MICRONICS

CLAMP-ON, NON-INVASIVE SENSING SOLUTION

ULTRASONIC LIQUID FLOW METER

ACCURATELY MEASURE
"TURBID" AS WELL AS "CLEAN"
LIQUIDS

Portaflow PF-300

Portaflow PF-204

Dopplerflow PDFM-IV

Ultraflow UF-2000

Portaflow PF-300, 204, 216, SE
Ultraflow UF-2000
Dopplerflow PDFM-IV

CAT. No. BBM-0104-01

KANSAI Automation Co., Ltd.

ACCURATELY MEASURE "TURBID" AS WELL AS "CLEAN" FLUIDS !

- To suit existing pipes with no adjustment
- Possibly measure accurately and instantly from outside the pipe.
- See instantaneous flow, velocity and total flow from digital display.
- A variety of outputs (RS232, 4-20mA, pulse)
- Portable, easy to commission and service.
- Beste choice out of many types depending on pipe diameter, flow velocity.
- Metal pipe, resin pipe, lining pipe can be accepted.
- Just follow instruction for set-up input.
- "Time of Flight" for clean water and "Doppler" for solids liquid

■ OPERATING PRINCIPLE

It measures a Transit Time ultrasonic flow. It can accurately measure with clamp-on transducers without the need for any mechanical parts to be inserted through the pipe wall or to protrude into the flow system.

■ FLOW RANGE

The flow range depends on the flow velocity of measured liquids and the pipe diameter. The sensor is designed to cover the wider range of flow and wider diameter. You can make a choice by application. The sensor is designed to make the best performance to any applications in either Reflex Mode or Diagonal Mode.

APPLICATIONS

Balancing system monitoring **Environmental monitoring** **Indicator**
Leak detection maintenance **Pump efficiency check** **Planning**
Flow check **Check of emergency stand-by pump**
Commissioning adjustment

APPLICABLE INDUSTRIES

Water and sewerage **Water treatment** **Deionized water facility**
Water feed for building **Heat Control system** **Pharmaceutical**
Chip MFG facility **Chemical** **Petrochemical**
Food **Power Plant** **Iron making**

Pipe Dia (mm)	Flow Velo(m/s)	Applicable Type
13 - 100	0.02 - 8	PF-300 / PF-204
50 - 400	0.02 - 12	PF-300
	0.50 - 8	PF-216
50 - 1000	0.02 - 12	PF-300
	0.50 - 12	PF-SE
300 - 2000	0.02 - 7	PF-300*
1000 - 5000	0.02 - 7	PF-300*

*Sensor is optional.

Portaflow 300 & SE

HIGHLY FUNCTIONAL /PORTABLE MODEL

A back light LCD display in large size being adopted, it is easy to read, and the set-up is simple and quick thanks to the track system.

You can make a choice so as to suit your application out of various sensors that can work on a wide variety of pipe sizes and flow velocity.. May we recommend SE Model that is highly functional and price competitive if the pipe diameter is 50 to 1000mm. The 300 model with self-check functionality is best suited to control various applications from small to large pipe diameter.


Portaflow PF-300

Portaflow PF-300キット

■ STANDARD SPECIFICATION

Enclosure : IP66 CE (300) High Density Polyurethane, IP66 (SE) ABS
Dimensions : 275 x 150 x 55mm(300)
236 x 125 41mm (SE)
Display : LCD
Keypad : 16 key
Connector : Lemo IP66
Temperature : Operating 0 – +50℃
Storage -10 - +50℃
Supply Voltage: 110 – 220VAC ±10% 50/60Hz 9W
Battery : 24-30 hrs continuous operating on fully charged battery cells (300)
10 hrs (SE)
Display : Volumetric flow m^3, Gallons, L
Flow velocity m/sec. f/sec
Total flow 12 digits
Battery level
Signal level
Error messages
Graphic (300 only)
Output : 4-20mA 750Ω resolution 0.1% FS
0 – 5V 1pulse/sec Max (300only)
RS232C
Memory capacity: 100K (50,000 data points)
Temperature range: - 20 - + 200℃(300)
- 20 - +125℃ (SE)
Accuracy : 1% or ±0.02m/sec
(turbulent flow profile with Reynold numbers above 4000)
Self-check : PF-300 only
Response Time: below 2 sec
Repeatability: ±0.5% with unchanged transducer positions.

Portaflow PF-204 & PF-216

SIMPLIFIED/PORTABLE MODEL

To suit pipes with a small bore !

It is an ultrasonic portable flow meter that you can use easily to make flow readings with only limited function including a quick flow reading in activation. The difference between PF-204 and PF-216 is the transducer varied by the pipe bore. It is a handy model with which we can readily use when we need data.

Portaflow PF-204

Portaflow PF-216

■ STANDARD SPECIFICATION

Enclosure : IP40
Material : ABS
Weight : below 0.5kg
Dimensions : 204 x 110 x 41mm
Display : LCD
Keypad : 15 key
Connector : Lemo IP66
temperature : Operating 0 – 55℃
: Storage -10 - +55℃
Supply Voltage: 110 – 220VAC ±10%
50/60Hz 9W
Battery : Rechargeable Ni-Cad batteries
10hrs continuous operation
Display : Volumetric flow m³, Gallons, L
Flow velocity m/sec. f/sec
Total flow 7 digits
Pulse : 0 – 5V Max 1pulse per second

Pipe bore	: Flow Range	Type
13-100	0.02-8m/sec	PF-204
50-400	0.5 – 8m/sec	PF-216

Temperature : -20 - +125℃ (PF-204)
-20 - +200℃ (PF-216)
Accuracy : 1 - 3% or ±0.02m/sec
(turbulent flow profile with Reynold numbers above 4000)
Response Time: below 2 sec
Repeatability: ±0.5% with unchanged transducer positions.

