

Accessories - Solar Offline Power

CableFree Solar Offline POE Power solutions

Overview



About Wireless Excellence

Founded in 1996 and with headquarters in Oxford UK, Wireless Excellence Limited is a leading designer and supplier of outdoor and indoor Broadband Wireless communication products.

With a complete range of solutions including Radio, Microwave, Millimeter-Wave, Free Space Optics, WiFi and 4G/5G/LTE solutions, customers in over 80 countries have chosen Wireless Excellence as the “one stop shop” solution of choice for dependable wireless networking.

About Offline Solar Power

CableFree Solar Off-Grid Power solutions are used on sites where ac mains power is either unavailable or unreliable, to ensure highly reliable connectivity for virtually any wireless broadband network.

The Solar Offline Power range combines advanced offline power controllers, high efficiency solar panels and batteries with flexible choice of options to facilitate a wide range of applications.

This solution is designed to speed deployment and time to market ensure reliable connectivity for all applications.

Overview of Solar Offline "Off-Grid" Power Solutions

CableFree Solar Offline Power solutions are used on sites where ac mains power is either unavailable or unreliable, to ensure highly reliable connectivity for virtually any wireless broadband network, including Radio, Microwave, FSO, MMW and WiFi access points.

The Solar Offline Power range combines advanced offline power controllers, high efficiency solar panels and batteries with flexible choice of options to facilitate a wide range of applications. A variety of power options are available for different regions and power requirements.

This solution is designed to speed deployment and time to market ensure reliable connectivity for all applications.

CableFree outdoor power systems are designed for applications that require a primary off-grid power source to run various electronics. The sealed and weatherproof enclosures have a generous amount of space inside and a removable mounting plate for mounting all types of customer electronics. All enclosures are hinged and gasket sealed. The PL enclosure can accept a padlock or tamper seal. The ST enclosure is equipped with 2 tamper proof closures that are operated by a special key (included).

The enclosures can be mounted to a wall or pole with the included mounting bracket system. The high quality solar panels have a 25year power output guarantee. The 5W and 10W solar panels are mounted directly to the DC enclosure saving space and making a more convenient assembly. The 30W and 60W solar panel can be mounted to a 2" to 4" diameter pole or alternately to a wall with the included bracket kit.

Features include an advanced battery charge controller to protect against over-charging or over-discharging of the valve regulated sealed lead acid batteries. Other choices of battery are available including Lithium Ion (Li-Ion). The PL and ST systems include a controller with built in POE inserter and DCDC converter to supply up to 48V POE from the 12V battery system. Enclosures have multiple ports for CAT5 cable, antenna cables/connectors or other cabling. They are vented to prevent residual buildup of hydrogen gas. Batteries in the DC and PL enclosures are an Advance Glass Matt (AGM) type which have good all temperature performance. The ST enclosure uses a high performance GEL battery which gives the best available deep discharge and temperature performance.

A wind turbine can be added to any system by mounting the turbine to a pole and installing the wind turbine controller into the enclosure. The wind turbine controller and solar controller hook up to the batteries in a parallel fashion.



System Features

- Complete Remote Power Solution for Off-Grid operation
- Use for Radios, Microwave, WiFi, CCTV Cameras
- Provides 24hour continuous Power on remote sites
- Several voltages available (12, 18, 24, 48V dc)
- Interface Options including 10/100 POE & GigE
- Weatherproof IP65, UV resistant, outdoor enclosures
- Enclosures can be Wall or Pole Mounted
- High Performance Valve Regulated Sealed Lead Acid Batteries, or Lithium Ion batteries, or other as required
- Advanced battery charge controller protects against overcharge and over discharge

Applications

- Backup of unreliable ac power sources
- Provide power where no ac power available
- Point-to-Point or Point-to-Multipoint Data network segments
- Wireless ISP or Hotspots
- Fast Roll-out & Temporary Deployment

Options & Accessories

| | |
|------------------|--|
| Rated Power | Standard solutions up to 50W continuous, higher power options can be offered |
| Reserve Time | Reserve time (without solar input) up to 80 hours depending on options |
| Output Voltage | 12, 18, 24, 48V dc options |
| Battery Capacity | From 9Ah up to 200Ah or more |
| Wind Generator | Add a Wind Turbine generator for regions where this is recommended, such as low light or frequent loss of solar illumination |

