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Red Lion RLCB05-115

Red Lion RLCB05-115 1/2-HP 115-Volt VMC Control Box User Manual

Model: RLCB05-115 (640188)

1. PRODUCT OVERVIEW

The Red Lion RLCB05-115 VMC Control Box is specifically designed for use with 1/2 HP, 115-Volt, 3-wire, single-phase submersible deep well pumps. This control box features a robust construction and is engineered to provide reliable operation for your well pump system.



Figure 1: Red Lion RLCB05-115 VMC Control Box.

Key Features:

- **Compatibility:** Designed for 1/2 HP, 115 Volt, 3-wire, single-phase deep well submersible pumps.
- **Durability:** Features heavy-duty, box-type terminals and a weather-resistant seal.
- **Safety Ratings:** UL listed for use in the USA and Canada, with a NEMA Enclosure 3 rating for indoor/outdoor use.
- **Protection:** Includes quick disconnect relay, overloads, and capacitors for thermal protection.
- **Construction:** Assembled in the USA, ensuring quality and reliability.

2. SAFETY INFORMATION

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in serious injury, death, or property damage.

- **Electrical Hazard:** Always disconnect power before servicing or installing the control box. Only qualified personnel should perform electrical work.
- **Proper Grounding:** Ensure the control box is properly grounded according to local electrical codes.
- **Application:** This control box is for 3-wire submersible pumps only. 2-wire pumps do not require a control

box. Verify your pump type before installation.

- **Environmental Conditions:** The NEMA Enclosure 3 rating allows for indoor/outdoor use, but protect from direct water spray or submersion.

3. INSTALLATION AND SETUP

The control box should be mounted in a secure location, protected from physical damage. It includes four 7/8-inch knockouts, three 1-1/8-inch knockouts, a drain hole, and two mounting holes for flexible installation.

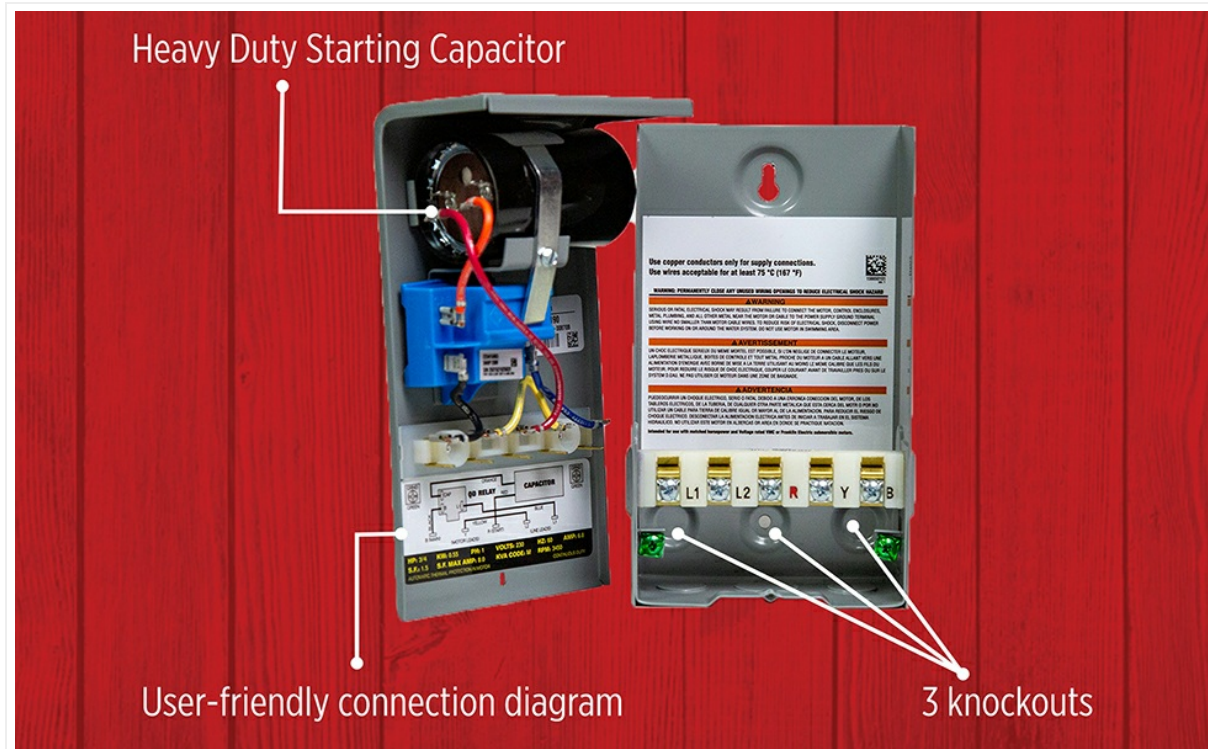


Figure 2: Internal components and knockouts of the control box.

