

INSTALLATION INSTRUCTIONS FOR SYMCOM'S PUMPSAVER MODELS 111 AND 233

**BE SURE POWER IS DISCONNECTED PRIOR TO INSTALLATION!!
FOLLOW NATIONAL, STATE AND LOCAL CODES!**

CONNECTIONS

1. Mount the PumpSaver in a convenient location in or near the pump control box. If the location is wet or dusty, then a NEMA 3R, 4 or 12 enclosure should be used.
2. Connect one line from the fused disconnect to PumpSaver's L1 IN terminal on the terminal strip. Run a wire from the "L1 OUT" terminal to other in-line controls such as a pressure switch. See Figure No. 1.
3. Connect the other line from the fused disconnect to PumpSaver's L2 IN terminal on the terminal strip. Run a wire from the "L2 OUT" terminal to other in-line controls such as a pressure switch. See Figure No. 1.
4. See Figure No. 1 for Electrical Diagram. See Figure No. 2 for Mechanical wiring diagram for standard 3 wire control boxes. See Figure No. 3 for Mechanical wiring diagram for Deluxe control boxes. See Figure No. 4 for Mechanical wiring diagram for direct feed of 2-wire pumps.

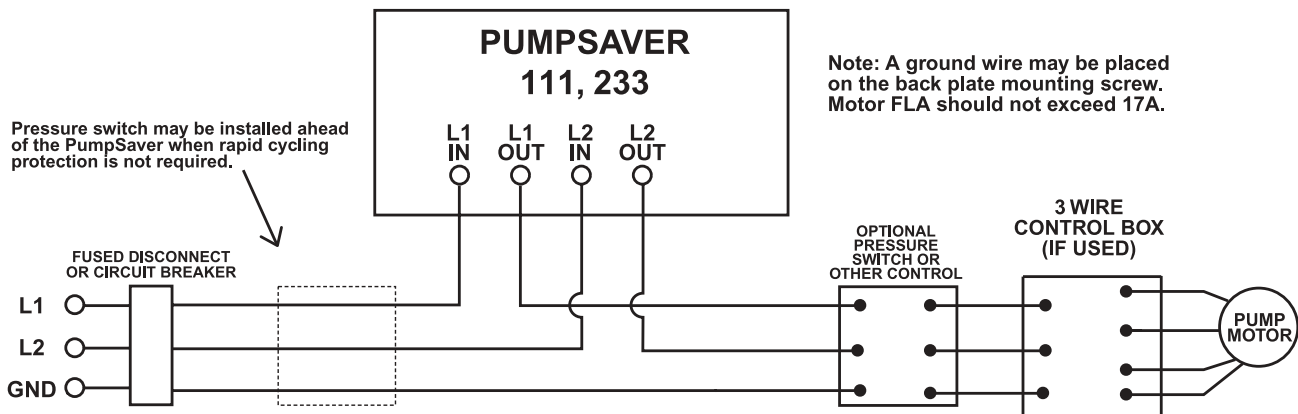


Figure No. 1: Typical Wiring Diagram for Models 111 and 233.

NOTE: Use in conjunction with UL listed or recognized thermal or solid state overload relays only. The PumpSaver may not detect a dead head (blocked pipe) condition on applications where the pump is undersized for a given motor or flow restrictors are used on high stage pumps or low yield wells.

