

# MicroFlow

## Non-Contacting Liquid Flow Velocity Sensor

MicroFlow is a non-contacting liquid flow velocity sensor that uses microwave technology to transmit short pulses that reflect off a moving surface back to the sensor and are analysed to determine the velocity. It is designed for open channel flow applications where the channel has no existing primary measurement device (e.g. weir or flume). Can be combined with a Pulsar level transducer and controller in order to provide a complete flow measurement system.



### Technical Specification:

#### PHYSICAL:

<b>Sensor body dimensions:</b>	Diameter 90mm x height 140mm (3.54in x 5.51in)
<b>Sensor body weight:</b>	Nominal 1kg (2.2lbs)
<b>Sensor body material:</b>	Valox 357
<b>Transducer cable extensions:</b>	5-core screened
<b>Maximum separation:</b>	Up to 500m (1640ft)
<b>Mounting connection:</b>	Via 1" BSP back mounted thread or 20mm via supplied adaptor Optional mounting bracket available from Pulsar
<b>Mounting angle:</b>	45° optimum and mounted at the centre line of the channel with a clear uninterrupted view

#### ENVIRONMENTAL:

<b>Enclosure protection:</b>	IP68
<b>Max. and min. temperature (electronics):</b>	-20°C to +60°C (-4°F to +140°F)

#### APPROVALS:

<b>CE &amp; radar approvals:</b>	Listed in the Certificate of Conformity within the <a href="#">manual</a> .
<b>ATEX approval:</b>	Ex II 2 G D, Ex mb IIC T4 Gb, Ex mb IIIC T135°C Db, Ta= -20°C to +60°C

#### PERFORMANCE:

<b>Velocity range:</b>	0.2 - 6m/s (0.66 - 19.7ft/s)
<b>Operational range:</b>	Up to 3m height (9.84ft)
<b>Accuracy:</b>	The greater of $\pm 0.5\%$ or 0.05m/s (0.1ft/s)
<b>Optimum installation:</b>	Install at an angle of 45° in line with the flow. More information is provided within the <a href="#">manual</a> - see the 'Locating the MicroFlow sensor' section
<b>Max. channel width per sensor:</b>	1.5m (4.92ft)
<b>Radar:</b>	K-Band (ISM)
<b>Transmitter power:</b>	<15 dBm
<b>Beam width:</b>	20° inclusive

#### OUTPUTS:

<b>Communication:</b>	RS485 and Modbus RTU
<b>Compatibility with Pulsar controllers:</b>	Integrates with <a href="#">FlowCERT</a> or <a href="#">Ultimate</a>

#### PROGRAMMING:

<b>PC programming:</b>	Via RS485 Modbus RTU
<b>Programming security:</b>	Via passcode
<b>Programmed data integrity:</b>	Via non-volatile memory
<b>PC setup and monitoring software:</b>	MicroFlow PC - Compatible with Windows 7/8/10

#### SUPPLY:

<b>Operating voltage:</b>	10 - 28Vdc
<b>Power consumption:</b>	0.36W

Also available in a 4-20mA loop powered version with ATEX Ex ia Zone 0 approval - [MicroFlow-i](#)

Patent pending.

Pulsar Process Measurement Ltd. operates a policy of constant development and improvement and reserves the right to amend technical details as necessary.

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