Mounting:

1. Choose a suitable location for mounting, ensuring it is easily accessible for maintenance and protected from environmental extremes.
2. Use the two mounting holes on the back of the control box to secure it to a flat, stable surface.
3. Ensure adequate ventilation around the unit.

System Overview:

RLCB SERIES CONTROL BOXES

INSTALLATION

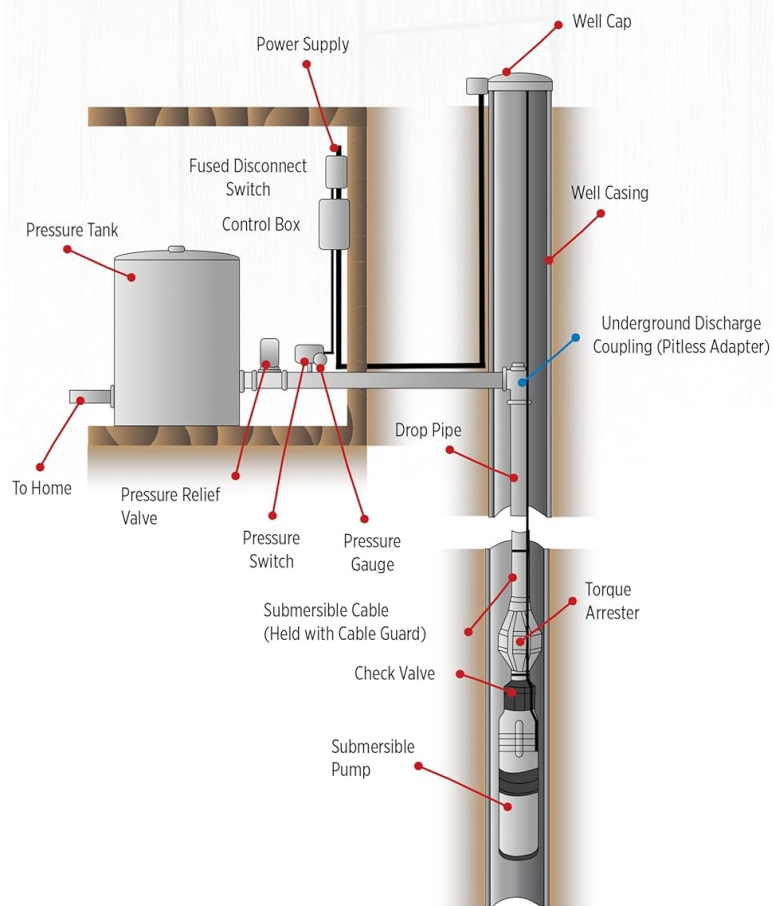


Figure 3: Typical submersible well pump system installation diagram.

4. WIRING AND ELECTRICAL CONNECTIONS

Refer to the wiring diagram below for correct electrical connections. All wiring must comply with national and local electrical codes.

