



Innovating the future of **RV POWER.**

WFCO BASIC POWER CONTROL SYSTEM

WF- 3154 POWER MINI

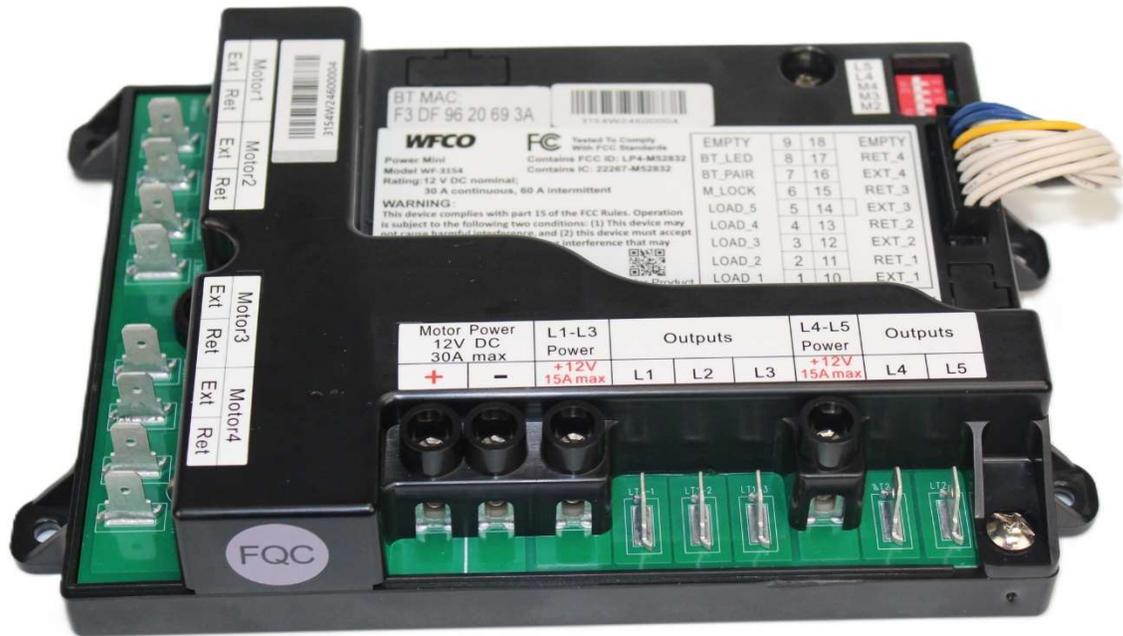


TABLE OF CONTENTS

Contents

| | | |
|------|--|----|
| I. | INTRODUCTION..... | 3 |
| II. | APP CONTROL | 4 |
| 1. | Bluetooth..... | 4 |
| a. | Pairing a New RV panel | |
| b. | Auto Connect to RV Panel | |
| c. | Bluetooth Button Details | |
| d. | Input Device Name Prompt | |
| 2. | Controls Page..... | 7 |
| a. | Device Controls | |
| b. | Renaming Controls | |
| 3. | Motors Page | 9 |
| a. | Motor Controls | |
| b. | Renaming Motor Controls | |
| c. | Motors Page Safety Lock | |
| 4. | Settings..... | 12 |
| a. | Change Device Name | |
| b. | Device Serial Number | |
| c. | Change Safety Lock | |
| d. | Language | |
| e. | APP Version | |
| f. | Firmware Version | |
| g. | Account Settings | |
| h. | Forget Panel | |
| III. | INSTALLATION..... | 16 |
| 1. | Mounting the Power Mini Unit | 16 |
| a. | Mounting to Wall/Floor | |
| b. | Mounting to WF-89xxAD Power Center | |
| c. | Mounting to WF-95xxAD Power Center | |
| 2. | Setting Active Circuits and Motors | 18 |
| 3. | Wiring Instructions | 18 |
| a. | Smart Panel Unit Wiring Instructions | |
| b. | Smart Panel Unit Wiring Diagram | |
| IV. | TROUBLESHOOTING..... | 19 |
| V. | WARRANTY | 20 |

WARNING

Risk of Electrical Shock. Disconnect or isolate all power supplies before making electrical connections. More than one disconnection or isolation may be required to completely de-energize equipment. Contact with components carrying hazardous voltage can cause electric shock and may result in severe personal injury or death.

IMPORTANT

All wiring must conform to local, national, and regional regulations. Use copper conductors only for all wire connections.

CAUTION

This product should be installed and serviced by a certified or licensed electrician familiar with applicable safety codes and installation requirements. Failure to observe this precaution could result in electrical shock or bodily injury. Consult your service dealer before attempting any work on this product.

WARNING

This unit employs components that can produce arcs or sparks. To prevent fire or explosion, do not install in compartments containing batteries or flammable materials (LP gas). This product is NOT ignition protected.

FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. 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.

IMPORTANT

The M52832QFAA Bluetooth module is integrated with the WF-3154 Power MINI system for using the APP through a smart device.

I. INTRODUCTION

The WFCO Power MINI system gives the user control of power circuits and motors throughout the RV. This includes up to five on/off controls (i.e. lights, water pump) and up to four motors (i.e. slideouts, awnings).

