

Greyline

# AVFM 6.1

## Technical Specifications:

The Area-Velocity Flow Meter 6.1 measures flow through partially filled pipes, channels, canals, and turnouts without a flume or weir. Ideal for wastewater, stormwater, effluent, industrial wastewater, and irrigation water. Compute the flow volume and displays the flow rate. Measure forward and reverse flow and calibrate to channels of any shape.



### GENERAL SPECIFICATIONS

<b>Operating Parameters:</b>	Round pipe, rectangular, trapezoid, egg, or custom shapes
<b>Programming:</b>	Built-in 5-key calibrator with English, French, or Spanish language selection
<b>Electronics Enclosure:</b>	NEMA4X (IP66) polycarbonate with clear, shatterproof cover
<b>Accuracy:</b>	<ul style="list-style-type: none"> <li>Level: <math>\pm 0.25\%</math> of reading or <math>\pm 2.03</math> mm (0.08 in), whichever is greater. Repeatability &amp; Linearity 0.1%.</li> <li>Velocity: <math>\pm 2\%</math> of reading or <math>\pm 12.2</math> mm (0.04 ft/s), whichever is greater. Requires solids or bubbles minimum size of 100 microns, minimum concentration 75 ppm. Repeatability &amp; Linearity 0.5%</li> </ul>
<b>Display:</b>	White, back-lit matrix — displays flow rate, totalizer, relay states, operating mode, and calibration menu
<b>Power Input:</b>	<ul style="list-style-type: none"> <li>100-240 V AC 50/60 Hz, 10 V A maximum</li> <li>Optional: 9-32 V DC, 10 W maximum</li> </ul>
<b>Analog Output:</b>	3 Isolated 4-20mA, 1 k $\Omega$ , (flow, level, and velocity) or 0-5 V DC by menu selection
<b>Control Relays:</b>	2 Relays, form 'C' dry contacts rated 5 A SPDT; programmable flow alarm and/or flow proportional pulse (sampler/totalizer), flow and/or level alarm
<b>Data logger:</b>	Programmable 26 million point data capacity, time and date stamped plus formatted flow reports including total, average, minimum, maximum, and times of occurrence. Includes USB output to Flash Drives and Windows software.
<b>Operating Temp. (Electronics):</b>	-20 °C to 60 °C (-5 °F to 140 °F)
<b>Approximate Shipping Weight:</b>	4.5 kg (10 lb)
<b>Approvals:</b>	CE, CSA/UL/EN 61010-1

### TRANSDUCER SPECIFICATIONS

<b>Transducer:</b>	QZ02L submersible sensor measures level and velocity
<b>Level Measurement Range:</b>	<ul style="list-style-type: none"> <li>Minimum Head: 25.4 mm (1 in)</li> <li>Maximum Head: 4.6 m (15 ft)</li> </ul>
<b>Velocity Measurement Range:</b>	30.5 mm/s to 6.2 m/s (1.2 in/s to 20 ft/s) and reverse flow to -1.5 m/s (-5 ft/s) in fluids containing bubbles or solids with a minimum size of 100 microns and a minimum concentration of 75 ppm to act as acoustic reflectors
<b>Operating Temperature:</b>	-15 °C to 80 °C (5 °F to 175 °F)
<b>Exposed Materials:</b>	316 stainless steel, epoxy resin, polyurethane
<b>Transducer Cables:</b>	7.6 m (25 ft) submersible polyurethane jacket, shielded, 3-coaxial
<b>Transducer Mounting Kit:</b>	Includes MB-QZ stainless steel mounting bracket
<b>Temperature Compensation:</b>	Automatic, continuous

## POPULAR OPTIONS

### Industrial Automation Protocols:

Modbus RTU via RS485 or HART (field selectable)

### Transducer Cables:

15.2 m or 30.5 m (50 ft or 100 ft) submersible, continuous from sensor — or splice up to a total of 152.4 m (500 ft) lengthlength

### Sensor Cable Junction Box

Watertight NEMA4 polycarbonate with connection terminal strip

### Enclosure Heater:

Thermostatically controlled to -40 °F/°C — recommended for temperatures below 0 °C (32 °F)

### Intrinsic Safety Barriers:

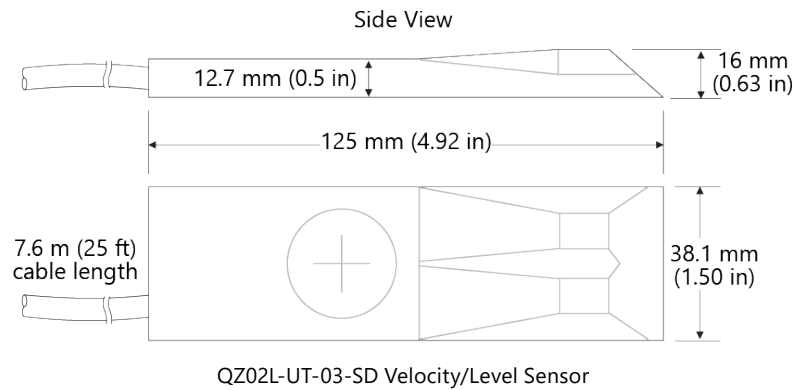
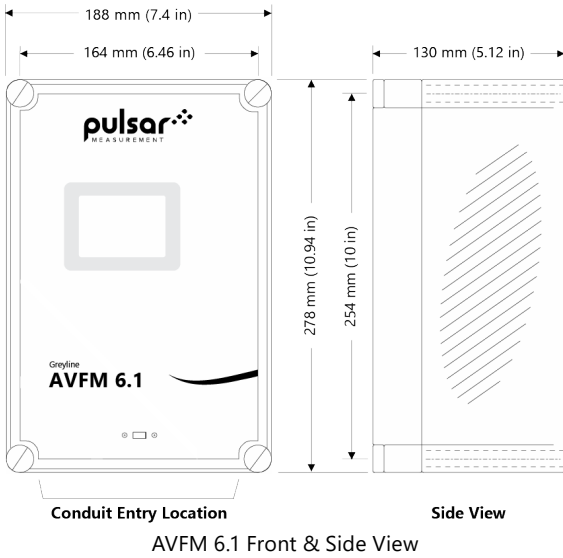
For sensor mounting in Class I, II, III, Div. I, II, Groups C, D, E, F, G hazardous locations

### Transducers:

Separate non-contacting ultrasonic level sensor and submerged velocity sensor

### Sensor Mounting Bands:

Stainless steel sensor mounting bands for pipes 152.4 mm to 1.8 m (6 in to 6 ft) diameter



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