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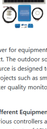
SKU:KIT0210

Overview



In outdoor projects, how to provide a power source is a headache. Whether in remote areas or harsh environments, providing continuous and reliable power for equipment is a major challenge when completing the project. The outdoor solar energy kit solves this problem. This power source is designed to provide power supply solutions for outdoor projects such as small weather stations, soil moisture monitoring, water quality monitoring, and garden plant monitoring.

Multiple Voltage Outputs to Meet Different Equipment Requirements In order to adapt to various controllers and sensors, this power source supports two voltage outputs of 12V1A and 5V1A, and can provide stable power for a variety of devices such as sensors and data loggers. Whether it is a 5V controller device or a 12V industrial sensor, it can obtain sufficient power supply under different application scenarios. This flexible voltage output design ensures that it can meet the power consumption needs of different devices during use.

Simple to Use, Resistant to Outdoor Wind and Rain, and Easy to Install This outdoor solar power source is carefully designed and has extremely high protection capabilities. All components are integrated in a waterproof housing. You just need to open the housing and install an 18650 lithium battery to use it. The housing is simply designed and durable, equipped with installation lugs, and can be easily fixed on any position such as brackets and walls, facilitating quick installation. This power source is also equipped with a 10W high-efficiency solar panel. Under sunny weather conditions in summer, the battery can be fully charged in one day, keeping the equipment in the best operating state at all times.

Efficient Battery and Intelligent Protection This power source supports the connection of 3 18650 lithium batteries, providing long battery life and reliable guarantee for long-term unattended equipment. At the same time, the built-in intelligent protection system includes overcharge, over-discharge and equalization protection functions, further ensuring the safety and stability of the battery. No matter in what environment the equipment is operating, these protection measures can effectively prevent the battery from being damaged or having its performance degraded due to excessive use, and prolong the service life of the battery.

Notes

- Do not connect the battery in reverse.
- Please use lithium batteries with consistent specification parameters.
- After installing the battery, you need to connect the input power source to activate the battery output (the battery output can be activated through type-C or solar panel input).

Features

- Flexible Dual Voltage Power Supply
  - 12V/1A output: Suitable for industrial devices such as professional sensors and data loggers.
  - 5V/1A output: Compatible with general devices such as controllers and IoT modules.
- Quick Installation and Worry-free Battery Life
  - Equipped with a 10W high-efficiency solar panel, which can fully charge the battery in 8 hours on a sunny day.
  - Supports the connection of 3 18650 lithium batteries for long-term battery life.
  - Equipped with installation accessories for easy installation.
- All-weather Reliable Protection
  - Resistant to outdoor wind and rain, and can operate stably in environments with heavy rain, sand and dust.
  - Built-in triple protection against overcharge/over-discharge/short circuit to extend the battery life.

Application Scenarios

- Small weather stations
- Soil moisture monitoring
- Real-time water quality monitoring
- Garden plant monitoring

##Technical Specifications Technical Specifications of the Solar Controller

- Photovoltaic input voltage: 17~20V
- Type-C input: 5V 2A
- Charging current: 0.5A MAX
- Charging cut-off voltage: 12.6V
- Output voltage: 12V1A, 5V1A
- Housing size: 115*90*35mm (excluding installation lugs)

Technical Specifications of the Solar Panel

- Maximum power: 10W
- Peak voltage: 19V
- Peak current: 0.51A
- Open circuit voltage: 22.8V
- Short circuit current: 0.55A
- Size: 210*315*7mm

Assembly Tutorial

Note: Do not let the output short-circuit after powering on.

Introduction to Accessories

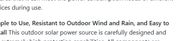
1. Controller Cover
2. Controller Main Body
3. Solar Panel
4. Waterproof Strip
5. Controller Screw Pack
6. Gland Head
7. Controller Installation Accessory Pack
8. 4-core Power Output Cable
9. 2-core Solar Panel Connection Cable

Installation Steps

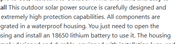
- Install the two gland heads on the controller holes.

- Thread the cable through the gland head and connect it to the terminal (Thread as much cable as possible through for easy wiring, refer to the cable on the left).
- Pull the cable outwards, leave an appropriate length, and tighten the gland head.

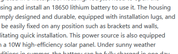
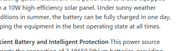
- Open the protective cover on the back of the solar panel, use screws to fix the cable connected to VIN (Please pay attention to the positive and negative polarities), and put on the protective cover after connection.



- Embed the waterproof strip into the gap of the controller cover and remove the excess part.



- After installing the battery into the controller, use the self-tapping screws in the controller screw pack to screw in and install the screw plugs (Tighten the 4 self-tapping screws cyclically until the outer shell is sealed).



- The hanging ear accessories can be installed on the upper, lower, left and right sides. Please install them according to your needs.