

Series PCM – “Pump Control Module”



Proportional chemical feed via any contact type water meter

The Series PCM is an electronic pump control interface that provides near-proportional control of a chemical feed pump. The PCM has the advantage of providing three separate time durations in one product. All time durations are also adjustable with a 10:1 turn down ratio provided by a knob adjustment conveniently located outside of the enclosure.

The PCM allows a chemical feeder's on-time to be initiated by the flow of water through a contact output water meter. As the water passes through the meter, the PCM will activate the chemical feeder for a pre-determined time duration, in turn establishing a fixed ratio of chemical solution to volume of water.

The PCM also can be used to initiate feed in conjunction with pumps or valves by the simple use of a relay switch. The PCM will accept the switch closure signal and energize the chemical feeder for the pre-determined time duration to deliver a measured amount of solution. The PCM can also energize alternative electrical devices with up to 10 amps resistive load at 120 vAC.

Operation of the PCM is maintenance free and requires no adjustment once installed and calibrated to your requirements.



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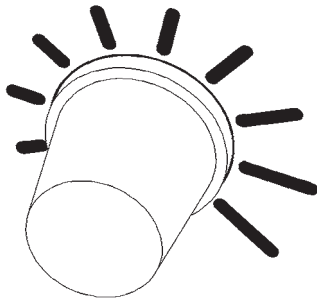
Phone: 904-641-1666
US Toll Free: 800-683-2378
Fax: 904-642-1012

Hours of Operation (EST):
Mon. – Thu. 7 AM – 5 PM
Friday 7 AM – Noon

TECHNICAL SPECIFICATIONS

The PCM – “**P**ump **C**ontrol **M**odule” utilizes very reliable, microcontroller timer technology with a durable relay output, all enclosed in a chemical resistant ABS plastic housing. A simple knob provides adjustment of the on-time required per input signal. Incoming power is transformed to low voltage for control circuits and the trigger input assuring safety during operation and installation.

On-Time Range: The duration of each pump on-time, per input signal, is set by adjustment of the knob located on the front of the unit.



Minimum time per input signal

Model No. PCM1 – 0.1

Model No. PCM5 – 0.5

Model No. PCM10 – 1.0

Maximum time per input signal

Model No. PCM1 – 1.0

Model No. PCM5 – 5.0

Model No. PCM10 – 10.0

Reset Time: Immediate

Minimum signal duration: 10 milliseconds

Input Electrical Specifications:

Voltage: 115 vAC 50/60 HZ

No Load Current: 45 mA ac maximum

Output Electrical Specifications:

Maximum Device Load: 10 ampere resistive at 120 AC



Caution!

The duration of time between each water meter contact at the maximum flow rate must be determined. The PCM must never be adjusted for on-times of a longer duration than the minimum time between flow meter input signals. Failure to maintain this relationship will result in missed signals and result in chemical feed errors.

INSTALLATION

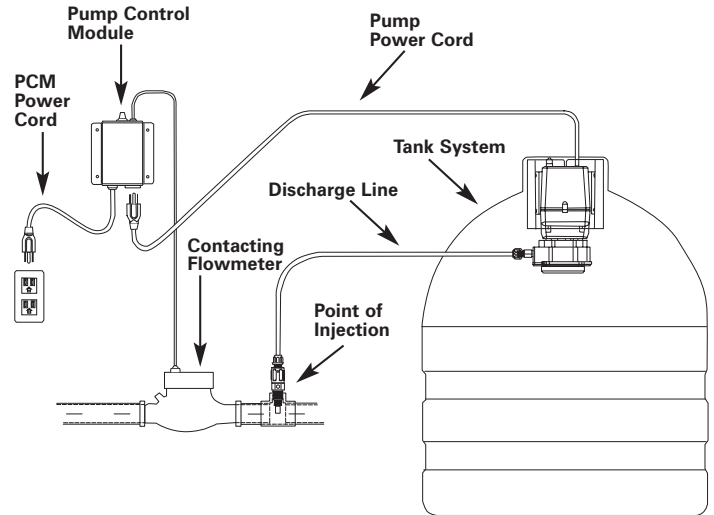
The PCM should be mounted within 6 feet of the chemical feed pump. Mount the PCM to any suitable surface with the aid of adequate fasteners through the mounting holes.

The PCM should be located in a protected environment to prevent any potential water intrusion. Supply voltage should be verified to prevent damaging the unit.

Uncoil the input signal cable. Remove approximately 2 inches of the outer cable jacket. Strip the ends of the two wires within the cable approximately 1/2 inch. Attach the two wires to the contact output water meter or relay switch.

Adjust the knob to the desired on-time duration. The label provides a reference for the approximate setting from minimum to maximum.

