



SENSORS &
CONTROLLERS



ANALYZERS
& SAMPLERS



LEVEL, FLOW
& PRESSURE



WEB APP &
DATALOGGING



ACCESSORIES

AVFM 6.1 DATASHEET

AREA-VELOCITY FLOWMETER DATASHEET



MAIN FEATURES

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.

APPLICATIONS

The AVFM 6.1 flowmeter is used for the measure of flow in pure and process waters.

Measure of flow in:

- Wastewater
- Industrial Effluent
- Stormwater
- Combined Sewers
- Natural Streams
- Irrigation Water

CHEMITEC S.R.L.

VIA I. NEWTON, 28 50018 SCANDICCI (FI)- ITALY
+39 0557576801 • sales@chemitec.it • www.chemitec.it

AVFM 6.1 AREA-VELOCITY FLOWMETER DATASHEET

TECHNICAL DATA

Operating parameters	Round pipe, rectangular, trapezoid, egg, or custom shapes
Programming	Built-in 5-key calibrator with English, French, or Spanish language selection
Electronics Enclosure	0,00 μ S to 20000 μ S
Accuracy	- Level: $\pm 0.25\%$ of reading or ± 2.03 mm (0.08 in), whichever is greater - Velocity: $\pm 2\%$ of reading or ± 0.012 m/s (0.04 ft/s), whichever is greater. Requires solids or bubbles min. size of 100 μ m, min. concentration 75 ppm
Repeatability	- Level: 0.1% - Velocity: 0.5%
Display	White, backlit matrix – displays flow rate, totalizer, relay states, operating mode, calibration menu
Power input	100-240 VaC 50/60 Hz, 10 VA maximum; Optional: 9-32 VdC, 10W maximum
Analog Output	3 isolated 4-20mA, 1 K Ω (flow, level and velocity) or 0-5 VdC by menu section
Control Relays	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
Data logger	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
Operating Temp. (Electronics)	-20 $^{\circ}$ C to 60 $^{\circ}$ C (-5 $^{\circ}$ F to 140 $^{\circ}$ F)
Shipping Weight	4.5 kg (10 lb)
Approvals	CE, CSA / UL / EN 61010-1

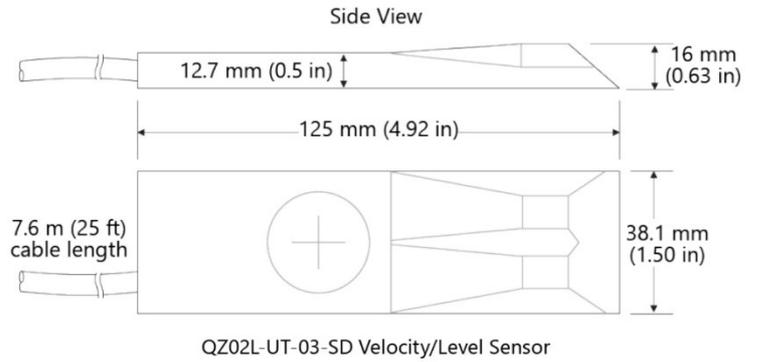
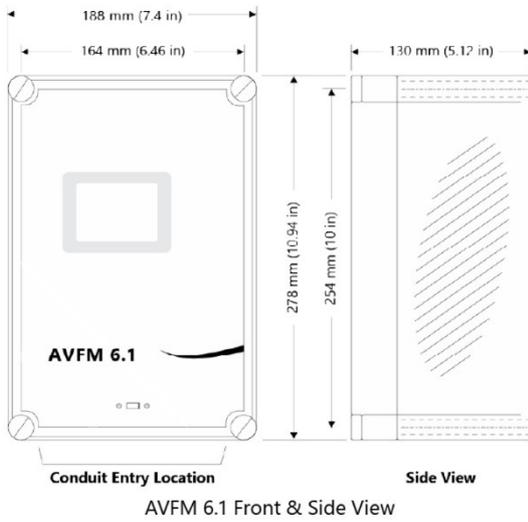
TRANSDUCER SPECIFICATIONS

Transducer	QZ02L submersible sensor measures level and velocity
Level Measurement Range	• Minimum Head: 25.4 mm (1 in) • Maximum Head: 4.6 m (15 ft)
Velocity Measurement Range	0.031 m/s to 6.2 m/s (0.1 ft/s to 20 ft/s) and reverse flow to -1.5 m/s (-5 ft/s) in fluids containing bubbles or solids with a min. size of 100 μ m and a min. concentration of 75 ppm to act as acoustic reflectors
Operating Temperature	-15 $^{\circ}$ C to 80 $^{\circ}$ C (5 $^{\circ}$ F to 175 $^{\circ}$ F)
Exposed Materials	316 stainless steel, epoxy resin, polyurethane
Transducer Cables	7.6 m (25 ft) submersible polyurethane jacket, shielded, 3-coaxial
Transducer Mounting Kit	Includes MB-QZ stainless steel mounting bracket
Temperature Compensation	Automatic, continuous

OPTIONS

Industrial Protocols	Modbus RTU via RS485
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) length
Sensor Cable Junction Box	Watertight NEMA4 polycarbonate with connection terminal strip
Enclosure Heater	Thermostatically controlled to -40 $^{\circ}$ F/ $^{\circ}$ C — recommended for temperatures below 0 $^{\circ}$ C (32 $^{\circ}$ 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 Φ 152.4 mm to Φ 1.8 m

DIMENSIONS



ORDER CODES

AVFM6IAIAIAIAIA	AVFM 6.1 Meas. range for open channels Area x cable speed 7.6 m
AVFM6IAIAIAIBIA	AVFM 6.1 Meas. range for open channels Area x Cable speed 15 m
AVFM6IAIAIAICIA	AVFM 6.1 Meas. range for open channels Area x Cable speed 30 m
AVFM6IAIAIBIBIA	AVFM 6.1 Meas. flow rate Area x Velocity sens. Lv. separate 15m cable