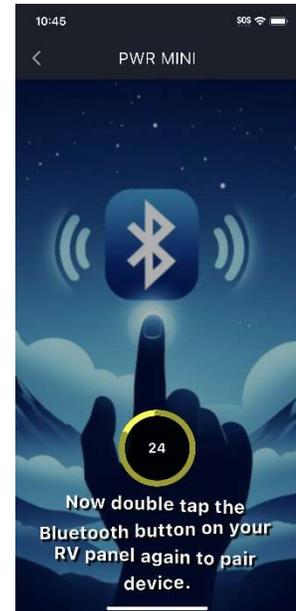
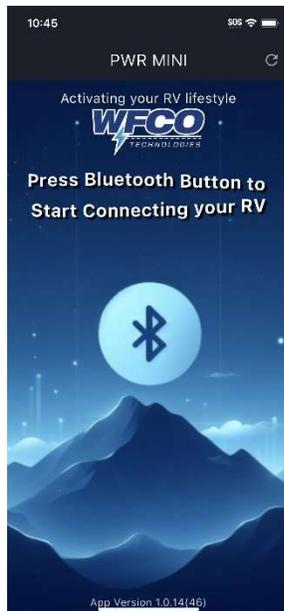
II. APP CONTROL

1. Bluetooth

To control the RV device, users must first connect and pair the mobile device to the Power MINI via Bluetooth. Once successfully paired, the mobile phone can be used for remote control of the Power Mini device in the RV.

a. Pairing a New RV Panel

- 1) Press the Bluetooth button connected to the Power MINI device. This will activate the Bluetooth radio to initiate connection.
- 2) With the Power MINI APP open, the Power MINI device(s) with an open connection will display, as shown in image 2.
- 3) Select the Power MINI device you would like to connect to.
- 4) Double press the Bluetooth button connected to the corresponding Power MINI device to confirm the connection.
- 5) You have now successfully completed the pairing process and will have access to controls through the APP.



b. Auto Connect to RV Panel

The Power MINI will store the last connected device in memory. If the remembered device enters range of the Power MINI device, it will automatically reconnect if the following is true:

- The Power MINI APP is open.
- The Power MINI Bluetooth radio is active.
- No other mobile devices are currently connected.

Note: If the Power MINI Bluetooth radio is not active, simply press the Bluetooth button connected to the Power MINI device and the remembered mobile device will automatically reconnect. Ensure your device's Bluetooth function is enabled.

c. Bluetooth Button Details (Not Included)

i. Bluetooth Button Functions

With the installation of a Bluetooth button (momentary switch), the user can operate the Bluetooth functions.

- Single Press - Turns on Bluetooth radio.
- Double Press - Will confirm Bluetooth pairing, after selecting device.
- Long Press (>10 seconds) - Will turn off Bluetooth radio.

ii. Bluetooth LED

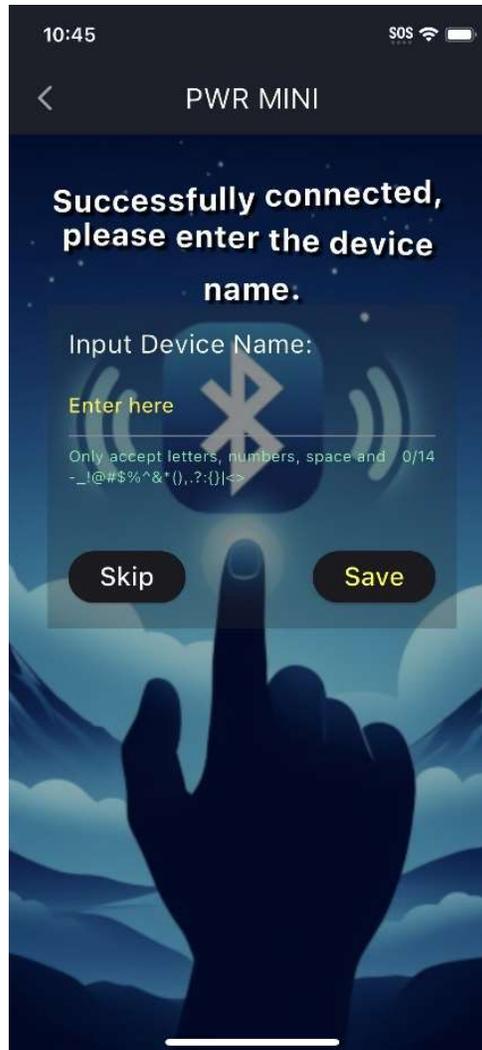
With the installation of an LED, the user can visually identify Bluetooth status.

