



# Southwire™

## **X-TREME** **BOX**™

### **50-AMP 125/250V TEMPORARY POWER DISTRIBUTION BOXES**

**Q: How many 50-Amp temporary power boxes can I connect together?**

**A:** *There is no limit on the number of boxes, however the total length of 1 single 50-Amp power run should not exceed 300 Feet unless a booster transformer is used.*

**Q: Can your 50-Amp Temporary Power Boxes be plugged into a 3-wire receptacle?**

**A:** *No, the power system that a 50-Amp 125/250V 3P 4W Temporary power Boxes requires is 3-Poles, Hot 1, Hot 2, Neutral, plus a Ground. The unit will not function correctly if adapted to a system that does not match the voltage configuration, and may injure personnel if such.*

**Q: Can your 50-Amp Temporary Power Boxes be plugged into a 5-wire receptacle?**

**A:** *The power system that a 50-Amp 125/250V 3P 4W Temporary Power Boxes requires is 3-Poles, Hot 1, Hot 2, Neutral, plus a Ground. When connecting to a 3-Phase 5-Wire System, a temporary power distribution box must be utilized (6606GUSF-256 for example) to connect the 2 hots and neutral legs properly, then the box will function properly having 120V and 208V available instead of 125V and 250V respectively. In most applications, equipment will stay powered without any issues.*

**Q: If I use the 3-Phase 120/208 200-Amp 6606GUSF-256 unit to power your 50 Amp 125/250V 3P 4W Temporary Power Box, does the voltage change happen inside the box?**

**A:** *No. When connecting to a 3-Phase 5-Wire System, The 6606GUSF-256 unit takes 2 of the 3 phases and directs them to the 50-Amp receptacles for the 50-Amp boxes. The box 50-Amp unit will function properly, but it will have 120V and 208V available instead of 125V and 250V respectively. In most applications, equipment will stay powered without any issues.*

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**Q: I purchased a temporary power box from you, and need a short tail with connector to connect it to a generator lug kit or circuit breaker. Which gender device should I use?**

**A:** *All temporary power units are fed via a male inlet on the side of the enclosure, or a male plug mounted on a tail. Therefore, a connection tail should have a female device. If you are unsure as to the part number of the device, contact [toolcsn@southwire.com](mailto:toolcsn@southwire.com) . Common tails with female devices are usually kept in stock.*

**A:** *All 50-Amp 125/250V Temporary Power Boxes will need a 6364-Style connector or a 6369-style receptacle in order to power them*

**A:** *All 30-Amp 125/250V Temporary Power Boxes will need a NEMA L14-30R or L14-30C in order to power them*

**A:** *All CAM-Type units will need Female CAM devices on cables in order to power them*

**Q: Can I power a 50-Amp 3P4W Temporary Power Unit with a 30-Amp 3P4W Service, say on a dryer outlet?**

**A:** *Yes, and we sell adapter PN# 6408M & 6408MC for this. You will not be able to utilize the full capacity of the box.*

**Q: Can I power a 30-Amp 3P4W Temporary Power Unit with a 50-Amp 3P4W Service, say on a stove outlet?**

**A:** *No, the circuit must be protected by circuit breaker of the lower amperage. A 50-Amp Temporary Power Unit must be utilized.*

**Q: Can I power a 50-Amp 3P4W Temporary Power Unit with a 60-Amp 3P4W Service, say from a portable generator?**

**A:** *No, the circuit must be protected by circuit breaker of the lower amperage. A 60-Amp or larger Temporary Power Unit must be utilized.*

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**Q: Will your 50-Amp 125/250V 3P4W boxes work in Europe?**

**A:** *No, the voltage system in most European countries is 240V 2P3W, and runs higher than our box is manufactured for. Southwire's units can only be used in North America. There are manufacturers in Europe who will manufacture this product for Europe.*

**Q: Does NEMA Type 3R Mean Waterproof?**

**A:** *NEMA 3R enclosures are typically used in outdoor applications for wiring and junction boxes. This style of enclosure provides protection against falling rain, sleet, snow, and external ice formation. NEMA Type 3R Enclosures have undergone a series of tests of a certain water pressure and angle that equates to a light rain. Anything Listed has passed, and water may still enter the device will immediately exit and not touch any electrified parts. Temporary Power boxes should also be seated so that the legs are horizontal position.*

**Q: My GFCI Modules are not responding**

**A:** *First, be certain that the unit is powered up properly and that all circuit breakers are in the ON position. The GFCI modules have 3 LED's on the front.*

**A:** *Next, have an electrician inspect and meter the incoming power source to be certain 110-125 Volts is maintained between Black/Y Hot and Neutral, as well as between Red/X Hot and Neutral, and between both hots, X and Y should read 220-250V*

**A:** *If the 'Over-Voltage' LED is illuminated, this means the module is getting more than 125V but less than 250V. Somewhere in the power system feeding the module there is most likely a crossed wire. Please have an electrician inspect and meter the incoming power source to be certain 110-125 Volts is maintained between Black/Y Hot and Neutral, as well as between Red/X Hot and Neutral, and between both hots, X and Y should read 220-250V.*

**A:** *If the Power LED is illuminated but not the Monitor, then the GFCI is missing a connection to a ground. Test the grounding of all connections.*