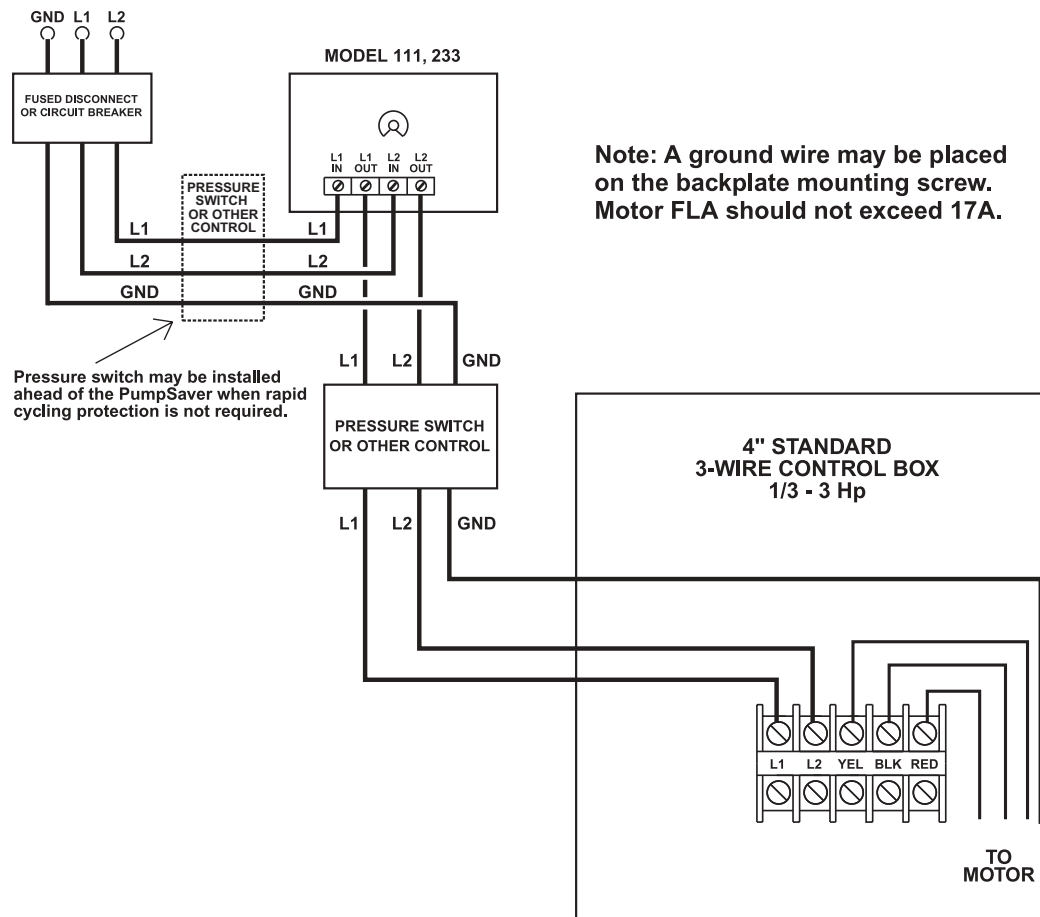


Figure No. 2: Standard Control Box

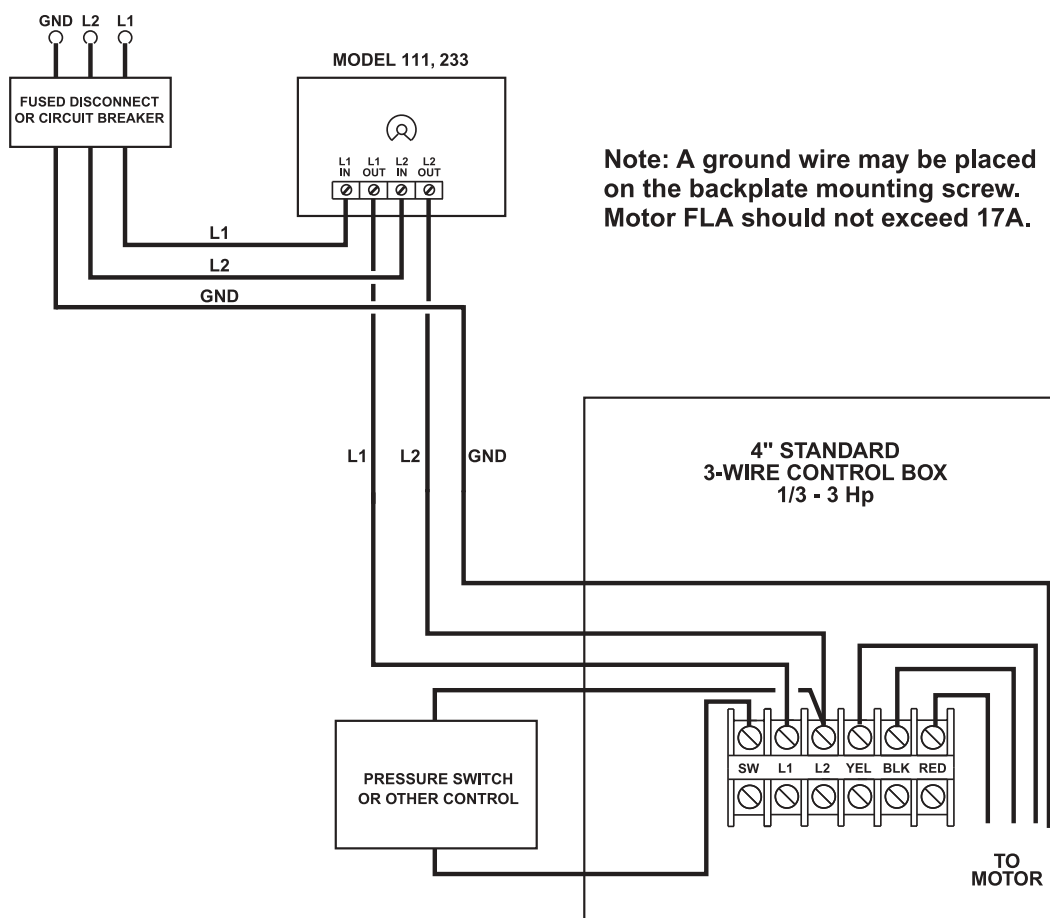


Figure No. 3: Deluxe Control Box

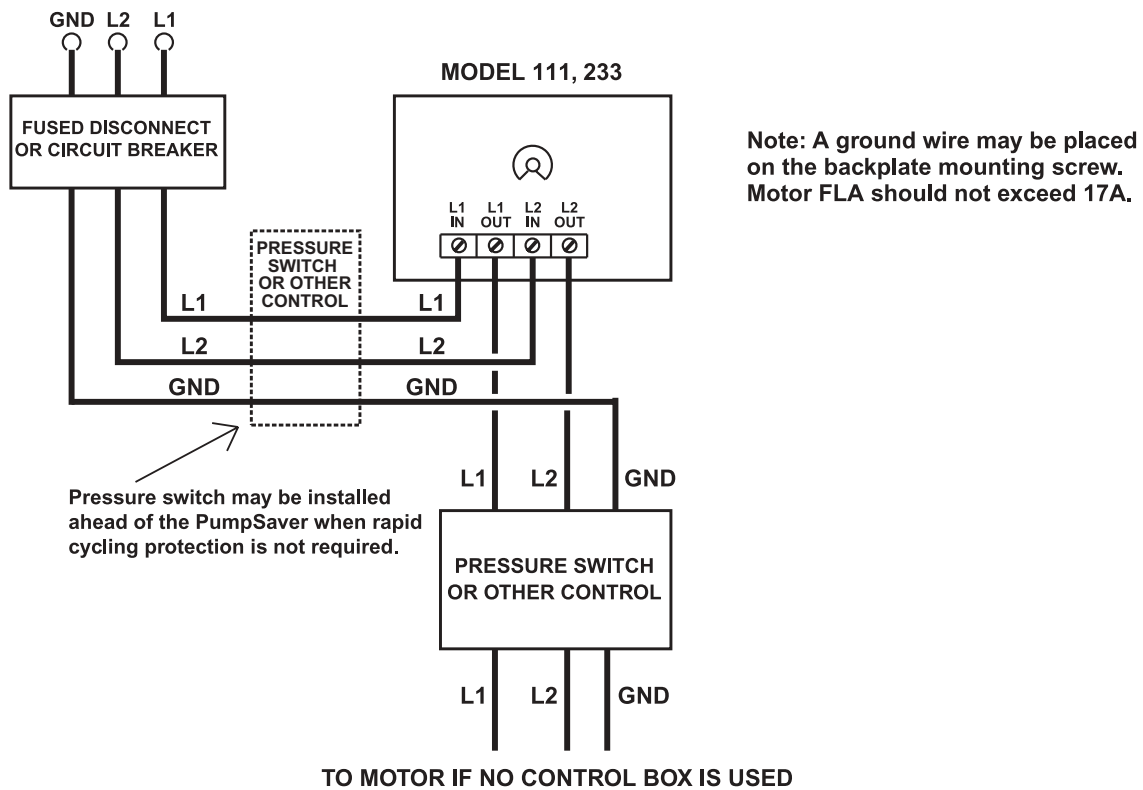


Figure No. 4: 2-Wire Pump Application

CALIBRATION / SETTINGS

1. Turn the RESTART DELAY / CALIBRATION adjustment fully counter-clockwise to the "CAL." position.
2. Apply power to the PumpSaver. The pump motor should be running at this point.
3. When the CAL. LIGHT turns on (approximately 5 seconds), the PumpSaver is being calibrated. Within 10 seconds, proceed to step 4.
4. Set the RESTART DELAY / CALIBRATION adjustment to the desired Restart Delay (Dry Well Recovery Time). **If you leave the RESTART DELAY / CALIBRATION adjustment in the "CAL." position, the unit will trip off and stay off. Turn the adjustment out of the "CAL." position to start the pump.**

Manual Reset Mode: If the RESTART DELAY / CALIBRATION adjustment is set to "RESET", the PumpSaver is in Manual Reset mode. After the PumpSaver shuts down due to a voltage or load problem, the RESTART DELAY / CALIBRATION adjustment must be rotated out of the "RESET" position to restart the pump. Any restart delay can be by-passed by rotating the RESTART DELAY / CALIBRATION adjustment to the "RESET" position and back to the desired Restart Delay setting.