- Slow Blink - Indicates Bluetooth radio is active and looking for connection.
- Fast Blink - Indicates active pairing in process, looking for device confirmation.
- Solid - Indicates device is paired.
- Off - Indicates Bluetooth radio is inactive.

d. Input Device Name Prompt

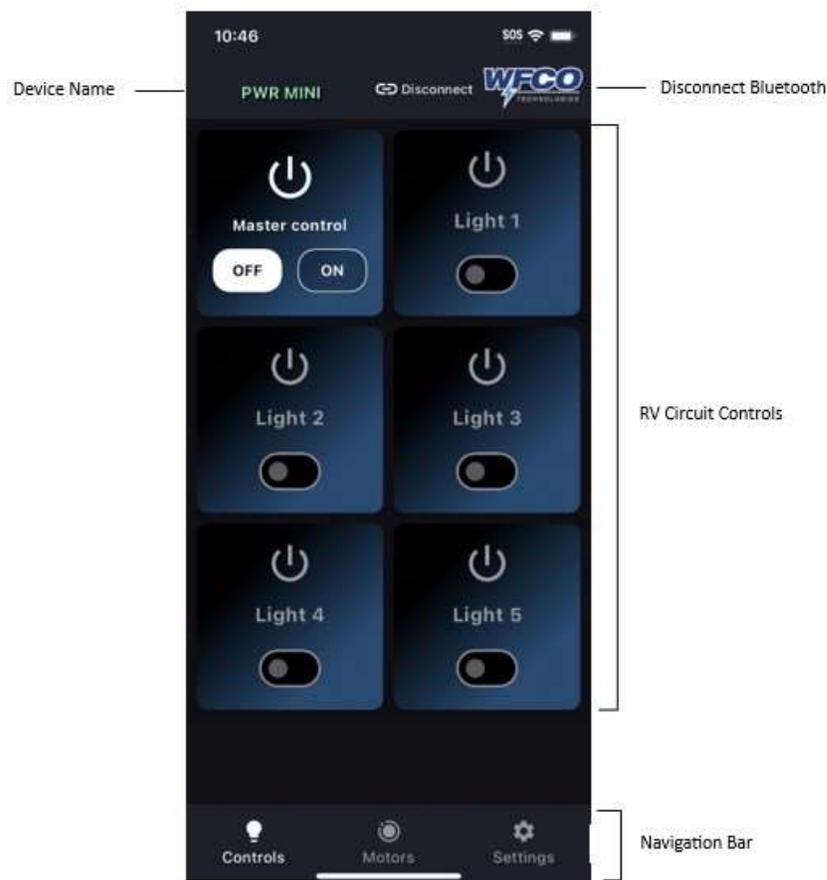
Upon initial Bluetooth connection, the Power MINI APP will prompt the user to enter a device name. This name will be saved within the Power MINI device for easy identification when trying to connect in the future.

NOTE: This prompt will appear upon connection until device name has been entered.



2. Controls Page

The controls page gives the user control of the actively installed controls. These have on/off capability.

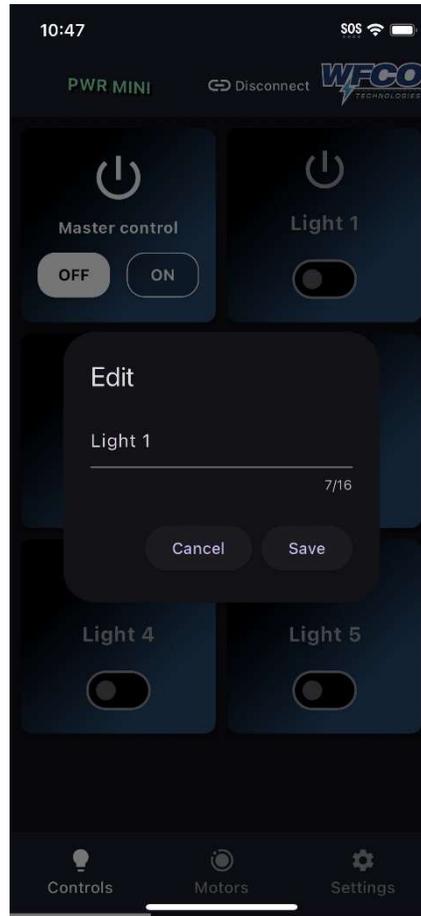


a. Device Controls

The active controls are listed in the RV circuit controls area. Up to five total controls can be installed on the device, with a minimum of three. These all have on/off capability. They can be turned on/off individually, or they can be controlled at once with the 'Master Control' button.

