



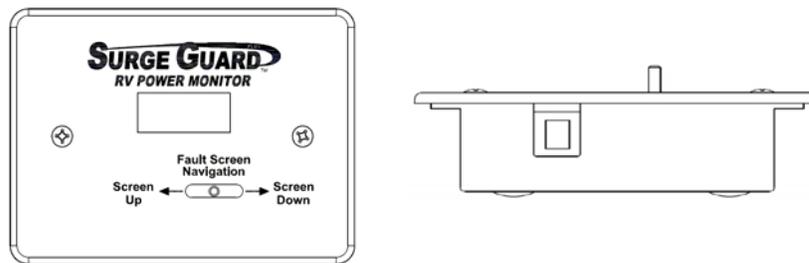
Please read these instructions carefully.
In the event you have any questions concerning use or care of this product, please contact TRC at 1-800-780-4324.

www.surgeguard.com

Installation and Operating Instructions Optional Remote Power Monitor LCD Display w/Navigation - Model 40248-003

The optional Remote Power Monitor LCD Display is connected to a Surge Guard unit via a RJ12 (6 pin) connector cable and conveniently monitors your electrical power anywhere inside your RV remotely from the Surge Guard's location. This display allows you to see more detailed information regarding incoming line voltages, current being used, and fault conditions than with just a Surge Guard unit alone. With the Remote Display you can see exactly what your line voltages are and whether or not you have any faulty conditions with your RV's electrical power, thus keeping you well informed regarding the electrical status of your vehicle. The display also features an up/down navigation button/lever allowing navigation through various informational screens.

The figures below illustrate the Remote Power Monitor Display's front and bottom faces. The front of the display provides a small LCD screen and a navigation lever for viewing critical information. The side view shows the location of the connector where you plug in your cable that connects to the Surge Guard.



TO INSTALL OPTIONAL REMOTE POWER MONITOR DISPLAY

1. Determine a convenient location where the remote display can be viewed. The display provides a continuous visual indication of source voltages, load currents, and fault diagnostics. The RJ12 (6 pin) connector cable allows for installation virtually anywhere inside the RV. It may also be installed in the same location as the Surge Guard unit. Mounting is not necessary. Leave enough cable length for accessibility. Balance of cable can be bundled with a plastic tie wrap. Should a remote location be desired, route cable through the coach as needed. (Cable ends and remote display must be located in a dry interior location away from inclement weather and moisture.)
2. Suggested mounting procedure.
 - A. Remove cover plate. (Do not allow foreign matter to fall into open box).
 - B. Using the open box as a template, mark outline on mounting surface.
 - C. Allow room for connector cable.
 - D. Position box, with cable installed and secure with mounting screws (not supplied).
 - E. Attach cover plate.
3. Connect Remote Display to Surge Guard using RJ12 (6 pin) connector cable. The Remote Display can be connected to the Surge Guard before or after the Surge Guard has been powered up.

OPERATING THE REMOTE POWER MONITOR DISPLAY

Screen Navigation Using the Button/Lever

There are several information screens associated with the Remote Display which can be selected via the Screen Lever on the front of the unit. Pushing the lever to the RIGHT repeatedly will access the screens in the following order.

Main Screen -> L1 VOLT -> L2 VOLT -> L1 CURR -> L2 CURR -> VIEW FAULTS -> repeats.

Pushing the lever to the LEFT accesses the screens in the reverse order.

On the 30Amp Surge Guard, the Remote Display will not show the L2 VOLT or the L2 CURR screens, as they are not applicable.

When VIEW FAULTS screen is displayed, pushing down on the lever accesses a log of faults which have been stored by the Surge Guard unit. If no faults have ever occurred, the display will show NO FAULTS. If any faults have been stored the screen will show FAULT 1. If you push the lever to the RIGHT or LEFT repeatedly, you will see all the faults which have occurred from FAULT

1 to FAULT 16. A total of 16 faults can be stored by the Surge Guard. As faults occur, the Surge Guard discards the oldest fault and stores the most recent one. The most recent fault would be FAULT 1, followed by FAULT 2, FAULT 3, etc. up to FAULT 16.

Exiting the Faults Screens: Pressing down on the lever while viewing the faults will get you out of the faults screens and back to VIEW FAULTS from where you can go back to the Main Screen as described above.

SCREENS

Main Screen - The Main Screen of the Display is used to show a continuous status of the RV's electrical power. These include: incoming Line Voltages and Currents (Amps) being used by the RV; Reverse Polarity State which is a faulty shore power condition; Delay State which is a waiting state that the Surge Guard goes into whenever it is first powered up or whenever there is a fault with shore power. The display will revert back to the Main Screen by default if it is left in any other screen for more than 3 minutes.

- A. **Delay State** - Whenever the Surge Guard is in the Delay State, the screen will show that it is in Delay as well as the time in seconds. For instance when the Surge Guard is first powered up, the Remote Display will show that the Surge Guard is in Delay, i.e., that it is waiting 128 seconds before connecting power to the RV. After that time if shore power is good, then the Surge Guard will connect power to the RV, and the Main Screen will show the Line Voltages and Currents. For 50Amp Surge Guards, the Main Screen will display information for Line 1 and Line 2; 30Amp models will only show Line 1 information.
- B. **Voltage and Current** - If the voltage for Line 1 or 2 is too low or too high, the Main Screen will show it; otherwise it will display the primary information regarding your shore power which is the Line Voltages and the Currents.
- C. **Reverse Polarity** - If the hot line and neutrals of your shore power are reversed, the Main Screen will display REVERSE POLARITY and FAULTY GROUND alternately.

Examples of Main Screens



L1 VOLT and L2 VOLT Screens - These screens are useful for viewing the line voltages when the Main Screen is in Delay or when it shows that L1 or L2 have a fault such as a line voltage that is too low or too high. The Main Screen will display the line voltage if it is between 102 and 132 volts; otherwise it will show that the line has a fault. The L1 VOLT and L2 VOLT screens however display a greater range, from 90 to 140Volts. The L2 VOLT screen is only shown when using a 50Amp Surge Guard.

L1 VOLT and L2 VOLT Screens



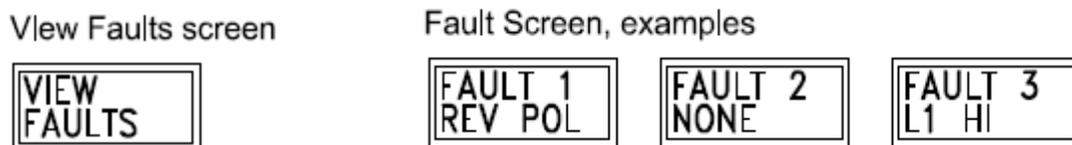
L1 CURR and L2 CURR Screens - These screens are useful for viewing the line currents in amps when the Main Screen is in Delay or when it shows that L1 or L2 have a fault. The L2 CURR screen is only shown when using a 50Amp Surge Guard.

L1 CURR and L2 CURR Screens



The VIEW FAULTS screen has been described above under the screen navigation section.

Examples of Screens regarding Faults



The most recent fault will be Fault 1, the second most recent is Fault 2, etc.