

Info Window (1 of 1) Clear

Parcels



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Property

**PIN** - 9596-34-9838.000  
**PID** - 039596 0038 01

[TAX BILL SEARCH](#)  
 (please confirm parcel information)  
[PROPERTY CARD](#)

**Account Number** - 307677000  
[LINK TO ALL TAXPAYERS](#) \*

**Owner** - SCHUMACHER JAMES THOMAS &  
 SCHUMACHER CHERYL LYNN

**Mailing Address** - 479 D. L. PHILLIPS LN BROADWAY,  
 NC 27505-0000

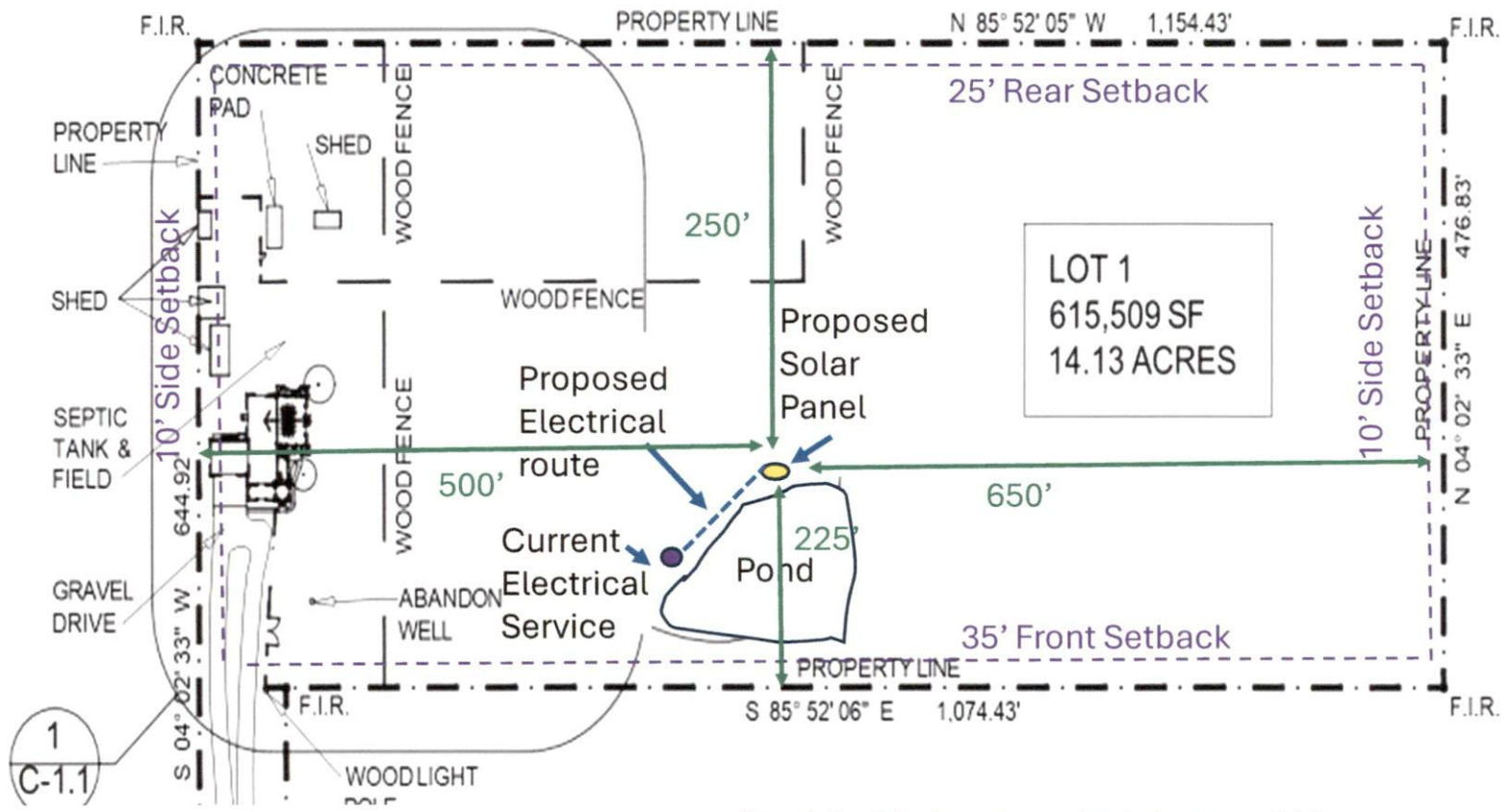
**Physical Address** - 479 D L PHILLIPS LN  
 BROADWAY, NC 27505

**Description** - LOT#1 CARLTON C ROBERTSONIII  
 PC#F-365B

**Surveyed or Deeded Acreage** - 14.13  
**Calculated Acreage** - 14.30

**Deed Date** - 4/7/1997 1:00 AM  
**Deed Book and Page** - 1198 : 0049  
**Deed Instrument Number** - 0009704617  
[LINK TO DEED](#) \*

Building Setbacks  
 Front 35'  
 Rear 20'  
 Side Corner 20'  
 Max Height 35'

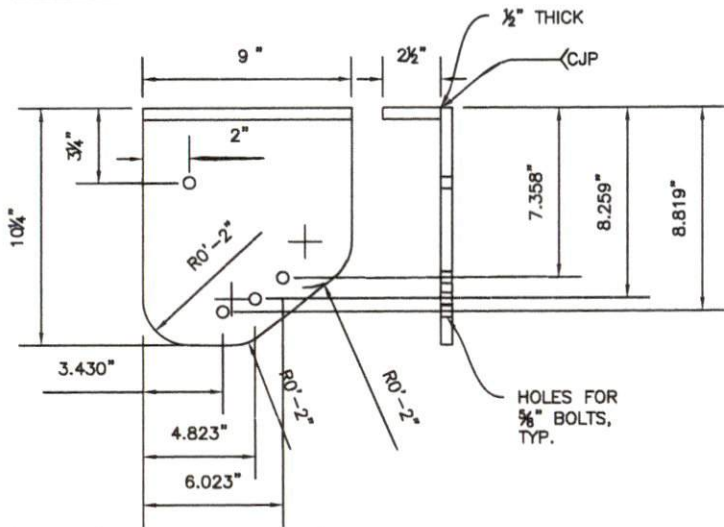


Electrical to be placed minimum of 18  
 deep in conduit.

