Receptacles

Instruction Manual

MODEL MH15-ST

WARNING

WARNING — THE INSTALLATION MUST BE CARRIED OUT BY A QUALIFIED ELECTRICIAN.

1. Receptacles can only be installed by a qualified electrician
2. Turn OFF power at the service panel before working with wiring
3. Use with copper or copper-clad wire. DO NOT use with aluminum wire
4. Please keep the receptacles away from any corrosive substance, and please use dry cloth when you clean it

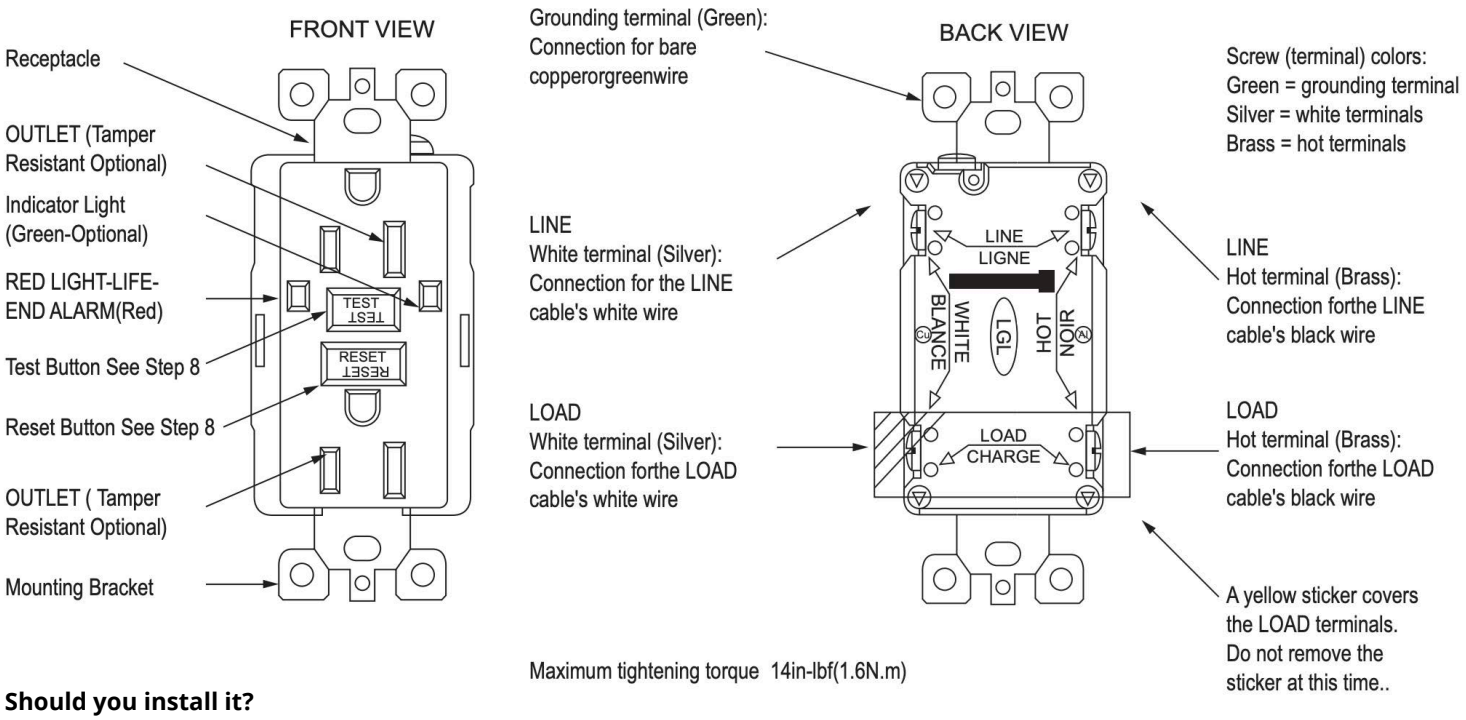
Application Notice

1. MUST be installed in accordance with national and local electrical codes
2. A GFCI receptacle does NOT protect against circuit overload, short circuits, or shocks
3. In the event of a ground fault, a GFCI will trip and quickly stop the flow of electricity to prevent serious injury
4. You can still be shocked if you touch bare wires while standing on a non-conducting surface such as an wooden floor
5. For installation in wet locations, protect the GFCI receptacle with a weatherproof cover that will keep both the receptacle and any plugs dry
6. DO NOT install the GFCI receptacle on a circuit that powers life support equipment because if the GFCI trips, it will shut down the equipment

CAUTION

PLEASE READ INSTRUCTION BEFORE COMMENCING INSTALLATION AND RETAIN FOR FUTURE REFERENCES.
Electrical products can cause death or injury, or damage to property.
If in any doubt about the installation or use of this product, consult a competent electrician.

