



PSR, PSRP and PSRPL Pump Start Relays



for Optimum Pump Performance and Protection



The Rain Bird PSR, PSRP and PSRPL Series pump start relays offer the protection and reliability that your irrigation system needs when using a pump to pull water from an external water source like a pond, creek, low pressure potable water source or rain water harvesting container. Our complete line of pump protection series offers a specific solution for every application.

- **You can rely on the Universal Rain Bird Pump start relays (PSR's)** to provide worry free performance for your irrigation system. The Universal model is compatible with all Rain Bird and other reliable irrigation controllers.
- **Choose the PSRP for dry-run protection.** By adding a pressure switch you will have additional protection in the event that you lose water pressure from your source of water. The pressure switch will start a timer when pressure is lost and if it does not regain pressure before the timer times out, the pump will stop. The Pump will re-start when normal conditions are met.
- **Choose the PSRPL if your irrigation system is operating through a water harvesting system** or some other source that requires level control. This control feature will prevent the pump from running if the source is depleted. A float switch opens and does not allow the pump to operate until the float switch close when the water rises above it.

Choose the pump protection series that is right for your system and enjoy the results of a green, luscious and healthy landscape for years to come.



Rain Bird PSR Universal Pump Start Relay

The Rain Bird pump start relays work with a lawn controller's start/stop command to facilitate the electrical path from the breaker box to the pump motor.

Rain Bird PSR Universal Pump Start Relays provide "pilot duty" operation for all types of electrically driven pump equipment with available coil voltages of 24, 110 and 220 VAC.



Features

- 40 AMP certified relay
- Quick connect terminals with wire nuts
- Grounding provision
- Compatible with 24 VAC timed lawn controllers
- Compatible with 110 or 220 VAC 3/4 hp thru 5 hp* single phase pumps
- Grey "baked-on" powder coating, for long life in difficult environments
- UL Listed as "Enclosed Industrial Control Panels" and backed by a limited two-year warranty
- Housed in compact NEMA 3R weather tight enclosures

Rain Bird Description	Coil Voltage	hp	Rain Bird MODEL#
Rain Bird PSR Universal Pump Start Relay U-110 volt	110	3/4 THRU 5*	RBSR24WG1
Rain Bird PSR Universal Pump Start Relay U-220 volt	220	3/4 THRU 5*	RBSR24WG2

Rain Bird PSRPL Rain Water Harvesting Pump Control



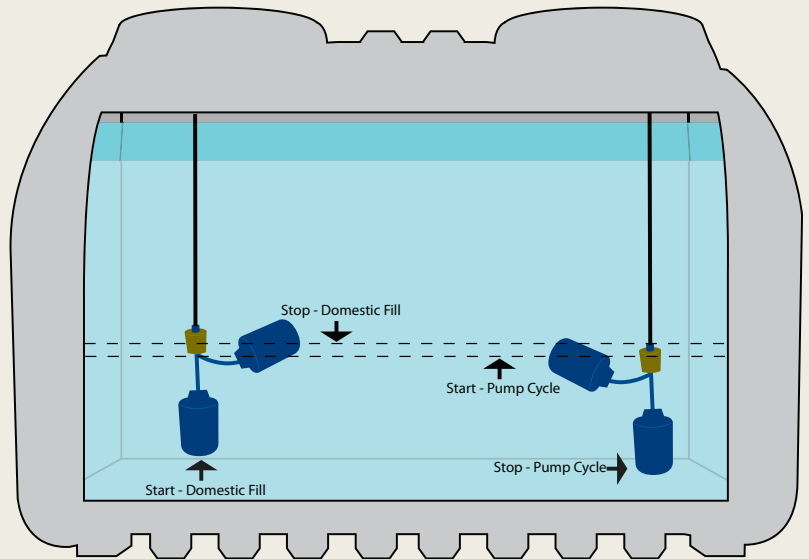
The Rain Bird® PSRPL Rain Water Harvesting Pump Control monitors the balance of available water in a rainwater harvesting system against the water level needed to assure proper pump performance.

Simple and efficient, the Rain Bird PSRPL provides the pump control for rainwater harvesting, through the use of simple float controls, the Rain Bird PSRPL synchronizes source water with pump requirements. If rainwater is available, the Rain Bird PSRPL uses the stored water first, if no rainwater is available, the Rain Bird PSRPL utilizes a domestic or alternate source to provide water to the pump during a run cycle.



