Cable Matters

Installation Instructions

2 pack

Model 400046

15A GFCI WR & TR Receptcle with Wall Plate

support@cablematters.com

Should YOU install this?

Installing a GFCI outlet is more complicated than wiring a standard electrical outlet.

Review the following checklist:

- Basic understanding of electrical wiring principles, techniques and safety requirements
- Ability to read and understand a wiring diagram
- Electrical wiring experience
- Use a voltage tester and GFCI tester or other method to verify if the power is live and the GFCI is functioning correctly
- Other tools needed: screwdriver, wire stripper, wire nuts and electrical tape (optional)

What is a GFCI?

A ground-fault circuit interrupter (GFCI) provides protection against electrical shock by de-energizing an electrical circuit when a ground fault is detected. Building codes usually require GFCI outlets in areas subject to moisture such as kitchens and bathrooms.

Ground Fault Definition

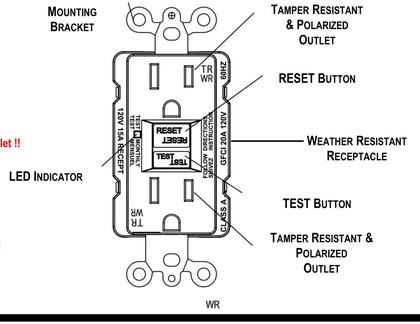
Electrical current is not following a safe path to ground such as through a human body.

GFCI Lockout Feature

Prevents RESET function when:

- No power is supplied to the GFCI
- GFCI LINE and LOAD terminals are incorrectly wired
- GFCI fails an internal test

GFCI Front View Features



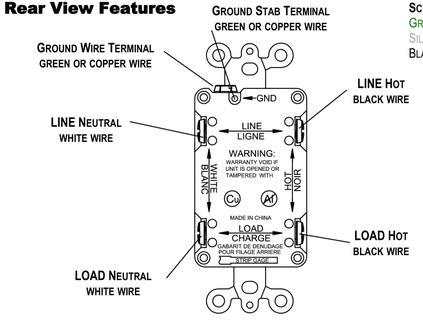
LED Indicator Colors:

GREEN = NORMAL

RED (SOLID OR FLASHING) = FAIL
Remove and replace the outlet !!

NOTE:
Outlet can be installed with the ground pin slot oriented at the top or bottom.

GFCI Rear View Features



Screw Terminal Colors:
GREEN = GROUND
SILVER = NEUTRAL
BLACK = HOT

Specifications

- Tamper-Resistant (TR) Outlets
- Weather-Resistant (WR) Receptacle
- AC Input: 125VAC 60Hz, 15A (20A pass-thru)
- 2 Pole / 3 Wire Standard Duplex
- Residential Grade
- Side Wiring Terminals: 12 AWG wire
- Back Stab Wiring Terminals: 12 or 14 AWG wire
- AC Outlets: 2 x TR Grounded Female
- Compliance: UL Listed
- Receptacle: (W x D) 1.7 x 1.5 Inches
- Wall Plate (HxW) 4.5 X 2.7 Inches
- 2x Receptacle and 2x Wall Plate mounting screws
- Warranty: Limited-One Year

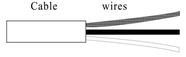
Note: Specifications are subject to change without notice

CAUTION

- Read the instructions before installation!
- Turn OFF the power at the electrical panel before installing to avoid shock or electrocution!!
- Verify that the power is off with a voltage tester!
- Use solid copper wiring only. DO NOT use aluminum wire. 12 AWG is required for 20A pass-thru.
- Do not install to power life support equipment! The GFCI will shut down the circuit, if tripped.
- A GFCI **DOES NOT** protect against a circuit overload, short circuit or shock from bare wires.
- A weather-resistant receptacle requires a weather-proof cover in wet locations.
- This outlet must be installed in compliance with national and local building electrical codes.

LINE vs LOAD

A typical electrical cable has neutral and hot wires. The ground wire can be integrated or separate.



LINE Cable:

Delivers power from the electrical service panel (breaker or fuse box) to the GFCI outlet. If there is only 1 cable in the electrical box, it is the LINE cable. Connect to the WHITE and HOT LINE terminals.