Specifications

Specifications below include most typical configuration options - many more combinations exist and can be tailored to exact customer specification and demand.

| | | | | | | | | | | | | |
|---|--|-------|---|-------------|--------------------------------------|--------------------------------------|-------------|--|-------------|--------------|------------|------------|
| Rated Power Generation | 1.25W | 2.5W | 8W | 8W | 15W | 20W | 20W | 30W | 30W | 50W | 50W | 50W |
| Reserve Time @ Rated Power | 40hrs | 21hrs | 27hrs | 27hrs | 80hrs | 60hrs | 60hrs | 40hrs | 40hrs | 24hrs | 24hrs | 24hrs |
| POE Output Voltage (DC) | No POE Out | | 12V1A 18V1.7A 24V1.2A 48V.62A | 24V 1A | 12V1A 18V1.7A 24V1.2A 48V.62A | | 24V 1A | 12V1A 18V1.7A 24V1.2A 48V.62A | 24V 1A | | No POE Out | |
| Secondary Voltage Out (DC) | 12V 10A | | 12V 1.5A | 24V 1.5A | 12V 1.5A | | 24V 1.5A | 12V 1.5A | 24V 1.5A | 24V 1.5A | 12V 15A | 24V 10A |
| Battery Capacity (Amp Hours) | 9Ah | | 36Ah | 18Ah | 102Ah | | 51Ah | 102Ah | 51Ah | 102Ah | 200Ah | 102Ah |
| Battery Voltage (DC) | 12V | | | 24V | 12V | 24V | 12V | 24V | | 12V | 24V | |
| Battery Type | Valve Regulated Sealed Lead Acid / Absorbent Glass Mat (AGM) | | | | Valve Regulated Sealed Lead Acid GEL | | | | | | | |
| Battery Life | 5 Years | | | | | | | | | | | |
| Controller Type | PWM | | Dual Input: Solar/POE, Dual Output: Battery Voltage/POE with DCDC Converter | | | | | | | PWM | | |
| Overcharge Protection | 14.4V | | 28.6V | | 14.4V | | 28.6 V | 14.4V | 28.6V | | 14.4V | 28.6V |
| Over-discharge protection | 11.0V | | 22.0V | | 11.0V | | 22.0 V | 11.0V | 22.0V | | 11.0V | 22.0V |
| Over-discharge recovery volts | 12.0V | | 24.8V | | 12.0V | | 24.8 V | 12.0V | 24.8V | | 12.0V | 24.8V |
| Controller Self Consumption | <0.5W | | | | | | | | | | | |
| Enclosure Type | Die Cast Aluminum | | Polycarbonate | | | Powder Coat Steel | | | | | | |
| Enclosure External Size | 11 x 8.5 x 3.5" (279x216x89mm) | | 17.5 x 12.5 x 6" (445x318x152mm) | | | 24 x 15 x 14" (610 x 381 x 356mm) | | | | | | |
| Enclosure Internal Size | 10 x 7.75 x 3" (254x197x76mm) | | 14 x 10 x 5" (356x254x127mm) | | | 23 x 14 x 12" (584 x 356 x 305mm) | | | | | | |
| Space available for Customer Electronics | 7.75 x 5 x 1.25" (197x127x32mm) | | 7 x 7 x 4" (177x177x102mm) | | | 12 x 12 x 12" (305 x 305 x 305mm) | | | | | | |
| Operating Temperature | -30°C to +60°C (-22°F to 140°F) | | | | | | | | | | | |
| System Weight (no batteries) | 10lb (4.5kg) | | 22lb (10kg) | | 84lb (38kg) | 89lb (40kg) | | 101lb (46kg) | | 142lb (64kg) | | |
| Battery Weight | 5.5lb (2.5kg) | | 22lb (10kg) | | 78lb (35kg) | | | | | 156lb (71kg) | | |

Part Numbers

There are many options, choices depend on local environmental conditions.

Please contact Wireless Excellence for details

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