MicroFlow

Non-contacting Microwave Liquid Velocity Sensor

pulsar®
PROCESS MEASUREMENT

MicroFlow

Non-contacting microwave liquid velocity sensor

Features

- Non-contacting
- Cost-effective
- Lightweight, compact design
- Minimal installation costs
- No interruption to service
- Maintenance-free
- RS485 Modbus
- IP68

Pulsar's MicroFlow delivers accurate, repeatable velocity measurement for liquid flow, either as a stand-alone device or as part of a complete measurement system.

MicroFlow builds on Pulsar's award-winning pipe flow technology and world-leading open channel flow measurement systems.

MicroFlow can be installed as a stand-alone velocity sensor delivering data via RS485 Modbus or integrated within a complete system when combined with FlowCERT or Ultimate controller and dB series transducer.

Velocity x area calculation using MicroFlow provides a cost-effective flow measurement option compared to the installation of a primary measurement device such as a flume, and provides a viable alternative where the hydraulics of the site do not allow for a restriction in the channel.

EASY TO INSTALL MICROFLOW BRACKET

MICROFLOW AND dBMACH3

VELOCITY MEASUREMENT IN WIDE CHANNELS

FIELD MOUNTING OF MICROFLOW AND LEVEL MEASUREMENT

BUILT-IN WEATHER SHIELD AS STANDARD

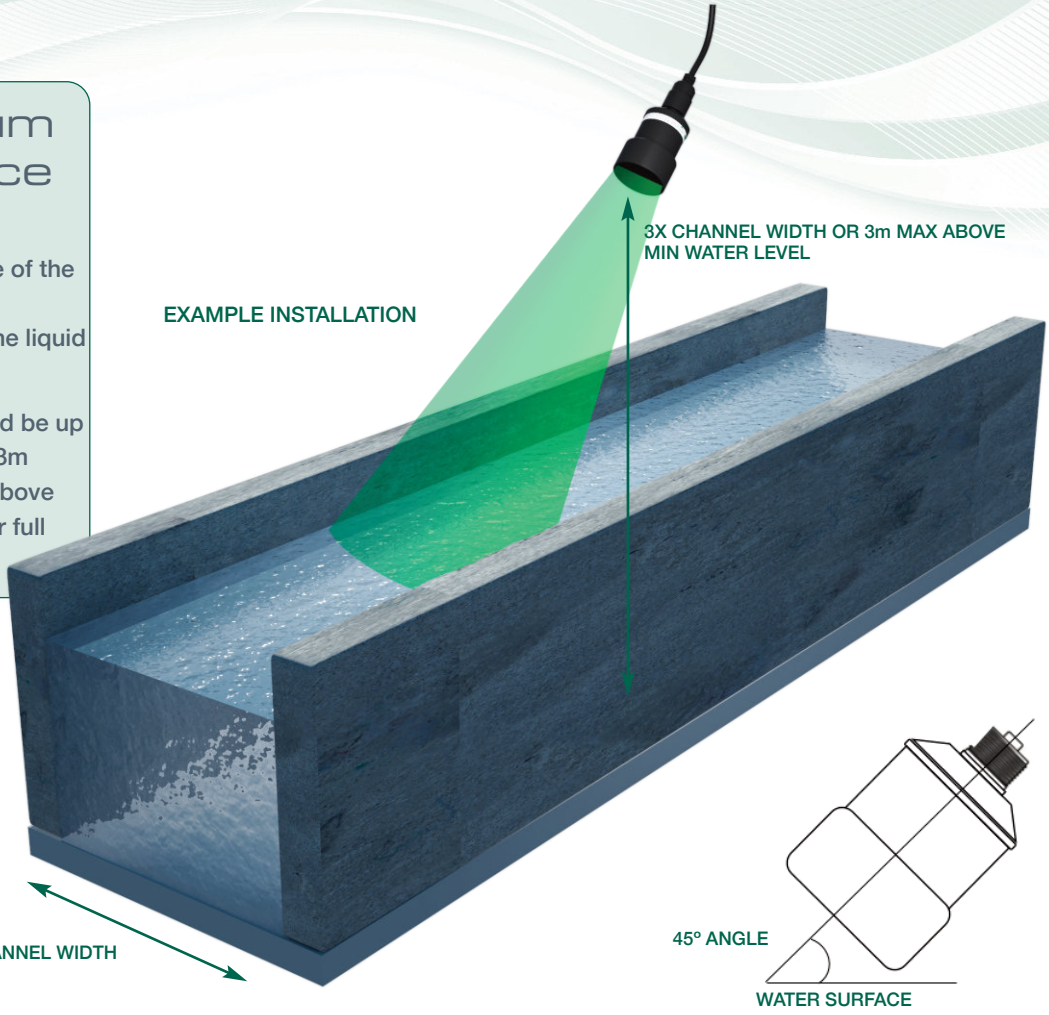
FLOW MEASUREMENT IN NARROW UNDERGROUND U-SHAPED CHANNEL

Easy installation

No service interruption, maintenance-free

For optimum performance

- 45° mounting angle
- Mount at the centre line of the channel with a clear uninterrupted view to the liquid surface
- MicroFlow height should be up to 3x channel width or 3m (whichever is smaller) above minimum water level for full channel measurement



