



Switchable PMP Rapid-Fire™ Pulsar Installation Instructions **PMP #48503**

3-POSITION SWITCH

- 100:1** VR-10, VR-10M (Money)
Non-Computers (Gallons or Liters)
- 40:1** VR-10/4, 2002E/4203, 2002M, 4005 (Money)
- 10:1** Non-Computers (Gallons or Liters)



**These instructions are to be used when installing
a Switchable PMP Rapid-Fire Pulsar.**

READ THIS GUIDE BEFORE YOU BEGIN



• Dispensers have both electricity and hazardous, flammable and potentially explosive liquid. Failure to follow the precautions below and instructions in this guide may result in serious injury and death. Follow all rules, codes and laws that apply in your area.



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SAFETY PRECAUTIONS FOR INSTALLATION AND MAINTENANCE

- Only a person with knowledge and experience with gasoline dispensing equipment should perform this work.
- Barricade the work area with your truck and / or other appropriate means.
- Always make sure ALL power to the dispenser is turned OFF before you open the dispenser cabinet for maintenance. Physically lock and tag out the circuit breakers energizing the dispenser following OSHA guidelines.
- Note that more than one disconnect switch may be required to de-energize the dispenser for maintenance and servicing. Use a voltmeter to make sure ALL circuits in the dispenser are de-energized. Failure to do so may result in serious injury.
- Know how and where to turn OFF power to the submersible pumps in case of emergency.
- Observe precautions for handling electrostatic sensitive devices and avoid ESD.





INTRODUCTION The Rapid-Fire Pulser is an intrinsically safe, easy to install pulsing device for use with most mechanical computers or non-computers.

The intrinsically safe feature of the Rapid-Fire Pulser eliminates the need to install conduit or M.I. cable and therefore significantly reduces installation time and cost.

The Rapid-Fire Pulser can interface with any electronic console pulse circuit from 5 to 400 VAC/DC, with a current requirement not exceeding 100 mA.

There is no need to remove the computer or non-computer from the dispenser.

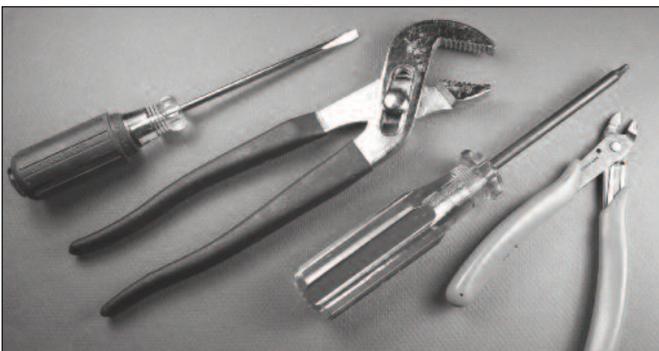
The Switchable PMP Rapid-Fire Pulser consists of two components: The barrier, which is connected to the dispenser's junction box, and the sensor that mounts on the computer. Incorporated in the PMP 48503 Switchable Rapid-Fire Pulser barrier is a 3-position switch.

Contents



- 1 – Barrier hardwired to Sensor
- 1 – Slotted screw
- 1 – Washer
- 3 – Cable ties
- 4 – Wire nuts
- 1 – Installation instructions

Tools needed



- 1 – Flat blade screwdriver
- 1 – Channel Lock pliers
- 1 – Torx T20 screwdriver
- 1 – Wire-cutters to trim tie wraps

The PMP 48503 Switchable Rapid-Fire pulser has a 3-position toggle switch located at the threaded end of barrier. There is a small label next to the switch which indicates the switch position. Changing the switch position will give you settings of 100, 40, or 10 pulses per revolution of the register wheel. The PMP Rapid-Fire pulser is shipped with the switch in the 10:1 position.

Rapid-Fire Barrier Installation (Refer to Figure A)

1. Turn off all power to the dispenser.
2. Remove dispenser junction box cover.
3. Remove a plug from a 3/4" NPT location that will allow clearance for the 6" length of the barrier.
4. Set the 3-position switch to the desired pulse ratio:
 - 100:1** VR-10, VR-10M (Money)
Non-Computers (Gallons or Liters)
 - 40:1** VR-10/4, 2002E/4203, 2002M, 4005 (Money)
 - 10:1** Non-Computers (Gallons or Liters)
5. Install the barrier by screwing it into a 3/4" hole at least five (5) full turns.

NOTE: The Rapid Fire Pulser is not designed for use with 220V. Connecting to a 220V circuit will render the pulser inoperable and beyond repair.

6. Attach the black and white barrier wires to a "switched" 115 VAC circuit. The solenoid, pump motor or electric reset circuits are suitable options.

