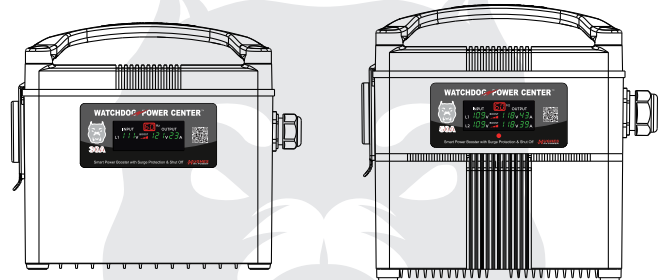




INSTALLATION & OPERATING INSTRUCTIONS

MODEL:WPC30A

MODEL:WPC50A



FOR YOUR RECORDS

MODEL NO: _____
SERIAL NO: _____
DATE PURCHASED: _____
PURCHASED FROM: _____

Patent No.US11,128,934 B2

DOWNLOAD APP AND REGISTER



App Store



Google play

All of us at Hughes are ever so thankful that you chose our product. Our goal is to exceed your expectations. You are now a proud owner of the world's most advanced RV surge protector & voltage booster! Loaded with features like WiFi & Bluetooth connectivity for monitoring remotely, a replaceable surge module, emergency power off, and voltage boosting capabilities. You should enjoy many years of service. First things first, go to the 'Google Play Store' for Android or 'App Store' for iOS and download the Power WatchDog GEN 2 app. Alternatively, you can scan the appropriate QR codes (shown above).

Should you run into any issues connecting your phone or tablet, please contact us at 888-540-1504 M-F 8-5 PST. Once the app is installed on your phone or tablet, follow the instructions to successfully sync your Watchdog Power Center unit to the app. The unit must be plugged in and powered on for the app binding process. Bluetooth will connect your phone directly to the Watchdog Power Center. Wi-Fi will connect your Watchdog Power Center to the net server, and your phone will communicate via Wi-Fi with the Watchdog Power Center. It's very important that you register your Watchdog Power Center. This can be done through the app, online at <https://hughesautoformers.com/customer-service/warranty/>. You can also mail in the included warranty card. We recommend you register online or through the app.

The Watchdog Power Center has a Limited Lifetime Warranty. The Watchdog Power Center is type 3R rated & suitable for outdoor use. The unit is 'plug & play' and will operate just fine without using the app. Error codes will be displayed on the unit's LCD screen.

Type 3R -> Unit Must Be Standing Vertically

WHAT YOUR WATCHDOG POWER CENTER CAN DO

Hughes Autoformers, a trusted name in RV power protection for over 25 years would like to say, "THANK YOU and CONGRATULATIONS." You are now in possession of the most advanced surge protector & voltage booster on the market!

OVER/UNDER VOLTAGE PROTECTION:

Should the output voltage drop to 96 Volts or less, or rise to 132 Volts or higher, the Watchdog Power Center will cut the power to the coach to protect against the unsafe voltage.

- This unit monitors Volts, Amps, Frequency and Watts in real-time from your smartphone/tablet.
- It will constantly watch for dangerous power conditions - like high voltage, low voltage, open ground, open neutral, and over-current. When any fault is detected the Watchdog Power Center disconnects your coach from the park power. The dog's face turns red indicating there's a problem. An error code appears on the screen of the Watchdog Power Center. An alert is sent to your smartphone/tablet telling you why it has disconnected and what to do next. Once the fault condition is resolved, the Watchdog Power Center will restore power after a 90 second delay, or you can push the restart button from your app.
- The Watchdog Power Center absorbs high voltage spikes and surges. If the surge module is ever used up, an 'E9' code will appear on the dog's face and your device app. Our toll-free number will appear (888) 540-1504. Call us, and you can receive a free surge module (within the first two years of ownership). (*Canada, Hawaii, Alaska shipping fees may apply).
- The Watchdog Power Center gives you the ability to turn your RV on and off remotely from the phone app.
- The Watchdog Power Center will track how many kilowatt hours you have used since hooking up in the RV park. Just tap on the "Energy Reset" after connecting in a new RV park.
- Fault conditions are recorded in the app. Tap on 'Alert History' while on the monitor display in the app to see the when, the why, and the duration of the fault. It's important to know if your RV had been shut down while you were away.
- The Watchdog Power Center makes a great diagnostic tool. IE: Note the amperage on the app monitor display, then turn on an appliance. The difference in amperage is how much that appliance is drawing. Use this information for balancing loads and avoiding overloading/over-current.

THE WI-FI ADVANTAGE:

As long as your phone has cellular reception, you can monitor and turn your RV's power off from anywhere on the planet.

