Solenvis
experts in energy metering

Open channel & partially filled pipe Ultrasonic flow meters

SUITABLE FOR PARTIALLY FILLED PIPES AND OPEN CHANNEL

FAMOUS PROFESIONAL ULTRASONIC FLOWMETERS MANUFACTURER, ADVANCED TECHNOLOGY, SERIES PARTIALLY FILLED PIPE ULTRASONIC FLOWMETERS ARE SUITABLE TO MEASURE THE FLOW OF PARTIALLY FILLED PIPE OR OPEN CHANNEL.

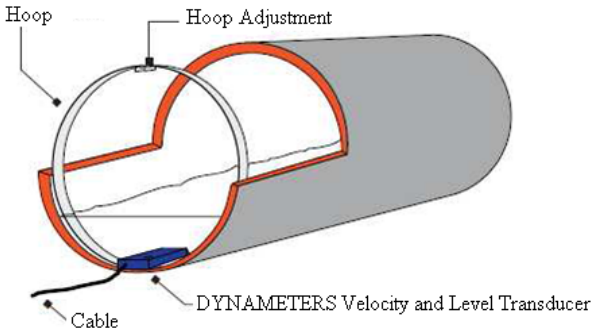
Features:

- Excellent low flow rate measurement ability, low to 0.021 m/s
- Automatically signal gain adjustment
- Superior measurement accuracy
- 4-20mA and RS485/MODBUS output, GPRS is optional
- Complete in specifications, and can provide a variety of applications
- Very suitable for large pipe or open channel sewage measurement

Applications:

- Open Channel Flow
- Partially pipes
- Water treatment
- Sewage treatment
- Irrigation
- Industrial waste
- Environmental monitoring

DMDF-OP -B open channel & pipe outlet flow meter



Measuring diagram

DMDF-OP -B Flow Meter includes flow calculator, DYNAMETERS velocity and level transducer. It is suitable for the flow measurement of pipe outlet and open channel.

DMDF-OP -B Fixed Partially Filled Pipe Flow meters

Flow Calculator

DMDF-OP -B Fixed Flow meters

Fixed Flow Calculator

The flow calculator can set the calculate the cross-sectional area of partially filled pipe or open channel, for circular pipe, it only need to input the inner diameter; for open channel, it only need to input the width; users also can input up to 20 point coordinates of channel to calculate the cross-sectional area.

The flow calculator can display the velocity, level, flow rate and flow totalizer, and is configured with 4-20mA and RS485/MODBUS output, GPRS is optional.

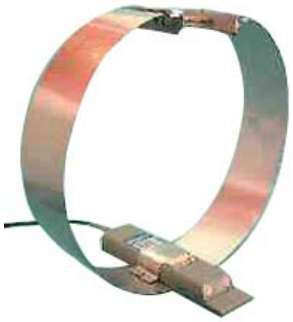
DYNAMETERS Velocity and Level Transducer

By using digital signal processing techniques, DYNAMETERS velocity and level transducer is able to perform in a wide range of environments. It is used to record flows in pipes, channels and small streams and operates in a wide range of water qualities from fresh streams to primary sewage channels.
DYNAMETERS velocity and level transducer combines water velocity and water depth measurement

with a powerful data logger. Its systems have been tested in small streams and pipes, and the calibration has been verified in a tow tank.

DYNAMETERS velocity and level transducer is mounted on (or near to) the bottom of the stream/pipe/culvert and measures the velocity and depth of the water flowing above it.

Velocity and Level Transducer



Installation Drawing of Transducer in Circular Pipe

When installing transducer, a hoop as shown above is needed, at first, fix the transducer on the hoop, then fix the component in the pipe, and connect the cable to flow calculator.