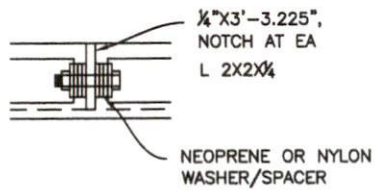


# PREFABRICATED PARTS SCHEDULE

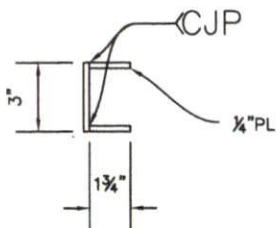
## ADJUSTABLE MOUNT



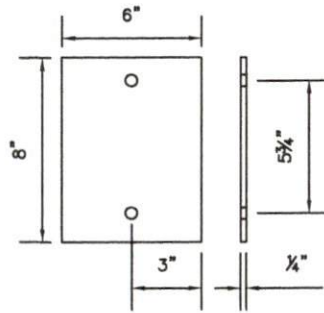
## 1/4" PLATE (BAND AND INTERMEDIATE)



## BUILT UP CHANNEL



## FIXED MOUNT



## ASSEMBLY PARTS:

- (2) ADJUSTABLE MOUNTS
- (2) FIXED MOUNTS
- (2) STIFFENER PL
- (4) L 2X2X1/4X7'-2 1/2"
- (10) PL 3'-3 1/2"X2"X1/4"
- (2) C3X2X1/4X6'-7 1/8" BUILT UP
- (1) HSS 4X3X1/4X6'-7 1/8"
- (3) HSS 2 1/2X2 1/2X1/4X7'-3"
- (12) 1/2" DIA BOLTS, ASTM A325
- (106) 5/16" DIA A307 BOLTS, STAINLESS

DESIGNED &  
ENGINEERED BY:



SEAL

DESIGNED BY: DMT  
DRAWN BY: DMT  
REVIEWED BY: DMT  
QC'D BY: DMT  
PROJECT MANAGER: DMT

HWY 87 AND BUFFALO RD

SOLAR PANEL  
FRAMING

PLAN AND DETAILS

SCALE: AS SHOWN  
CONSTR. CONTR. #: N/A  
DRAWING NO. 20240328  
SHEET 02 OF 03

S2.0

# STRUCTURAL STEEL NOTES:

## 1. LOAD COMBINATIONS PER ASCE 7-22:

### A. LRFD:

- (1) 1.4D
- (2) 1.2D + 1.6L + 0.5 (Lr or 0.3S or 0.5R)
- (3) 1.2D + 1.6 (Lr or 1.0S or 1.6R) + (L or 0.5W)
- (4) 1.2D + 1.0 (W or W<sub>T</sub>) + L + (0.5Lr or 0.3S or 0.5R)
- (5) 0.9D + 1.0 (W or W<sub>T</sub>)
- (6) 1.2D + E<sub>v</sub> + E<sub>h</sub> + L + 0.15S
- (7) 0.9D - E<sub>v</sub> + E<sub>h</sub>

## 2. ASCE 7-22 WIND CLASSIFICATIONS:

- A. PARTIALLY OPEN BUILDING
- B. DESIGN WIND SPEED: 120 MPH
- C. RISK CATEGORY II
- D. EXPOSURE: C
- E. SURFACE ROUGHNESS: C
- F. MEAN HEIGHT: 6'

## 3. LOADING:

- A. DEAD LOAD: WEIGHT OF MATERIALS
- B. WIND LOAD: PER ASCE 7-22

5. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," LATEST EDITION.

## 6. CONNECTIONS - GENERAL:

- 1) ALL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE DESIGNED AS AISC TYPE II BOLTED CONNECTIONS DESIGNED FOR THE FULL LOAD CAPACITY OF THE CONNECTING MEMBERS.
- 2) THE DESIGN AND DETAILING OF ALL CONNECTIONS SHALL CONFORM TO THE AISC SPECIFICATION CONTAINED IN THE LATEST AISC EDITION.
- 3) ALL WELDING SHALL BE PERFORMED AS PER THE AMERICAN WELDING SOCIETY'S RECOMMENDATIONS BY CERTIFIED WELDERS.
- 4) E70XX (70 KSI) ELECTRODES SHALL BE USED FOR ALL WELDS.
- 5) MINIMUM WELD SIZE FOR STRUCTURAL STEEL CONNECTIONS SHALL CONFORM TO AISC SPECIFICATIONS.
- 6) UNLESS OTHERWISE NOTED. ALL NEW BOLTS SHALL BE HIGH STRENGTH BOLTS, ASTM A325 UNLESS DIRECTED BY MANUFACTURE OR NOTED OTHERWISE. THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE.
- 7) PROTECT ALL BOLTED CONNECTIONS FROM GALVANIC CORROSION WHERE DISSIMILAR METALS ARE PRESENT. ALL FASTENERS/ANCHORS SHALL USE NEOPRENE OR OTHER WASHERS IF THERE IS A POTENTIAL FOR GALVANIC CORROSION. IN LIEU OF HOT-DIPPED GALVANIZATION, FASTENERS MAY BE COVERED BY CONCRETE PER ACI 318.

8) **\*\*ALL STEEL TO STEEL SECTIONS SHALL BE BOLTED AS NOTED AND WELDED IN COMBINATION.\*\***

## 9) STRUCTURAL STEEL MATERIAL SPECIFICATION:

- 1) PLATES: ASTM A572 GR 50, UNLESS OTHERWISE NOTED
- 2) ANGLES: ASTM A36.
- 3) STEEL TO STEEL BOLTS: ASTM A325
- 4) ALUMINUM TO STEEL BOLTS: ASTM A307 (STAINLESS; AROUND SOLAR PANEL)
- 5) CHANNELS: ASTM A36.
- 6) HSS: ASTM A500 GR B, F<sub>y</sub> = 46KSI

10) WHERE HOT-DIPPED FASTENERS ARE USED, ZINC RICH PAINT SHALL BE USED ONLY ON AREAS OF STEEL WHERE THE HOT-DIPPED GALVANIZATION HAS BEEN DISTURBED DUE TO CONSTRUCTION.

11) ALL SHOP DRAWINGS, PAINT AND A MATERIAL PURCHASE SHEET SHALL BE SUBMITTED FOR APPROVAL BY CLIENT.

