EV CONNECTIVITY



120V Terminal Block Wiring Guide for NEMA Enclosure

Before You Start

Ensure power is disconnected at the breaker and verify with a meter. Wear appropriate PPE and follow local electrical codes.

Power Source Requirements

Power for this enclosure should be supplied from an existing, properly rated electrical panel.

Do not tap directly into existing wiring unless it is part of a properly protected circuit. If a suitable circuit is not available, a customer-supplied sub-panel will be required to provide proper circuit protection and maintain code compliance.

Ensure all power connections meet local electrical codes. When in doubt, consult a licensed electrician.

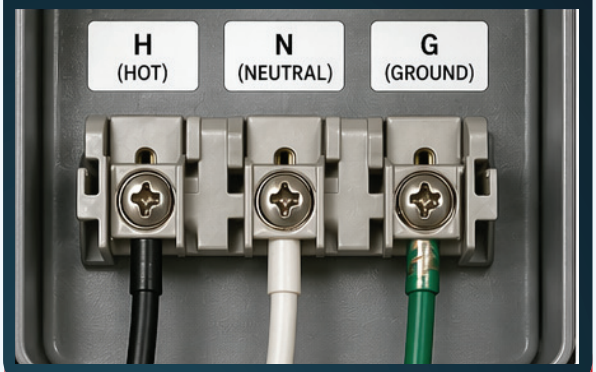
TOOLS & MATERIALS

- Flat/Phillips Screwdriver
- Wire Stripper
  - (¾ inch Strip Length)
- Multimeter or Voltage Tester
- Labels or Marker
- Optional: Ferrules or Lugs
- Personal Protective Equipment

Wiring Steps

1. Open and prepare the enclosure. Confirm the terminal block is securely mounted and marked H (Hot), N (Neutral), and G (Ground).
2. Route your conductors through the strain relief or conduit fitting with adequate slack.
3. Cut wires to proper length, leaving a gentle service loop.
4. Strip approximately ¾ inch of insulation from each conductor.
5. Loosen each terminal screw just enough to insert the wire.
6. Insert the ground (green/bare) wire into terminal G and tighten securely. Perform a gentle tug test.
7. Insert the neutral (white) wire into terminal N and tighten securely.
8. Insert the hot (black) wire into terminal H and tighten securely.
9. If a torque spec is given, tighten screws to that value (e.g., 6–8 in-lbs). Avoid overtightening.
10. Dress the wires neatly and secure them with cable ties to prevent strain on connections.
11. Label all conductors and terminals for clarity.
12. Inspect the wiring—no exposed copper, stray strands, or loose fittings.

TERMINAL BLOCK LAYOUT (120V)



IMPORTANT: This enclosure is for use on 120V, Single-phase (hot + neutral + ground) systems.

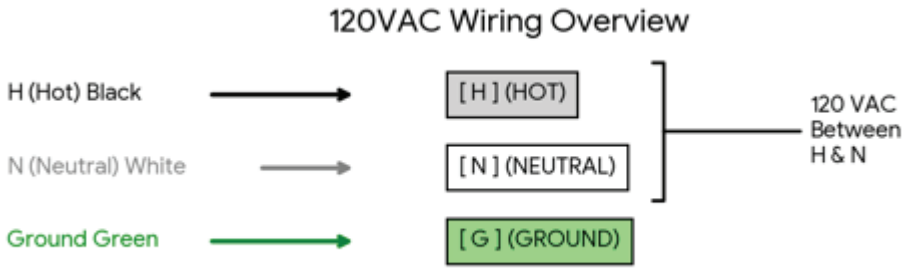
Power-Up & Testing

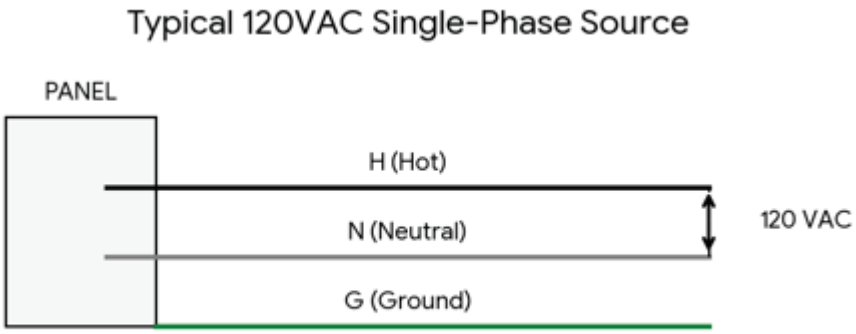
- Check continuity between G and chassis ground.
- Ensure no continuity between H and N or H and G before energizing.
- Apply power and verify voltages:
  - H → N ≈ 120 VAC
  - H → G ≈ 120 VAC
  - N → G ≈ 0 VAC
- Confirm enclosure seals are clean and latch the cover securely.