b. Renaming Controls

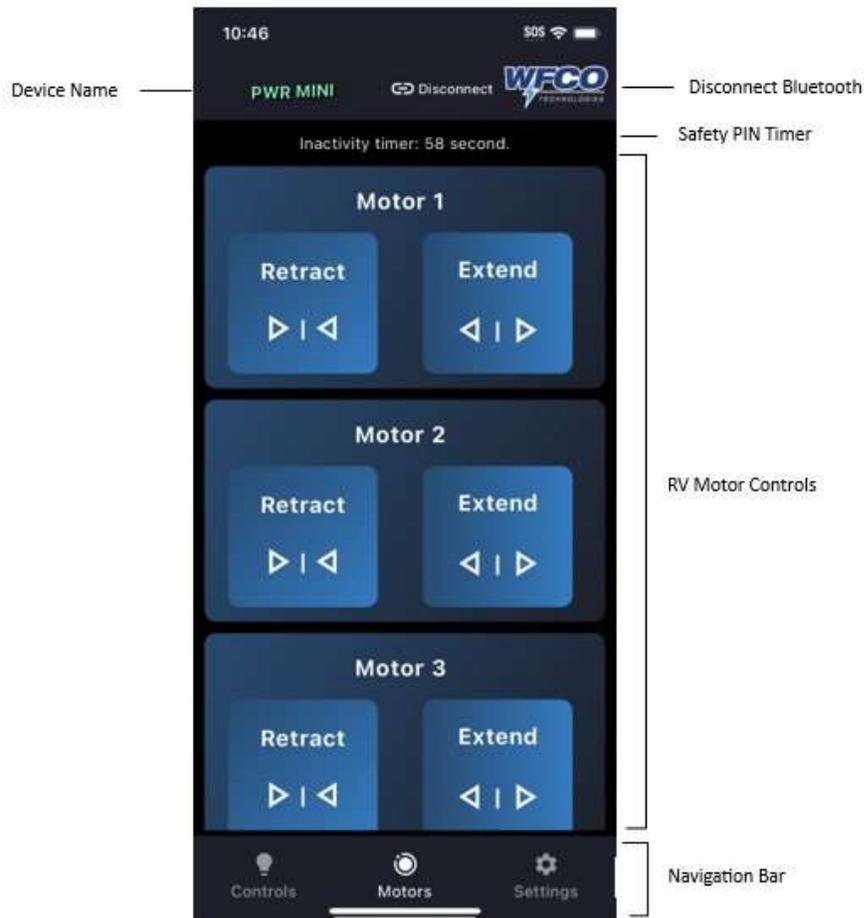
Each of the five controls can be renamed by the user. Press and hold the name of the control you would like to change (i.e. 'Light 1'). This will open the edit naming prompt. Once the new name is entered, press the save button to accept it.



Note: On the Controls page, you will find the Disconnect button in the top right corner. This will allow you to disconnect your current Bluetooth connection, allowing another user to connect their mobile device. This will not erase your mobile device from the Power MINI device's memory, allowing you to easily reconnect to the panel automatically by reopening the Power MINI APP.

3. Motors Page

The motors page gives the user control of the actively installed motors. These have extend/retract capability.

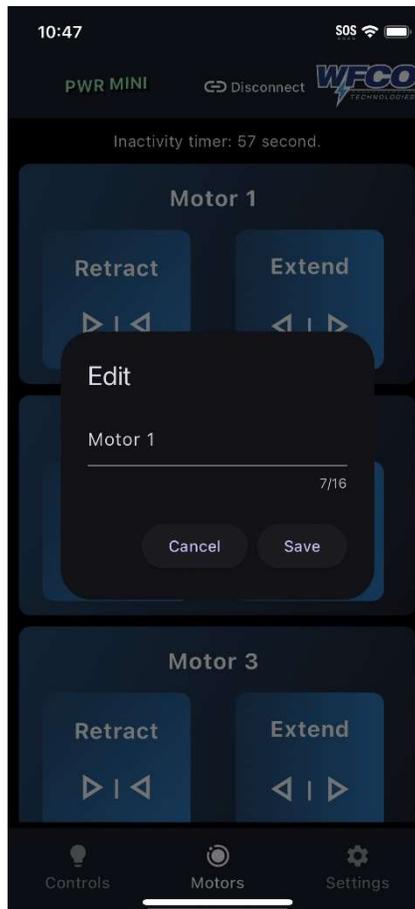


a. Motor Controls

The active motors are listed in the RV motor controls area. Up to four total motors can be installed on the device, with a minimum of one. These all have extend/retract capability.

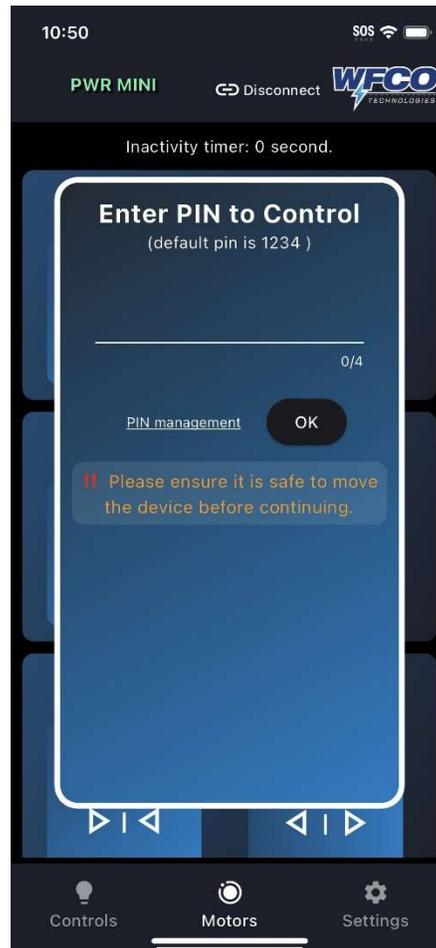
b. Renaming Motor Controls

Each of the four motors can be renamed by the user. Press and hold the name of the motor you would like to change (i.e. 'Motor 1'). This will open the edit naming prompt. Once the new name is entered, press the save button to accept it.



c. Motors Page Safety Lock

To enter the Motors page, you must enter the safety PIN. Once the safety PIN has been entered, the safety PIN timer begins.



If the user extends/retracts any motor, the timer restarts at 60 seconds. If 60 seconds expires without any activity, the safety PIN will be required to reopen the Motors page.