12) ALL STEEL SECTIONS SHALL BE HOT-DIPPED GALVANIZED. ANY NOTED DAMAGE DURING INSTALLATION SHALL BE REPAIRED WITH ZINC RICH PAINT.

## GENERAL NOTES:

1. ALL UTILITIES, EXISTING FEATURES AND DIMENSIONS ARE TO BE FIELD VERIFIED PRIOR TO BIDS AND CONSTRUCTION. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.

3. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE AS SOON AS PRACTICABLE.

4. CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. CONTRACTOR SHALL DISPOSE OF DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCE AND STATUTES.

5. BURNING WILL NOT BE ALLOWED ON THE PROJECT SITE UNLESS AUTHORIZED IN WRITING BY CLIENT.

6. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAG MEN, FENCE, ETC AS NECESSARY TO INSURE SAFETY TO PUBLIC.

7. DETAILS ENTITLED OR NOTED AS "TYPICAL" SHALL APPLY NOT ONLY WHERE SPECIALLY INDICATED OR REFERENCED, BUT ALSO IN ALL OTHER CASES WHERE THE NATURE OF THE CONSTRUCTION REQUIRES THEIR USE. APPLICATION OF TYPICAL DETAILS SHALL BE DETERMINED FROM DESCRIPTIVE TITLES OR FROM THE SIMILARITY OF A CONSTRUCTION CONDITION TO ANOTHER CONDITION WHERE THE DETAIL IS SPECIFICALLY INDICATED OR REFERENCED.

8. DISCREPANCIES IN DIMENSIONS BETWEEN DEFERENT DRAWINGS SHALL BE REPORTED TO THE CLIENT AND DESIGNER FOR CLARIFICATION PRIOR TO BEGINNING CONSTRUCTION IN THE AREAS THAT ARE INVOLVED WITH THE DISCREPANT DIMENSIONS.

10. NOTE: EXISTING PIPE AND FOUNDATION DESIGNED AND CONSTRUCTED BY OTHERS.

DESIGNED &  
ENGINEERED BY:



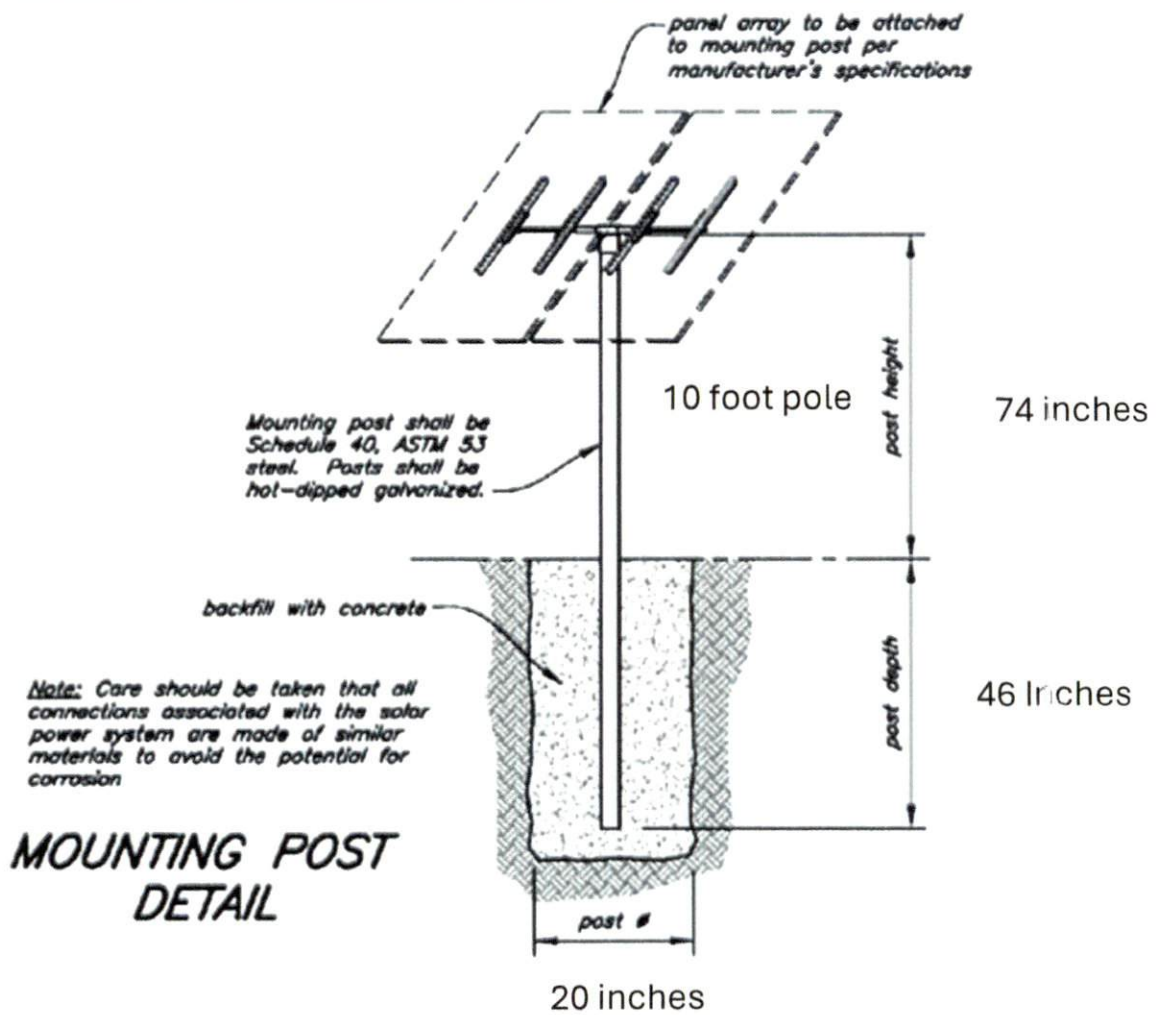
SEAL

DESIGNED BY: DMT  
DRAWN BY: DMT  
REVIEWED BY: DMT  
QC'D BY: DMT  
PROJECT MANAGER: DMT

HWY 87 AND BUFFALO RD  
SOLAR PANEL  
FRAMING  
PLAN AND DETAILS

SCALE: AS SHOWN  
CONSTR. CONTR. #: N/A  
DRAWING NO. 20240328  
SHEET 03 OF 03

S5.0



### Mounting Pole Installation Details

Panel Area (sq-ft)	Pole Size Sch-40 Steel (in.)	Length in Ground (in.)	Height Above Ground (in.)	Hole Dia. (in.)	Estimated Concrete (ft <sup>3</sup> )
15	2	36	60	12	2.3
20	2.5	38	60	12	2.4
28	3	40	60	14	3.4
35	3	42	66	14	3.5
60	4	46	66	20	8.1
90	6	54	72	28	18.3
120	6	60	78	28	20.4

## RPS SOLAR WELL PUMP

**⚠ WARNING: RISK OF SHOCK!** Solar panels, especially when connected in series and parallel, can produce a significant amount of energy, which can cause electric shock. Cover the solar panels with a cloth or tarp when you're working with the wires.