FEATURES



Should you install it?

Installing a GFCI receptacle can be more complicated than installing a conventional receptacle. Make sure you:

- Understand basic wiring principles and techniques
- Can interpret wiring diagrams & have circuit wiring experience
- Are prepared to take few minutes to test your work, making sure that you have wired the GFCI receptacle correctly

** If you do not fully understand these instructions, you should seek the assistance of a qualified electrician

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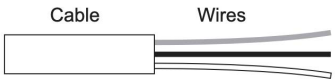
Line vs. Load

A cable consists of 2 or 3 wires



LINE Cable

Delivers power from the service panel (breaker panel or fuse box) to the GFCI. If there is only one cable entering the electric box, it is the LINE cable. This cable should be connected to the GFCI's LINE terminals ONLY.

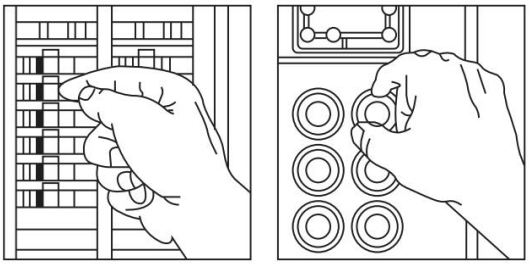
LOAD Cable

Delivers power from the GFCI to another receptacles in the circuit. This cable should be connected to the GFCI's LOAD terminals only. The LOAD terminals are under the yellow sticker. DO NOT remove the sticker at this time.

Turn the Power OFF

Plug an electrical device, such as a lamp or radio, into the receptacle on which you are working. Turn the lamp or radio ON. Then, go to the service panel. Find the breaker or fuse that protects that receptacle. Place the breaker in the OFF position or completely remove the fuse. The lamp or radio should turn OFF.

Next, plug in and turn ON the lamp or radio at the receptacle's other outlet to make sure the power is OFF at both outlets. If the power is not OFF, stop work and call an electrician to complete the installation.



Identify Cables / Wires

IMPORTANT

DO NOT install the GFCI receptacle in an electrical box containing (a) more than 4 wires (not including the grounding wires) or (b) cables with more than two wires (not including the grounding wire). Contact a qualified electrician if either (a) or (b) is true.

- If you are replacing an old receptacle, pull it out of the electrical box without disconnecting the wires
- If you see one cable (2-3 wires), it is the LINE cable. The receptacle is probably in position C (see diagram below). Remove the receptacle and go to step "Connecting the Wires A")
- If you see two cables (4-6 wires), the receptacle is probably in position A or B (see the diagram below)

Procedure: Box with Two Cables (4-6 wires)

a) Detach one cable's white and hot wires from the receptacle and cap each one separately with a wire connector. Make sure that they are from the same cable

b) Re-install the receptacle in the electrical box, attach the faceplate, then turn the power ON at the service panel

c) Determine if power is flowing to the receptacle. If so, the capped wires are the LOAD wires. If not, the capped wires are the LINE wires

d) Turn the power OFF at the service panel, and label the LINE and LOAD wires. Then, remove the receptacle

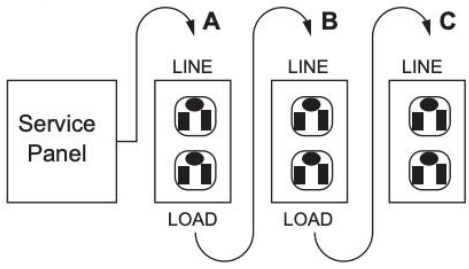
e) Go to step "Connecting the wires B"

Placement in Circuit

The GFCI's place in the circuit determines if it protects other receptacles in the circuit.

Placing the GFCI in position A will also provide protection to "load side" receptacles B and C. On the other hand, placing the GFCI in position C will not provide protection to receptacles A or B. Remember that receptacles A, B and C can be different rooms.

Sample circuit:



Connecting the Wires (choose A or B): A — One Cable (2-3 wires) Entering the Box

Connect the LINE cable wires to the LINE terminals:

- The WHITE wire connects to the WHITE terminal (Silver)
- The BLACK wire connects to the HOT terminal (Brass)

Connect the grounding wire (only if there is a grounding wire):

- For a box with no grounding terminal, connect the LINE cable's bare copper (or GREEN) wire directly to the grounding terminal on the GFCI receptacle
- For a box with a grounding terminal, connect a 6" bare copper (or GREEN) 12 or 14AWG wire to the grounding terminal on the GFCI. Also, connect a similar wire to the grounding terminal on the box. Connect the ends of these wires to the LINE cable's bare copper (or GREEN) wire using a wire connector. If these wires are already in place, check the connections.