TECHNICAL SPECIFICATIONS

FEATURES	WPC30A	WPC50A
Operating Current	30 Amps	50 Amps
Operating Voltage	120 Volts	120 Volts
Maximum Watts	3600 Watts	12000 Watts
3 Mode Surge Protection	Yes, L-N, L-G, N-G	Yes, L1-N, L2-N, L1-G, L2-G
Energy Dissipation	2300 Joules	4600 Joules
Maximum Surge Current	10000A per MOV	10000A per MOV
Over/Under Voltage Protection	Yes	Yes
Input Voltage Range	97/145V	97/145V
Output Voltage Range	104/132V	104/132V
Time Delay for A/C	90 seconds	90 seconds
Reverse Polarity Check	Yes	Yes
Voltage On Ground Check	Yes	Yes
Power Indicator	Error code window/phone	Error code window/phone
Warranty	Limited Lifetime	Limited Lifetime
Corrosion Resistant	Yes	Yes
Easy Installation	Yes	Yes
Industrial Contactor	Yes	Yes
Overvoltage category rating:	III	III
Pollution level:	II	II
Temperature range:	-20-+50 C	-20-+50 C
Humidity range:	95%	95%
Altitude:	2000 m	2000 m

Error Codes

E 1	Line1 voltage error	E 7	Missing ground
E 2	Line2 voltage error	E 8	Missing neutral at the coach
E 3	Line1 overcurrent	E 9	Surge protection used up
E 4	Line2 overcurrent	F 1	Line1 Frequency error
E 5	Line1 & neutral reversed	F 2	Line2 Frequency error
E 6	Line2 & neutral reversed	F 3	Over temperature error

OPERATING YOUR WATCHDOG POWER CENTER

1. Start by making sure the park breaker is in the off position.
2. Plug in the Watchdog Power Center by itself, without the RV attached.
3. Turn on the park breaker.
4. If the Dog logo illuminates white: All is well. Turn off the breaker and then plug the RV into the Watchdog Power Center, then turn the breaker back on. You're 'Good to Go.'

5. If the dog's face on the unit illuminates red, then there is a fault active. Refer the active code to the list shown below, or on the app. Contact the park management and inform them that you are seeing a fault. "E8 for 'Neutral Missing' indicates there is a problem inside the RV and not from the external power source.
6. If the dog's face on the unit does not light up, it could mean that you do not have power (voltage) from the pedestal, OR there is no neutral/return path connected. For 50 Amp units, check to see if the red "neutral missing" light is lit up, if so, no neutral line is detected from the source power (differs from E8). Contact park management. If you have a 30 Amp unit and no lights are on, it could mean that you have no power on that line. (Inform park management)
7. Your RV should now be in full operation while plugged into the Watchdog Power Center. If any faults occur, your Watchdog Power Center will turn power off to your RV to avoid any dangerous outcomes of unsafe power. (E9 - Surge Module used up will not turn RV power off, but will alert user via the app and indication on the unit itself)
8. If the Watchdog Power Center shuts down the power to the RV, it will continue to monitor the shore power. If the problem(s) have been corrected, it will begin a 90 second delayed restart. After this 90 second delay, the unit will restore power to your RV. "Beware!" If you plan on performing any electrical repairs, ALWAYS UNPLUG YOUR RV. For overcurrent faults (E3 and E4) and neutral missing faults(E8), you must turn off some appliances and push the restart button on your app, or cycle the breaker off/on at the pedestal.
9. The Watchdog Power Center is constantly absorbing voltage surges and spikes. Surges can happen at any time, and can vary in severity. Small surges can wear out the surge module over time, and large ones can use it all up in an instant. If the surge module is used up, the dog's face will illuminate red, and will stay illuminated to let you know it is time to change out the surge module. In addition, "E9" will be displayed on the unit and an alert will be sent to your phone/app with the corresponding error code. Contact Hughes Autoformers at 888-540-1504 to order a replacement module.

ERROR CODES

Below is a list of codes for faults that the Watchdog Power Center will detect. The unit itself will display the code in the event of a fault, and the phone/app will alert as well. The app will display the same detailed information of the fault as found below:

E 1 LINE ONE VOLTAGE ERROR

Your Watchdog Power Center has determined that the voltage coming from the park has either exceeded 132V or dropped below 96V and has disconnected the power entering your RV. Both high and low voltages can damage your RV. The Watchdog Power Center will now constantly monitor the voltage, and once the voltage stays in the safe range for 90 seconds, the Watchdog Power Center will restore the power back to your RV. You can check your voltage right now on the phone app. If volts are below 96V, or above 132V, contact park management.

E 2 LINE TWO VOLTAGE ERROR (50 AMP MODELS ONLY)

Your Watchdog Power Center has determined that the voltage coming from the park has either exceeded 132V or dropped below 96V and has disconnected the power entering your RV. Both high and low voltages can damage your RV. The Watchdog Power Center will now constantly monitor the voltage, and once the voltage stays in the safe range for 90 seconds, the Watchdog Power Center will restore the power back to your RV. You can check your voltage right now on the phone app. If volts are below 96V, or above 132V, contact park management.

E 3 LINE ONE OVER-CURRENT

Your Watchdog Power Center has determined that you have exceeded your RV's rated amps. You are likely drawing more amps than your RV wiring is built to handle. It is recommended to turn off major appliances such as an air conditioner/heat pump. After doing so, you will now draw fewer amps. Then, push the restart button on your phone and check how many amps you are using. You can use the app to see how different appliances affect amperage on the phone app. Also, check the park voltage on your phone; low voltage causes higher amperage. Report both conditions to park management.

