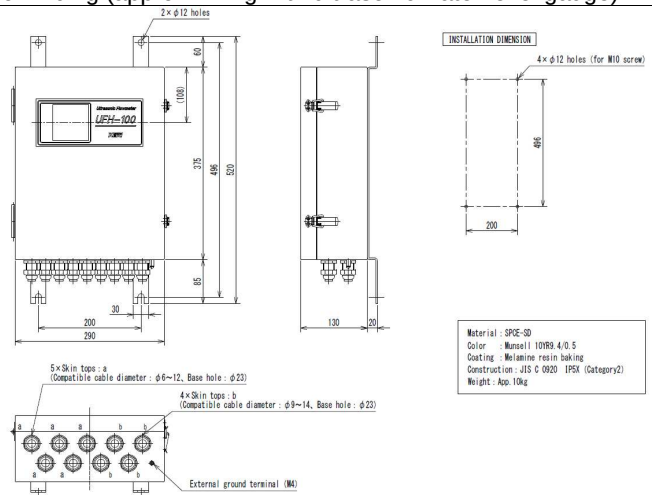
Measurement Method



Specifications

Measurable liquid	Applications: agricultural water, river water, process water, industrial effluents, etc. Water temperature: 0~40°C / Turbidity: ≦ 10000 mg/L (degree)		
Measurement water channel	Water channel width: 0.3~20m (circular water channels ø0.3~5m) Needed channel straight run: standard - upstream ≧ 10B, downstream ≧ 5B (B: water channel width, pipe diameter in case of circular water channel)		
Measurement principle	Flow: flow velocity × channel cross sectional area (water level) computation method Flow velocity: ultrasonic pulse transit time difference method Water level: signal from existing or any 2 wire level gauge (DC 4~20mA) can be utilized.		
Measurement range	Flow: 0 ~ full water level flow	Flow velocity: 0~10m/s	Water level: 0～10m
Output signals	Flow: 4~20 mA DC (allowable load resistance within 750Ω) ※ with arrester element Flow Pulse: Capacity AC 3~250V / DC 3~125V Flow velocity: 4~20 mA DC (option: allowable load resistance within 750Ω) Water level: 4~20 mA DC (option: allowable load resistance within 750Ω)		
Accuracy	Flow Forward flow: less than ±3% of full scale Reverse flow: not specified as it depends on channel structure (+/- 10mm or better accuracy for level gauge required.)		
Alarm relay output	Water level measurement failure, flow velocity measurement failure		
Display	16 digit × 16 digit LCD display (with backlight) Flow value: max. 6 digits (incl. comma, decimal point) Water level: max. 6 digits (incl. m unit, comma and decimal point) Flow velocity: max. 6 digits (including m/s unit, comma and decimal point) Operation status indication		
Power source	AC90V – 132V (50/60 ±2Hz) Standard AC180V-250V (50/60 ±2Hz) (Option)		
Power consumption	AC100V approx. 30VA AC240V approx. 40VA		
Ambient temperature	-10C degree ～50C degree		
Ambient humidity	Less than 90% RH (non-condensation)		
Main unit configuration	Wall mount type IP5X (IEC60529 / dust proof)		
Weight	Approx. 10 kg (approx. 11 kg with ultrasonic water level gauge)		

Dimensions



Design and specifications are subject to change without prior notice, and without any obligation on the part of the manufacturer.

⚠ **CAUTION**	Before operating this equipment, you should first throughly read the operator'smanual.

TOKYO KEIKI INC.

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