Safety Notes & Best Practices

- Use correct wire gauge for circuit (e.g., 14 AWG for 15A, 12 AWG for 20A).
- Ensure the enclosure and ground connections meet code requirements.
- Maintain NEMA rating by properly sealing cable entries.
- When in doubt, consult a licensed electrician.

Reference Images





EV CONNECTIVITY



240V Terminal Block Wiring Guide for NEMA Enclosure

Before You Start

Ensure power is disconnected at the breaker and verify with a meter. Wear appropriate PPE and follow local electrical codes.

Power Source Requirements

Power for this enclosure should be supplied from an existing, properly rated electrical panel.

Do not tap directly into existing wiring unless it is part of a properly protected circuit. If a suitable circuit is not available, a customer-supplied sub-panel will be required to provide proper circuit protection and maintain code compliance.

Ensure all power connections meet local electrical codes. When in doubt, consult a licensed electrician.

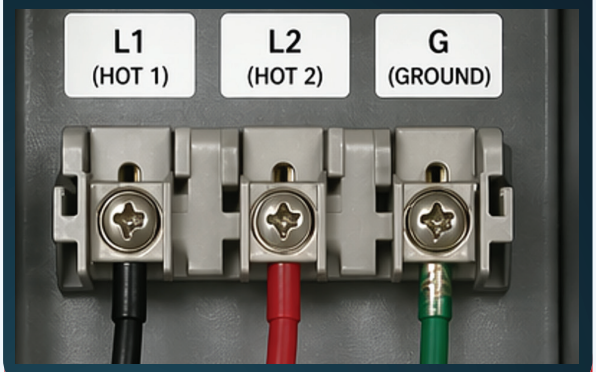
TOOLS & MATERIALS

- Flat/Phillips Screwdriver
- Wire Stripper
  - (¾ inch Strip Length)
- Multimeter or Voltage Tester
- Labels or Marker
- Optional: Ferrules or Lugs
- Personal Protective Equipment

Wiring Steps

1. Open and prepare the enclosure. Confirm power supply is securely mounted and marked L1 (Hot 1), L2 (Hot 2), and G (Ground).
2. Create penetration with weathertight fittings.
3. Cut wires to proper length, leaving a gentle service loop and adequate slack.
4. Strip approximately ¾ inch of insulation from each conductor.
5. Loosen each terminal screw just enough to insert the wire.
6. Insert the ground (green/bare) wire into terminal G and tighten securely. Perform a gentle tug test.
7. Insert the L2 (Hot 2, red) wire into terminal L2 and tighten securely.
8. Insert the L1 (Hot 1, black) wire into terminal L1 and tighten securely.
9. If a torque spec is given, tighten screws to that value (e.g., 6–8 in-lbs). Avoid overtightening.
10. Dress the wires neatly and secure them with cable ties to prevent strain on connections.
11. Label all conductors and terminals for clarity.
12. Inspect the wiring—no exposed copper, stray strands, or loose fittings.

TERMINAL BLOCK LAYOUT (240V)



IMPORTANT: This enclosure is for use on 240V, single-phase (2-wire + ground) systems. NEUTRAL (white) is NOT used.

Power-Up & Testing

- Check continuity between G and chassis ground.
- Ensure no continuity between L1 and L2 or L1 and G or L2 and G before energizing.
- Apply power and verify voltages:
  - L1 → L2 ≈ 240 VAC
  - L1 → G ≈ 120 VAC
  - L2 → G ≈ 120 VAC
- Confirm enclosure seals are clean and latch the cover securely.

Safety Notes & Best Practices

- Use correct wire gauge for circuit (e.g., 14 AWG for 15A, 12 AWG for 20A).
- Ensure the enclosure and ground connections meet code requirements.
- Maintain NEMA rating by properly sealing cable entries.
- When in doubt, consult a licensed electrician.

Reference Images

