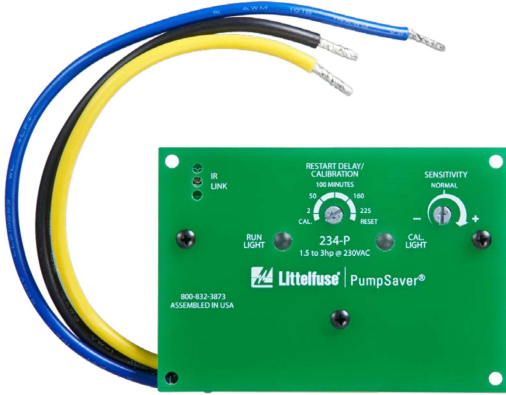


234-P

Single-Phase Pump Monitor



Description

The PumpSaver® Model 234-P is designed to be mounted inside a Grundfos® control box to protect 1/3 – 3hp, 2- or 3-wire, 230V pumps.

The Model 234-P protects single-phase pumps from dry-well, dead-head, rapid-cycle, jammed-impeller, and over/undervoltage conditions. Typical applications include residential waterwells, commercial waterwells, irrigation wells, and golf course and other sprinkler systems.

A calibration adjustment allows the 234-P to be calibrated to your specific pumping applications, thereby reducing the possibility of false or nuisance tripping. A unique microcontroller-based voltage and current-sensing circuit constantly monitors the incoming power for fluctuations, overcurrent, and undercurrent. When an abnormality, such as loss of suction is detected, the 234-P deactivates its output relay and directly disconnects the pump motor. The 234-P then begins its user-selectable restart delay (dry-well recovery) timer. When the timer counts to zero or power is removed and reapplied, the 234-P reactivates its output relay and turns the pump back on. By leaving the restart delay knob in the reset position, the 234-P will operate in manual reset mode.

The 234-P communicates with a hand-held diagnostics tool called the Informer (sold separately). The Informer displays parameters including calibration points, trip points, run time and last faults. An IR Kit-12 (12" fiber optic kit) allows the Informer to access these parameters even when the 234-P is enclosed in a control box. This is valuable for troubleshooting the pump while it is running.

NOTE: The PumpSaver® models 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.

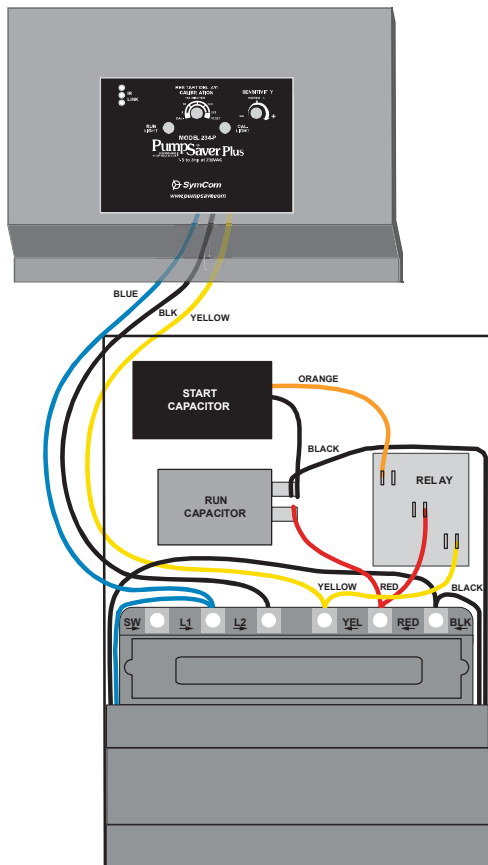
The Model 234-P is not recommended for use with the Grundfos® Deluxe Control Box.

Wiring Diagram

234-P CONNECTIONS IN GRUNDFOS® CONTROL BOX

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MOTOR & PUMP PROTECTION



For installation instructions see the Install Bulletin.

Features & Benefits

FEATURES	BENEFITS
Proprietary microcontroller based circuitry	Constant monitoring of voltage and current protects pumps from dry-well, dead-head, jammed impeller, rapid cycling, and voltage faults
Onboard sensitivity adjustment	Allows user to adjust the current sensitivity for the dry-well / dead-head trip point from 70% - 90% of the full load.
Adjustable restart delay	Allows user to select well recovery time delay after a dry-well condition occurs, or to select manual reset
Built in IR communications link	Used with the Informer, allows user to see stored faults, run time, and also troubleshoot the pump while it's running
LED indication	Provides status and diagnostics for troubleshooting

234-P

Accessories



Informer

A hand-held diagnostic tool that uses an infrared receiver to access information which can be helpful for troubleshooting the system. Includes the Informer IR Kit-12



Informer IR Kit-12

12" infrared adapter cable attaches to the face of the unit to provide remote diagnostics without opening the panel. Included with the Informer

Specifications

Functional Specifications

Adjustments/Settings

Overcurrent

125% of calibration point

Underload (dry-well)

Adjustable (70 - 90% of calibrated run power)

Overvoltage

265VAC

Undervoltage

190VAC

Number of restarts allowed in a 60-second period (rapid-cycling)

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Trip Delay Times

Overcurrent

5 seconds

Dry-well

4 seconds

Restart Delay Times

Over/undervoltage

2 seconds

All other faults (dry-well recovery timer)

Manual, 2-225 Minutes

Input Characteristics

Supply Voltage

230VAC

Load Range

1/3 - 3 hp

Frequency

50*/60Hz

Output Characteristics

Output Contact Rating (SPST)

3 hp @ 240VAC (17 amps max.)

General Characteristics

Operating Temperature

-40° to 60° C (-40° to 140° F)

Maximum Input Power

5W

Dimensions

Fitted to Grundfos® Control Box

Weight

14 oz.

Mounting Methods

Grundfos® Control Box

Standards Passed

Electrostatic Discharge (ESD) IEC 61000-4-2, Level 2, 4kV contact, 6kV air

*Note: 50 Hz will increase all delay timers by 20%