The circuit must be "hot" when the dispenser is in use and "dead" when the operating handle is turned off.

NOTE: This step must be performed properly. The pulser must be connected to a circuit which will turn off between sales to maintain accuracy and ensure reliable operation.

7. Attach the blue barrier wires to the "pulse circuit" from the console. (These wires are interchangeable.)
8. Confirm the switch position is in the correct position for the application. *See list in #4 above.*
9. Re-install the junction box cover.

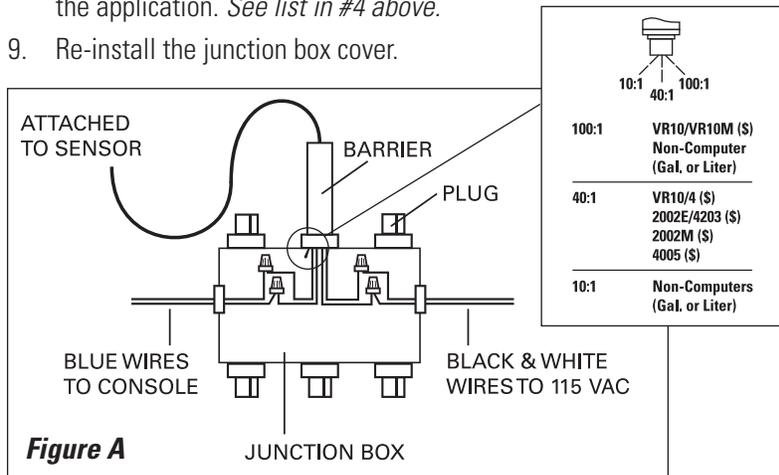
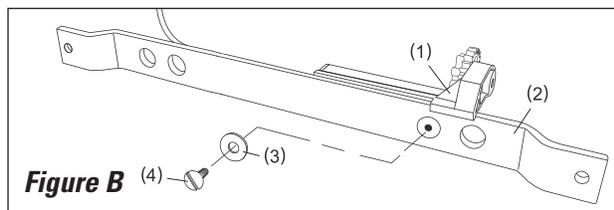


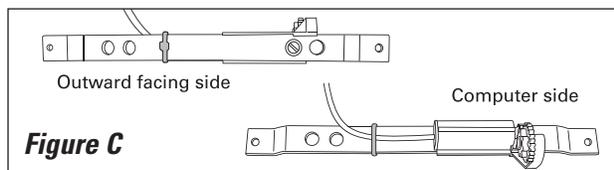
Figure A

Switchable Rapid-Fire Sensor Installation (Refer to Figure B)

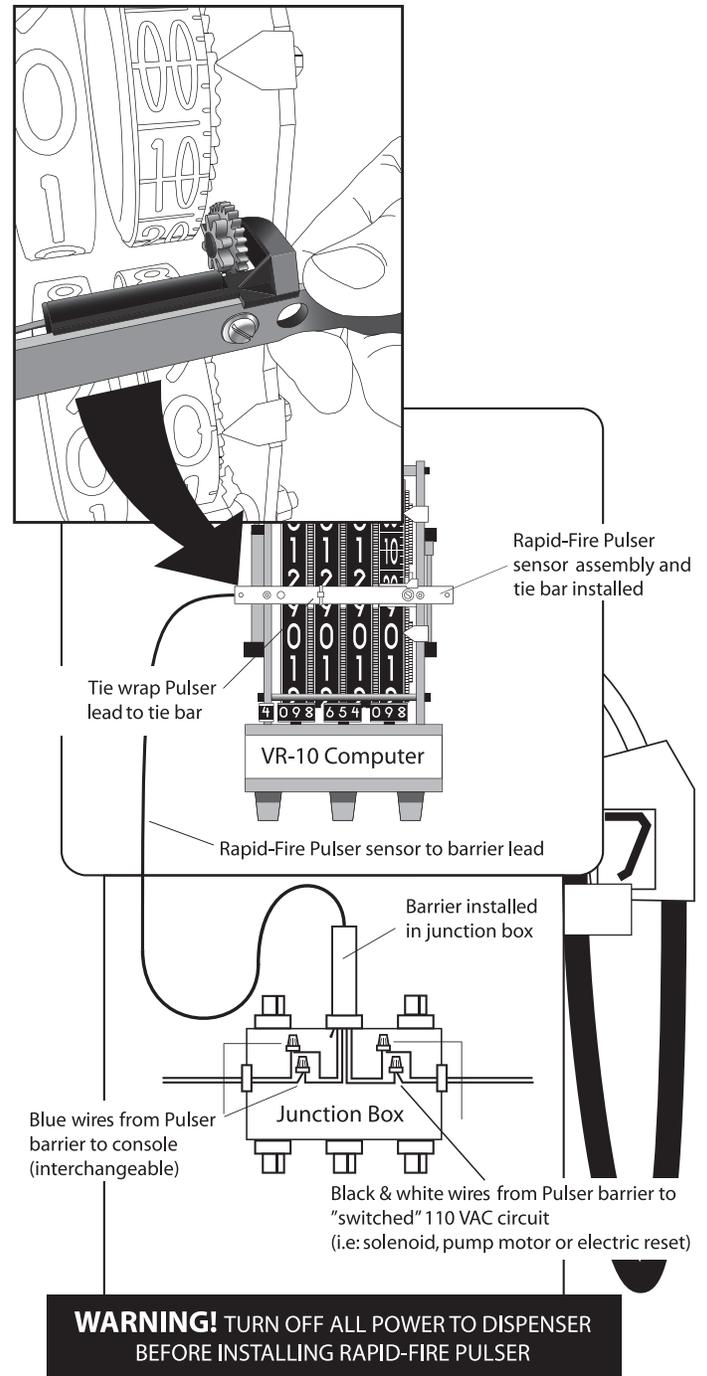
1. Remove all panels; face plates, etc., to completely expose the rear (non-totalizer side) of the computer.
2. Remove the two Torx T20 screws that fasten the rear tie bar (#2) located between the wheel banks in the counter section of the computer (below the upper wheel bank in non-computers).
3. Assemble the sensor housing assembly (#1) onto tie bar (#2) as shown in Figure B. Be sure that the boss on the sensor inserts into the large hole closest to the center of the bar.



