

## GFCI SAFETY OUTLET TAMPER RESISTANT GROUND FAULT CIRCUIT INTERRUPTER WITH USB CHARGER

### INSTALLATION AND TESTING

**20A, 120VAC, 60Hz  
CLASS A+C  
USB: 5VDC, 4.8A  
CLASS 2**



Please read this manual completely  
before installing

## CAUTION

- To prevent severe shock or electrocution, always turn the power OFF at the service panel before working with wiring.
- Use this GFCI receptacle with copper or copper-clad wire. Do not use it with aluminum wire.
- Do not install this GFCI receptacle on a circuit that powers life support equipment because if the GFCI trips it will shut down the equipment.
- For installation in damp or wet locations, the GFCI receptacle must be listed and marked as Weather Resistant (WR).
- For installation in wet locations, protect the GFCI receptacle with a weatherproof cover that will keep both the receptacle and any plugs dry.
- Must be installed in accordance with national and local electrical codes.

Tamper resistant mechanism stops access to outlet contacts unless a two-prong plug is inserted.

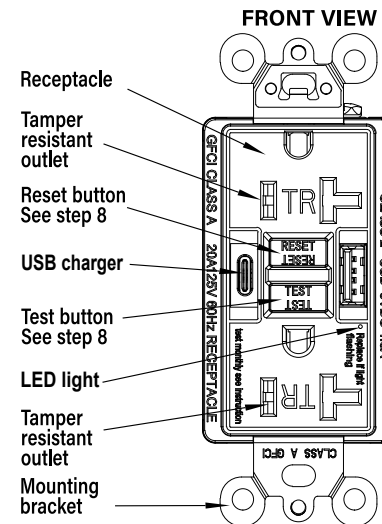
### 1. What is a GFCI?

A GFCI receptacle is different from conventional receptacles. In the event of a ground fault, a GFCI will trip and quickly stop the flow of electricity to prevent serious injury.

Definition of a ground fault: Instead of following its normal safe path, electricity passes through a person's body to reach the ground. For example, a defective appliance can cause a ground fault.

A GFCI receptacle does not protect against circuit overloads, short circuits, or shocks. For example, you can still be shocked if you touch bare wires while standing on a conducting surface such as cement or grease.

### 2. The GFCI's features



### BACK VIEW

Grounding terminal (green):  
Connection for bare copper or green wire.

LINE  
White terminal (silver):  
Connection for the LINE cable's white wire.

LOAD  
White terminal (silver):  
Connection for the LOAD cable's white wire.

Screw (terminal) colors:  
Green – grounding terminal  
Silver – white terminals  
Brass – hot terminals

LINE  
Hot terminal (brass):  
Connection for the LINE cable's black wire.

LOAD  
Hot terminal (brass):  
Connection for the LOAD cable's black wire.

Maximum tightening torque 14in-lbf(1.6N.m)

### 3. Should you install it?

Installing a GFCI receptacle can be more complicated than installing a conventional receptacle.

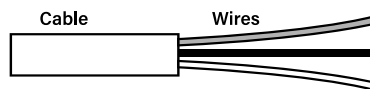
Make sure that you:

- Understand basic wiring principles and techniques.
- Can interpret wiring diagrams.
- Have circuit wiring experience.
- Are prepared to take a 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.

### 4. Line vs load

A cable consists of 2 or 3 wires.

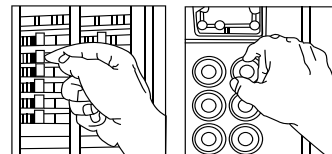


**LINE CABLE:** Delivers power from the service panel(breaker panel or fuse box) to the GFCI. If there is only one cable entering the electric box, it is the LINE cable. This cable should be connected to the GFCI's LINE terminals only.

**LOAD CABLE:** Delivers power from the GFCI to another receptacle/outlet in the circuit. This cable should be connected to the GFCI's LOAD terminals only.

### 5. 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

### 6. 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 to the right). Remove the receptacle and go to step 7A.
- If you see two cables (4-6 wires), the receptacle is probably in position A or B (see diagram to the right). Follow steps a-e of the procedure to the right.

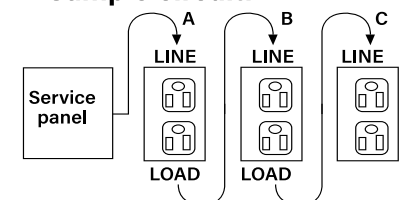
Procedure: box with two cables (4-6 wires)

- 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.
- Re-install the receptacle in the electrical box, attach the wall plate, then turn the power ON at the service panel.
- 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.
- Turn the power off at the service panel, label the LINE and LOAD wires, then remove the receptacle.
- Go to step 7B.

Placement in circuit:

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

Sample circuit:



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

**B: Two cables (4 or 6 wires) entering the box**