LOAD Cable:

Delivers power from the GFCI to another outlet on the same circuit. Connect to the WHITE and HOT LOAD terminals only.

1) Turn off the power at the electrical panel

Use a voltage test to verify that the power is turned off at the outlet, if possible

Alternative Testing Method:

1) Plug in an AC-powered device, such as a lamp, into the outlet for testing.
2) Switch on the device to check that the power is working.
3) Locate the breaker or fuse for this outlet at the electrical panel.
4) Switch the breaker to the OFF position (remove the fuse in a fuse panel).
5) Check that the device plugged into the outlet is off.
6) If this is a LOAD cable, plug in the test device to the other outlet(s) on the same circuit.
7) Repeat Steps 2-5.

Caution! Consult an electrician If the device is still powered-on after switching off the breaker (removing the fuse).

2) Identify the existing Cables and Wires

Important Note

DO NOT install the GFCI outlet in an existing electrical box containing:

a) 1 cable with more than 2 wires (1 neutral + 1 hot, not including ground wire)
b) More than 4 wires (2 neutral + 2 hot, not including ground wire)

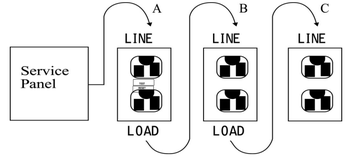
!! Consult a qualified electrician if either a or b is true.

When replacing an existing outlet, remove it from the electrical box WITHOUT disconnecting the wires and then follow the instructions below.

LINE Cable - If the box contains one cable (2 wires and a ground wire), it is a LINE cable. The outlet is probably in position C (see GFCI Circuit Diagram). Remove the outlet and go to the installation instructions in **Step 3A.**

LOAD Cable - If the box contains two cables (4 wires and 2 ground wires), the outlet is probably in position A or B (see GFCI Circuit Diagram).

GFCI Circuit Placement



A GFCI outlet can provide protection to other non-GFCI outlets on the same circuit even if they are in different rooms.

Position A: GFCI provides protection to positions B and C with LOAD line wires.

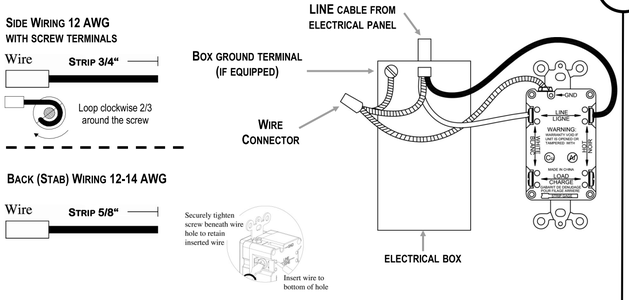
Position C: Placing a GFCI in this position will NOT provide protection to A or B.

LINE & LOAD cable ID in a box with 2 cables (4 wires and ground wires)

Use a voltage tester to locate the LOAD wire or the following method:

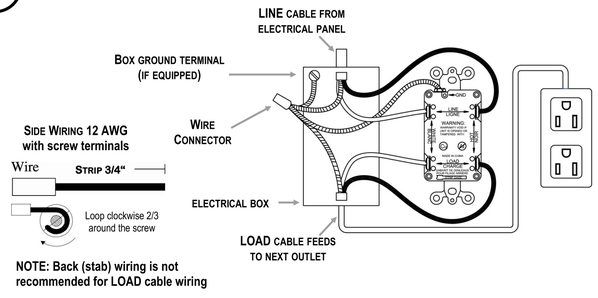
1) Check that the power is OFF. Select one cable and detach the neutral and hot (white/black) wires from the existing outlet. Terminate the wires with wire connectors (not included)
2) Re-install the outlet into the electrical box and attach the faceplate. Turn the power ON at the electrical panel.
3) Plug in a lamp or other device to determine if the outlet is receiving power.
   Power to outlet = LINE wires
   No power to outlet = LOAD wires
4) Turn the power OFF at the electrical panel. Label the LINE and LOAD wires
5) Continue to Step 3B.