4. Locate the washer (#3) and screw (#4) that are provided in the Rapid-Fire Pulser kit. Fasten the sensor to the tie bar. Caution: Do not over tighten the screw.
5. Tie wrap the cable coming from the sensor to the tie bar. (Refer to Figure C)

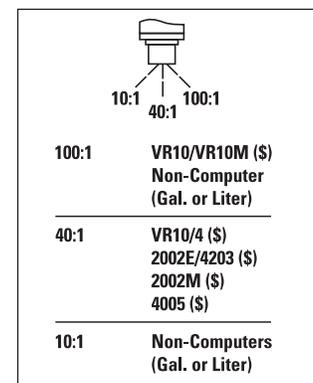


6. Route the sensor cable out of the computer to the barrier. Do not route it near other wires or near sharp metal edges (such as computer wheels).
7. Reattach the tie bar (#2) to the computer with two Torx T20 screws. Be sure that the sensor gear is properly engaged with the wheel drive gear.
8. Check to ensure that the sensor cable does not interfere with the computer wheels, reset mechanism or any other moving component.
9. Tie wrap the cable in at least one location.
10. Reinstall all panels, face plates, etc.
11. Apply power to the dispenser.
12. Test the system by pumping fuel into an approved container.
13. If you have any questions, call 1-800-243-6628.



Operation

PMP 48503 Switchable Rapid-Fire Pulser has a 3-position switch.



Troubleshooting Notes: If changing position of switch, you must cycle power each time.

Problem	Cause	Solution
Incorrect count on console on installation.	Rapid-Fire Pulser switch is in the incorrect position for the application.	Check for correct position of switch: 100:1 VR-10, VR-10M (Money), Non-Computers (Gallons or Liters) 40:1 VR-10/4, 2002E/4203, 2002M, 4005 (Money) 10:1 Non-Computers (Gallons or Liters)
Sensor is binding and/or chattering. Erratic Count. Missing Pulses.	Bent-tie bar — Does not allow proper tooth engagement between sensor gear and the gear on side of wheel. Depending on how it is bent will cause: Too much pressure and binding. Too little — gears will not engage and slip.	Remove tie-bar and straighten/flatten. -or- Replace tie-bar with a tie-bar from another computer. -or- Call PMP for a replacement tie-bar. 800-243-6628
Pulser won't count on installation.	Improper wiring connections. Pulser is not compatible with console model. Defective pulser.	Recheck wiring connections. Call PMP for technical assistance. 800-243-6628 Call PMP for technical assistance. 800-243-6628

Specifications:

Input Voltage Range	Electronic Console Pulse Circuit Range	Operating Temperature	Operating Speed (Computer Wheel)
70 VAC to 130 VAC	5 to 400 VAC/DC	-40°F to +160°F -40°C to +71°C	200 RPM maximum* 20,000 pulses per minute

*Rapid-Fire Pulser tested to a speed of 600 RPM

Wiring Connections:

Rapid-Fire Pulser #48503	Black Wire	White Wire	Blue Wire	Blue Wire
115 VAC Pulser	115 VAC Hot	Neutral	Pulser Circuit	Pulser Circuit These wires are interchangeable.

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