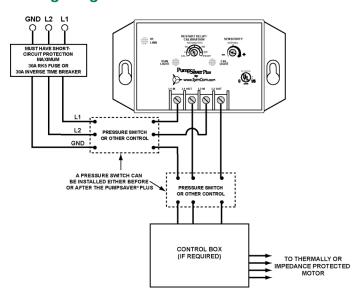
111P / 233P SERIES

Single-Phase PumpSaver®





Wiring Diagram



Ordering Information

MODEL	LINE VOLTAGE	DESCRIPTION
111P	115VAC	Load Range: 1/3 - 1hp
111P-ENCL	115VAC	111P with NEMA3R enclosure
233P	230VAC	Load Range: 1/3 - 3 hp
233P-ENCL	230VAC	233P with NEMA3R enclosure
233P-1.5	230VAC	Load Range: 1/3 - 1.5hp
233P-1.5-ENCL	230VAC	233P-1.5 with NEMA3R enclosure

Description

The 111P (115 volt, $\frac{1}{3}$ to 1hp), 233P-1.5 (230 volt, $\frac{1}{3}$ to 1.5hp), and 233P (230 volt, $\frac{1}{3}$ to 3hp) single-phase PumpSaver® relays protect pumps from dry-well, dead-head, jammed impeller, rapid-cycling, and overvoltage/undervoltage, whether the pressure switch is mounted before or after our unit.

A calibration process allows the relay to be calibrated to your specific pumping application, thereby reducing the possibility of false or nuisance tripping. A proprietary microcontroller based voltage, power factor and current-sensing circuit constantly monitors for power fluctuations, overcurrent and underload conditions. When an abnormality, such as loss of suction, is detected, the relay deactivates its output relay and directly disconnects the pump motor and begins its user-selectable "Restart Delay" (dry-well recovery) timer. When the timer expires or power is removed and reapplied, the unit reactivates its output relay and allows the pump to turn back on.

An infrared LED communicates directly with a hand-held diagnostic tool called the Informer (sold separately). The Informer displays parameters including calibration points, trip points, run time and last faults.

Special considerations for pump cables larger than #10 AWG*: In some cases where larger motors are installed with deep set pumps, pump cables are used that exceed the relay's terminal size. In these conditions, a short splice of #10 AWG or #12 AWG may be a solution at the control box.

*All local, state and national electric codes should be followed when applying this solution.

NOTE: The 111P / 233P Series relays have a sensitivity adjustment for the dry-well trip point. After calibration is done, you can adjust the sensitivity for the dry-well/dead-head trip point from 70-90% of the full load. This makes the unit even more adaptable to varying pumping applications. If you have a very low producing well, you increase the sensitivity closer to the 90% mark, or if you have a very heavy producing well, you would decrease the sensitivity around the 70% mark.

Features & Benefits

FEATURES	BENEFITS
Proprietary microcontroller based circuitry	Constant monitoring of voltage, power factor, current for reliable pump protection
Onboard calibration process	Calibrates unit to your specific individual pumping application and reduces nuisance tripping
Onboard sensitivity adjustment	User adjustable sensitivity knob makes the unit more adaptable to varying pumping applications

Accessories



Informer

A hand-held diagnostic tool that uses an infrared receiver to access information which can be helpful for troubleshooting the system.



111P / 233P SERIES

Specifications

Functional Specifications

Adjustments/Settings Overcurrent

Underload (dry-well)

Overvoltage

111P

233P, 233P-1.5

Undervoltage

111P 95VAC 233P. 233P-1.5 190VAC

Number of restarts allowed in a 60-sec. period

(rapid-cycling) **Trip Delay Times**

Overcurrent 5 seconds Dry-well 4 seconds

Restart Delay Times

Over/Undervoltage 2 seconds

All other faults Manual, 2-225 Minutes

Input Characteristics

Supply Voltage

111P 115VAC 233P-1.5, 233P 230VAC

Load Range:

111P $\frac{1}{3} - 1 \text{ hp}$ 233P-1.5 $\frac{1}{3}$ – 1.5 hp 233P $\frac{1}{3} - 3 \text{ hp}$

50/60Hz (Note: 50Hz will increase all delay **Frequency**

timers by 20%)

125% of calibration point

132.5VAC

265VAC

4

Adjustable (70 to 90% of calibrated run power)

Output Characteristics

Output Contact Rating-SPST

111P 233P-1.5 233P

General Characteristics

Operating Temperature Maximum Input Power

Wire Gauge

Terminal Torque Safety Marks

cULus Listed

Dimensions

Weight

Mounting Methods

1hp@120VAC (16 amps max.) 1.5hp@240VAC (10 amps max.) 3hp@240VAC (17 amps max.)

-40° to 55° C (-40° to 131° F)

Solid or Stranded 10 - 22AWG

13 in.-lbs.

UL508, C22.2 No. 14

H 73.66 mm (2.9"); **W** 133.35 mm (5.25");

D 73.99 mm (2.913")

14 oz. #8 screws