

How do you know the pump is *really* pumping? PosiFlow® Feed Verification Sensor

The PosiFlow Sensor will verify that your metering pump is truly moving liquid and has not lost prime. Designed for the E-Series pumps, the PosiFlow Sensor detects the flow of liquid output by the pump. Unlike our competition, it accomplishes this without any moving parts! The standard flow path of the pump is preserved so the liquid does not have to go through any gears or move a magnet to actuate a pulse in the sensor. This eliminates any concern of plugging or jamming of the sensing mechanism.

The PosiFlow Sensor utilizes proprietary circuitry coupled with advanced pressure sensing technology to provide the most accurate and non-intrusive flow verification device to date.

Operation

The output signal of the PosiFlow Sensor is an open-collector contact closure corresponding with each flow pulse. Additionally, a visual LED is mounted on the top side of the sensor. This flashes ON green in sync with each output signal and is red in any abnormal pressure conditions (open discharge/dead head).

To function accurately, the sensor requires a minimum of 40-50 PSI of back pressure. If an application has little or no system pressure, an upgrade spring for the standard injection check valve, or a separate back pressure valve, is available to ensure the sensor functions properly.

The PosiFlow will send out a signal with every stroke as long as there is liquid flow. If the pump becomes air-locked or if the pump is in a dead-head condition, the sensor will no longer output a signal. Also, if large volumes of air are in the line during normal pumping operation, the PosiFlow will temporarily stop signaling flow until normal operation returns.

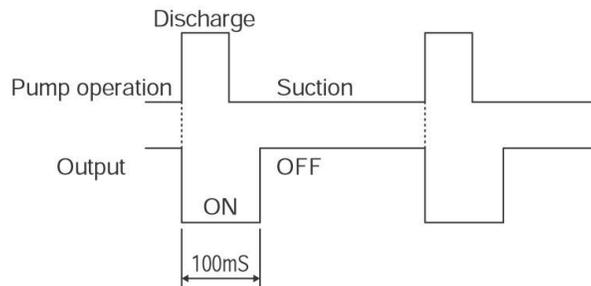
Installation

The PosiFlow Sensor is easily mounted directly into the manual air vent valves of E-Series metering pumps. Simply remove the air vent knob and thread in the PosiFlow Sensor in its place. The sensor will then act as the air vent knob – unscrewing it one-half to one full turn will vent any gas and can also be used to drain the discharge line.

Connect the PosiFlow Sensor to an input device via its three-wire cable. The RED (positive) and BLK (common) wires are for 12VDC power supplied by a WebMaster, a Y-Module, or from an external power source. The WHT wire is the output signal with reference to BLK. Simply connect the BLK and WHT wires to any input requiring a contact closure and the input device will get a 100mS signal when the pump sees a pulse from liquid flow.



An input device can then be configured to interpret the signal in any way imaginable – totalization, no-flow alarms, drum re-fill notification, etc. Many of these features are currently available with the Walchem *WebMaster*.



Specifications

Part Number	Material
FCP-1VC	VC
FCP-1VE	VE
FCP-1PC	PC
FCP-1PE	PE

The PosiFlow Sensor is available for any E-Series metering pumps with matching liquid end code (in some cases an in-line adapter may be needed and pressure capabilities may limit some sizes.) It will mount into either the manual air vent valve or the *MultiFunction* valve, but at this time it is not compatible with auto air vent valve (VCA liquid end code).

The PosiFlow Sensor requires a minimum of 40 PSI total back pressure. If this is not available, the injection valve supplied with the pump can be retrofit with an optional high-pressure spring, part number E90375. It simulates approximately 50 PSI.

Power Source Voltage	12VDC +2VDC	
Current	25mA max (@12VDC)	
Materials Housing	PVC or GFRPP	
O-Rings	FKM or EPDM	
Sensor	96% Ceramic (Al ₂ O ₃)	
Output Pressure Range	40 PSI to 150±15 PSI	
Output Type	Non-Isol. Open Collector (NPN)	
Rating	24VDC max (from source)	
Wave Form	100mS +15mS	
Indicator LED (Green)		
Cable Length	9.75 Feet	
Cross Section	3.1x10 ⁻⁴ in ²	Termination #6 Fork Terminal
Ambient Temperature	0-120°F	
Ambient Humidity	35-90% RH	
Storage Temperature	32-120°F	
Liquid Temperature	32-105°F (PVC models) 32-140°F (GFRPP models)	