

Impressed Current Cathodic Protection

Power Supplies / Solar Power Supplies

PS 01.005

Solar Powered Photovoltaic (PV) System for Cathodic Protection

Our Solar Powered Units are tailored to your requirements. Our Solar powered cathodic protection systems use the latest technological achievements, including the latest remote monitoring and control systems.

A typical system comprises of:

- Solar PV modules
- Solar Charge Controller
- High Capacity Batteries
- Module Structure
- Cathodic Protection Control Unit (CPCU)
- DC array Combiner Boxes.

Our solar systems are designed using the internationally recognised NSOL sizing programme.

Based on the location, the most appropriate environmental data is identified. System performance is then modelled, taking into account the working temperature, voltage, battery efficiency, system losses and derating factors.





PV Modules & Solar Arrays

A solar array comprises of a number of Photo Voltaic (PV) modules. We supply a range of solar modules in various shapes and sizes including our high efficiency monocrystalline silicon cells.

Typical Electrical Performance

Peak Power (Pmax)	Maximum: 75W Minimum: 70W
Typical efficiency	11.6%
Open Circuit Voltage	21.4 V
Voltage at Maximum Power Point (Vmax)	17 V
Current at Maximum Power Point (Amax)	4.45 A
Short Circuit Current	4.75 A
Fill Factor	0.7

Our solar modules are manufactured using proven industry standard materials and lamination techniques.

Solar Controller

The function of the solar controller is to optimise the utilisation of the battery capacity and to extend the service life of the battery.

Our controllers are housed in weatherproof IP65 enclosures.

- High efficiency
- Three tier charging (Boost, Equalisation & Float)
- Fail safe normally closed relays
- Blocking Diodes to prevent discharge
- Optional remote temperature sensor
- Fail safe temperature sensing circuit
- Diagnostic facilities
- Metering of Battery Voltage, Array current and Load current
- High & Low Voltage alarms.

Cathodic Protection Control Unit

Hockway offer a range of CPCU or DC DC Convertors to maintain DC for the Cathodic Protection System and can accommodate remote monitoring and control. Refer to Hockway's DC DC Convertors brochure for a comprehensive list and specifications.



Solar Array Structure

We can provide a range of structures from ground level to pole mounted to mount the solar array. Up to 3 banks of 8 modules can be mounted on one support structure, the output of each bank is fed into a junction box minimising cable voltage drops.

Batteries

Batteries are incorporated in Photovoltaic Systems to store excess electrical energy generated by the photovoltaic array during the day to provide power at night and other periods of low sunlight.

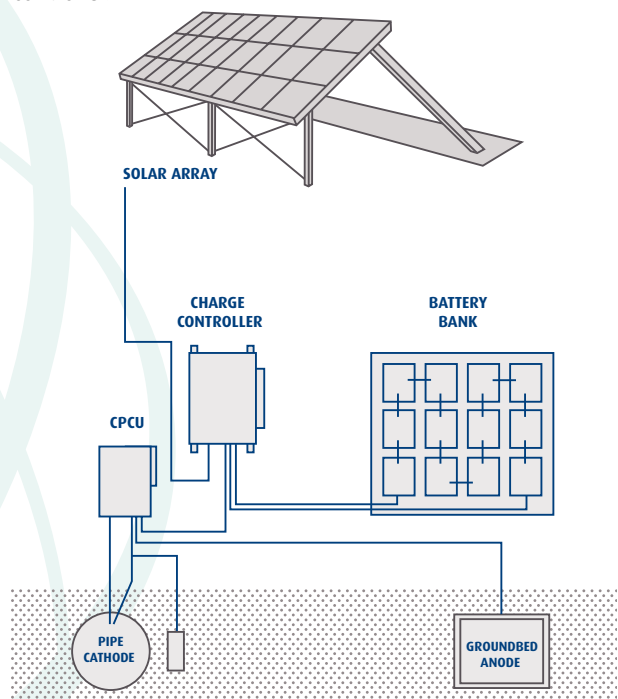
Battery capacity is calculated to include enough for normal day-to-day operation at the worst time of the year plus a reserve capacity for periods of bad weather.

Features:

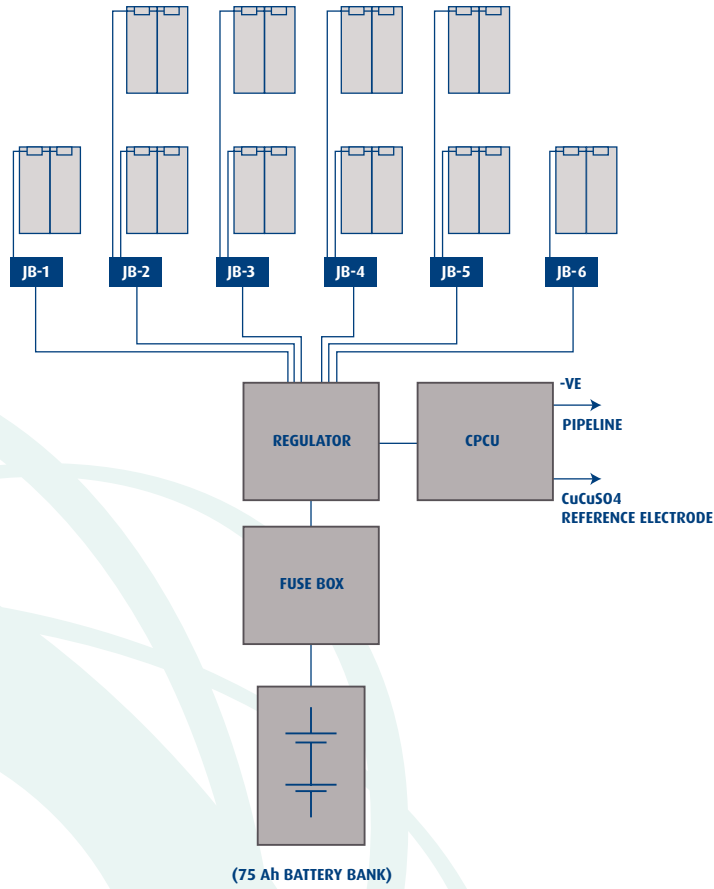
- High reliability
- High charging efficiency
- Low self discharge
- Large electrolyte reserve and low water loss rates provide minimal topping up intervals of 2 to 3 years
- Proven track record throughout the world's toughest environments
- Five year full replacement warranty.

Solar Array

Typical solar standalone system connected to a charge controller.



Typical Solar System



Contact

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