

SURGE GUARD[®]

RV Power Protection

MODEL 35530
HARDWIRE

MODEL 35550
HARDWIRE

INSTALLATION & OPERATING INSTRUCTIONS

OVER/UNDER VOLTAGE PROTECTION

Should voltage drop below 102V or rise above 132V for more than 8-14 seconds, power to RV is turned off.

SEE TIME DELAY INDICATOR

(with cover) INPUT TERMINALS (cover not required)

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.

INPUT POWER INDICATION

The green LED indicates power to RV when illuminated.

TIME DELAY AND FAULT INDICATOR

When unit is plugged in, the red caution LED is flashing indicating delay of 128 seconds. (This allows head pressure to bleed off the A/C compressor). Flashing can indicate faults are present, like possible mis-wiring or current to ground conditions (will prevent power reset).

L1 VOLTAGE

When green light is on L1 is between 102VAC to 132VAC. When the light is red, L1 is greater than 132VAC or below 102VAC, and power is shut off to protect your coach.

L2 VOLTAGE

When green light is on L2 is between 102VAC to 132VAC. When the light is red, L2 is greater than 132VAC or below 102VAC, and power is shut off to protect your coach.

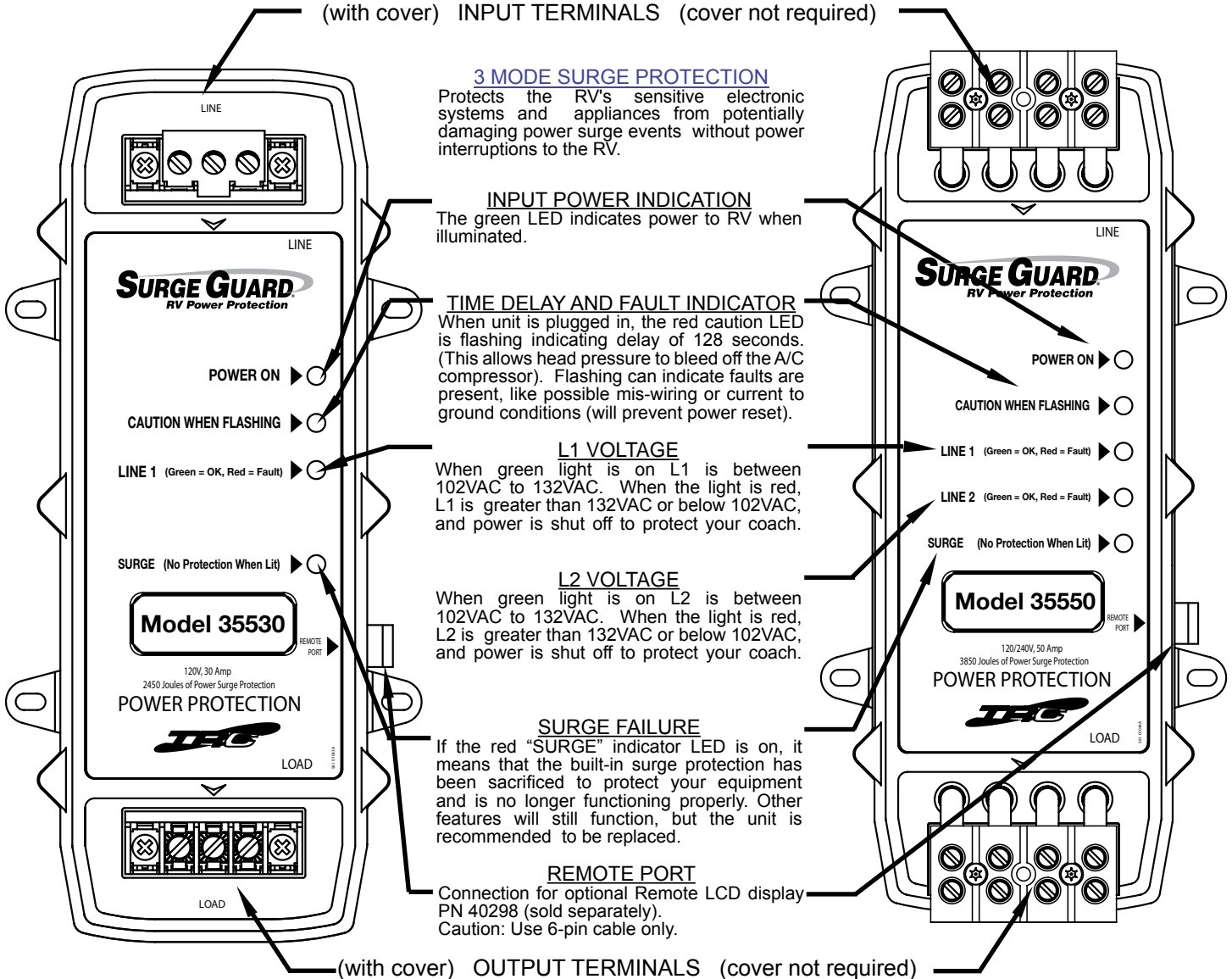
SURGE FAILURE

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.

REMOTE PORT

Connection for optional Remote LCD display PN 40298 (sold separately).
Caution: Use 6-pin cable only.

(with cover) OUTPUT TERMINALS (cover not required)

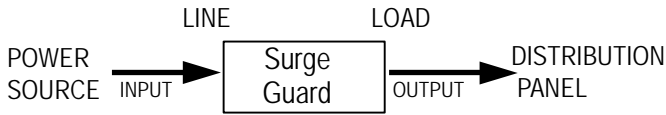


