

How to wire the electrical distribution box in the well



Overview

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Key Takeaways

To safely connect wires to a well's electrical distribution box, turn off the main power, use the correct wire gauge, connect hot wires to L1 and L2, attach the ground wire, and follow manufacturer wiring diagrams for the pump and control box. Safety First

Before starting, turn off the main breaker to prevent electric shock. Always follow local electrical codes and, if unsure, consult a licensed electrician. Use a multimeter to verify that power is off before touching any wires .

Wire Selection and Circuit Protection

- Determine the pump's horsepower (HP) and full-load amperage (FLA) from the pump nameplate.
- Select the correct wire gauge and circuit breaker rating based on these specifications to prevent overheating and voltage drop .



- For submersible pumps, a control box is often required; jet pumps may wire directly to a pressure switch .

Making Connections

- Hot Wires (L1 and L2): Usually black and red, these carry 120V each relative to ground, providing 240V between them. Connect them to the designated terminals in the control box or directly to the pressure switch for jet pumps .
- Motor Wires: Inside the control box, connect the wires running to the pump motor according to the manufacturer's labels (commonly Red = Run, Yellow = Start, Black = Common) .
- Ground Wire: Use a bare copper or green wire, attached to the grounding screw or nut in the control box and distribution panel .
- Neutral Wire: Typically not used for 240V well pumps, but if present, connect to the neutral bus in the panel .

Splicing and Waterproofing

- For submersible pumps, splice the motor wires to the pump cable using heat-shrink splice kits or waterproof connectors to ensure a watertight connection .
- In wet locations, a weatherproof box at the well head is recommended. Wire nuts with a small layer of moisture-resistant tape (e.g., Scotch 33) can be used if allowed by code .

Routing and Installation

- Mount the control box near the pressure tank in a dry, accessible location.
- Run the power cable from the breaker box to the pressure switch or control box using appropriate conduit or cable type (e.g., BX or Romex) .
- Ensure all connections are secure, correctly identified, and labeled for safety and troubleshooting.

Final Steps

- After all connections are made, double-check wiring against the pump and control box diagrams.
 - Restore power and test the pump operation, verifying correct rotation and voltage .
- Following these steps ensures a safe, code-compliant, and reliable electrical connection for your well pump system.

Article Content

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