**RPS 200** Arrange the two panels as pictured and connect the male end of one panel to the female end of the other panel.

⊖  
Negative Side  
to P- Terminal

⊕  
Positive Side  
to P+ Terminal

**RPS 400, 400V, 400N** Although you may arrange the panels in two rows of two, connect the male end of one panel to the female end of the other panel to create a string of 4 panels in series.

⊖  
Negative Side  
to P- Terminal

⊕  
Positive Side  
to P+ Terminal

**RPS 600** Arrange the panels in two rows of three, as shown below. In each row, connect the male end of the panel wire to the female end of the adjacent panel. Then use the Y-connectors included in your kit as shown below; the Y-connector with two male ends connects to the female ends from the top and bottom panels (shown below on the left), and vice versa.

⊖  
Negative Side  
to P- Terminal

⊕  
Positive Side  
to P+ Terminal

**RPS 800, 800V** Arrange the panels in two rows of four. In each row, connect the male end of the panel wire to the female end of the adjacent panel. Then use the Y-connectors included in your kit as shown below. If you don't have Y-connectors in your kit for some reason, wire only 4 panels for testing and contact RPS for a free set. **Wiring 8 panels in series will damage your controller.**

⊖  
Negative Side  
to P- Terminal

⊕  
Positive Side  
to P+ Terminal

## RPS SOLAR WELL PUMP

### 3. CONTROLLER INSTALLATION

#### Overview & technical features

Our RPS controllers are engineered with advanced technology and upgraded features. With maximum power point tracking (MPPT), the controller monitors power output from the solar panels and makes adjustments as needed to the voltage and current in order to maintain optimal performance. MPPT improves overall system efficiency, especially in low light or overcast conditions. The RPS controller also features low-water and overflow shutoff capabilities; these prevent the pump from running dry and also prevent over-pumping and wasting water.

The controller also includes a motor speed setting. Look for the lower internal dial (see image)—this adjusts the speed at which the pump operates. The pump can be set to operate between 10% and 100%, and can be fine-tuned to match the recharge rate of your well or the amount of water needed on a daily basis.

If the water level in your well drops below the low-water sensor, the controller will stop the pump. The time delay dial (above the pump speed dial) adjusts the amount of time the pump will be stopped after the low-water shutoff is triggered.

The RPS controller is encased in a waterproof enclosure that is suitable for outdoor use. It features waterproof wire pass-through ports on the bottom of the enclosure to prevent both moisture and insects from affecting the electronics. The clamping screw terminals inside the controller allow easy connections for the power and external sensor wires. Only a screwdriver is required to make the electrical connections to the terminals.

Time Delay Dial  
Pump Speed Dial

SOLAR OFF BATTERY  
3 Way Power Switch

Label	Terminal Connections
P+, P-	Positive and negative solar panel wire; these are already connected to MC4 clips outside of the controller housing
B+, B-	Battery positive and negative; optional
1, 2, 3	Pump wire, refer to page 12 for a reminder of which wire is which on your extension
COM2, TH	Tank sensor wire; either strand of the sensor wire can go in either terminal
COM1, WH	Low-water sensor; either strand of the sensor wire can go in either terminal

If you're using batteries, the RPS controller also acts as a charge controller and will turn the pump off when the voltage of the batteries is too low or too high to protect them from being damaged from excessive discharge or overcharging.



## USER MANUAL

Technical Parameters of RPS Controller	24V Solar Pump Controller (RPS 200)	48V Solar Pump Controller (RPS 400/800)
Rated Voltage	24 VDC	48 VDC
Rated Current	12 A	12 A
Max Open Circuit Voltage	63 VDC	96 VDC
Maximum Load	360 W	900 W
Maximum Solar Array	600 W	1200 W
Low Voltage Cutoff	22 VDC	44 VDC
Best Working Voltage*	36 VDC	72 VDC
Max Current	15 A	15 A
Operational Temperature	-5°F to 125°F	-5°F to 125°F

\*This is the voltage provided by the RPS solar array in your kit (panels produce 18V in full sun). See Appendix # using batteries.

### Controller modes and status lights

The controller has an external power switch on the bottom of the enclosure to alternate between its three modes: SOLAR, OFF, and BATTERY (BAT). If operating only on solar power, you will set the controller to the upper position (SOLAR) when you're ready to turn the system on. This will disable battery backup and charging functions.

If you are using batteries with the system, you will set the switch to the lower position (BAT) instead of SOLAR to turn it on. The controller will charge the batteries and will stop the pump when battery voltage drops below 11 volts.

To turn the system off completely, or when making any electrical connections, set the power switch to the center position (OFF).

On the cover of the controller, you will see a column of LED lights that will illuminate either green or red to show normal function or error messages.