For a complete open channel measurement system

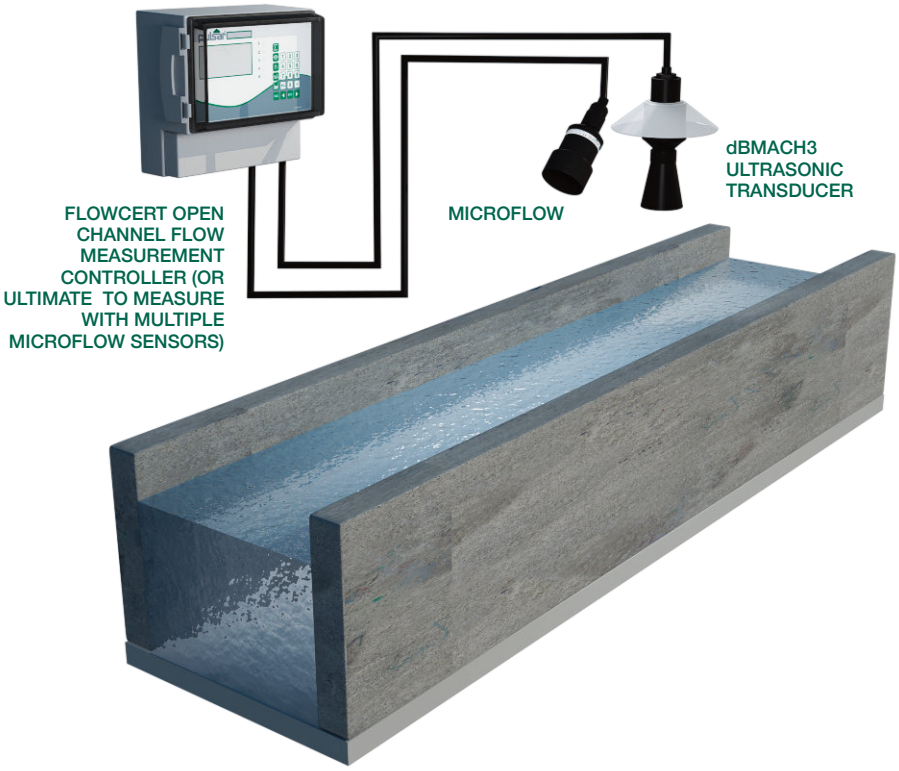
Add FlowCERT and dBMACH3 transducer

Expandable

1 With FlowCERT and dBMACH3 to convert velocity measurement to flow, or:

2 Use with Pulsar Ultimate Controller and dBMACH3:

- For channels wider than 1.5m
- Multiple MicroFlow sensors
- Pulsar Speedy velocity sensor (submerged, doppler) can be included to add underwater velocity measurement



Technical Specification

PHYSICAL	
Sensor body material:	Valox 357
Mounting connection:	Mounting bracket with 45º bend (optional)
Sensor body dimensions:	Diameter 86mm x Height 156mm
Sensor weight:	Nominal 1kg
Transducer cable extensions:	Maximum 100m
ENVIRONMENTAL	
Enclosure protection:	IP68
Maximum and minimum temperature:	-20ºC to +70ºC (-4ºF to +158ºF)
Flammable atmosphere approval:	Safe area (Hazardous area pending)
APPROVALS	
CE approval:	Complies with BS EN61326-1:2013 for emissions and immunity
RADAR approvals:	EN 300-440-1 EN 300-440-2 FCC 15.245
PERFORMANCE	
Operating voltage:	10-28Vdc
Velocity range:	0.2 - 6.0m/s
Accuracy:	The greater of ±0.5% or 0.03m/s
Optimum installation:	45º optimum and mounted in the centre line of the channel with clear uninterrupted view of the liquid surface.
Level measurement: **RADAR:** **Transmitter power:**	Compatible with up to dB6 transducer K Band (ISM) <15dBm
Beam width:	20º inclusive
OUTPUTS	
Communication:	RS485 and Modbus RTU
Compatibility with Pulsar controllers:	Integrates with FlowCERT or Ultimate
PROGRAMMING	
PC Programming:	Via RS485 Modbus
Programming security:	Via passcode
Programming data integrity:	Via non-volatile memory
PC setup and monitoring software:	MicroFlow PC
SUPPLY	
Power consumption:	0.5W maximum

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UK AWARDS/CERTIFICATIONS

ISO 9001 Registered Company sira CERTIFICATION UKAS MANAGEMENT SYSTEMS 011
CERTIFICATE NUMBER: 950136-1

ISO 14001 Registered Company sira CERTIFICATION UKAS MANAGEMENT SYSTEMS 011
CERTIFICATE NUMBER: 072570-1

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