Complete the installation:

- Fold the wires into the box, keeping the grounding wire away from the WHITE and HOT terminals. Screw the receptacle to the box and attach the faceplate
- Go to the next step "Test Your Work" (explained on the last page of this instruction manual)

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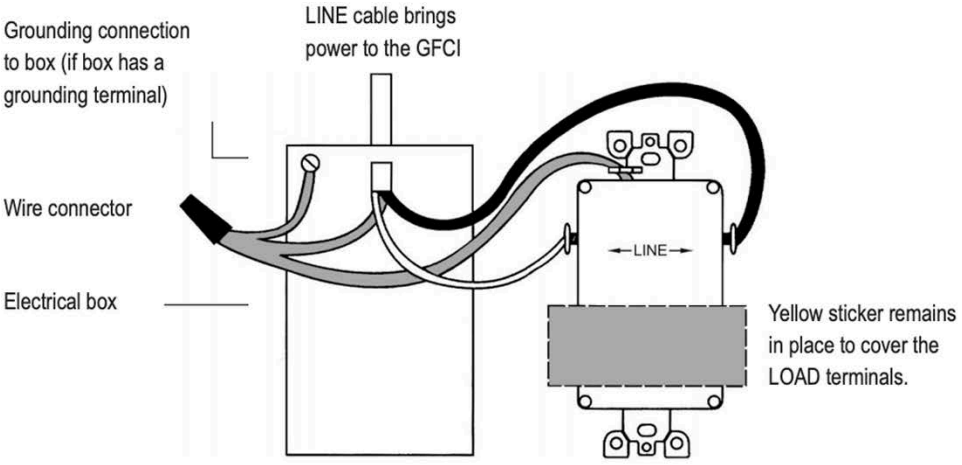
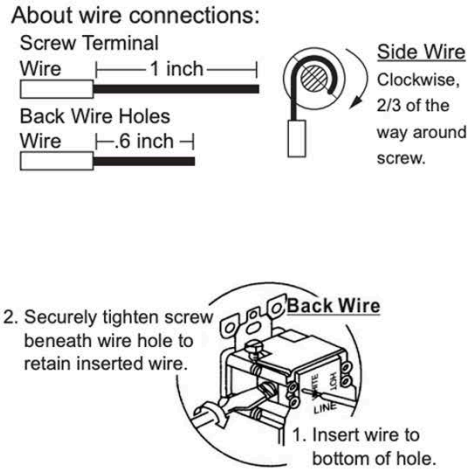
Connecting the Wires (choose A or B): A — One Cable (2-3 wires) Entering the Box





Connecting the Wires (choose A or B): B — Two cables (4 or 6 wires) Entering the Box

Connect the LINE cable wires to the LINE terminals:

- The WHITE wire connects to the WHITE terminal (Silver)
- The BLACK wire connects to the HOT terminal (Brass)

Connect the LOAD cable wires to the LOAD terminals:

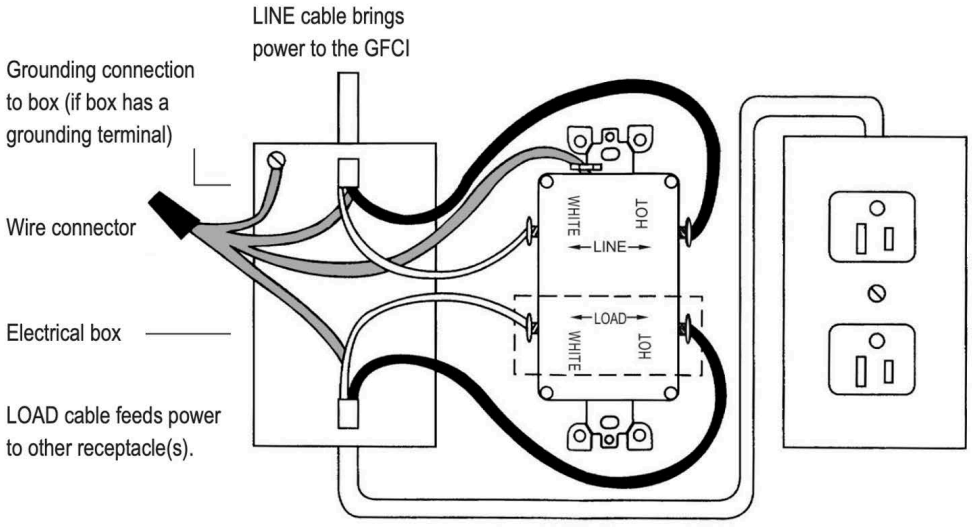
- Remove the yellow sticker to reveal the LOAD terminals
- The WHITE wire connects to the WHITE terminal (Silver)
- The BLACK wire connects to the HOT terminal (Brass)

