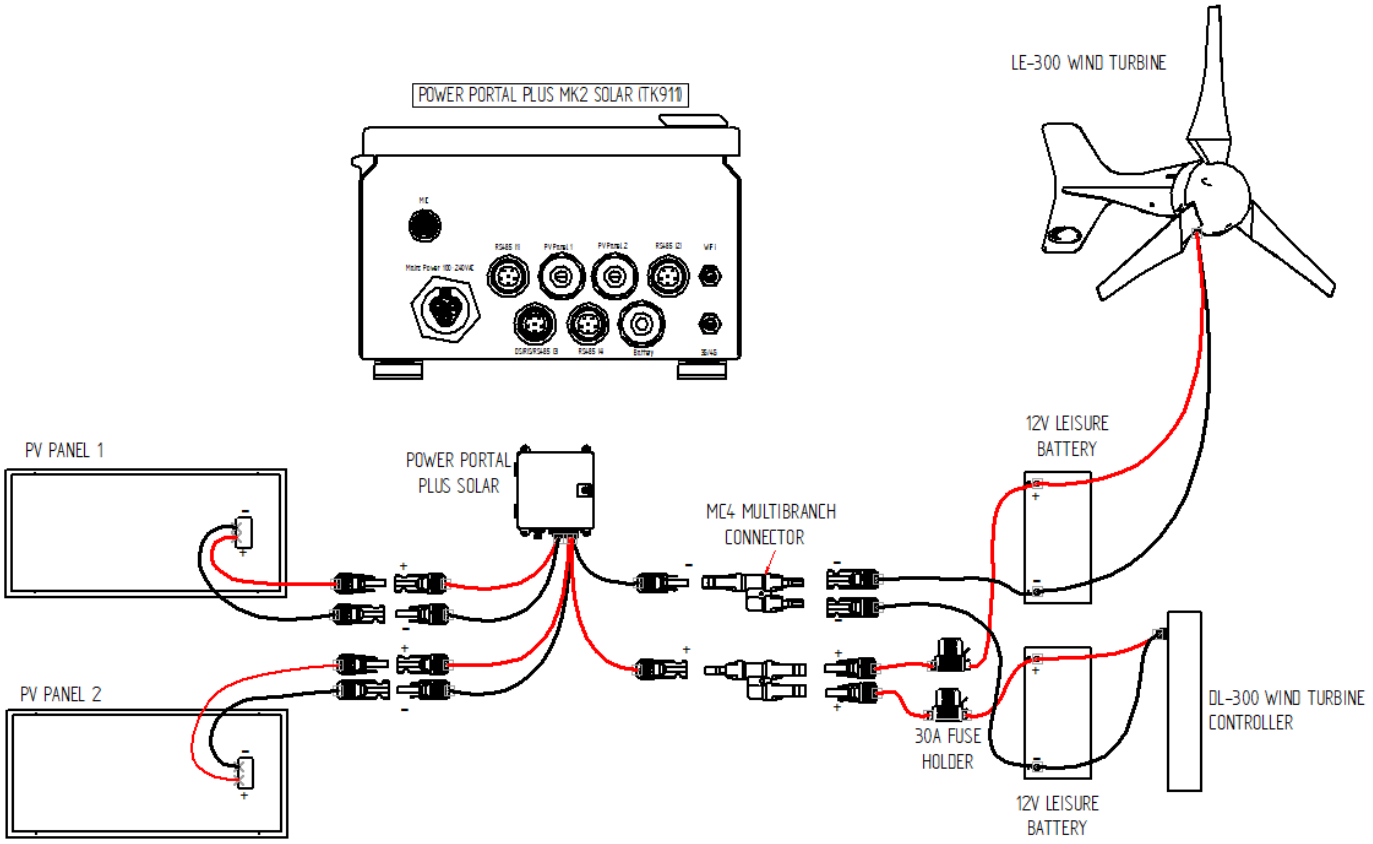
Off-Grid Technical Specifications.

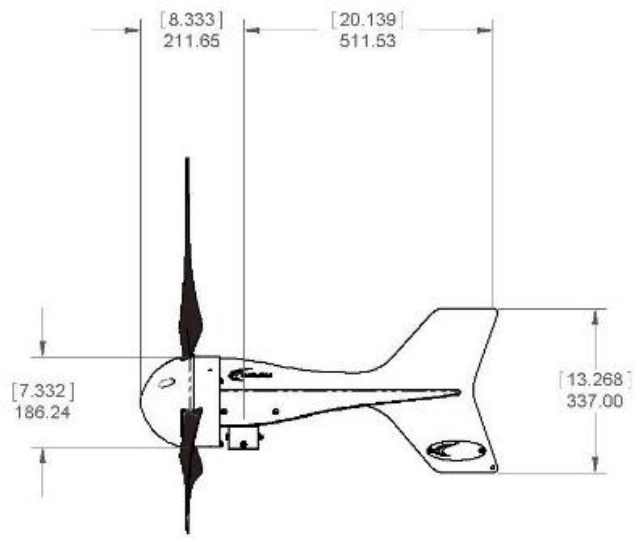
Turnkey Power Portal Plus Solar System as used on the Quad Pod

