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> Red Lion RL22G10-3W2V 4-inch Submersible Deep Well Pump Instruction Manual

Red Lion 14942409

Red Lion RL22G10-3W2V 4-inch Submersible Deep Well Pump Instruction Manual

Model: RL22G10-3W2V (14942409)

INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Red Lion RL22G10-3W2V 4-inch Submersible Deep Well Pump. Please read all instructions carefully before beginning installation or operation to ensure proper function and to prevent injury or damage.



Image: The Red Lion RL22G10-3W2V 4-inch Submersible Deep Well Pump with its control box.

SAFETY INFORMATION

Always observe safety precautions to reduce the risk of injury, fire, or electric shock. This pump is designed for specific applications; using it for other purposes may void the warranty and create hazards.

- **Electrical Safety:** All electrical wiring must be performed by a qualified electrician in accordance with national and local electrical codes. Ensure the power supply matches the pump's voltage requirements (230-Volt).
- **Grounding:** The pump and control box must be properly grounded to prevent electrical shock.
- **Water Quality:** This pump is NSF/ANSI 372 certified for potable water. Do not use for flammable liquids or chemicals.
- **Well Diameter:** Designed for 4-inch I.D. or larger wells.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

PRODUCT OVERVIEW AND FEATURES

The Red Lion RL22G10-3W2V is a robust 4-inch submersible deep well pump designed for reliable water delivery. It

features a durable stainless steel pump casing and thermoplastic components for longevity.

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Video: A rotational view of the RL12G and RL22G series submersible pumps, highlighting their external design and components.

Key Features:

- **Submersible Design:** Fits 4-inch diameter driven wells or larger.
- **Built-in Check Valve:** Helps prevent rapid cycling and extends motor life.
- **Built-in Suction Screen:** Protects impellers from debris.
- **Durable Construction:** Stainless steel pump casing with thermoplastic discharge and motor bracket.
- **Control Box Included:** A Red Lion/VMC branded 1 HP, 230 Volt, 3-wire control box is supplied.
- **Potable Water Certified:** NSF/ANSI 372 certified for clean drinking water applications.



Image: Detailed diagram illustrating the internal features of the RL Series pump, including the 1-1/4" FNPT Thermoplastic Discharge Head, Built-in Check Valve, Multiple-Stage Design, Stainless Steel Body, Glass-filled Thermoplastic Impeller, and Built-in Suction Screen.



RL SERIES DEEP WELL SUBMERSIBLE PUMPS

Control box included.



Image: The included Red Lion/VMC Submersible Motor Control Box, showing its external casing and internal wiring.



RL SERIES DEEP WELL SUBMERSIBLE PUMPS

NSF/ANSI 372 Certified for Clean Drinking Water.



Image: The Red Lion RL Series Deep Well Submersible Pump is NSF/ANSI 372 Certified for Clean Drinking Water, as depicted by water flowing into a glass.