Rapid Cycling Protection: Rapid cycling is defined as more than 4 restarts in a 60 second period. The PumpSaver will lock-out upon detecting a rapid cycling condition until power is removed and reapplied to the L1 IN and L2 IN terminals. See the Diagnostics table for instructions to diagnose a rapid cycling fault.

CONGRATULATIONS!!! YOU HAVE JUST INSTALLED THE FINEST PUMP PROTECTION AVAILABLE!!!

DIAGNOSTIC INDICATOR TABLE

RUN LIGHT	CAL. LIGHT	PROBLEM OR FUNCTION	CORRECTIVE ACTION
On Steady	Off	RUN: Pump is running, no problems in operation.	None
On Steady	On Steady	CAL: The Model 233 is in calibration process.	None
Off	On Steady	CAL COMPLETE: Model 233 is calibrated, restart delay/calibration pot was left in "CAL." position. Pump is off.	Pump will restart as soon as the restart delay/calibration pot is rotated out of the "CAL." position.
Off	Off	OFF/MANUAL RESTART: The pump is not running. The Model 233 has tripped on dry run, dead head, or overload while restart delay/calibration pot was at the "Reset" position, or source power is not present.	If pot is in "Reset" position, rotate the pot out of that position. If the "CAL." light blinks, check for an overload condition, if the "RUN" light blinks, look for a dry run or dead head condition, and if no lights blink check incoming power for adequate voltage.
Blinking	Off	DRY RUN DEAD HEAD: The Model 233 has shut the pump off due to a dry run or dead head condition. The unit is timing through the restart delay for dry run recover and will try to restart.	Check for restricted flow or inadequate supply of liquid.
Off	Blinking	OVERLOAD: The Model 233 has shut the pump off due to an overload condition. The unit is timing through the restart delay; it will then interrogate the voltage to make sure it is acceptable before restarting the pump.	Check for low or high voltage or jammed pump impellers. If these conditions do not exist, recalibrate the unit while it is drawing higher amps. (Amps should not exceed service factor.)
Blinking alternately with the CAL. light	Blinking alternately with the RUN light	VOLTAGE FAULT: The Model 233 has shut the pump off due to an overload condition and is now interrogating the voltage. The unit will remain in this mode until the voltage is at an acceptable level.	If the unit remains in this position for more than 5 seconds, check for high or low voltage.
Blinking in unison with the CAL. light	Blinking in unison with the RUN light	RAPID CYCLE: The Model 233 has shut down on rapid cycling. Power must be removed and reapplied to reset the unit.	Check for a broken bladder on the pressure tank (if used), or check for a defective pressure switch.

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