3A) Wiring One Cable (2 wires + ground wire)



OR

3B) Wiring Two Cables (4 wires + ground wires)



NOTE: Back (stab) wiring is not recommended for LOAD cable wiring

Connection steps for LINE cable wiring

1) Connect the white/neutral wire to the silver LINE terminal
2) Connect the black/hot wire to the brass LINE terminal
3) Connect the green/copper ground wire to the GND terminal
4) Fold the wires into the electrical box. Keep the ground wires away from the neutral/hot terminals
5) Screw the outlet into the box with the included screws
6) Attach the wall plate with the included screws

PRO TIP: WRAP THE WIRE TERMINALS WITH ELECTRICAL TAPE TO SECURE THE WIRNG AND PROTECT IT FROM MOISTURE

GO TO STEP 4

Ground Terminal Wiring: If there is no ground wire with the cable and the electrical box has a grounding terminal. follow these instructions:

- Connect a 6-inch 12 AWG ground wire pigtail to the grounding terminal
- Connect another 6-inch 12 AWG ground wire pigtail to the GFCI GND terminal
- Check that the box is grounded or add a ground wire to an external ground
- Use a wire connector to terminate the ground wires (see above)

Note: Consult a qualified electrician if you are unsure of the grounding connection!!

Connection steps for LINE/LOAD cable wiring

1) Connect the white/neutral wire to the silver **LINE** terminal
2) Connect the black/hot wire to the brass **LINE** terminal
3) Connect the green/copper ground with to the GND terminal

4) Connect the white/neutral wire to the silver **LOAD** terminal
5) Connect the black/hot wire to the brass **LOAD** terminal
6) Fold the wires into the electrical box. Keep the ground wires away from the neutral/hot terminals
7) Screw the outlet into the box with the included screws
8) Attach the wall plate with the included screws

PRO TIP: WRAP THE WIRE TERMINALS WITH ELECTRICAL TAPE TO SECURE THE WIRNG AND PROTECT IT FROM MOISTURE

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- Check that the box is grounded or add a ground wire to an external ground

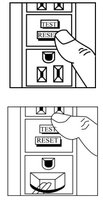
Note: Consult a qualified electrician if you are unsure of the grounding connection!!

4) Testing the Wiring

Warning!

- An improperly wired GFCI receptacle may not prevent personal injury or death due to a ground fault electrical shock!
- If the wiring to the LINE and LOAD terminals are switched, the GFCI will not provide power.

Test the outlet with an GFCI circuit tester, if possible.



I. Testing a GFCI wired to LINE terminals

1) Turn the power **ON** at the electrical panel. Depress the **RESET** button fully and then release. The **LED** indicator should be lit showing a green color. While the **RESET** button remains depressed, plug in a lamp or other device to check if the outlet is powered. If the **RESET** button does not stay depressed or there is no power, check the **Troubleshooting Tips.**

2) Plug in a lamp or other device. Depress the **TEST** button and release. This should trip the GFCI and the power should stop flowing. The **LED** should NOT be lit and the **RESET** should pop out. Depress the **RESET** button to restore power. If the power does **NOT** stop when the **TEST** button is pressed, check the **Troubleshooting Tips.**

II. Testing a GFCI wired to LOAD terminals

1) Test the main GFCI outlet using the steps above.

2) Plug in a lamp or other device into the outlet(s) wired to the GFCI.

3) Depress the **TEST** button on the GFCI. The power to the wired outlet(s) should stop flowing. If the power does NOT stop when the TEST button is pressed, check the **Troubleshooting Tips.**

4) Press the **RESET** button to restore power to the outlet(s).

5) Place a label on the outlet(s) wired to the GFCI with “GFCI PROTECTED OUTLET”.

Troubleshooting Tips

- Turn off the power at the electrical panel!!
- Compare the wiring to the diagrams in 3A or 3B.
- Check that **LINE** or **LOAD** wires are not reversed (indicated by no power and the **RESET** button will not hold).
- Check for any loose wiring connections.
- Review the test steps in Step 4.

Contact support@cablematters.com with any questions.

Monthly Testing Procedure Notes

- Press the **TEST** and **RESET** buttons every month to ensure proper operation.
- This self-testing GFCI outlet conducts an automatic test every five seconds.
- When the GFCI reaches the product end-of-life from repeated reset cycles, it is no longer able to provide ground fault protection. The LED indicator will turn orange or flash red. The GFCI should be removed and replaced.

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