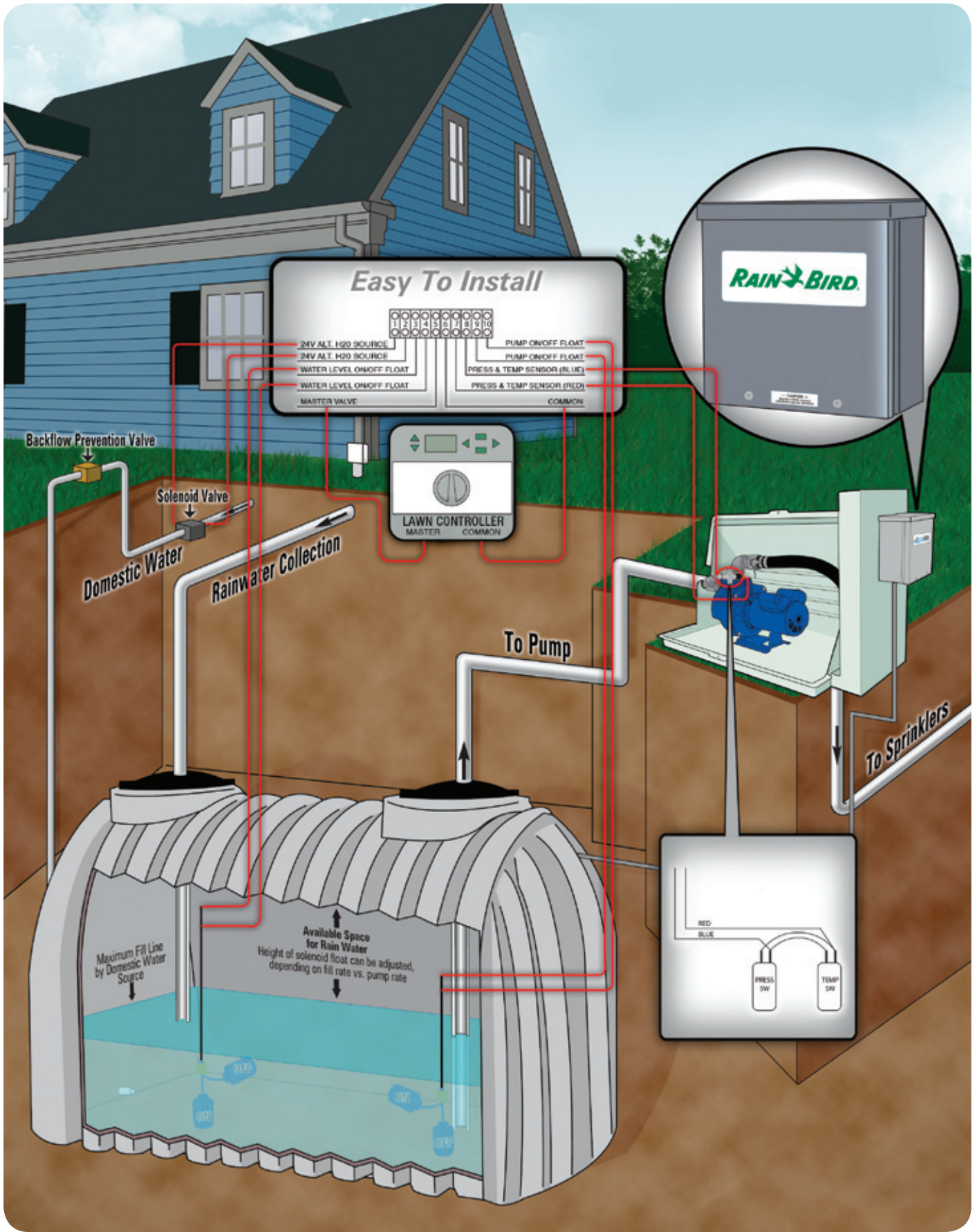
Features

- Float control (lower) is used to verify water is available during pump run cycle.
- Float control (upper) is used to supplement harvested water supply through the use of a 24 VAC domestic solenoid valve. (Solenoid to be supplied by others.)
- Low pressure sensor protects the pump if the inlet water flow is restricted, reduced, or completely blocked.
- High temperature sensor protects the pump if the discharge is closed or blocked.
- All sensors and in-tank floats use safe 24 VAC power.
- Completely automatic and hands-free pump protection.
- Bridges the gap between 24 VAC lawn controllers and 110/220V pump motors.
- Serves as a pump start relay plus offers pump shut-down protection if source water is not available.
- One model works for all pumps from 3/4 HP to 5 HP
- Terminal block wiring for easy installation
- Low Pressure Sensor – fixed at 20 psi
- High Temperature Sensor – fixed at 105°
- Housed in NEMA 3R, weather tight enclosure
- Grey “baked-on” powder coating, for long life in difficult environments
- UL Listed as “Enclosed Industrial Control Panels” and backed by a limited two-year warranty.