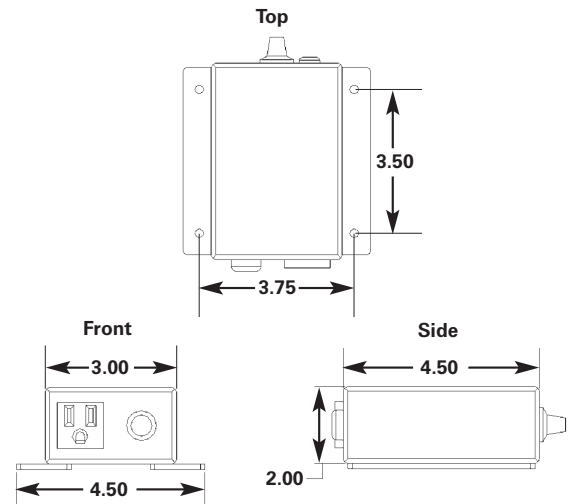
Plug the chemical feeder power cord into the PCM's receptacle. Plug the PCM power cord into a properly installed 120-Volt receptacle.



CALIBRATION

Basic calibration of the PCM requires knowledge of the amount of contacts per gallons of water output by the flow meter. Assuming the water meter outputs 1 contact closure per gallon of water flowing through it, and we desire to deliver 10 ml/cc per gallon of water, perform the following: Fully prime the feed pump and with the aid of a graduated measuring device with a known amount of solution, measure the amount of time required to draw the desired amount of solution from the measuring device. Set the adjustment knob to approximate this time duration. The system is now calibrated to deliver the desired amount of solution per gallon of water flowing through the meter.

NOTE: When selecting a contact type water meter remember that signal interval duration should never be more than the on-time duration of the PCM.



OPERATION & MAINTENANCE

Once installed and calibrated for your requirements, the PCM requires no maintenance. Typically, fine-tuning of the system is all that is required. This is usually accomplished through on-time adjustment and solution concentration. Pump output adjustment is also used with adjustable feed rate metering pumps.

TROUBLE SHOOTING

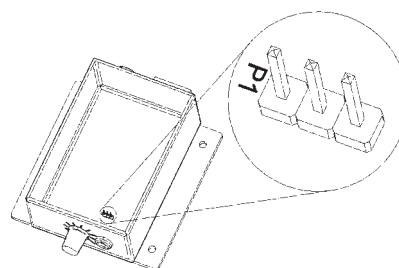
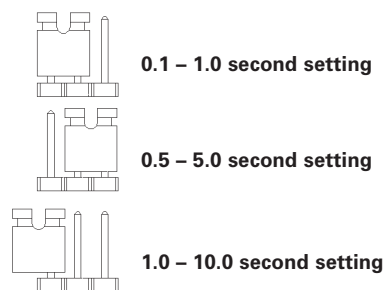
The typical cause of an apparent failure of the PCM is most commonly a lack of either input supply voltage (120vAC) or a proper input signal. The PCM is easily diagnosed by performing the following tests:

1. Plug the chemical feed pump directly into the 120 vAC receptacle that the PCM was plugged into. This procedure bypasses the PCM. If the feed pump is not running, and you have checked to make sure it is on, then the pump, power source or both may be defective. If the feed pump operates, proceed to Step 2.
2. Plug the chemical feed pump into the PCM. Plug the PCM into the receptacle tested in Step 1. Remove the PCM input signal cable from the water meter or relay and touch the two wires together. The chemical feed pump should run for the pre-determined on-time and then stop. If the feed pump does run, the failure is in the water meter contacts. If the feed pump does not run, the PCM has failed and should be returned to the manufacturer for service and repair.

PCM TIMER RANGE CHANGE

The PCM is factory pre-set for the desired time duration range. The PCM does allow for three separate available time ranges within the one original product, which provides customers the benefits of three separate timer choices without the cost of purchasing another unit. The timer feature enables the PCM to be re-implemented into another application timer range without the need to purchase another PCM.

Timer range adjustment is simply performed by the position of a shunt located on the printed circuit board located beneath the PCM's cover. Unplug the unit from the input supply power, remove the cover and reposition the shunt to provide the timer range desired. Replace the PCM cover and secure with the four screws.



WARRANTY & CUSTOMER SERVICE

Damaged or Lost Shipments

UPS and prepaid truck shipments: Check your order immediately upon arrival. All damage must be noted on the delivery receipt. All shortages and damages must be called into Stenner Customer Service at 800-683-2378 within seven (7) days of receipt.

Returns

Stenner offers a thirty day return policy. Except as otherwise provided, no material will be accepted for return after 30 days from date of purchase. To return merchandise at any time, you must call Stenner at 800-683-2378 for a Return Goods Authorization (RGA) number. A 15% re-stocking fee will be applied. Include a copy of your invoice or packing slip with your return.

Limited Warranty

Stenner & Co., Inc. will for a period of one (1) year from the date of purchase (proof of purchase required) repair or replace — at our option — all defective parts. Stenner & Co., Inc. is not responsible for any removal or installation costs. Stenner & Co., Inc. will incur shipping costs for warranty products shipped from our factory in Jacksonville, Florida. Any tampering with major components, chemical damage, faulty wiring, weather conditions, power surges, or products not used with reasonable care and maintained in accordance with the instructions will void the warranty. We make no other warranty expressed or implied.

Disclaimer

The information contained in this manual is not intended for specific application purposes. Stenner & Co. reserves the right to make changes to prices, products and specifications at any time without prior notice.