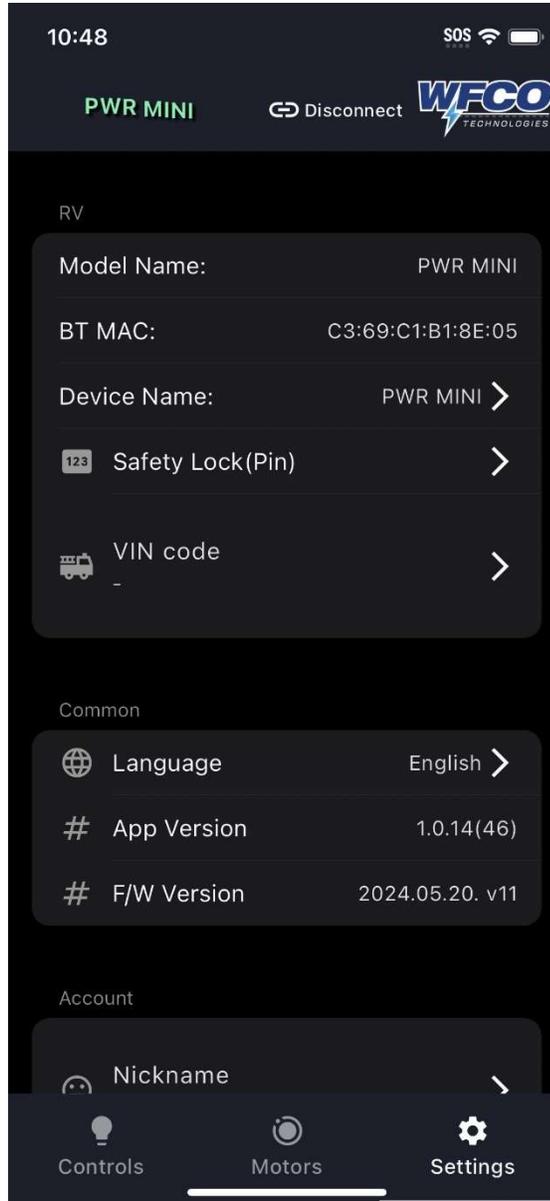
If the user exits the Motors page, the safety PIN will be required to reenter the Motors page.

See “Change Safety Lock” in Settings section for details to change safety PIN.

Note: On the Controls page, you will find the Disconnect button in the top right corner. This will allow you to disconnect your current Bluetooth connection, allowing another user to connect their mobile device. This will not erase your mobile device from the Power MINI device’s memory, allowing you to easily reconnect to the panel automatically by reopening the Power MINI APP.

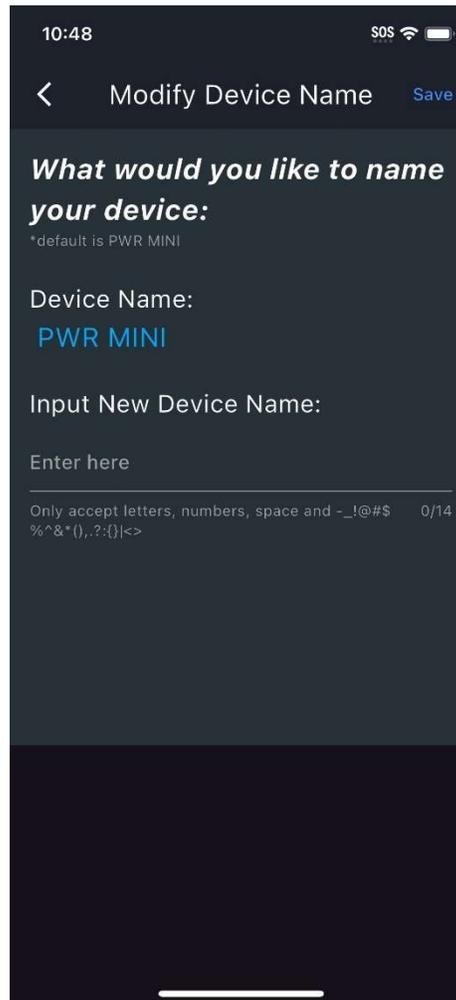
4. Settings

The settings page includes settings and important device information.



a. Change Device Name

You can change your devices name by pressing the Device Name section in settings. Once you enter your new device name, press the save icon in the top right corner.