Light	Message
POWER	Power is connected to the controller, blinks when batteries are in use
PUMP	Pump status; pump is operating, blinks with batteries
MFPT	Flashing when maximum power point is being tracked ** This blinking is normal and expected!
ERROR	Excessive current; check pump wire for a short Battery-to-Solar Voltage Mismatch (see Battery Section).
LOW PWR	Low power; common at sunrise, sunset, and on cloudy days
TANK FULL	Tank sensor is submerged; pump will not run when tank is full
WELL LOW	<b>Solid:</b> Low-water sensor is out of water, jump low water terminals to test; to clear light, you may need to reset by switching from SOLAR to OFF and back to SOLAR <b>Flashing:</b> Low-water time delay is activated when blinking

\* ALL Lights Blinking: Indicates low power, common in the evening

## RPS SOLAR WELL PUMP

### Controller wiring

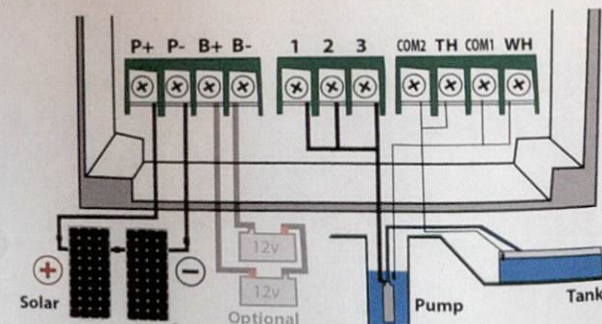


**CAUTION:** Before you start wiring, turn the controller mode switch to the OFF (center) position. Turn the power switch to SOLAR or BAT only after confirming all connections have been made properly. Cover your solar panels with a cloth or tarp while making connections.

To wire the controller, grab your screwdriver and make sure you have all your wires ready. (Don't do anything with the solar panel wires just yet.) On the outside of the controller housing, you'll notice there is a pass-through port sealed with rubber that corresponds to each incoming wire. Puncture this with a screwdriver or other tool just enough to fit the wire through; this will be your moisture/insect barrier, so keep the hole as small as possible.

Next, to connect the pump wire and sensor wires to the controller terminals, strip about 1/2" off the end of the wire and insert the exposed end into the corresponding terminal (see below). Tighten the wire in place with a screwdriver. Make the connections in the following order:

1. Low-water sensor wires to COM1 and WH\*
  2. Tank sensor wires to COM2 and TH\* (if using a pressure tank, see page 29 of the Appendix)
- \*Note: polarity does not matter for the sensors; either strand of the sensor wire can go into either terminal.
3. Well pump wires to 1, 2, and 3. Consult your notes on page 12 to make sure you're inserting the proper strand into the terminals for 1, 2, and 3. These are labeled on the pump wire and must be inserted into the correct terminal.
  4. Batteries, if applicable: first B-, then B+. Make sure the polarity is correct (plus to plus, minus to minus). Be very careful not to reverse or short the terminals; you can confirm polarity with a multimeter prior to making the battery connections and again prior to turning on the power switch.



## USER MANUAL

### Connecting the solar panels to the controller

**Note:** the bottom switch on the controller should be OFF and your panels should still be covered with a cloth.

You'll notice that the solar panel wires coming out of P+ and P- are already conveniently extended outside of the controller housing with MC4 connectors labeled (+) and (-). (You don't have to worry about which wire is positive or negative since there is only one way to connect the MC4s from your panels.)

Take the end of your solar panel wires and connect the female end to the controller's male MC4 clip and the male end to the controller's female MC4 clip.

Good job! You're all wired up but **do not turn the power switch to SOLAR or BAT yet**. The pump must be submerged in water before turning it on or it will be damaged. In the next section, we'll test the system to make sure everything works properly before placing the pump in the well.



### Controller Mounting

The controller is waterproof with a rubber gasket seal around the outer rim of the controller door, and is built for mounting either outdoors or indoors. Its best to provide shade for the controller (mounting underneath solar panels works well). Mount your controller rigidly; screws and brackets are included in your kit for this purpose. Many customers opt to mount their controller on the same pole they mount their solar panels when possible.

**Important:** The outside of the controller's enclosure and the frames of the solar panels need to be grounded to the same grounding rod with copper wire. See the Grounding section on page 24 for more details.



### KEY STEPS

- Cover your solar panels and turn your controller switch OFF
- Insert the sensor wires and pump wires into the appropriate terminal; tighten with screwdriver
- Connect your solar panel wire to the controller's external MC4 clips
- **DO NOT turn the pump on yet!**



TECHNICAL BROCHURE  
Y202-100V20 RPS



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# RPS SOLAR PUMP CONTROLLER

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RPS | Rural Power Systems  
40250 County Road 27  
Woodland, Ca 95776

Visit us online at  
[RPSsolarpumps.com](http://RPSsolarpumps.com)

888-637-4493



## SPECIFICATIONS

	<b>RPS100V20</b>
<b>Compatible Systems</b>	RPS 200, 400, 600, 800, 400N, 400V, 800V, T400, T800 <i>(Well, Submersible, 2" Narrow, Transfer)</i>
<b>Solar Min Voltage</b>	30VDC
<b>Solar Max Voltage</b>	90VDC
<b>Max DC Current</b>	Variable 1.6 to 11.6A
<b>MC4 Connectors</b>	1 set (1 male + 1 female)
<b>Solar Power Range</b>	160w - 1200w
<b>Solar Charge Controller</b>	24V/36V/48V Auto Sensing PWM
<b>AC Input Compatible</b>	With External AC to DC Converter Accessory
<b>Motor Compatibility</b>	RPS Permanent Magnet BLDC Motor Only (210w, 370w, 500w)
<b>Minimum Generator Size</b>	1000W (when using 36 or 72V AC to DC Converter Accessory)
<b>Temp. Range</b>	-25 to 60°C, -13 F to 140 F
<b>Weight</b>	9lbs
<b>Dimensions</b>	13" x 8" x 6"

## MORE FEATURES

- Rated for Continuous Operation
- Tank Sensor - 2 Terminal, Normally Open for Tank Full Detection
- Well Sensor - 2 Normally Closed Terminals for Run-Dry Protection
- Speed Dial for GPM Adjustment
- Low Well Timer Dial - Set up to 30 min delay after low well condition is resolved
- 3-Way Exterior Shut-off Switch (Solar, Battery, Off)
- MPPT Pump Function (Maximum Power Point function is used to optimize the running of the pump motor with variable frequency based on available power)
- Pump Terminals (Labeled 1, 2, 3)
- Over Voltage Protection Diode

