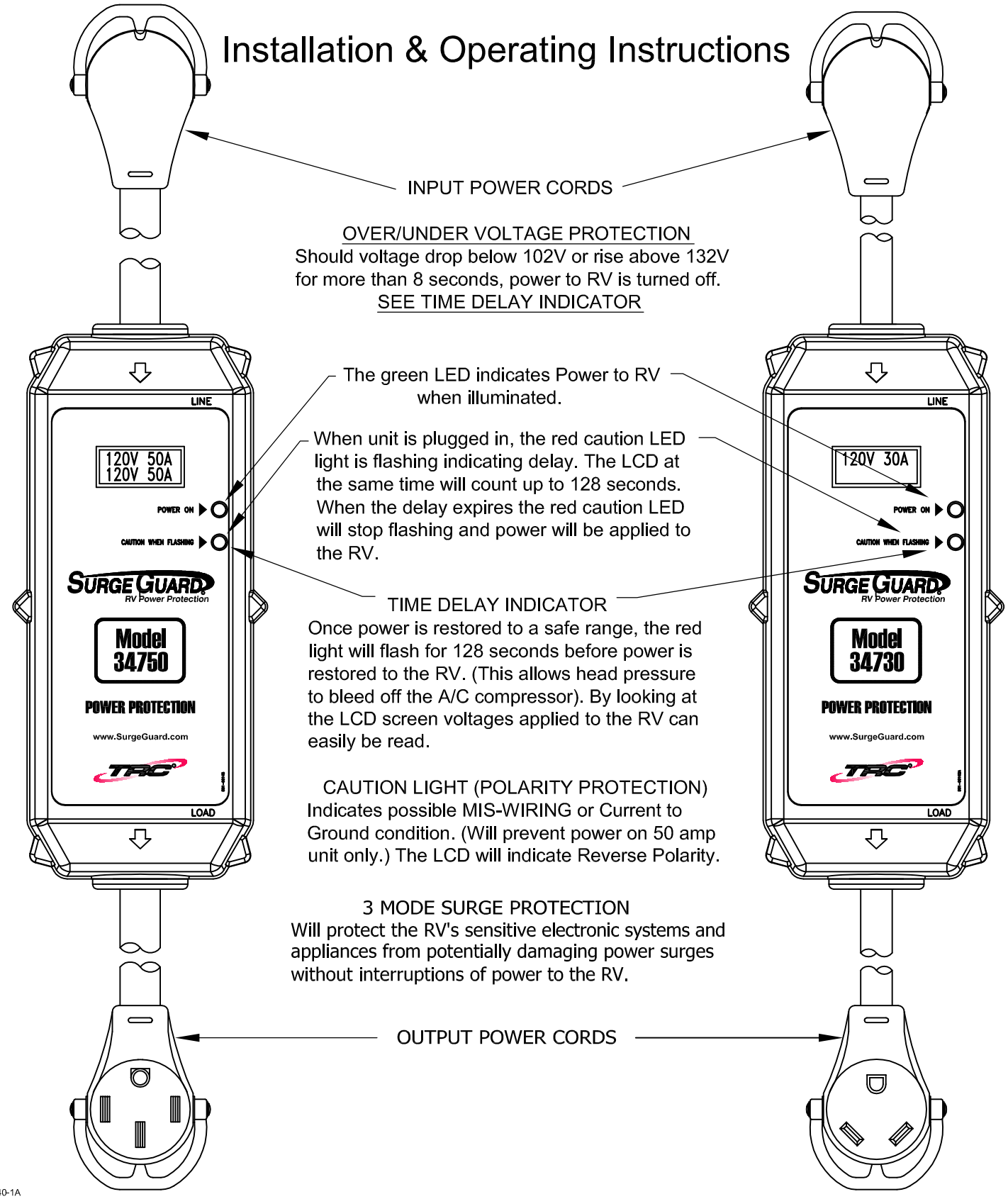
SURGE GUARD®
RV Power Protection

MODEL 34750
Portable

www.surgeguard.com

MODEL 34730
Portable

Installation & Operating Instructions



OVER/UNDER VOLTAGE PROTECTION
Should voltage drop below 102V or rise above 132V for more than 8 seconds, power to RV is turned off.
SEE TIME DELAY INDICATOR

The green LED indicates Power to RV when illuminated.

When unit is plugged in, the red caution LED light is flashing indicating delay. The LCD at the same time will count up to 128 seconds. When the delay expires the red caution LED will stop flashing and power will be applied to the RV.

TIME DELAY INDICATOR
Once power is restored to a safe range, the red light will flash for 128 seconds before power is restored to the RV. (This allows head pressure to bleed off the A/C compressor). By looking at the LCD screen voltages applied to the RV can easily be read.

CAUTION LIGHT (POLARITY PROTECTION)
Indicates possible MIS-WIRING or Current to Ground condition. (Will prevent power on 50 amp unit only.) The LCD will indicate Reverse Polarity.

3 MODE SURGE PROTECTION
Will protect the RV's sensitive electronic systems and appliances from potentially damaging power surges without interruptions of power to the RV.