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- A:** *If no LED's are operating, this means that the GFCI is not operating properly and needs replaced. The most likely cause of this is damage to the internal circuitry of the GFCI from a power spike, in-rush current, or over-voltage situation.*
- A:** *Spikes: GFCI modules are designed to allow up to 125V to pass through the receptacle adjacent and will absorb up to 250V of power spike. However, power spikes in utility systems can be greater. Please be sure an isolation transformer exists in your power system*
- A:** *Over-Voltage: Greater than 250V can happen for a number of reasons. We have found the most likely cause is a temporary system rated at 125/250V connected to a portable generators system, and the generator is set to produce 277 or 480 Volts. This voltage will obliterate the GFCI circuitry, and a scent of burnt plastic and electronics will emanate from the GFCI.*
- A:** *In-Rush Current: Certain pieces of equipment will cause a rush of electrons through the GFCI, and this will cause the GFCI to burn out. Most manufacturers of these types of equipment will provide a warning and possibly adapters to prevent this from occurring. A few examples are compressors, conduit benders, and welders.*

**Q: My GFCI Modules will not trip either with a tester or the buttons on the front.**

- A:** *This means that the GFCI is not operating properly and needs replaced. The cause for this is damage to the internal circuitry of the GFCI from heat. The most likely sources of heat are either excessive temperature for long periods of time, or the GFCI was running at less than 110V for a long period of time. The latter can happen due to voltage drop, hence why it is recommended to stay 300 Ft from your power source or to maintain 110 Volts or more.*

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## **Q: What is Voltage Drop?**

**A:** *Voltage drop is an electrical term where the natural resistance of the conductor, say a copper wire, will cause loss of voltage cumulatively along a power run. The further you get from your power source, the greater percent of loss. Voltage drop can be combated by utilizing a larger conductor, for example #4 AWG cord instead of #6, or by adding a booster transformer. For more information on voltage drop, see PN# 6700: <https://www.cepnow.com/product/6700/>*

## **Q: My GFCI's keep tripping**

**A:** *Something that is plugged into the GFCI might be tripping it. Does the same thing happen with nothing plugged into the receptacles? If so, the items(s) you have plugged in or their extension cords might have a fault.*

**A:** *The 20-amp receptacles themselves need a good grip on the contacts of the plug. If you can wiggle it around when plugged in, that brief loss of contact can fool the GFCI into tripping. If these are older receptacles, or if the plug you are using has some bent prongs, you might want to look at replacing both.*

## **Q: How should I test GFCI modules?**

**A:** *Please refer to the instruction manual of the appropriate product for a testing procedure. In most cases, this will require pushing the 'TEST' button of the GFCI.*

## **Q: How often should I test GFCI modules?**

**A:** *The answer varies from location to location. On a national basis, GFCI's must be tested and their results recorded every 90 days. Some local codes for states and cities have every 30 days. Please contact your local electrical inspector or OSHA chapter for a review of how often they need tested, and what documentation much be kept.*

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**Q: Why is a GFCI not required on the 30A 240V receptacle on your temporary power boxes?**

**A:** *The 2017 Code now requires GFCI protection for all 15, 20 and 30A Dual Voltage 125/250V outlets. The 240V 30A 2P3W L6-30 only carries a single voltage: 240V. Single Voltage (2P3W) and Dual Voltage (3P4W) are 2 different configurations. Dual voltage requires the addition of a neutral wire. In addition, a GFCI requires the presence of a neutral wire, which the L6-30 configuration does not include.*

**A:** *2017 NEC Code for 590.6 : Receptacles Not Part of Permanent Wiring. 15A, 20A, and 30A, 125V and 125/250V, single-phase receptacles that aren't part of the permanent wiring of the building or structure and that are in use by personnel must be GFCI protected. In addition to the required GFCI protection for personnel, listed cord sets or devices incorporating listed ground-fault circuit-interrupter protection for personnel identified for portable use are permitted.*

**Q: What is the difference between a 15-Amp rated GFCI and a 20-Amp rated GFCI?**

**A:** *The difference is the amount of current that passes through the GFCI. 15-Amp GFCI's can only have 15-Amp wiring devices on them, whereas 20-Amp GFCI's can have 15- or 20-amp devices. The 20-Amp GFCI's are usually found in situations where Twist-Lock configurations are accepted and are adapted between the two NEMA 5-20 and NEMA L5-20.*

**Q: Do GFCI's work with entertainment systems?**

**A:** *GFCI's are notorious for not functioning correctly when being used with sound systems and ballasts for fixtures in motion picture studio's. If you require a temporary power unit in these applications, please verify if GFCI protection is required, as many times it is not.*

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**Q: Why is there no ground or green wire on the newer GFCI modules?**

**A:** *The 30401 GFCI model (known at CEP as a GF60954) was discontinued in 9/2021 due to the new UL regulations about self- testing GFCI's. The Southwire (acquired by CEP) took it's place as PN# 18900000. The newer models of the GFCI modules (18900000) do not include the Ground Monitor function. It was an added selling feature (by CEP in 2014) that didn't really do anything (other than to show the box was grounded) and added unnecessary cost. No ground wire is needed for the GFCI wiring.*

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