# SOLAR CHARGE CONTROLLER

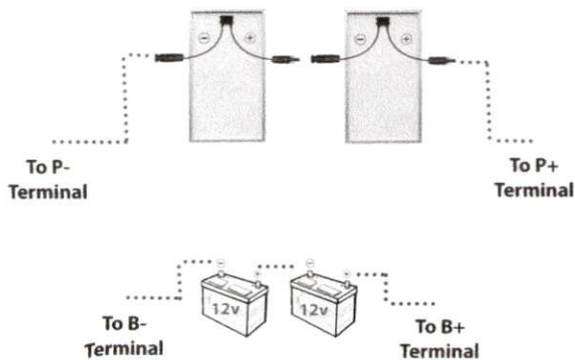
## 24V/36V/48V Auto Sensing PWM

Max. PV Input Voltage: 90 VDC (Voc). IP65, Working Temperature: -31°F - 113°F. Self-Consumption: <10mA, Recommended Wire Gauge: 12 Gauge. Compatible Batteries: Sealed, Gel, Flooded

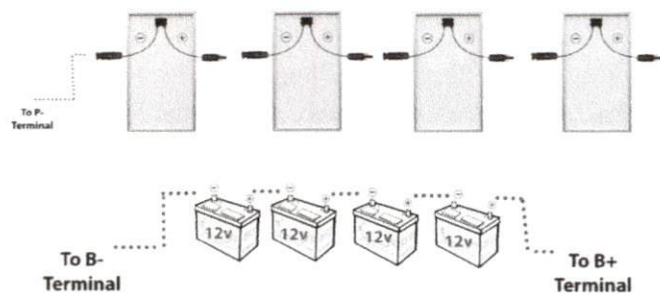
	24V	36V	48V
Solar Input Voltage Range:	30V - 44V	50V - 66V	68V - 88V
Solar Input Max Current / Wattage	20A / 600W	20A / 900W	20A / 1200W
Low Battery Cutoff / Float Voltage	22V / 27.4V	33V / 41.1V	44V / 54.8V
Example Arrays	2x 100w 12v panels in series (24v) 1x 300w 24v panel (24v) 2x 180w 24v panels in parallel (24v) 4x 100w 12v in series/parallel (24v)	3x 100w 12v panels in series (36v) 3x 100w 12v panels in series/parallel (36v)	4x 100w 12v panels in series (48v) 8x 100w 12v in series/parallel (48v) 2x 300w 24v panel in series (48v)

Want more power for batteries? Higher input voltages? Ask about adding an external MPPT Solar Charge Controller to your system for more power and flexibility with input voltages, Li-Ion Compatibility etc.

### '24V' Wiring



### '48V' Wiring



*Recommended*

**Pledge to Our Customers:** We pledge to be a company our grandfathers would have trusted. The all-too-common practice of outsourcing customer support after the sale is one we wholeheartedly oppose. We are an American, family-run company and our USA engineers, who will support you before and after the sale, are the best in the industry. We gain most of our business from word-of-mouth as a result of treating customers with respect and standing by our products. Call us anytime.



+TECHNICAL BROCHURE  
Y18-200-400-800 RPS2

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# RPS 200, 400, 800

# RPS 400V, 800V

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RPS | Rural Power Systems  
40250 County Road 27  
Woodland, Ca 95776

*Visit us online at*  
[RPSsolarpumps.com](http://RPSsolarpumps.com)

888-637-4493

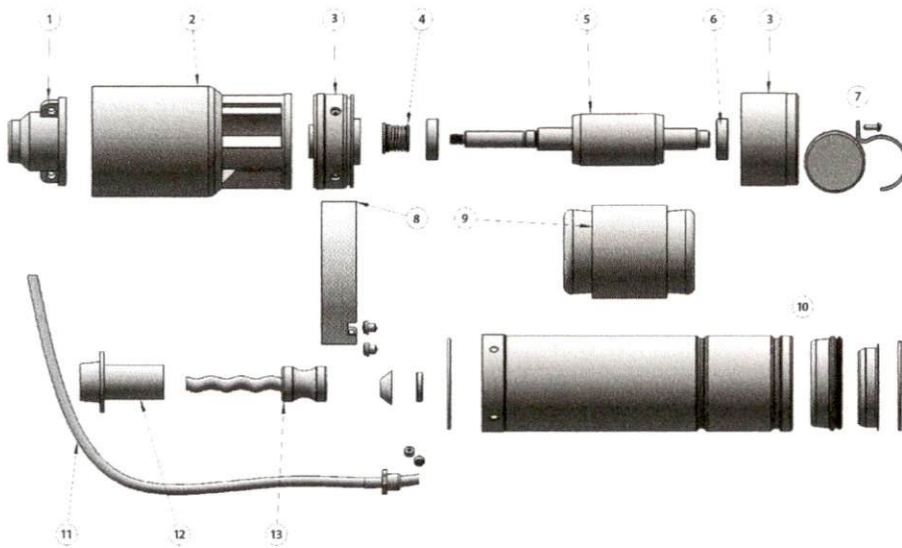


# SPECIFICATIONS

Pump Model	Pump Type	Motor Range (watts)	Array Range (watts)	Array Voltage	Discharge Connection	Pump Diameter	Minimum Well Size
H3-2102020RPS	Helical	120-418	200-600	36/54Vmp	¾" FNPT	3"	3.5" ID
H3-5002020RPS	Helical	220-835	400-1200	54/72Vmp	¾" FNPT	3"	3.5" ID
C3-5002020RPS	Centrifugal	280-835	400-1200	72Vmp	1" FNPT	3"	3.5" ID

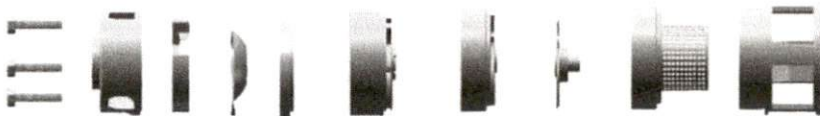
Motor Rotation is counterclockwise when observed from pump discharge end

## MOTOR & HELICAL PUMP ASSEMBLY



1. Pump outlet (with 3/4" female NPT pipe thread and holes for safety rope)
2. Pump end barrel
3. Bearing seats
4. Mechanical seal
5. Brushless motor rotor
6. Motor bearing
7. Cap assembly
8. Intake filter screen
9. Brushless motor stator
10. Motor end barrel, cap assembly
11. Pump wire (12 gauge, 3 strand)
12. Pumping mechanism/helical screw, female stator end (field serviceable)
13. Pumping mechanism/helical screw, male rotor end (field serviceable)

The C3 Centrifugal Pump End is pictured below (same motor)