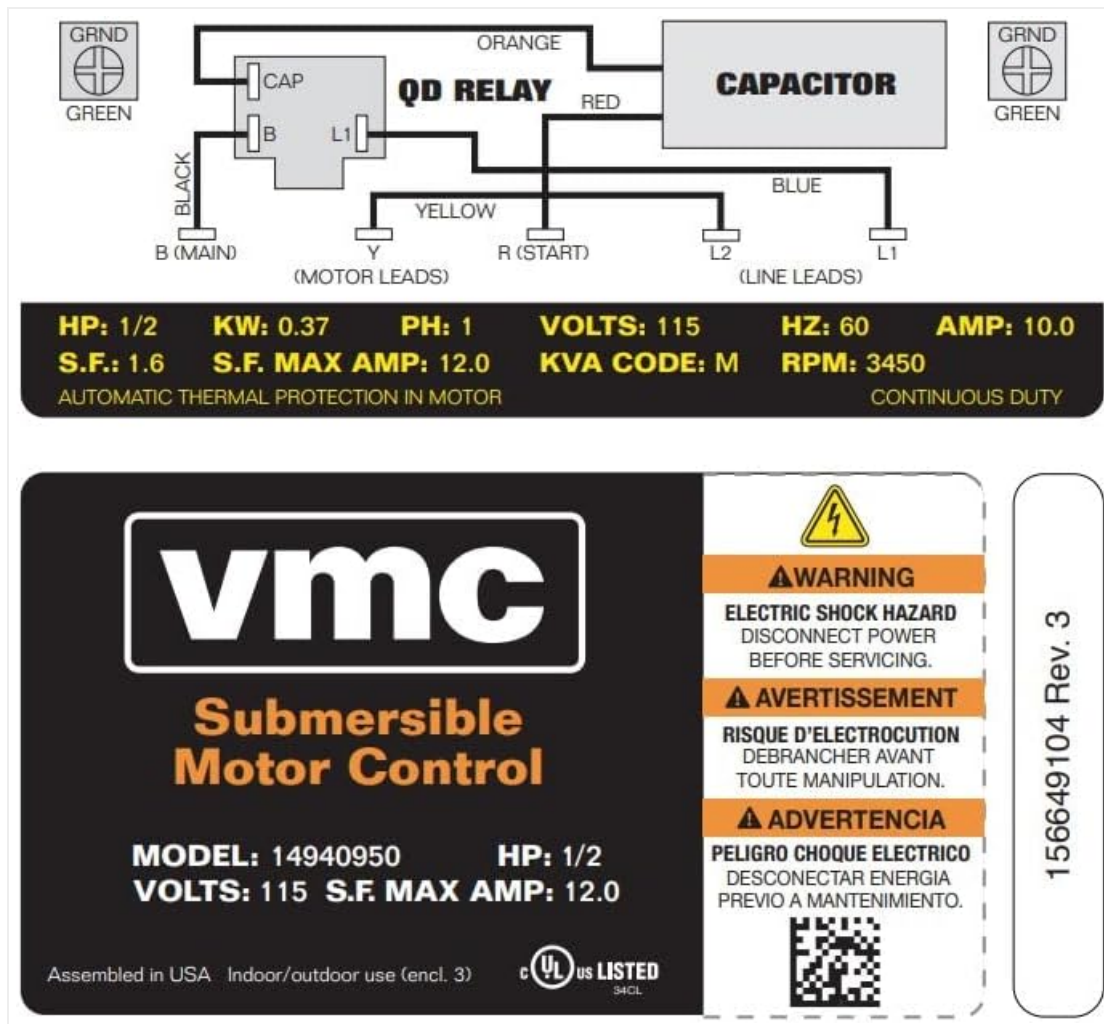


Figure 4: Wiring diagram for the VMC Submersible Motor Control box.

Connection Steps:

1. **Power Supply:** Connect the incoming power supply to terminals L1 and L2.
2. **Motor Leads:** Connect the motor leads from the submersible pump to terminals R (Start), Y (Motor Leads), and B (Main) as indicated on the diagram.
3. **Grounding:** Connect the ground wire from the power supply and the pump to the GRND terminal.
4. **Capacitor:** The control box includes a capacitor start/run design with thermal protection. Ensure all internal connections are secure.

5. OPERATION

Once properly installed and wired, the control box provides responsive control for your submersible well pump. The clearly labeled switches and indicators facilitate straightforward operation.

- **Power On/Off:** Use the main switch on the control box to power the pump on or off.
- **Indicator Lights:** Observe any indicator lights for operational status or fault conditions.
- **Automatic Thermal Protection:** The system includes automatic thermal protection in the motor to prevent overheating.

6. MAINTENANCE

The Red Lion RLCB05-115 control box is designed for minimal maintenance. Regular checks can help ensure

long-term reliability.

- **Periodic Cleaning:** Occasionally dust the exterior of the control box to prevent accumulation of dirt and debris.
- **Connection Checks:** Periodically inspect all electrical connections to ensure they remain tight and free from corrosion.
- **Environmental Inspection:** Check the control box for any signs of water ingress or physical damage. Ensure the weather-resistant seal is intact.

