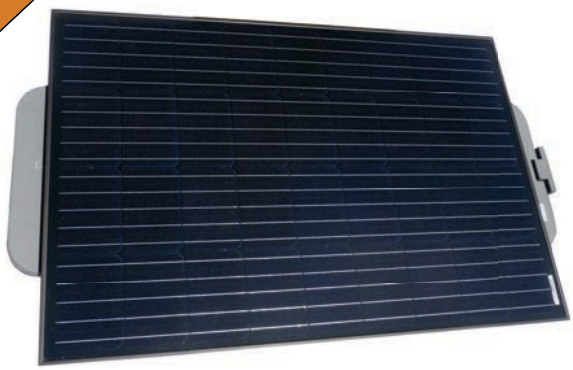
SO-EK-363L-D1

120W Solar Panel W/ Controller



- Integrated Die Casting Casing
- Aluminum alloy frame
- Monocrystalline solar panel
- Lithium battery pack
- Remote monitoring with APP
- Maximum Power Point Tracking charging controller
- RS485 communication function
- Electronic protection

System Overview

This is a solar panel, battery pack and controller in an all-in-one structure, surrounded by an IP66 rated aluminum alloy casing ensuring power in harsh rural enviroments. Being so compact allows for easy assembly, portability and disassembly; all without the need of intricate cabling. The Iron Phosphate Lithium battery offers over-temperature and over-voltage protection. As well as, operate in daily temperatures of 32°F to 140°F and nightly temperatures of -4°F to 140°F.

Features

Integrated Aluminum Die Casting Casing
Compact structure integrated with solar panel, lithium battery pack and charging controller to improve the appearance, installation, and maintenance of the system.

Monocrystalline Solar Panel
Adopts monocrystalline solar panel to greatly improve optical absorbance efficiency and power generation performance with dusky light.

Lithium Battery
Iron phosphate lithium batteries are of smaller size and have a longer life cycle compared to conventional lithium batteries.

Maximum Power Point Tracking Charging Controller
Maximum Power Point Tracking (MPPT) charging controller helps significantly improve the energy utilization efficiency of the system, and raise the charging efficiency by 10% - 30% compared with a conventional PWM controller.

RS-485 Port
RS-485 port and standard Modbus protocol, meeting communication requirements for various scenarios.

Electronic Protection
Comprehensive electronic protection: Current limiting, short circuit, and reverse current protection of solar panel; reverse connection, overvoltage, over-discharge, and over-temperature protection of lithium battery; overload and short circuit protection of load.

Technical Specification

Integrated Solar Power System

System

Output Voltage	12.8V DC (11.1V DC to 14.6V DC)
Output Current	1A
Standard Backup Time (20ºC)	“Backup time (h)=576Wh/total load power consumption (W) For Example, the total load power consumption is 6W, then backup time: 576Wh/6W=96h”
Idling Power Consumption	< 0.5W

Solar Panel

Type	Monocrystalline silicon
Maximum Power	120W
Solar Cell Efficiency	21%
Maximum Mechanical Load	5400Pa

Battery

Type	Lithium iron phosphate battery
Rated Capacity (20ºC, 5hr)	576Wh (12.8V/45Ah)
Low Temperature Discharge (-20°C, 5hr)	≥80% of rated capacity
High Temperature Discharge (60°C, 5hr)	≥90% of rated capacity
Maximum Charging Voltage	14.6V DC
Maximum Charging Current	10A

Protection

Over-discharge Protection Voltage	11.1V DC
Low Temperature Charge	≤-10°C (14°F)
Low Temperature Discharge	≤-20°C (-4°F)
Others	Over-temperature and overvoltage protection of battery; overload and short circuit protection of load.

Port

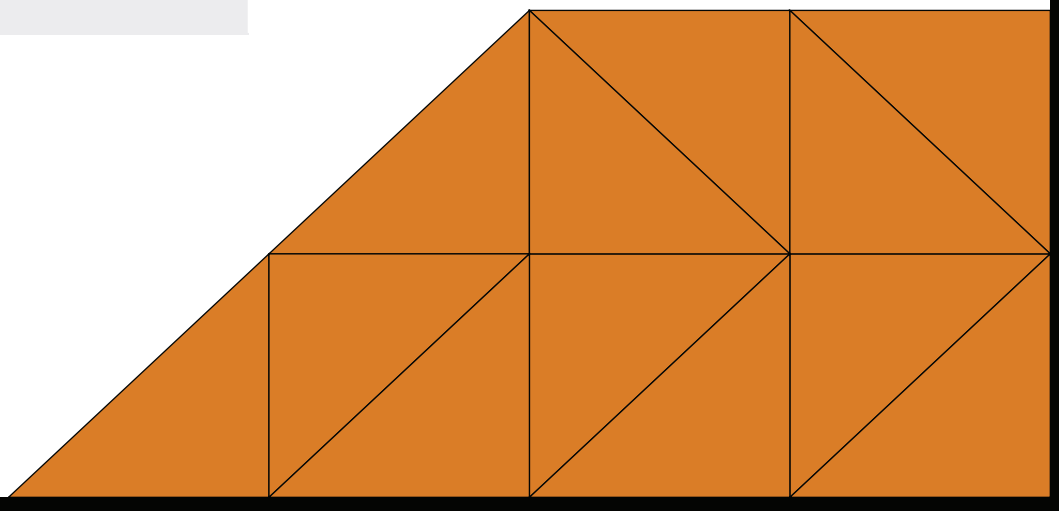
Power Output	Φ5.5mm×Φ2.1mm×12mm (Φ0.22""×Φ0.08""×0.47"")
RS-485	1
RS-485 to Ethernet	N/A
Network	N/A

General

Casing Material	Aluminum
IP Rating	IP66
Installation	Pole-mount, suitable for Φ76~96mm (Φ3.0"~Φ3.78") pole
Adjustable Angle Range	"Pan: 0°~360° Tilt: -75°~80°"
Operating Altitude	< 3000m
Applicable Area	Daily solar radiation ≥ 4.5h
Operating Temperature	Day (charging mode): 0°C~60°C (32°F~140°F) Night (discharging mode): -20°C~60°C (-4°F~140°F)
Operating Humidity	Less than 95% RH
Storage Temperature	0°C~+40°C (32°F~104°F)
Storage Humidity	Less than 95% RH
Dimensions	1149.5mm×367.5mm×430.2mm (45.26""x14.47""x16.94"")
Net Weight	26.5kg (58.42lb)
Gross Weight	34.5kg (76.06lb)

Certification

Certification	CE: EN61000-6-2, EN61000-6-4 FCC: FCC Part 15 Subpart B



Dimensions (mm/inch)