Ultraflow UF-2000

HIGHLY FUNCTIONAL/ STATIONARY MODEL

A back light LCD display in large size being adopted, it is easy to read. It is the stationary model whose set-up we can easily accomplish.

It is a highly reliable and self-check sensor that can contribute to the process measurements and control in your company in terms of a variety of sensors and output forms enabling wider applications. Providing information including a 4-20mA flow proportional output, Pulse output or Set point, Negative flow indication, it loads variable damping functions to cope with poor and unstable flow conditions. An optionally available version, the UF-2000HM can be used to meter Heat or Energy.

Ultraflow UF-2000

■ STANDARD SPECIFICATION

Enclosure : IP67 CE, ABS
Dimensions : 264 x 230 x 101mm
Display : 2 x 16, backlit LCD
Keypad : IP67 16 key
Connector : TNC coax IP65
Temperature : Operating 0 – 55℃
Storage -10 - +60℃
Supply Voltage: 110 – 220VAC ±10% 50/60Hz
24VDC
Display : Volumetric flow m³, Gallons, L
Flow velocity m/sec. f/sec
Velocity range 0.2 – 12m/sec
Total flow 12 digits
Signal level
Error messages
Output : 4-20mA 759Ω resolution 0.1% FS
0 – 5V Max 1pulse per second
RS232C
Memory Capacity: 100K (50,000 data points)

Pipe bore	: Flow Range	Diagonal
13-100	0.02 - 4m/sec	8m/sec
50-400	0.02 – 8m/sec	12m/sec
50-1000	0.02 – 8m/sec	12m/sec
300-2000	0.02 – 4m/sec	7m/sec *option
1000-5000	0.02 – 4m/sec	7.5m/sec*option

Temperature : -20 - +200℃
Accuracy : 1% or ±0.02m/sec
(turbulent flow profile with Reynold numbers above 4000)
Response Time: below 2 sec
Repeatability: ±0.5% with unchanged transducer positions.

Dopplerflow PDFM-IV

HIGHLY FUNCTIONAL PORTABLE DOPLER FLOW METER

Flow meter utilizing the ultrasonic Doppler effect, suitable for measuring liquids containing bubbles or solids !

Besides its quick response time and easy flow measurements, it can be strapped on a pipe in a minute. It is ideal to measure any "difficult liquids" including wastewater, slurries, sludge, chemicals, viscous fluids, and abrasives. It can be used in AC as well as DC with batteries or charger built in. It can also be used as Standby Generator for diagnostic process with 4-20mA outputs. We can check flow or troubles in retrieving 50,000 point data in the built-in Data Logger.

■ OPERATING PRINCIPLE

It continuously injects high frequency sound through the pipe wall into the flowing liquid. Gas bubbles or solids suspended in the liquid reflect the ultrasonic signal back to the sensor. When the sound is reflected from moving bubbles or particles it is returned to the sensor at an altered frequency, which is called as the Doppler effect. In applying the Doppler effect, it measures the flow from the change from its transmitted frequency to the received frequency..

Dopplerflow PDFM-IV

STATIONARY MODEL AVAILABLE

■ STANDARD SPECIFICATION

Measuring object: 100 μ, over 750ppm(particles, gas)
Enclosure : Aluminum (No standard)
Dimensions : 254 x 165 x 300mm
Display : Numeric Values: large 4 digit LCD
16 digit LCD alphanumeric
Built-in key : 3
Temperature : Operating -23 – +60℃
Supply Voltage: Rechargeable built-in batteries
12VDC 16hr
100 – 160VAC, 200 – 260VAC, 12VDC
Display : Flow velocity m/sec. f/sec
Total flow 16 digits
Signal level
Damping : Adjusting with keypad
Output : 4-20mA 500Ω
0 – 5V Max 1pulse per second
RS232C
Memory Capacity: 50,000 data points
Pipe bore : 12.5 – 4000mm
Flow rate range: 0.08 – 12.2m/sec
Temperature : -23 - +93℃
-40 - +150℃ (option)
Sensor withstand pressure: 10psi
Accuracy : 2% FS
Response Time: below 2 sec
Repeatability: ±0.1% with unchanged transducer positions.

製造元
MICRONICS

■営業品目 HANDLING ITEMS

❶回転式レベルスイッチ
❷振動式レベルスイッチ
❸音波式レベルスイッチ
❹静電容量式レベルスイッチ
❺静電容量式近接センサ
❻静電容量式レベルメータ
❼ダイヤフラム式レベルスイッチ
❽チルトスイッチ
❾リーク式レベルスイッチ
❿マイクロウェーブスイッチ
⓫サウンジング式レベルメータ
⓬フロースイッチ
⓭電極式レベルスイッチ
⓮フロートスイッチ
⓯フロート式レベルメータ
⓰超音波式レベルメータ
⓱コンベア周辺機器
⓲ダストモニタ
⓳レーザー式レベルメータ
⓴電波式レベルメータ
㉑液体分析オンラインセンサ

ご使用に際しては取扱説明書を必ずお読み下さい。
※予告なく仕様変更することがありますので予めご了承下さい

Nuclear Power Generation to Rice Milling
All-round Manufacturer of Level Controllers for Powder, Granules and Liquid

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