

SURGE GUARD®

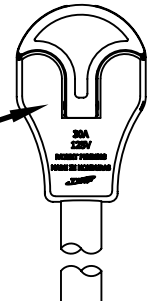
RV Power Protection

www.SurgeGuard.com

MODEL 34850
PORTABLE

MODEL 34830
PORTABLE

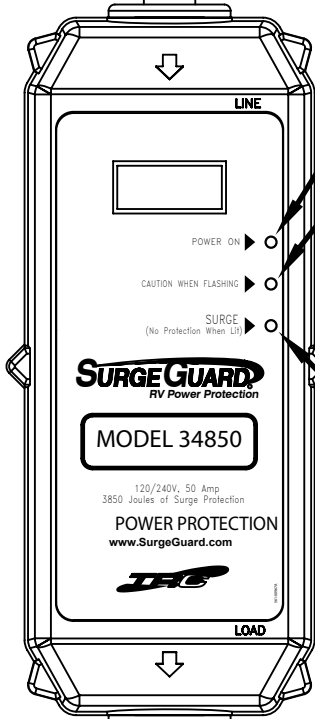
INSTALLATION & OPERATING INSTRUCTIONS



INPUT POWER CORDS

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.

TIME DELAY INDICATOR

When unit is plugged in, the red caution LED is flashing indicating delay. The LCD at the same 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 will also be applied to reset once power is restored to a safe range following the 128 second delay. This allows head pressure to bleed off the A/C Compressor.

SURGE FAILURE

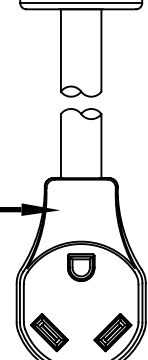
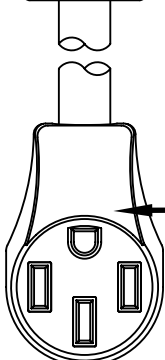
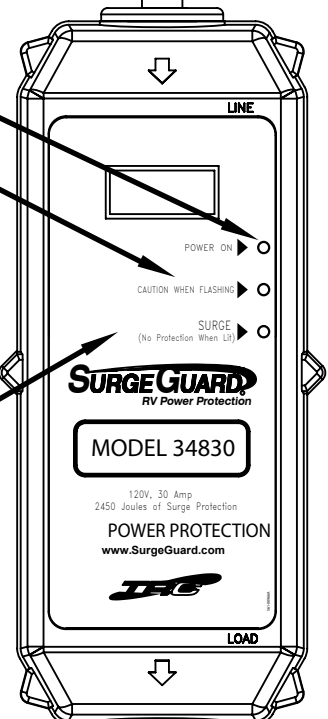
If the red "SURGE" indicator LED is on, it means that the built-in surge protection has been sacrificed to protect your equipment and is no longer functioning properly. Other features will still function, but the unit is recommended to be replaced.

CAUTION LIGHT POLARITY PROTECTION

Indicates possible mis-wiring or current to ground condition present. (Will prevent power on 50 amp unit only.) The LCD screen will also indicate REVERSE POLARITY.

3 MODE SURGE PROTECTION

Protects the RV's sensitive electronic systems and appliances from potentially damaging power surge events without power interruptions to the RV.



OUTPUT POWER CORDS

FOR YOUR RECORDS

MODEL NO: _____

DATE PURCHASED: _____

WHERE PURCHASED: _____



TECHNOLOGY RESEARCH, LLC
A Southwire Company
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TECHNICAL SPECIFICATIONS

FEATURES	MODEL 34830	MODEL 34850
Operating Current	30 Amps	50 Amps
Operating Voltage	120 Volts	120/240 Volts
Maximum Watts	3600 Watts	12000 Watts
3 Mode Surge Protection	Yes, L-N, L-G,N-G	Yes, L-N, L-N, L-G, N-G, L-L
Energy Dissipation	2450 Joules	3850 Joules
Clamping Voltage	< 300 VAC	< 300 VAC
Maximum Spike Current	6500A per MOV	6500A per MOV
Over/Under Voltage Protection	Yes	Yes
Voltage Range	132/102V	132/102V
Trip Time	8-10 seconds	8-10 seconds
High Neutral Current Trip	N/A	130%
Plug/Receptacle Temperature Trip	200°F	200°F
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
Industrial Contactor	Yes	Yes

OPERATING INSTRUCTIONS MODELS 34830 34850

1. Plug the Surge Guard 34830/34850 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 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.

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Caution light is flashing	There is a fault. Read LCD for information.	For reverse polarity or voltage on ground, move RV to 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 source	1. Move to a new source 2. Use inverter or generator power
When first plugging into pedestal power, caution light flashes momentarily, then goes out.	High or low voltage is present at source.	Change site or use inverter or generator power

LCD DISPLAY INDICATORS

REPLACE SURGE	Surge Expended
OPEN GROUND	Open Ground
REVERSE POLARITY	Any line wired to neutral
L1 High 118V 42A 115V 32A L2 High	Voltage > 132
L1 Low 118V 42A L1 High L2 Low	Voltage < 102
NEUTRIP CUR=65A	Current > 130%
CUR HIGH	Current > 125%
PLUG OVERHEAT	Temperature > 200°F

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, with voltage for Line 1 coming into the RV.

The main screen for Model 34850 (50Amp) will show the voltages and currents for Lines 1 and 2, whereas Model 34830 will only show 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 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 50 amps of current on Line 1. The bottom row of the main screen for 34850 shows voltage and current for Line 2.

Model 34850

120V 25A
120V 25A

Main Screen

RV STATUS ON/OFF
L1 120V

Secondary Screen

Model 34830

120V 30A

RV STATUS ON/OFF
L1 120V

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 as L1=120V.

If the power coming into the RV is less than 102 volts on either Line 1 or 2, then the main screen will show L1 Low or L2 Low, in place of the voltage or 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 Conditions

When the Surge Guard is powered up, the LCD screen will display "Delay" and the elapsed time in seconds until it reaches 128 seconds. After the delay is completed, the unit will go to the Normal Operating screen showing voltages and 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; and when power comes back within range (102V-132V) the unit will begin the Delay as described above before returning to the main screen that shows the voltages and currents.

Reverse Polarity Conditions

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

Delay
011 Sec

REVERSE
POLARITY