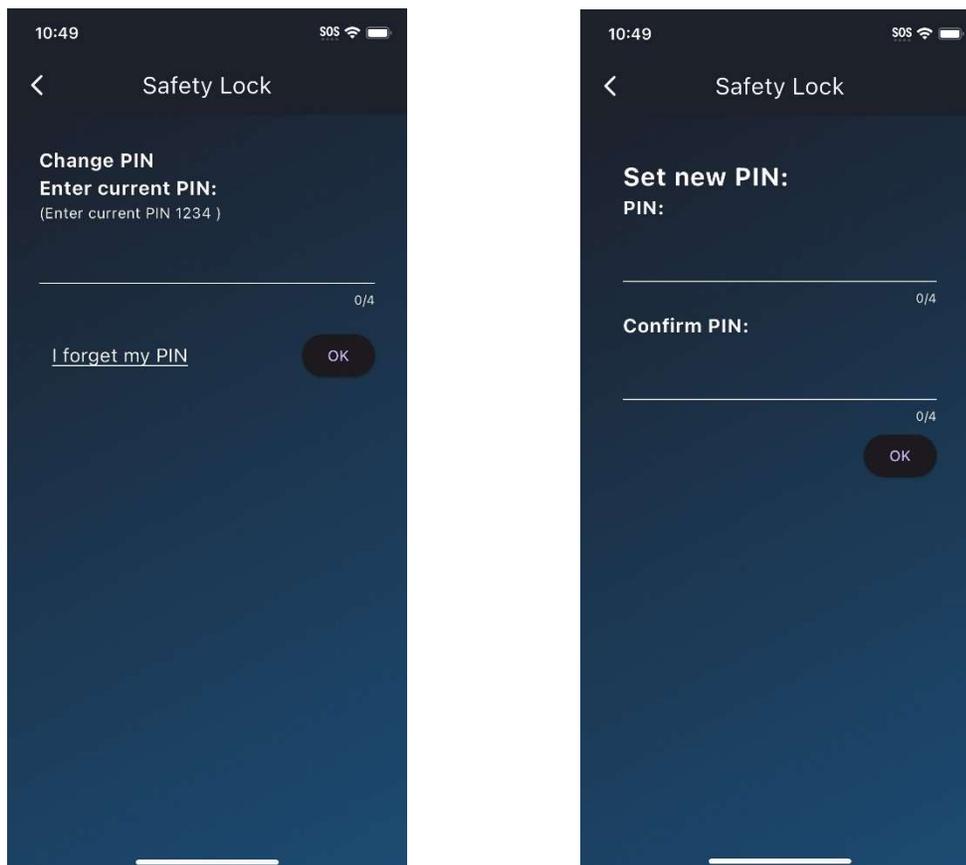


b. Device Serial Number

The Device Paired S/N displays your devices serial number.

c. Change Safety Lock

This setting allows you to change your safety PIN. You can also change your safety PIN on the initial safety PIN prompt on the Motors page. Press “PIN Management” on the Motors page safety PIN entry page.



Once your safety PIN has been changed and confirmed, press OK.

Note: It is recommended you change your safety PIN from the default PIN “1234”.

d. VIN Code

Stores your RV's VIN.

e. Language

Displays the device language. You can change the language displayed within the APP.

f. APP Version

Displays the APP version being used on the mobile device.

g. Firmware Version

Displays the firmware version currently installed on the Power MINI device.

h. Account Settings

Account settings are specific to each individual user, through each mobile device connected to the Power MINI device.

i. Nickname

Displays the nickname of the user within the APP settings.

ii. Phone

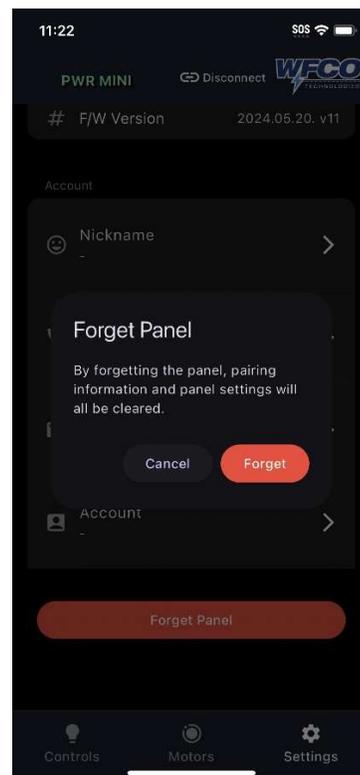
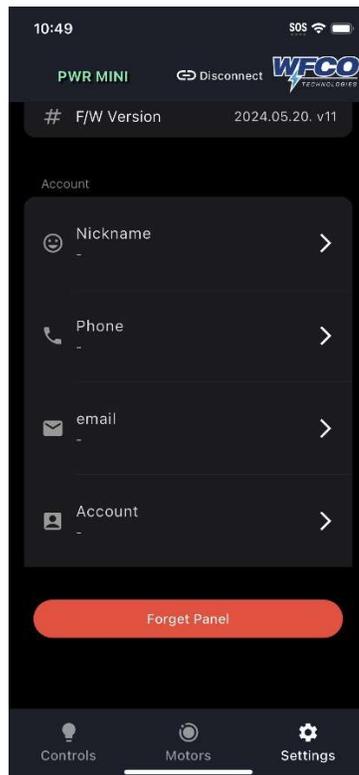
Displays the phone number of the user within the APP settings.

iii. Email

Displays the email address of the user within the APP settings.

i. Forget Panel

To forget the device, press "Forget Panel". This will clear the mobile device out of the Power MINI device's memory. To reconnect the mobile device to the Power MINI device, you will need to complete the pairing process again. See "Pairing a New RV Panel" in the Bluetooth section.