Rain Bird Description	Coil Voltage	hp	Rain Bird MODEL#
Rain Bird PSRPL Rain Water Harvesting Pump Control 2 Floats U2-110	110	5 hp maximum*	RBRB242WG1
Rain Bird PSRPL Rain Water Harvesting Pump Control 2 Floats U2-220	220	5 hp maximum*	RBRB242WG2
Rain Bird PSRPL Rain Water Harvesting Pump Control 1 Float U1-110	110	5 hp maximum*	RBRB241WG1
Rain Bird PSRPL Rain Water Harvesting Pump Control 1 Float U1-220	220	5 hp maximum*	RBRB241WG2

*when thermal protection is present





Rain Bird PSRP Pump Start Relay

The Rain Bird® PSRP Pump Protection System monitors an irrigation system to protect the pump from damage due to low pressure.

Pressure is produced in the volute case and discharge of a pump when it is working. If this pressure does not exist, there is a problem within the pumping system.

Rain Bird PSRP Pump Protection System monitors this pressure through the use of a pressure sensor located on the discharge side of a pump. At the beginning, or anytime during a zone cycle, if water is not available the pressure will drop within the pump and the pressure sensor will signal a time delay to begin counting. If pressure has not recovered over the timer cycle, the pump shuts down to save itself before damage occurs.

The resetting of the pressure sensor is automatic. The next cycle after an electrical signal shut down will have the same opportunity to build pressure. Since the sensor measures lack of pressure, as long as the pump is able to rebuild and maintain pressure, the pump will be allowed to run normally.



Features

- 40 AMP certified relay
- 4-wire color coded wiring for easy installation
- Grounding Provision
- Completely automatic pump protection
- Adjustable time delay
- Bridges the gap between 24 VAC lawn controllers and 110/220V pump motors
- One model works for all pumps from 3/4 hp to 5 hp*
- Low pressure sensor protects the pump if the inlet water flow is restricted, reduced, or completely blocked
- Housed in NEMA 3R weathertight enclosures with “baked-on” powder coating for long life in difficult environments

Rain Bird Description	Coil Voltage	hp	Rain Bird MODEL#
Rain Bird PSRP Pump Start Relay U-110 volt	110	3/4 THRU 2	RBLC24WG1
Rain Bird PSRP Pump Start Relay U-220 volt	220	3/4 THRU 5	RBLC24WG2



Rain Bird Relays and Sensors



Pressure Sensor

Monitors system pressure. 24 volt incoming power makes it suitable for outdoor use.

- Normally Closed
- Fixed set point
- 1/4" NPT male
- Nema: 4, 13
- Diff. Range: 8-16%
- Factory Setting: 20 psi



Protective Boot for Pressure Switch



105° High Temperature Sensor

Monitors the temperature created in a pump during dead head and shuts it down - protecting the pump and the pipework from damage.

- Set Point: 105 degrees
- Diff. Range: 5-9 degrees
- Thread size: 1/2" NPTF
- Normally Open



Rain Bird Relays

Rain Bird's 40 AMP Relays are designed with specific parameters in mind:

- Fully enclosed contacts
- High holding power on oversized contacts
- Low current requirements on the coil for lower required holding power
- Available in 24 volt, 110 volt or 220 volt
- Available in a 2-pole, 3-pole or 4-pole
- Option of a screw base or DIN rail mounting



* NATIONAL ELECTRICAL CODE (NEC) STATES ALL MOTORS WILL BE THERMALLY PROTECTED FROM EXCESSIVE "AMPERAGE DRAW." MOST MOTORS UNDER 2 hp ARE SUPPLIED WITH THERMAL PROTECTION FROM THE MOTOR MANUFACTURER. FOR MOTORS OVER 2 hp, PSR OR PSRP CODE-COMPLIANT IS RECOMMENDED. 5 AND 7.5 hp AVAILABLE UPON REQUEST. CIRCUIT BREAKERS ARE NEVER CLASSIFIED AS MOTOR PROTECTION

** NOTE ~ CHECK WITH YOUR LOCAL HEALTH DEPARTMENT FOR REGULATIONS AND REQUIREMENTS FOR BACKFLOW PREVENTION.

THIRD PARTY CERTIFIED

All Rain Bird Relays & Pump protection systems are UL listed as enclosed industrial control panels. Look for the listing mark!



The Intelligent Use of Water.™

LEADERSHIP • EDUCATION • PARTNERSHIPS • PRODUCTS

At Rain Bird, we believe it is our responsibility to develop products and technologies that use water efficiently. Our commitment also extends to education, training and services for our industry and our communities.

The need to conserve water has never been greater. We want to do even more, and with your help, we can. Visit www.rainbird.com for more information about The Intelligent Use of Water.™



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