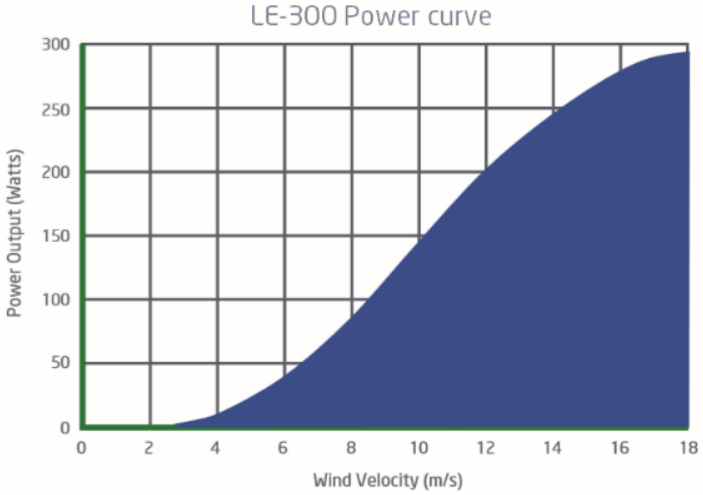


LE300 WIND TURBINE TECHINCAL SPEC

- **Rotor Diameter:** 1 metre
- **Rotor Type:** 3-Blade upwind
- **Blade Material:** Glass Reinforced, UV resistant Nylon
- **Rated Output:** 85 watts @ 8m/s (18mph)
- **Peak Output:** 300 watts
- **Cut-in speed:** 3m/s (6.7mph)
- **Weight:** 6.5Kg
- **Design:** 3-Phase AC rectification
- **Alternator:** Direct drive, axial flux, 8 pole permanent magnet generator
- **Typical Noise Level:** 6dB(A) above background
- **Rotational Speed:** 0-2000rpm
- **Swept Area:** 0.785m^2
- **Tip Speed Ratio:** 6
- **Swept Area:** 0.785m^2
- **Mounting Pole:** 48.3 or 50.0mm outer diameter (3mm wall thickness)
- **Output Voltage:** 12, 24 or 48V







PHOTOVOLATIC PANEL 130/140W

Electrical characteristics

3130J / 3140J

	[1] STC 1000W/m²	[2] NOCT 800W/m²
Maximum power (P_{max})	130W / 140W	93.6W / 101W
Voltage at P_{max} (V_{mpp})	17.4V / 17.5V	15.5V / 15.6V
Current at P_{max} (I_{mpp})	7.5A / 8.0A	6.0A / 6.4A
Short circuit current (I_{sc})	8.2A / 8.6A	6.6A / 7.0A
Open circuit voltage (V_{oc})	22.0V / 22.0V	20.0V / 20.0V
Module efficiency	12.8% / 13.7%	
Tolerance (P_{max})	±10%	
Nominal voltage	12V	
Efficiency reduction at 200W/m²	<5% reduction efficiency 12.1% / 13.0%	
Limiting reverse current	8.2A / 8.6A	
Temperature coefficient of I_{sc}	0.105%/°C / (0.065±0.015)%/°C	
Temperature coefficient of V_{oc}	-0.360%/°C / -(80±10)mV/°C	
Temperature coefficient of (P_{max})	-0.45%/°C / -(0.5±0.05)%/°C	
[3] NOCT	47±2°C	
Maximum series fuse rating	20A	

Application class (according to IEC 61730:2007) Class A

Maximum system voltage 600V (U.S. NEC) / 1000V (IEC 61730:2007)

1: Values at Standard Test Conditions (STC): 1000W/m² irradiance, AM1.5 solar spectrum and 25°C module temperature

2: Values at 800W/m² irradiance, Nominal Operation Cell Temperature (NOCT) and AM1.5 solar spectrum

3: Nominal Operation Cell Temperature: Module operation temperature at 800W/m² irradiance, 20°C air temperature, 1m/s wind speed

Mechanical characteristics

Solar cells	36 polycrystalline 6" silicon cells (156 x 156mm) in series
Front cover	High transmission 3.2mm (1/8th in) glass
Encapsulant	EVA
Back cover	White polyester
Frame	Silver anodized aluminum
Junction box	IP65 with 4 terminal screw connection block; accepts PG 13.5, M20 13mm (½") conduit, or cable fittings accepting 6-12mm diameter cable. Terminals accept 2.5-10mm² (8-14 AWG) wire
Dimensions	1510 x 674 x 50mm / 59.4 x 26.5 x 2in
Weight	12kg / 26.5lbs

All dimensional tolerances within ±1% unless otherwise stated.

Power Consumption Data

- **OSIRIS & TOPAS,** 12 volts x 1.5 Amps = 18 Watts.
- **iGAS,** 12 Volts x 340mA = 4 Watts.
- **iDB & iVIBE**, 12 Volts x 310mA = 3.7 Watts.



Quad Pod

Revision History

- Original 17/02/21

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