

PicoCell™ 3500 Solar A/C Motor Controller

Extending the line of SunTech Drive solar controllers, the PicoCell 3500 addresses our customers need for higher horsepower and amperage up to 3HP and 12amps

Product Highlights:

- Run installed or new A/C motor/pump/compressor with free solar power up to 3HP
- Universal controller for 1.5HP-3HP motors – Single/Three Phase, 50/60Hz, 120V/240Vac
- Smart technology that is easy to deploy, and can provide significant cost savings
- Small sized box, simple hook up, weather proof, durable and automatic starting capacity
- Maximizes solar panel efficiency allowing fewer panels to supply the needed power
- Changes a 1 or 2 speed A/C motor into a soft start, VFD (Variable Frequency Drive)
- VFD will run motors even at lower solar output extending the useful operating time
- Solar Projects for homes and business can qualify for Tax Credits, Grants, State and Local Rebates and incentive programs
- WiFi communication/control modules available as optional accessories
- Patented, Engineered and Manufactured in the USA
- PicoCell supports up to 2 digital and 2 analog inputs
- Integrated DC Disconnect and PV Parallel Junction

Description

SunTech offers you the ability to upgrade a hard starting DOL single- or three-phase motor system to a soft start Variable Frequency Drive Technology running on solar power. The PicoCell 3500 universal controller can power motors, pumps, compressors or other inductive loads regardless of whether it is 50HZ or 60HZ, 120Vac or 240Vac. Now you can retrofit single-phase 2HP - and up to three-phase 3HP – pumps, fans and compressor motors. Designed for remote off-grid installations, the weather proof all aluminum chassis/heat sink is IP65 rated for harsh outdoor environments and can operate in high temperatures, humidity and corrosive environments.

SunTech Drive engineers have improved on the functions and features of traditional solar controllers to run inductive motor loads by replacing old electromagnetic designs with high voltage silicon components intelligently controlled by our patented adaptive firmware. The PicoCell 3500 integrates the functions of an inverter, VFD, MPPT controller, phase initiator and voltage boost with automatic control.



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Technical Specifications

Electrical		Mechanical	
MPPT operating voltage:	100-380V	Degree of protection:	NEMA3/IP65
Max PV panels open circuit voltage:	400V	Enclosure material:	Aluminum
Minimum operating PV voltage:	100V	Operating temperature:	-40°C to 50°C
Maximum PV panel current:	15A	Dimensions:	18"x10"x5"
Single-phase max AC motor power:	12A	Solar terminal:	AWG#10-14
Three-phase max AC motor power:	10A	Motor terminal:	AWG#8-14
		Sensor terminal:	AWG#14-18
		Cooling:	Passive/no fan

Dual Solar Array Input

Over current, overvoltage and over temperature protections

Optional: WiFi communication module, GFCI protections

Contact SunTech Drive to configure solar for your application, either single array or double array in parallel.

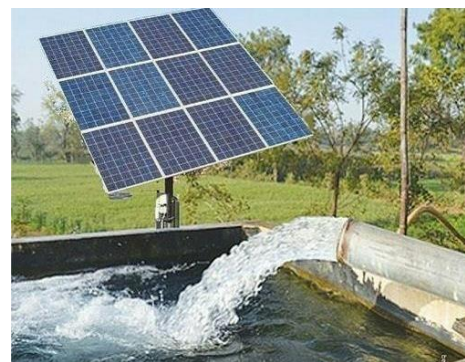
S.F. AMPS			Recommended Solar PV Capacity		
1-ph; 120Vac	1-ph; 240Vac	3-ph; 240Vac	Recommended Solar Power Capacity	Minimum Solar MPP Voltage	Absolute Maximum Open Circuit Voltage
Amps	Amps	Amps	Watt	Min Vmpp	Max Voc
8 - 10	6 - 8	6 - 7	2500 - 3500	220	400
10 - 12	8 - 10	7 - 8	3500 - 4500	250	400
-	10 - 12	8 - 10	4500 - 6000	270	400

New and Improved Features

- Integrated DC disconnect so no additional disconnect is required
- 2 digital and 2 analog inputs
- Multiple DIP switches for feature selection in the field, including Hz limit
- Integrated load filters
- Integrated junction connections for parallel solar arrays
- Integrated Bluetooth for smartphone app connectivity
- Optional GFCI protection

Optional Accessories

- Float switches for well pumps and tank overflow
- SolSwitch - manual transfer switch for generator or grid alternate AC power source
- Analog sensors adapter board
- Communication module with web services
- Pumps
- Solar PV panels and racks
- DC Rated Disconnects



Typical Applications

- Crop irrigation
- Livestock Watering
- Pool Pumping & Recirculation Systems
- Lake and Pond Aeration & Fountains
- Aquaculture and De-Icing
- Solar Hot Water Heating & Recirculation
- Salt Water/Residual H2O evaporation
- Village & residential drinking water

* 2 Wire surface motors with starting capacitors require Accessory Power Cable retrofit, available from SunTech Drive.