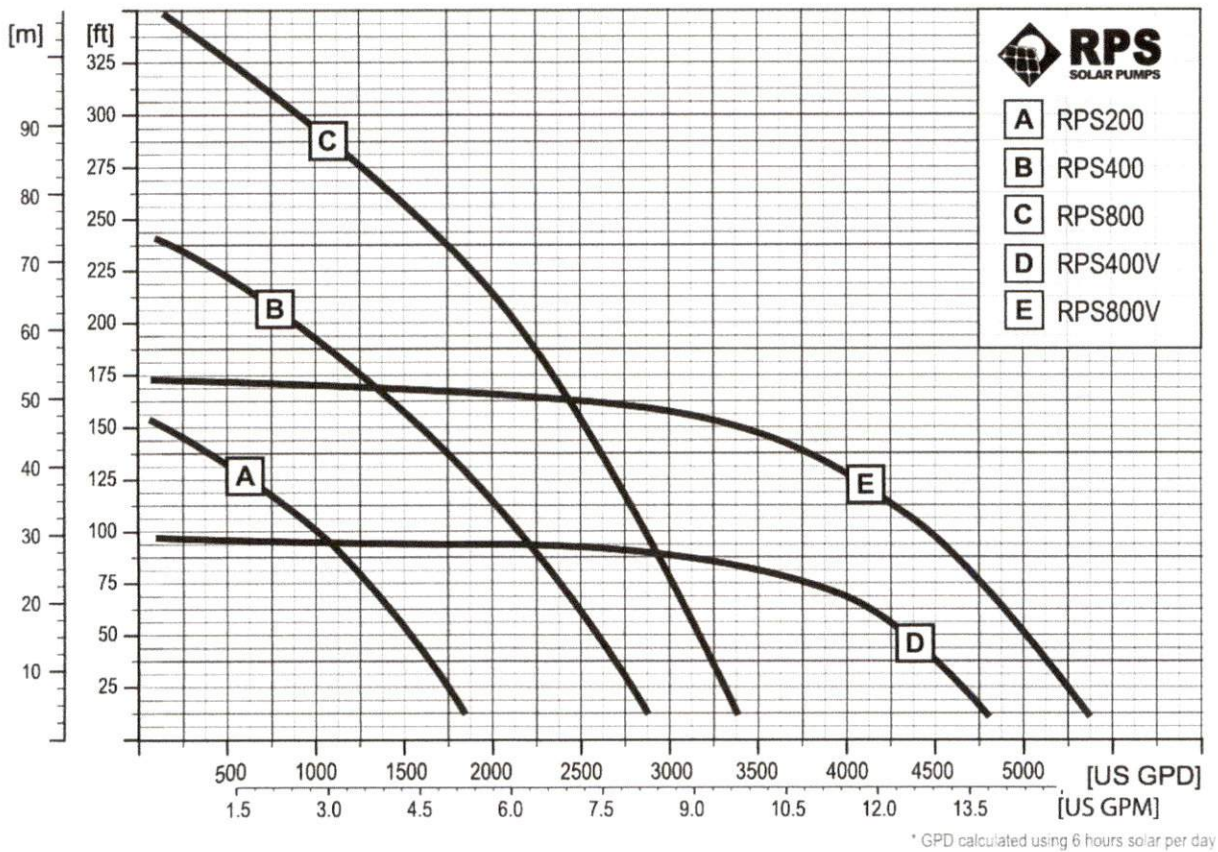


## SYSTEMS WITH SOLAR ARRAY & CONTROLLER

	200 Watts (2x100w, 36Vmp)	400 Watts (4x100w, 72Vmp)	600 Watts (6x100w, 54Vmp)	800 Watts (8x100w, 72Vmp)
H3-2102018RPS	<b>RPS 200 (¼ hp)</b>	<b>RPS 400 (½ hp)</b>		
H3-5002018RPS			<b>RPS 600 (¾ hp)</b>	<b>RPS 800 (1 hp)</b>
C3-5002018RPS		<b>RPS 400V (½ hp)</b>		<b>RPS 800V (1hp)</b>

See chart on following page for performance of each System (Pump, Controller, Solar Panels)

# SYSTEM PERFORMANCE CURVES



## RPS Controllers

- Multiple Sensor Inputs
- Tank & Well Low sensors
- Variable Frequency Control
- Cycling Protection Timer
- Exterior Shut-off Switch

## RPS Motors

- Slow Start/Stop
- Brushless Motor Tech.
- Permanent Magnet
- Efficiency
- Rated for Continuous Operation
- ISO 9001:2015

## RPS Pump Ends

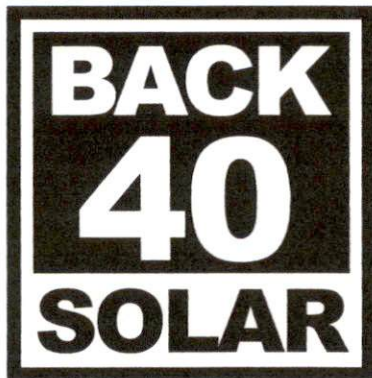
- Serviceable in the Field
- Helical & Centrifugal Technology
- Lifetime Rotor Warranty
- Stainless Steel Body

## Solar Panels

- UL1703 Certified
- Per Intertek ETL
- Nationally Recognized to Hail, Wind Requirements
- IEC 612512 / IEC 61646
- Comply fully with NRCS

**Pledge to Our Customers:** We pledge to be a company our grandfathers would have trusted. The all-too-common practice of outsourcing customer support after the sale is one we wholeheartedly oppose. We are an American, family-run company and our USA engineers, who will support you before and after the sale, are the best in the industry. We gain most of our business from word-of-mouth as a result of treating customers with respect and standing by our products. Call us anytime.





