



# Cell 3500

## Solar AC Motor Controller

*Answering the need for higher horsepower and amperage up to 3HP and 12amps*



PEH 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 ENFusion™ Cell 3500 universal controller can power motors, pumps, compressors or other inductive loads regardless of whether it is 50HZ, 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-grid installations, the weatherproof, all-aluminum chassis/heat sink is IP65 rated for harsh outdoor environments and can operate in high temperatures, humidity and corrosive environments.

ENFusion™ 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 ENFusion™ Cell 3500 integrates the functions of an inverter, VFD, MPPT controller, phase initiator and voltage boost with automatic control.

- Run installed or new AC 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, weatherproof, durable and automatic starting capacity
- Maximizes solar panel efficiency allowing fewer panels to supply the needed power
- Changes a 1 or 2 speed AC 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
- Cell supports up to 2 digital and 2 analog inputs
- Integrated DC Disconnect and PV Parallel Junction
- Patented and made in the USA

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MADE IN THE  
**USA**



## 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

## 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

## 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

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

## Technical Specifications

<b>ELECTRICAL</b>	Solar operating voltage range:	<b>100-380V</b>
	Max PV Panels Open Circuit Voltage:	<b>400V</b>
	Solar PV rated current per channel:	<b>12A</b>
	Single-phase Max AC Motor Power:	<b>13A</b>
	Three-phase Max AC Motor Power:	<b>10.5A</b>

<b>MECHANICAL</b>	Degree of Protection:	<b>NEMA#/IP65</b>
	Enclosure Material:	<b>Aluminum</b>
	Operating Temperature:	<b>-40°C to 50°C</b>
	Dimensions:	<b>18"x10"x5"</b>
	Solar Terminal:	<b>AWG#10-14</b>
	Motor Terminal:	<b>AWG#8-14</b>
	Sensor Terminal Passive:	<b>AWG#14-122</b>
	Cooling:	<b>Passive/no fan</b>

*Over current, over voltage and over temperature protections.  
Optional: WiFi communication module, GFCI protections  
Dual Array Input*

Contact ENFusion  
to configure solar for  
either single array or  
double array in parallel.