7. TROUBLESHOOTING

If you experience issues with your well pump system, consider the following general troubleshooting steps:

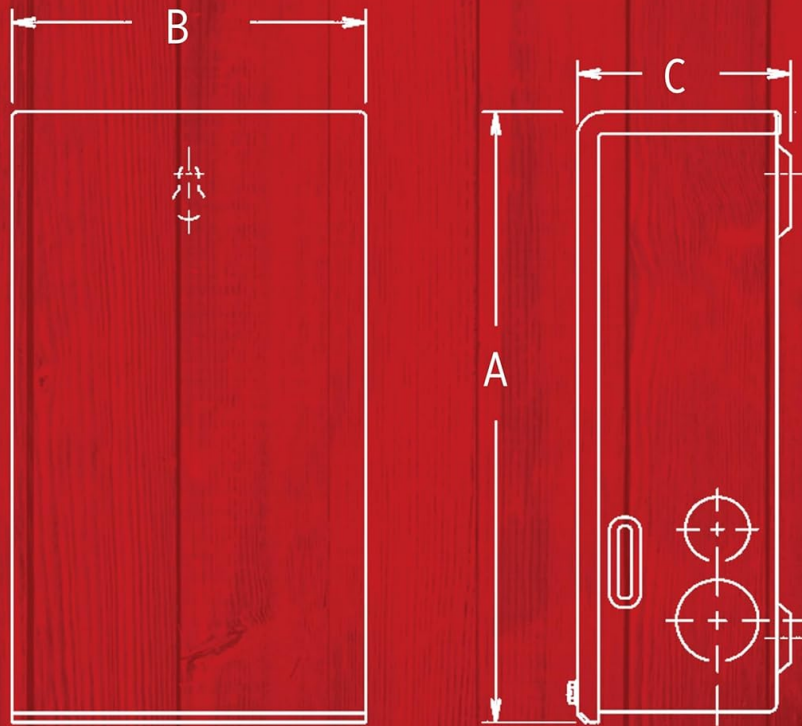
- **No Power:** Check the main power supply, circuit breakers, and all electrical connections to the control box.
- **Pump Not Starting:** Verify that the control box switch is in the 'ON' position. Check for any tripped overloads or thermal protection activation.
- **Unusual Noises:** Disconnect power and inspect the pump and control box for any loose components or wiring.

For complex issues or if you are unsure about any troubleshooting steps, it is recommended to consult a qualified electrician or pump technician. Do not attempt repairs beyond your technical capability.

8. SPECIFICATIONS

RLCB SERIES CONTROL BOXES

DIMENSIONS



HEIGHT (A)	LENGTH (B)	WIDTH (C)	WEIGHT
8.41" (214 mm)	4.81" (122 mm)	2.84" (72 mm)	2.5 lbs (1.13 kg)

Figure 5: Dimensions of the RLCB Series Control Boxes.

Specification	Detail
Model Number	RLCB05-115 (640188)
Horsepower (HP)	1/2 HP
Voltage	115-Volt
Phase	Single-Phase
Material	Stainless Steel (housing)
Color	Gray
Product Dimensions (D x W x H)	2.84" x 4.81" x 8.41" (72mm x 122mm x 214mm)
Item Weight	2.5 Pounds (1.13 kg)
Enclosure Rating	NEMA Enclosure 3 (Indoor/Outdoor)
Certifications	UL Listed (USA and Canada)
Included Components	Control box
UPC / GTIN	010121122031

RED LION 640188 | 1/2 HP
RLCB05-115 | 1/2 CV
115 V

CONTROL BOX FOR SUBMERSIBLE MOTORS
BOÎTE DE CONTRÔLE POUR MOTEURS SUBMERSIBLES
CONTROLE CAJA PARA MOTORES SUMERGIBLES

VMC # 14940950

0 10121 12203 1

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LÍNEA DE ATENCIÓN AL CLIENTE
888.885.9254 | redlionproducts.com

2 YEAR ANS ANOS
WARRANTY / GARANTIE / GARANTIA

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Rev. 003 03/18

Figure 6: Product label with model details and contact information.

9. WARRANTY INFORMATION

This Red Lion RLCB05-115 VMC Control Box is covered by a **2-year manufacturer's warranty** from the date of purchase. Please retain your proof of purchase for warranty claims.

For items purchased within 30 days, please refer to Amazon's 30-day return policy. After 30 days, if Amazon.com is the seller, your product is covered by the terms outlined in this manual. If another company is the seller, please

contact them directly for warranty information.

10. SUPPORT AND CONTACT

Our team is available to assist with product selection, installation, maintenance, and troubleshooting.

- **Technical Service Line:** 888.885.9254
- **Website:** redlionproducts.com

Please refer to your owner's manual for more detailed information or contact our staff for assistance.