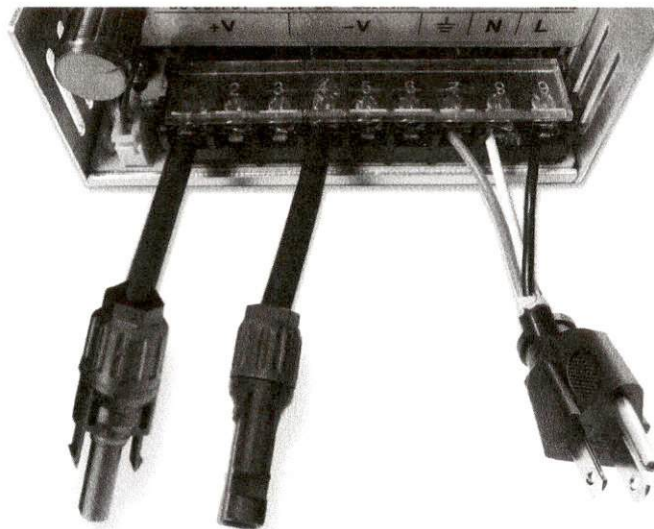
**REMOTE POWER  
FOR FARMS,  
RANCHES &  
HOMESTEADS**



**AC to DC Converter  
110T036V, 110T072V**

# Overview

\* Models vary in appearance



**AC Plug**  
Connect to AC  
wall socket or  
generator

## MC4 Connectors

V+ = Male  
V- = Female

### PROTECTION

All Converters  
and Auto-Switcher units  
should be protected from  
the elements

## Standalone Install Instructions

### 1. Disconnect Solar Panels

Turn your controller to OFF position. Disconnect your existing solar panels from your controller by disconnecting the two MC4 connectors.

### 2. Connect DC Converter & Power Up

Plug in MC4 connectors from the converter to the two MC4 connectors on your solar pump controller. Connect the AC Plug on your converter into a wall socket or 110v AC generator.

### 3. Adjust Speed & Power On

36v and 72V converters are set to a fixed voltage. The speed dial on the inside of your solar pump controller to reduce the speed of your pump if desired. You can now turn your solar pump controller to the SOLAR position and start pumping!

# Auto-Switching Instructions

## 1. Disconnect Solar Panels

Turn your controller to OFF position. Disconnect your existing solar panels from your pump controller by disconnecting the two MC4 connectors.

## 2. Connect Auto-Switcher

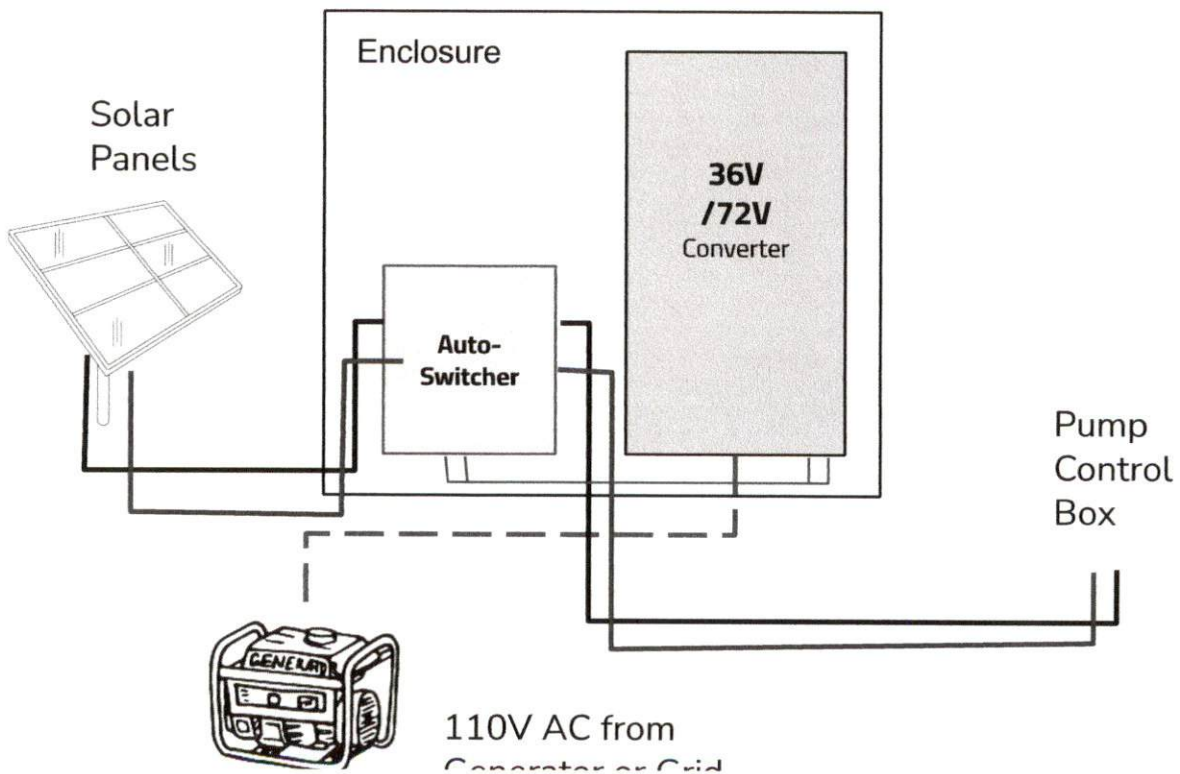
- Knockout at least one opening in base of enclosure to pass wires safely through. Add conduit or glands to knockouts as desired.
- Plug in the two MC4 connector wires from the left side of the small 'Auto-Switcher' box to the MC4 wires from your solar panels
- Connect the MC4 connectors from the right side of the small 'Auto-Switcher' box to the small length of solar wire included. This will come out of the enclosure to your controller.

## 3. Connect DC Converter & Power Up

Connect the AC Plug on your converter into a wall socket or 110v AC generator. You'll hear the converter power up.

## 4. Adjust Speed & Power On

36v and 72V converters are set to a fixed voltage. The speed dial on the inside of your solar pump controller to reduce the speed of your pump if desired. You can now turn your solar pump controller to the SOLAR position and start pumping. The Auto-Switcher will prioritize solar whenever available.





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## UL SOLAR PANELS

RPS Systems use different UL approved panels. *Solar Panels are calculated in 100w Increments and generally perform better than estimates as solar panels are officially rated to 115w.*

<b>AmeriSolar</b> Model: AS-6M30S 320 UL 1703, Type 2; IEC 61215, IEC 61730	Cell Type: Mono Peak Power (Pmax): 320w Tolerance: +/- 5%
Isc: 10.06 Imp: 9.64	Voc: 40.4 Vmp: 33.2 Vmax: 1000v
Dimensions: 65.59in × 39.45in × 1.38in Weight 41.9lbs (19kg)	Warranty: 25yr Less than 3% (see Warranty section) <b>Engineered in Germany</b>

Electrical Service 240v pump and 120v outlets