

What is it?

FlowCon is a flow monitoring system specifically designed for pulsating flows associated with positive displacement diaphragm metering pumps.

What does it do?

FlowCon is ideally suited for remote locations or for applications where immediate detection of reduced chemical feed due to overpressure, empty tanks or failed system components is required. The system performs two major functions:

- FlowCon senses and responds when the pump is not metering chemical. If there is no flow within a set number of strokes, an alarm signal is sent from the electronic evaluation unit. This signal can activate a light, an audible alarm, a teledialer or another metering pump.
- FlowCon senses and responds when the pump is no longer achieving the predetermined flow rate. Having calibrated the switch point to correspond with the desired flow rate, an alarm signal will be sent if this flow rate is not achieved within a set number of strokes. This signal can also activate the warning and backup devices mentioned above.

What is it made of?

FlowCon's flow sensor housing is offered in PVC. Standard seal materials are Viton® or Hypalon®



Flow Sensor

Why do you need it?

A FlowCon system is comprised of the following components configured to monitor chemical feed systems using either solenoid or motor-driven metering pumps.

Stroke Sensor (not pictured)

The stroke sensor is attached directly to the pump and registers if the pump has stroked. For solenoid pumps, the sensor identifies the magnetic field of the drive as it pulses. For mechanical pumps, it senses the presence of the stroking cam as it rotates.

If the pump is controlled externally by a pulse input signal or by water meter contacts, it is possible to substitute this signal in place of the stroke sensor. In this case the stroke sensor is not required.

Flow Sensor

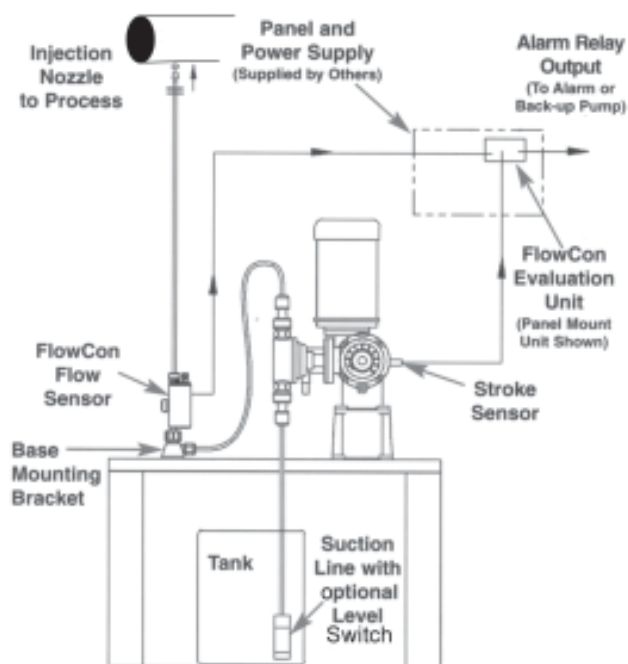
FlowCon's flow sensor is specifically designed to monitor the volume of metered flow. It evaluates the pulsation that occurs in the discharge line of the metering pump. During the discharge stroke, metered liquid lifts a float that operates a reed contact. The switch point can be calibrated to monitor a predetermined flow rate based on pressure and viscosity. The flow sensor can be wall or base mounted.

Evaluation Unit

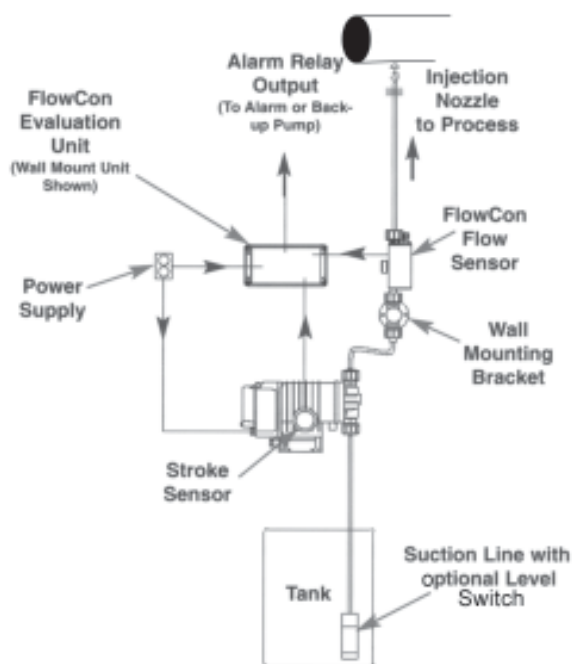
FlowCon's evaluation unit electronically monitors the flow and pulse inputs from the Flow and Stroke Sensors. If either input is not present, the failed or incomplete pump stroke is indicated by means of a relay contact in the form of a registered error. The acceptable number of errors (up to 7) can be field adjusted at the evaluation unit, allowing the unit's sensitivity to reflect the needs of the process. If this number is not reached within 128 strokes, the registered errors are cleared and the unit begins a new count. This process eliminates unnecessary alarms due to infrequent or random stroking errors.

The evaluations unit is offered in a NEMA 4X wall mount enclosure or a control panel door mount unit.

System with FlowCon & Motor Driven Metering Pump



System with FlowCon & Solenoid Driven Metering Pump



Technical Data

Flow Sensor		Specifications
Maximum Capacity	Solenoid driven pump	3.1 gph (11.7 lph)
	Motor driven pump	13.2 gph (50 lph)
Union nut		G 5/8 or G 3/4
Connections		1/4" NPT or 1/4" ID tubing
Maximum back pressure		150 psig (10 bar)
Maximum temperature of process fluid		95°F (35°C)
Reed contact switching capacity		48 V AC/DC, 0.5 A
Mounting		Wall or Base
Maximum process fluid viscosity		20 cps (20mPas)

Evaluation Unit	Specifications
Mounting	Wall mount (NEMA 4X) or
	Panel mount (enclosure by others)
Power requirement	115 VAC, 50/60 Hz, 5 VA (standard)
	230 VAC, 50/60 Hz, 5 VA (optional)
Alarm relay	120 VAC or 230 VAC
Switching capacity	Rated 4 A

Stroke Sensor	Specifications
Solenoid driven pump	Reed Contact, 6W / 6 VA
	50 VDC / 48 VAC, 0.5 A
Motor driven pump	Proximity sensor, N / O, IP67
	10-36 VDC Input, 250 mA