INSTALLATION INSTRUCTIONS

WARNING: This Surge Guard device must be installed by a licensed electrician or by an RV dealer.

PROTECTING SOURCE POWER ONLY

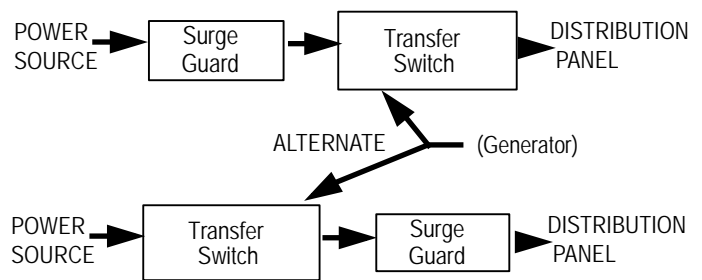
1. Disconnect RV power cord from source power.
2. Locate the Surge Guard® in the RV's electrical compartment. Unit should be located where lights are clearly visible to the user.



NOTE: Additional cable used must be electrically equivalent to original equipment.

PROTECTING SOURCE AND GENERATOR POWER

1. Disconnect RV power cord from source power.
2. Locate the Surge Guard® next to the transfer switch. Unit should be located where lights are clearly visible to the user.



MOUNTING IN RV COMPARTMENT

1. Position so LINE end is facing direction of incoming power cord.
2. Using #10 hardware, mount unit securely in place using molded mounting tabs.
3. Remove terminal block covers (Model 35530 only)
4. Route primary cable into position (over exposed terminals or into terminal block wells) - allowing enough slack to eliminate stress or tension on cable connections to be made. (See Figure 2)
5. Cut power cord, strip back outer jacket as shown. (See Figure 3)
6. Install conductors as shown. (See Figures 4, 4A, 5 & 5A)
7. After connections are made, secure both line and load side cables. Use "U" clamps (not supplied) to prevent strain on terminal connections. Recheck tightness of ALL connections.
8. Reinstall connector covers (Model 35530 only).