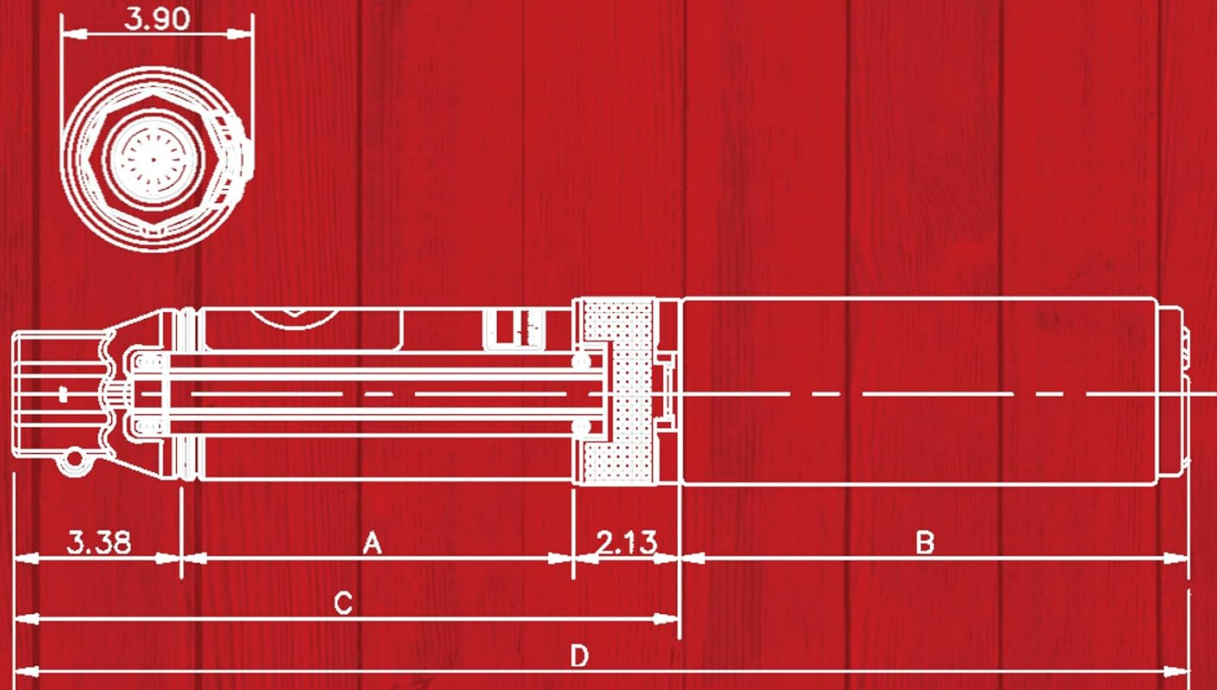
SPECIFICATIONS

The following table outlines the technical specifications for the Red Lion RL22G10-3W2V pump:

RL22G10-3W2V

DEEP WELL SUBMERSIBLE PUMP

DIMENSIONS



HEIGHT (D)	LENGTH OF PUMP (C)	LENGTH OF MOTOR (B)	DIAMETER
26.74"	15.01"	11.73"	3.9"

Image: Dimensional drawing of the RL22G10-3W2V pump, including overall height, pump length, motor length, and diameter.

Specification	Value
Brand	Red Lion
Model Number	14942409
Style	1 HP, 22 GPM
Horsepower	1 HP
Maximum Flow Rate	22 Gallons Per Minute (GPM)
Maximum Lifting Height	260 Feet
Voltage	230 Volts
Running Amps	10.4 Amps
Wire Configuration	3-Wire

Specification	Value
Discharge Size	1-1/4-inch FNPT
Material	Stainless Steel, Thermoplastic
Product Dimensions (L x W x H)	3.9"L x 3.9"W x 26.75"H
Item Weight	30 Pounds
Power Source	Corded Electric
Included Components	Pump with motor and 48-inch lead wires, control box, installation manual, wire splice kit

RL22G10-3W2V

DEEP WELL SUBMERSIBLE PUMP

PERFORMANCE

Depth to Water La profondeur pour arroser La profundidad para regar	Gallons Per Minute @ Discharge Pressure (PSI) Litres par minute @ pression de refoulement Litros por minuto @ presión de descarga									Shut Off Debit Nul Disconexión
	0 PSI	10 PSI	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	
	20' 6 m	-	-	28 106	27 102	25 95	23 87	22 83	20 76	
40' 12 m	-	28 106	27 102	25 95	24 91	22 83	20 76	-	-	95
60' 18 m	29 220	27 102	26 98	24 91	22 83	20 76	18 68	-	-	87
80' 24 m	27 102	26 98	24 91	22 83	20 76	18 68	-	-	-	78
100' 30 m	26 98	24 91	23 87	21 79	18 68	-	-	-	-	69
140' 43 m	23 87	21 79	19 72	-	-	-	-	-	-	52
200' 61 m	18 68	-	-	-	-	-	-	-	-	26

Image: Performance table detailing Gallons Per Minute (GPM) at various discharge pressures (PSI) and depths to water, along with shut-off feet.



RL SERIES

DEEP WELL SUBMERSIBLE PUMPS

DECIPHERING THE MODEL NUMBER

RL 12G 05-2W 1V

Rating
12 GPM
or
22 GPM

Horsepower
05 = 1/2 hp
07 = 3/4 hp
10 = 1 hp
15 = 1-1/2 hp

Wires
2W = 2 Wires + Ground
3W = 3 Wires + Ground

Voltage
1V = 115V
2V = 230V

Image: Diagram explaining how to decipher the RL Series model number, breaking down components like rating, horsepower, wires, and voltage.