TECHNICAL SPECIFICATIONS

<table>
<tr><td rowspan="6"> 
Fixed Flow Calculator</td><td>Pipe Sizes</td><td colspan="2">300mm～2000mm</td></tr>
<tr><td colspan="3">Flow Calculator</td></tr>
<tr><td>Enclosure</td><td colspan="2">NEMA 4X [IP65], cast aluminum
260L×193W×80H (mm), 10.2L×7.6W×3.2H(inch)</td></tr>
<tr><td>Power Supply</td><td colspan="2">100~240VAC, 50/60 HZ ±5%, 5VA Max
Or 12~28VDC, 2.5VA Max.</td></tr>
<tr><td>Outputs</td><td colspan="2">4-20mA, RS485/Modbus, GPRS(optional)</td></tr>
<tr><td>Temperature</td><td colspan="2">-40 to +70℃</td></tr>
<tr><td rowspan="11"> 
DYNAMETERS Velocity and Level Transducer</td><td colspan="4">DYNAMETERS Velocity and Level Transducer</td></tr>
<tr><td>Enclosure</td><td colspan="2">290L×70W×25H(mm); 11.4L×2.8W×1H(inch)</td></tr>
<tr><td>Material</td><td colspan="2">PVC body, Stainless steel mounting plate</td></tr>
<tr><td rowspan="2">Accuracy</td><td>Velocity</td><td>2% of measured</td></tr>
<tr><td>Level</td><td>±0.25% of calibrated lower range</td></tr>
<tr><td rowspan="2">Measuring Range</td><td>Velocity</td><td>0.021m/s to 4.5m/s bidirectional</td></tr>
<tr><td>Level</td><td>0 to 2m（021） 0 to 5m（051）</td></tr>
<tr><td>Temperature</td><td colspan="2">0°C to 60°C water temperature</td></tr>
<tr><td>Cable Length</td><td colspan="2">15 meters, 9 way vented cable «SQL» Compatible</td></tr>
<tr><td rowspan="2">Power Supply</td><td>Battery</td><td>External 12VDC</td></tr>
<tr><td>Voltage</td><td>11.5V to 15VDC</td></tr>
</table>

Model Selection Table of DMDF-OP -B fixed flow meters

MODEL DMDF-OP -B -X -X -X

Flow Calculator
- F-Fixed

Output
- N-None
- R-RS485
- M-Modbus
- G-GPRS

Level Range
- 21-0 to 2m（021）
- 51-0 to 5m（051）

Example: DMDF-OP -B-F-G-21 means fixed flowmeters, GPRS output, and the level range is 0 to 2m.

DMDF-OP-B Portable Partially Filled Pipe Flow meters

Flow Calculator

DMDF-OP -B Portable Flow meters

Portable Flow Calculator

The flow calculator can set the calculate the cross-sectional area of partially filled pipe or open channel, for circular pipe, it only need to input the inner diameter; for open channel, it only need to input the width; users also can input up to 20 point coordinates of channel to calculate the cross-sectional area.

The flow calculator can display the velocity, level, flow rate and flow totalizer, and is configured with 4-20mA and RS485/MODBUS output, GPRS is optional.

DYNAMETERS Velocity and Level Transducer

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Velocity and Level Transducer

Installation Drawing of Transducer in Circular Pipe

When installing transducer, a hoop as shown above is needed, at first, fix the transducer on the hoop, then fix the component in the pipe, and connect the cable to flow calculator.

TECHNICAL SPECIFICATIONS

 Portable Flow Calculator	Pipe Sizes	300mm～2000mm	
	Flow Calculator		
	Enclosure	NEMA 4X [IP65], ABS 358L×250W×150H (mm), 14.1L×9.8W×5.9H(inch)	
	Power Supply	rechargeable lithium battery, 12VDC, 14.4Ah, Over 50 hours working time on a full-charge Charger: 100~240VAC, 50/60 HZ ±5%, 3A Max	
	Outputs	4-20mA, RS485/Modbus, GPRS (optional)	
	Temperature	-40 to +70℃	
 DYNAMETERS Velocity and Level Transducer	**DYNAMETERS Velocity and Level Transducer**		
	Enclosure	290L×70W×25H(mm); 11.4L×2.8W×1H(inch)	
	Material	PVC body, Stainless steel mounting plate	
	Accuracy	Velocity	2% of measured
		Level	±0.25% of calibrated lower range
	Measuring Range	Velocity	0.021m/s to 4.5m/s bidirectional
		Level	0 to 2m（021） 0 to 5m（051）
	Temperature	0°C to 60°C water temperature	
	Cable Length	15 meters, 9 way vented cable «SQL» Compatible	
	Power Supply	Battery	External 12VDC
		Voltage	11.5V to 15VDC

Model Selection Table of DMDF-OP -B Portable flowmeters

MODEL DMDF-OP -B -X -X -X -X

Flow Calculator
- P-Portable

Output
- N-None
- R-RS485
- M-Modbus
- G-GPRS

Level Range
- 21-0 to 2m（021）
- 51-0 to 5m（051）

Extend operation time
- N- Normal
- E- Extend the operation time to 120 hours

Example: DMDF-OP -B-P-G-21-E means portable flow meters, GPRS output, and the level range is 0 to 2m, Extend the operation time to 120 hours.