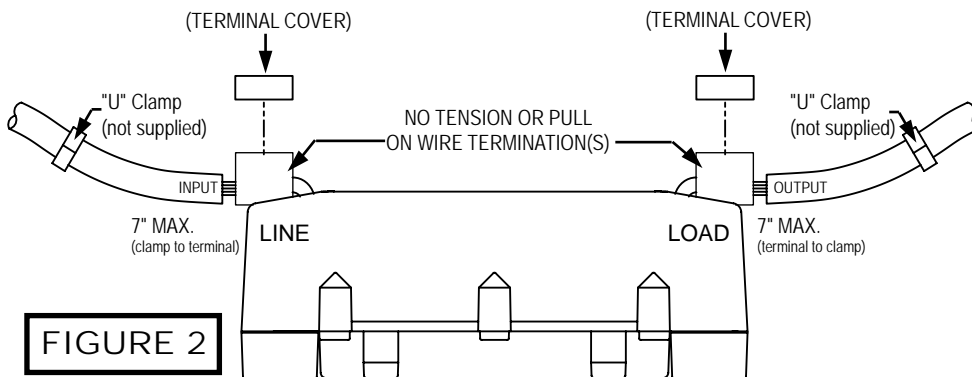


FIGURE 2

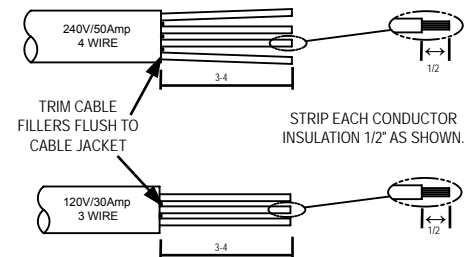
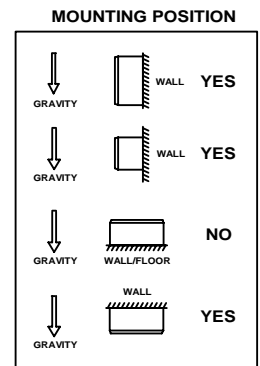


FIGURE 3

Do NOT split strands. Slide into terminals of block housing

FIGURE 4

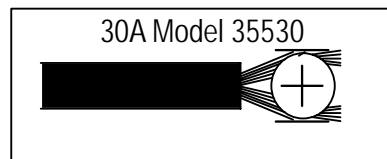
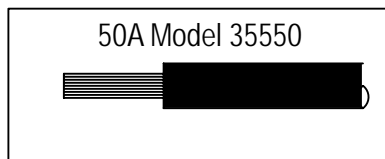


FIGURE 4A

INSERT PREPARED WIRES. STRIPPED ENDS MUST BE CONTAINED INSIDE TERMINAL BLOCK HOUSING.

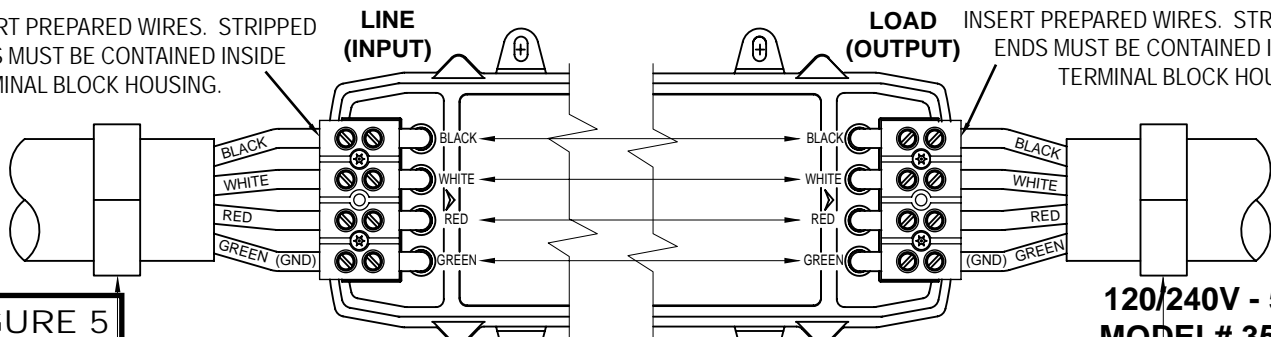


FIGURE 5

120/240V - 50A
MODEL# 35550

IMPORTANT NOTE: MAX TORQUE PER CONNECTION = 16 IN-LBS.