SETUP AND INSTALLATION

Proper installation is critical for the performance and longevity of your deep well pump. It is highly recommended that installation be performed by a qualified professional or licensed electrician.

Installation Steps Overview:

- 1. Prepare the Well:** Ensure the well casing is clean and free of debris. Verify the well diameter is sufficient for the 4-inch pump.
- 2. Assemble Pump Components:** Connect the pump to the motor and attach the drop pipe. Secure the submersible cable along the drop pipe.
- 3. Install Control Box:** Mount the control box in a dry, accessible location, typically near the pressure tank.
- 4. Electrical Connections:** Wire the pump to the control box and the control box to the main power supply, following the wiring diagram provided in the included installation manual. Ensure all connections are watertight and properly grounded.
- 5. Lower the Pump:** Carefully lower the pump into the well using appropriate lifting equipment, ensuring it is suspended

at the correct depth above the well bottom.

6. **Connect Plumbing:** Connect the drop pipe to the well cap and then to the rest of the plumbing system, including the pressure tank, pressure switch, and pressure relief valve.
7. **Test System:** Before final sealing, test the pump for proper operation, pressure, and leaks.



RL SERIES DEEP WELL SUBMERSIBLE PUMPS

Electrical experience required.
Hiring an electrician or qualified installer is recommended.



Image: A comprehensive diagram illustrating the components and layout of a deep well submersible pump installation, including the well cap, well casing, drop pipe, submersible pump, control box, pressure tank, and associated plumbing.

INSTALLATION & PRODUCT SELECTION TIPS



SKILL LEVEL REQUIRED



Image: Visual guide for making secure piping connections during pump installation.

OPERATING INSTRUCTIONS

Once installed, the Red Lion RL22G10-3W2V pump operates automatically based on the pressure switch settings. Ensure the well has sufficient water before starting the pump to prevent dry running.

- **Initial Start-up:** After installation, slowly open a faucet to allow air to escape the system. The pump will start when the pressure drops below the cut-in setting of the pressure switch.
- **Monitoring:** Periodically check the system pressure and pump performance. Listen for unusual noises or vibrations.
- **Power Disconnection:** Always disconnect power at the circuit breaker or fuse box before performing any service or maintenance on the pump or control box.

MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your Red Lion deep well pump.

- **Annual Inspection:** Have a qualified professional inspect the pump system annually, including the pump, motor, control box, and wiring.
- **Check Pressure Tank:** Verify the air charge in the pressure tank periodically.
- **Clean Suction Screen:** If water flow decreases, the suction screen may be partially blocked and require cleaning. This typically requires pulling the pump from the well.
- **Winterization:** In areas subject to freezing temperatures, ensure all exposed pipes and components are properly insulated or drained to prevent freeze damage.

TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your deep well pump. For complex problems, contact a qualified service technician.

Problem	Possible Cause	Solution
Pump does not start	No power, tripped breaker, faulty control box, motor issue	Check power supply and circuit breaker. Inspect control box wiring. Consult a professional.
Low water pressure	Low well water level, clogged suction screen, pressure tank issue, pump wear	Check well level. Clean suction screen. Inspect pressure tank. Consult a professional for pump inspection.

Problem	Possible Cause	Solution
Pump runs continuously	Leaking plumbing, faulty pressure switch, low well water level	Check for leaks. Inspect/replace pressure switch. Verify well water level.
No water delivery	Dry well, clogged intake, pump air-locked, broken pipe	Check well water level. Inspect intake. Prime pump if necessary. Inspect plumbing for damage.

WARRANTY INFORMATION

The Red Lion RL22G10-3W2V Submersible Deep Well Pump comes with a **3-year manufacturer's warranty**. Please retain your proof of purchase for warranty claims. For detailed terms and conditions, refer to the warranty documentation included with your product or contact Red Lion customer support.

SUPPORT AND CONTACT

For technical assistance, product selection, installation help, or maintenance inquiries, please contact Red Lion customer support.

Technical Support: 1-888-885-9254

Online Resources: Visit the official Red Lion website for additional manuals, FAQs, and product information.

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Video: An overview of the Red Lion brand, highlighting their long-standing commitment to water movement solutions and customer support.



Image: A focus image on the Red Lion brand, emphasizing their commitment to quality and innovation.