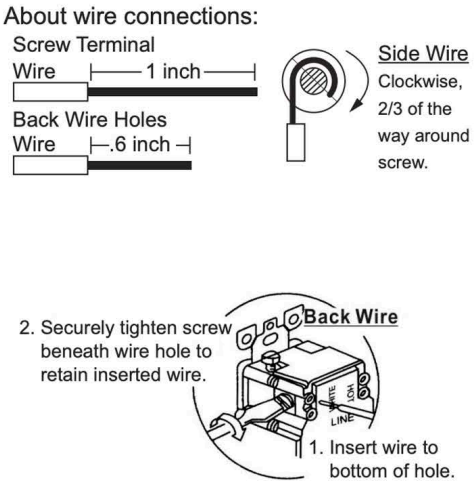
Connect the grounding wires (only if there is a grounding wire):

- Connect a 6" bare copper (or GREEN) 12 or 14AWG wire to the grounding terminal on the GFCI. If the box has a grounding terminal, also connect a similar wire to the grounding terminal on the box. Connect the ends of these wires to the LINE and LOAD cable's bare copper (or GREEN) wire using a wire connector. If these wires are already in place, check the connections.

Complete the installation:

- Fold the wires into the box, keeping the grounding wire away from the WHITE and HOT terminals. Screw the receptacle to the box and attach the faceplate
- Go to the next step "Test Your Work" (explained on the last page of this instruction manual)





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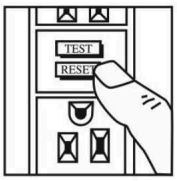
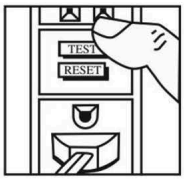
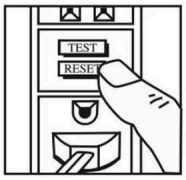
Test Your Work

Why Perform This Test?

- If you miswired a GFCI, it CANNOT be reset, the green indicator LED will be ON, by which it may prevent personal injury or death due to a ground fault (electrical shock)
- If you mistakenly connect the LINE wires to the LOAD terminals, the GFCI will NOT provide power to neither the outlet of the GFCI nor the load terminals fed through the GFCI







Procedure

a) After finishing the connection of wires and supply the power, press the RESET button fully and plug in a lamp or radio into the GFCI to verify that the GFCI is wired correctly (and leave it plugged-in) to verify that the power is ON. If the GFCI had been wired properly, it can be reset and supply the power to the outlet and the load terminals of the device.

b) Press the TEST button in order to trip the device. This should stop the flow of electricity, making the radio or lamp shut OFF. Note that the RESET button will pop out. If the power stays ON, go to Troubleshooting. If the power goes OFF, you have installed the GFCI receptacle correctly. To restore power, press the RESET button; the GREEN indicator LED will be on.

c) If you installed your GFCI using step "Connecting the Wires B: Two cables (4 or 6 wires) entering the box", plug a lamp or radio into surrounding receptacles to see which one(s), in addition to the GFCI, lost power when you pressed the TEST button. DO NOT plug life saving devices into any receptacles that lost power. Place a "GFCI Protected" sticker on every receptacle that lost power.

d) The GFCI includes an end-of-life monitoring function.
Once the GFCI has been correctly wired and powered, the red LED will flash one time within 5 sec, and the internal self-testing circuit will launch every 1-10 min. When the GFCI displays an alarm during its operation, the red light will turn ON immediately, and it will no longer provide a ground fault circuit protection, reminding the user that the GFCI is end of life and MUST be replaced.

e) Press the TEST button (then RESET button) monthly to ensure a proper operation. If the GREEN LED goes OFF when tripped, it means that the GFCI can still offer a ground fault circuit protection, the testing circuit is connected to the end-of-life monitoring circuit in a GFCI. Press the TEST button and cut off the power within the predetermined time, then press the RESET button to connect with the testing circuit. If the GFCI can provide ground fault circuit protection, it can be reset and supply the power to the outlets and the load terminals. If it fails to be reset, it reminds the user that GFCI has reached its end of life and should be replaced by a new one.

1) A GFCI ends its life when it fails to supply power, although the Line and Load are wired correctly.
If it happened, press TEST button manually, force to trip and cut off the power and replace it by a new one

2) A GFCI has reached its end of life when it cannot be reset, although the Line and Load are wired correctly. Please replace it by an new one

TROUBLESHOOTING

Turn the power OFF and check the wire connections against the appropriate wiring diagram in step "Connecting the wires (choose A or B)". Make sure that there are no loose wires or loose connections.

Also, it is possible that you reversed the LINE and LOAD connections if the GFCI cannot be reset and there is no power at the receptacle. Start the test from the beginning of step "Test your work" if you rewired any connections to the GFCI.

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