**120V- 30A
MODEL# 35530**

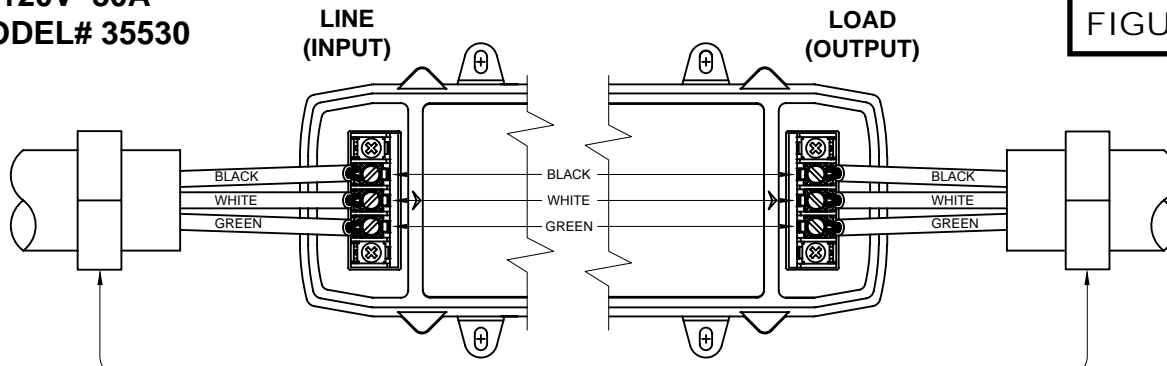


FIGURE 5A

**IMPORTANT NOTE: MAX TORQUE PER CONNECTION = 7 IN-LBS.
DO NOT EXCEED.**

TECHNICAL SPECIFICATIONS

FEATURES	MODEL 35530	MODEL 35550
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
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%
Time Delay for A/C	128 seconds	128 seconds
Reverse Polarity Protection	Yes	Yes
Voltage On Ground Check	Yes	Yes
Power Indicator	Yes (1 line light)	Yes (2 line lights)
Warranty	1 year	1 year
Corrosion Resistant	Yes	Yes
Easy Installation	Yes	Yes
Industrial Contactor	Yes	Yes

INDICATOR LIGHT CHART

MODEL 35530

CONDITION DESCRIPTION	INDICATOR LIGHT STATUS		RV POWER
	LINE 1	DELAY/CAUTION	
Normal Conditions	green	off	on
Startup Condition	on	flashing	off
Reverse Polarity	on	flashing	off
Open Ground	on	flashing	off
Voltage on Ground	on	flashing	off
Over or Under Voltage	red	flashing	off
No Power at L1	off	off	off

MODEL 35550

CONDITION DESCRIPTION	INDICATOR LIGHT STATUS			RV POWER
	LINE 1	LINE 2	DELAY/CAUTION	
Normal Conditions	green	green	off	on
Startup Condition	on	on	flashing	off
Reverse Polarity	on	on	flashing	off
Open Ground	on	on	flashing	off
Voltage on Ground	on	on	flashing	off
Over or Under Voltage	red	red	flashing	off
Power to Line 1 Only	on	red	flashing	off
Power to Line 2 Only	off	off	off	off
No Power at Input	off	off	off	off

OPERATING INSTRUCTIONS

1. Plug the RV power cord into an approved RV receptacle.
2. Verify the delay indicator is flashing, and the line lights are green.
3. Once caution light stops flashing (this takes 128 seconds), verify RV power is on.

NOTE: USING WITH TRC VOLTAGE REGULATOR

If using Surge Guard with TRC Voltage Regulator (10175 or 10176) the voltage regulator should be positioned between the power pedestal (shore power) and the Surge Guard.

WARNING: It is extremely important that the terminal covers (Model 35530 only) are in place prior to applying power to the RV. Failure to comply with these instructions may result in a shock hazard.

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Caution light is flashing	<ol style="list-style-type: none"> 1. Reverse polarity or voltage on ground condition is present at the power source. 2. Surge Guard mis-wired on the line side. 3. Open ground circuit on the line side 	<ol style="list-style-type: none"> 1. Move RV to new electrical source. 2. Match colors on terminals with colors on conductors. 3. Move RV to new electrical source.
L1 and/or L2 is red or off, and caution light is flashing	<ol style="list-style-type: none"> 1. Only partial power at 50 Amp source. 2. No power at source 	<ol style="list-style-type: none"> 1. Move to a new source 2. Use inverter or generator power
SURGE light is on	<ol style="list-style-type: none"> 1. Built-in surge protection has been sacrificed to protect your equipment and is no longer functioning. 	<ol style="list-style-type: none"> 2. Other features will still function, but it is recommended to replace unit.

