

# IMARK

## PRODUCT DESCRIPTION



### RPSE

#### Remote Power System Enclosure

Imark Stock # [746001](#)

#### Features:

- Legs adjustable for uneven terrain
- Solar Panel Frame adjustable from 15° to 60°
- DPL60R (Dual Solar Regulators)
- Lightning Protection
- 18 pieces US64 64Watt Solar panels
- Dual Battery Systems with 2400Ahr capacity
- 45RU Stainless steel cabinet with internal light
- Dual DC Distribution panel
- Hinged Cavity Filter Bracket
- 16 Metre guyed winch-up mast

#### DESCRIPTION:

The Imark Remote Power System Enclosure (RPSE) is constructed using high tensile Aluminum throughout to provide additional strength for high stress installations. The frame assembly incorporates a cover (or roof) that is spaced 150mm above the cabinet to shade the cabinet from the sun, and permits airflow around the cabinet providing passive cooling in hot climates.

The Solar Panel Frame accepts up to 18 Uni-Solar US64 Panels, and can be adjusted for tilt angles of 15° to 60° in 5° increments.

Each of the four frame legs can be adjusted by as much as 20° to suit uneven ground conditions.

The battery compartment can accommodate two separate banks of 12 Volt batteries each with up to 1750 Ah of capacity. A tool box compartment is situated between the battery banks for the miscellaneous tools that are required at such sites.

The stainless steel equipment enclosure is a 45RU cabinet designed specially to be integrated with the RPSE frame and battery cabinet. It includes lockable doors front and rear, and a recessed cable entry location. Cable lacing bars, a swing-out cavity filter mounting bracket, and/or a small 12 volt operated 2 x 8w fluorescent light can be installed as options.

The power system is a dual independent solar based system. Each Power System has its own solar panel bank, lightning protector, PL60R Solar Regulator, and DC Distribution panel. A single power system can be provided when redundancy is not required.

Uni-Solar photovoltaic panels are used as they feature triple junction technology to collect more diffuse radiation than conventional solar panels. Uni-Solar panels do not suffer as severely from localized shading such as that caused by guy wires. The solar panels also incorporate a polymer encapsulation, which allows the solar panels to operate with only slightly reduced performance in the event of damage.

Battery Energy 2SG series batteries are used as they have been specifically developed by the CSIRO for use in solar installations. They utilise a gel type electrode thus making them air transportable, and are housed in a flame retardant (UL94V-0) case. Furthermore, they have a design life of 10 - 15 years (or more than 5,000 cycles) provided the batteries are not discharged to less than 80% capacity.

Specially modified Plasmatronics PL60R Solar Regulators are installed for each power system. The PL60 regulators operate in a Negative Earth environment and can provide the user with useful Load Power usage, Battery condition, and Solar collection data. They incorporate a time clock that can be used to control external devices such as generators or lights.

The Imark DCDP-2 Dual DC Distribution Panel has separate and independent inputs and out puts for each power system. Each system provides four Binding Post type outputs. Two are 100 Amp rated and two are 10 Amp rated. Switchable circuit breakers are installed on each output.

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An Imark GIM-1 Generator Input Module is provided for emergency battery charging from a single generator. The Generator Input Module keeps each battery bank isolated from each other, while allowing both battery banks to be charged simultaneously.

A 16 Metre two section winch-up guyed mast completes the package. It is designed to withstand Category 2 cyclones with up to eight communication antennas installed. The Mast is supplied with a lightning finial, an earth cable running from the finial to the earth stake, and all guying hardware.

<b>SPECIFICATIONS:</b>	
Operating Voltage	12Vdc System (Other voltages available)
Load Current	Up to 30A per regulator
Battery Capacity	Up to 1750Ahr per system
	Up to 3500Ah with a single system
Wind Loading	Up to 170K per hour (47 metres per second)
Cabinet Temperature Rise	Typically 7°C with 200 Watts of internal heat
Quantity of Solar Panels	Up to 18 Uni Solar US-64 panels
Charge Current	Up to 60 Amps (regulator dependant)
Unit Dimensions	6700 x 2500 x 2500 mm (excluding the mast height)
Unit Weight:	1300 Kilograms. including mast, batteries, equipment, & solar panels (depending on batteries)
Imark Stock #	746001