E 4 LINE TWO OVER-CURRENT (50 AMP MODELS ONLY)

Your Watchdog Power Center has determined that you have exceeded your RV's rated amps. You are likely drawing more amps than your RV wiring is built to handle. It is recommended to turn off major appliances such as an air conditioner/heat pump. After doing so, you will now draw fewer amps. Then, push the restart button on your phone and check how many amps you are using. You can use the app to see how different appliances affect amperage on the phone app. Also, check the park voltage on your phone; low voltage causes higher amperage. Report both conditions to park management.

E 5 LINE ONE & NEUTRAL REVERSED

Your Watchdog Power Center has noticed a very serious condition. The park power has a wire reversed somewhere. This could cause severe damage to your appliances. See park management and tell them they have a neutral and hot wire reversed. The Watchdog Power Center will not allow park power through in this condition. Once this condition is fixed, the Watchdog will automatically turn on the power after a ninety-second delay.

E 6 LINE TWO & NEUTRAL REVERSED (50 AMP MODELS ONLY)

Your Watchdog Power Center has noticed a very serious condition. The park power has a wire reversed somewhere. This could cause severe damage to your appliances. See park management and tell them they have a neutral and hot wire reversed. The Watchdog Power Center will not allow park power through in this condition. Once this condition is fixed, the Watchdog will automatically turn on the power after a ninety-second delay.

E 7 MISSING GROUND

Your Watchdog Power Center has found a condition that can be very serious. You have lost your ground connection. Normally, if an electrical wire touches metal in your coach the current then flows to ground, and should trip a circuit breaker. Without a ground-connection, the protection from the ground will not work. You could receive a serious shock or a 'hot skin' scenario. Contact park management. The Watchdog Power Center will not allow park power to the RV without a ground connection. Once this condition is fixed the Watchdog will wait 90 seconds to ensure that the electrical grounding is consistent, then restore power automatically.

E 8 NEUTRAL MISSING INSIDE THE COACH

The Watchdog Power Center has detected that you have no neutral circuit inside your RV. The neutral wire provides a return path for electricity. Without a neutral, your electronics/appliances may experience very high or very low voltages. Damage to electronics & appliances can occur rather quickly. The Power Watchdog Power Center will not allow power to an RV that does not have a proper neutral connection. Please consult an electrician/technician to inspect your RV's electrical connections; starting from the Power Center/RV connection, RV cable, power inlet, transfer switch (if applicable), power bus bars, and then individual outlets inside. Once this condition is fixed, please push the restart button on your phone. It is also possible that both lines in your RV are matching in wattage and create a similar scenario as a missing neutral connection would. To test this, turn on a small appliance or fan on one leg and see if this solves the problem. This function can be selected to turn off or on in APP. Unbalanced wattages from Line 1 & Line 2 causes the difference in current to flow back to the source on the neutral wire.

E 9 SURGE MODULE PROTECTION USED UP

The Watchdog Power Center is sensing the surge absorption capacity has been depleted. (This is the only indication/fault code) The RV will continue to have power available with a used up surge module. Each surge protector can only take so many surges before they're done. Fortunately, the Watchdog Power Center's surge absorption board is replaceable via the user. Go to hughesautoformers.com or call 888-540-1504 and order a new module. It is advised to always have a spare surge module on-hand so there is no waiting for a new module to be shipped to you. The Watchdog Power Center surge module is compatible with the GEN II Power Watchdog surge modules and only depends on if your unit is 30 or 50 amps.

F 1 LINE ONE FREQUENCY ERROR

The Watchdog Power Center has detected the electrical frequency (sine wave) is either too high, or too low. Appliances may not work properly if operated at a different frequency than is specified (60 Hertz). Some sensitive electronics can be damaged by incorrect frequency.

F 2 LINE TWO FREQUENCY ERROR

The Watchdog Power Center has detected the electrical frequency (sine wave) is either too high, or too low. Appliances may not work properly if operated at a different frequency than is specified (60 Hertz). Some sensitive electronics can be damaged by incorrect frequency.

F 3 UNIT OVER-TEMPERATURE

WARNING: This unit has reached a very high internal temperature and has shut down for its own safety. When the internal temperature cools down, it will restart.

⚠ If the internal temperature is over 165 degrees Fahrenheit, the phone app will show the following message:

The temperature inside is too high, this can be caused by high ambient temperature. (Direct sun and/or high amperage) Try to shade the unit and reduce appliance usage. Try lowering your amp draw by turning off unneeded appliances.

		Caution, possibility of electric shock
	ISO 7000 - 0434B (2004-01)	Caution *

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Please scan the code to watch the operation video.



I'm watching it!!



I know there's a lot of information here but just relax and let me do the work



Scan this unique QR code to connect to your Power Watchdog. KEEP FOR RECORDS

HUGHES
AUTOFORMERS

hughesautoformers.com 888-540-1504