

## SolSwitch: for Solar with Grid or Genset Backup

### Product Highlights:

- A safe and simple manual transfer switch between solar power and AC grid/generator, single or three phase power source
- Accessory to the PicoCell controller
- Powers single/three phase AC motors, 50/60Hz, 120V/230Vac
- Includes DC disconnect for Solar PV system – no need for additional solar disconnect
- All SolSwitch components are UL listed
- Operated by a PLC device which provides flexibility for custom applications



### Description

Many pumps, compressors, fans and other AC motors may need to run when solar power is unavailable. Examples include unusually cloudy weather, backup power situations, or nighttime operation. When combined with the PicoCell controller the SolSwitch provides the customer with AC backup capability by using utility grid or generator power as an alternate power source. For those critical applications where daily solar power has to be supplemented with AC power, the SolSwitch allows the customer to – both safely and simply – *manually* switch the power from the PicoCell (solar driven), to an AC power source (directly driven).

The SolSwitch is controlled by a robust industrial Programmable Logic Controller (PLC), which provides optional features, including external sensors, a programmable timer and more. For special applications, it is possible to configure automatic power transfer from solar to grid/generator power with the SolSwitch. The SolSwitch contains a DC disconnect, **so no additional solar disconnect is required.**

The Solswitch comes with a standard DC disconnect built in, but can be configured with additional protections such as Ground Fault Detection (GFD) for use in open water applications, such as aquaculture or swimming pools.

It is important to note that the **grid/generator voltage and phase** must match the pump for the SolSwitch to operate correctly. For example, a single phase pump must only be used with single phase grid/generator power, and a three phase pump must only be used with three phase grid/generator power.

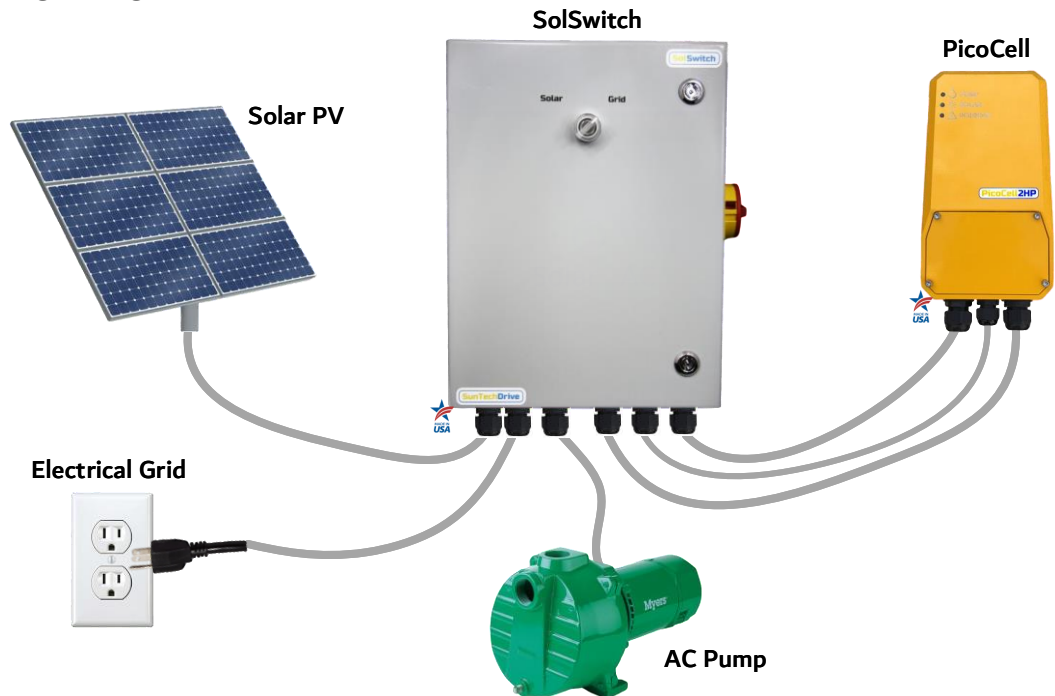
PicoCell™, PicoBlender™, and SolProtect™ are trademarks of SunTech Drive LLC

SunTech Drive, 5485 Conestoga Court, Suite 250, Boulder, CO, 80301 [www.SunTechDrive.com](http://www.SunTechDrive.com)

## Technical Specifications

Electrical		Mechanical	
AC grid/generator input voltage:	90-240Vac	Degree of protection:	NEMA4/IP66
Maximum AC grid/generator input current:	10Aac	Enclosure material:	Steel
Maximum PV panels open circuit voltage:	380VOC	Operating temperature:	-40°C to 50°C
Minimum operating PV voltage:	100Vdc	Dimensions:	16"x12"x8"
Maximum PV panel current:	9Adc	Solar/AC power terminals:	AWG#10-14
Maximum Single/Three phase motor SF AMPS:	10Aac	Sensor terminal:	AWG#14-18
Single/Three phase AC motor voltage:	120/240Vac	Cooling:	Passive/no fan

## Wiring Configuration



For solar PV cable wires, use AWG#10, to minimize the voltage drop between the solar PV panels and SolSwitch. Position the SolSwitch box as close to the motor load (pump/compressor/fan) as possible, not exceeding 25 feet.

If powering either a single phase (2 or 3 wire) or three phase motor load, make sure to connect all Phases A, B and C from the PicoCell to the SolSwitch box in accordance with the SolSwitch wiring diagram.

If powering an above ground single phase (2 wire) motor load with starting capacitor and centrifugal relay, use the wiring diagram for connecting the SolSwitch to a modified motor using a custom accessory power cable, available in the SunTech Product Catalog.