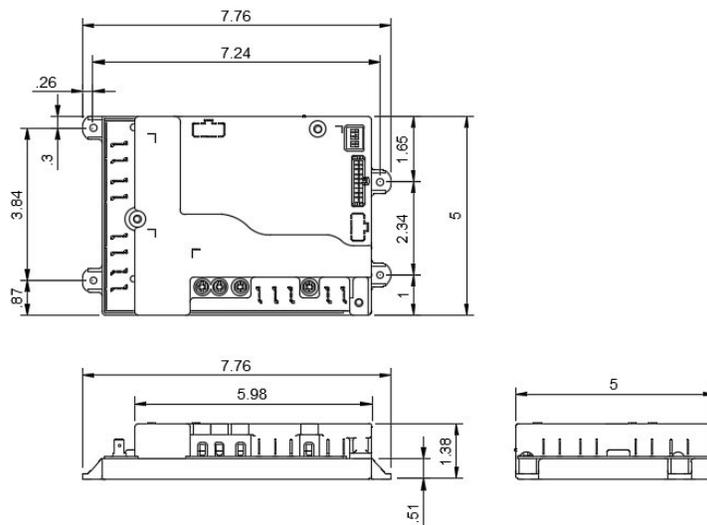


III. INSTALLATION

1. Mounting the Power MINI Unit

The Power MINI unit has primarily been designed for three different mounting configurations.

1. Wall/Floor Mounting.
2. Back of WFCO WF-89xxAD Power Centers.
3. Back of WFCO WF-95xxAD Power Centers.



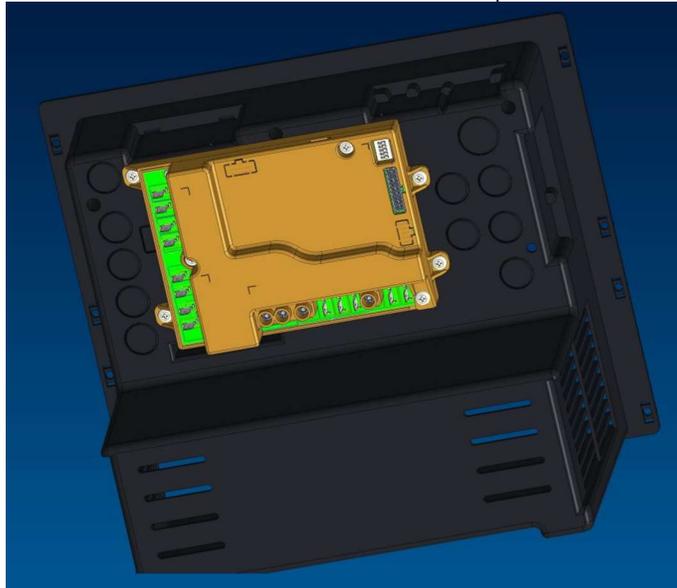
a. Mounting to a Wall or Floor

The Power MINI unit can be mounted to a wall or floor with four self-tapping screws.



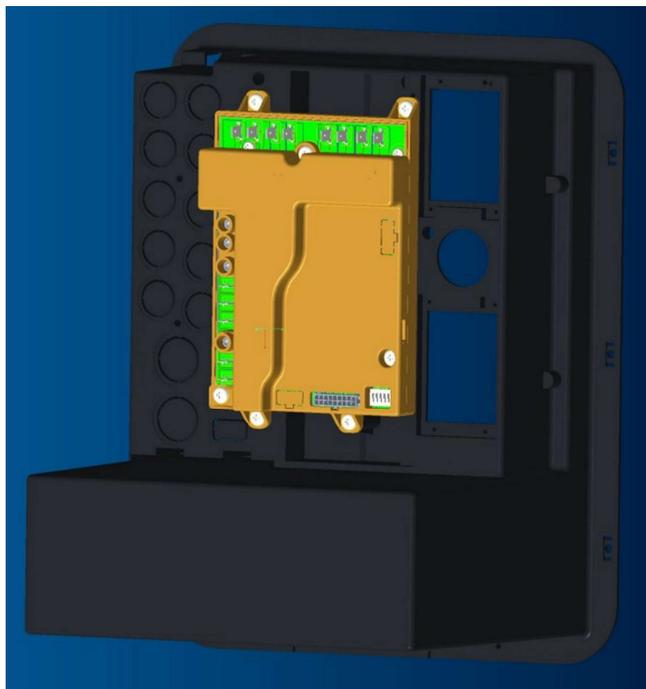
b. Mounting to a WF-89xxAD

The Power MINI unit can be mounted to the back of a WF-89xx AD power center with four M4*10mm screws, thread M4, thread pitch 0.7mm.



c. Mounting to a WF-95xxAD

The Power MINI unit also can be mounted to the back of a WF-95xxAD power center with four M4*10mm screws, thread M4, thread pitch 0.7mm.



2. Setting Active Circuits and Motors

The Power MINI offers up to five load circuits and four motor circuits. Two of the load circuits (L4, L5) and three of the motor circuits (M2, M3, M4) can be disabled or enabled with a dipswitch located on the Power MINI device.



3. Wiring Instructions

a. Power MINI Unit Wiring Instructions

Refer to the below table for wiring specification, use copper conductors only. All wiring shall meet local codes/standards and be performed by qualified personnel.