Technical Specs for the Surge Guard Over and Under Voltage Models

Features	Model **34750**	Model **34730**
Operating Current	50 Amps	30 Amps
Operating Voltage	120/240 Volts	120 Volts
Maximum Watts	12,000 Watts	3,600 Watts
3 Mode Surge Protection	Yes, L-N, L-N, L-G, N-G	Yes, L-N, L-G, N-G
Energy Dissipation	3850 Joules	2450 Joules
Clamping Voltage	< 300 VAC	< 300 VAC
Maximum Spike Current	6500A per MOV	6500A per MOV
Over/Under Voltage Protection	Yes	Yes
Voltage Range	< 102V - 132V > (each side)	< 102V - 132V >
Trip Time	8-10 seconds	8-10 seconds
Restoration Level	> 102V -132V < (each side)	> 102V - 132V <
Time Delay for A/C	128 seconds	128 seconds
Reverse Polarity Check	Yes	Yes
Voltage On Ground Check	Yes	Yes
Power Indicator	LCD voltage & current reading	LCD voltage & current reading
Warranty	1 year	1 year
Corrosion Resistant	Yes	Yes
Easy Installation	Yes	Yes
Remote Panel	Not Applicable	Not Applicable
Industrial Contactor	Yes	Yes

OPERATING INSTRUCTIONS - MODELS 34750, 34730

1. Plug in the Surge Guard 34750/34730 into an approved RV receptacle and plug the RV power cord into the Surge Guard.
2. Verify the delay indicator is flashing, the LCD is counting. The LCD will read between 102V and 132V.
3. Once caution light stops flashing (this takes 128 seconds), verify RV power is on.

Note: Using with TRC Voltage Regulators.
If the Surge Guard is used with the TRC Voltage Regulator (10175 or 10176) then the Voltage Regulator should be positioned between the power pedestal (shore power) and the Surge Guard.

Note: Using with power cord adapters.
Purchased power cord adapters will work in most cases with Surge Guard but TRC does not recommend using them for full load applications due to the possibility of over-heating. Be advised that power cord adapters have been known to cause fires when Amps (electrical current) ratings are exceeded. Should you decide to use an adapter, our recommendation is to check on the power cord from time to time to make sure it is not overheating.

FOR YOUR RECORDS

MODEL NO: _____

DATE PURCHASED: _____

WHERE PURCHASED: _____

_____

_____

_____

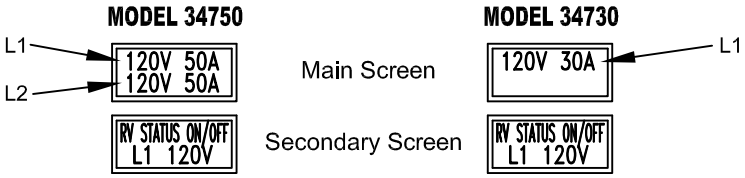
KEEP THIS INFORMATION FOR WARRANTY PROTECTION

TROUBLESHOOTING

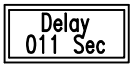
Symptom	Cause	Solution
Caution light is flashing.	1. There is a fault. Read LCD for information.	1. For reverse polarity or voltage on ground, move RV to a new electrical source.
LCD reads less than 102V on first line or L1, L2 Low on either line.	1. Only partial power at 50 AMP source. 2. No power at the source.	1. Move to a new source pedestal. 2. Use inverter or generator power.
When first plugging into pedestal power, caution light flashes momentarily, then goes out.	1. High or low voltage is present at source.	1. Change site or use inverter or generator power.

For further assistance call TRC at 727-535-0572

LCD Display Indicator



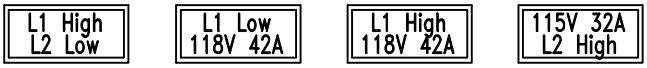
Surge Guard alternates between these two screens. There are two screens on the Surge Guard. The main screen and the secondary screen.



Start up condition: at power up.
Also fault condition: after over or under voltage.

Fault for reverse polarity condition or current on ground condition.

Main Screen examples:



Display for Normal Operation:

During normal operation the Surge Guard's LCD screen alternates between two displays, a main screen showing voltages and currents for power Lines 1 and 2 coming into the RV; and a secondary screen showing whether power to the RV is ON or OFF, and again the voltage for Line 1 coming into the RV.
The main screen for Model 34750 (50Amp) will show the voltages and currents for Lines 1 and 2, whereas for Model 34730 (30Amp) it will only show them for Line 1 since there is no Line 2 for that model.
There are two rows or text lines on the LCD screen. The top row for the main screen shows information for power Line 1 in the following format: 120V 50A. This means that the voltage on power Line 1 coming into the RV is at 120 volts and the RV is drawing 50Amps of current on Line 1. The bottom row of the main screen for the 34750 will show the voltage and current for Line 2.
The top row of the secondary screen for both models shows RV ON or RV OFF, and the bottom row shows the voltage on power Line 1 like so: L1=120V.
If the power coming into the RV is less than 102 volts on either Line 1 or Line 2, then the main screen will show: L1 Low or L2 Low, instead of the voltage and the current. If the power coming in is greater than 132 volts, then the main screen will show: L1 High or L2 High.

Display During Fault Condition:

When the Surge Guard is powered up, the LCD screen will display "Delay" and the elapsed time in seconds until it reaches 128 seconds. Then the unit will go to the display for Normal Operation showing the voltages and the currents as described above. If there is a fault condition during normal operation such as high or low voltage, the unit will display that L1 or L2 is high or low; however when the power comes back within range (120Volts-132Volts) the unit will go to the "Delay" screen as described above before going to the main screen that shows the voltages and currents.

Reverse Polarity Condition:

If the polarity of the voltages coming into the RV is reversed, then the Surge Guard unit will display "Reverse Polarity" until this condition is corrected. Also, current or voltages on Ground will be displayed as reversed polarity.

5250 140th Avenue North • Clearwater, Florida 33760 • (727) 535-0572
www.surgeguard.com