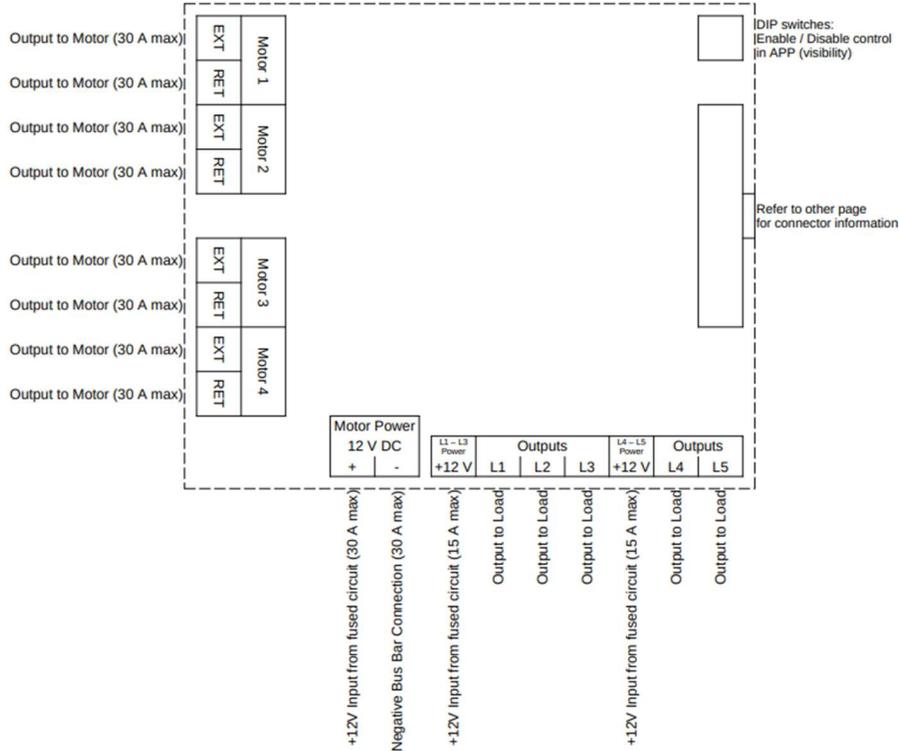
| Terminal Name | Recommended Wire Gauge | Wire Temperature Rating | Remark |
|-------------------|------------------------|-------------------------|--------------------------------------|
| Motor 1 ~ Motor 4 | 10 AWG | Min. 75 °C | 0.25 inch tab connector. |
| Load 1 ~ Load 5 | 14 AWG | Min. 75 °C | 0.25 inch tab connector. |
| Motor Power Input | 10 AWG | Min. 75 °C | Screw terminal; tighten to 25 in-lb. |
| Load Power Inputs | 14 AWG | Min. 75 °C | Screw terminal; tighten to 25 in-lb. |

Pigtail Detail

| | | | | | |
|--|----------|---|----|-------|-------------------------------|
| DO NOT CONNECT: | +12 V DC | 9 | 18 | GND | DO NOT CONNECT |
| <i>Connect to Bluetooth LED</i> | BT_LED | 8 | 17 | RET_4 | <i>Connect to Push Button</i> |
| <i>Connect to Bluetooth Push Button</i> | BT_PAIR | 7 | 16 | EXT_4 | <i>Connect to Push Button</i> |
| <i>Connect to Brake Light (+12V active high)</i> | M_LOCK | 6 | 15 | RET_3 | <i>Connect to Push Button</i> |
| <i>Connect to Push Button</i> | LOAD_5 | 5 | 14 | EXT_3 | <i>Connect to Push Button</i> |
| <i>Connect to Push Button</i> | LOAD_4 | 4 | 13 | RET_2 | <i>Connect to Push Button</i> |
| <i>Connect to Push Button</i> | LOAD_3 | 3 | 12 | EXT_2 | <i>Connect to Push Button</i> |
| <i>Connect to Push Button</i> | LOAD_2 | 2 | 11 | RET_1 | <i>Connect to Push Button</i> |
| <i>Connect to Push Button</i> | LOAD_1 | 1 | 10 | EXT_1 | <i>Connect to Push Button</i> |

Wire insertion side of connector

b. Power MINI Unit Wiring Diagram



IV. TROUBLESHOOTING

| Power MINI Troubleshooting Guide | | | | |
|----------------------------------|--|--|------------|------------|
| Issue | Solution 1 | Solution 2 | Solution 3 | Solution 4 |
| Panel is unresponsive. | Restart panel. To do this, disconnect shore power and battery. Reconnect shore power and/or battery. | Contact WFCO tech support at 574-294-8997. | | |

V. WARRANTY

CONSUMER WARRANTY CLAIM PROCEDURE

After it has been determined that a WFCO product is defective, an RGA number will be required before it can be returned. The RGA number can be requested by completing the Warranty Information Fax Sheet & Troubleshooting Form found at www.wfcoelectronics.com. Once the forms have been completed, email this form along with Proof of Purchase to warranty@wfcoelectronics.com or fax both forms to the Warranty Department (574)-294-8698. After receipt of the forms, an RGA number will be issued. This number shall appear on all correspondence with warranty service. Upon validation of the warranty, WFCO shall replace or repair the product with a like product. The RGA number shall be placed on the outside of the carton used to return the product for ease of identification. Do not mark directly on the product. The product must be packaged properly to avoid further product damage which could cause a non-warrantable condition.

WARRANTY ASSISTANCE

The consumer may contact the selling Dealer or OEM for warranty assistance. The OEM may contact WFCO Technologies at Phone: (574) 294-8997 or Fax: (574) 294-8698.