



RPMS24-360-650

DATA SHEET

Mobile Solar Pro™

Features

- **Low Cost Complete Mobile Solar Remote Power Solution** for Off-Grid operation. Fully Assembled. Sets up in minutes.
- **Weatherproof Outdoor Locking Enclosure** with 720Ah High Performance Sealed Lead Acid Battery provides 2 days autonomy with <100W continuous load. Thermostatically Controlled Ventilation.
- **650W of Solar Capacity** – Supports up to 160W continuous power with 6 Hrs. Peak Sun. Heavy Duty galvanized 360° adjustable solar mount.
- **MPPT Temperature Compensated Solar Charge Controller:** 40A Solar, 20A Load, 99% Efficiency.
- **Complete Remote Monitoring and Control** – Email Alerts and Manual/Automatic Reboot. Monitor Solar Voltage & Current, Battery Voltage & Current, Load Current, Temperature. Disconnect Load Power.
- **Pneumatic Four Position (17ft, 14ft, 11ft, 8ft) Locking Aluminum Extension Mast** for up to 110lb load. Raises fully in about 1 Minute using the integrated air pump.
- **Regulated 56VDC and Un-regulated 24VDC Output at Top of Mast.** Includes surge protected Gigabit 5 port PoE Layer 2 Switch with one 60W High PoE Port, three 802.3at PoE+ Ports and one 24V Passive PoE Port, all at top of pole. CAT5 connection between top of mast and battery enclosure.
- **Protected and Secured Wiring.**
- **Dual Charging. Convenient Backup Generator or Grid Power Port.** Charges batteries using solar and/or AC power.
- **Locking 2" Ball Hitch Tongue Lock.** Four spring actuated extending (30" Max) support jacks.
- **Room for Second Enclosure** for tool storage or additional battery capacity.
- Chrome Wheels, Leaf Spring Suspension, Aluminum Diamond Plate Decking, Powder Coated Welded Steel Tube Construction.
- Solar Panel Cover and Ratchet Straps for secure travel protection, Included.
- Option for adding a Tycon BreezePro® Wind Turbine.



Applications

- Construction Sites
- Surveillance Cameras
- Temporary Security
- Off Grid Power
- Temporary Remote Lighting
- Emergency Power

Description

The RPMS24-360-650 Mobile Solar Pro™ outdoor mobile power system is designed for temporary power applications like Construction Sites, Concerts and Festivals, Emergency Power, Agriculture and other applications requiring temporary security and lighting. The rugged mobile solar trailer can support up to 160W continuous power draw with 6hrs peak sun per day.

The two, high quality, 325W solar panels have a 25year power output guarantee. The panels are mounted to a heavy duty, fully adjustable galvanized solar mount. Tilt range is 10-65 degrees. Horizontal rotation is 360 degrees, so trailer orientation is not critical as in some other competitive designs.

The temperature compensated MPPT Solar Controller boasts a 99% conversion efficiency. It handles up to 40A solar input and provides up to 20A load output. It provides Bluetooth connectivity for monitoring and setting of solar controller parameters.

The entire Mobile Solar Pro™ system is capable of remote monitoring and control via the built-in web enabled remote monitor system. Monitor Solar Voltage & Current, Battery Voltage & Current, Load Current, Temperature. Disconnect Load Power. Email Alerts and Manual/Automatic Reboot. There are 2 spare 10A relays, 1 spare current measuring channel and 2 spare voltage measuring channels for customer expansion. For instance, a customer could use one of the spare relay channels to automatically turn on a generator based on programmable rules.

There is a convenient AC voltage input port to be able to charge batteries from AC and/or solar. AC can come from grid power or a generator.

At the top of the 17ft aluminum pneumatic extension mast there is a die cast aluminum junction box which houses a 5 port Gigabit Layer 2 PoE Switch with a versatile PoE output scheme. Port 1 = 60W High PoE, Port 2-4 = 802.3at PoE+, Port 5 = 24V Passive PoE. There is regulated 56VDC and unregulated 24VDC available at the top of mast. In addition, a CAT5 cable connects the battery enclosure to the top of mast switch.

The locking diamond plate aluminum enclosure includes a thermostatically controlled fan which turns on automatically when the temperature exceeds 45°C. There is room for an additional enclosure if needed for additional battery capacity or tool storage.

The 720Ah battery array is organized in a 24VDC configuration using Non-Spillable Valve Regulated Sealed Lead Acid Advance Glass Matt (AGM) batteries which have excellent temperature and deep discharge performance. Expected battery life exceeds 5years.

The Mobile Solar Pro™ comes completely assembled for quick deployment. The trailer is constructed of powder coat painted welded tubular steel instead of typical C channel bolt together trailer construction. This provides superb structural integrity and allows for completely protected and secured wiring inside the tubing. A solar cover is included for protection of panels during transport.



Specifications

General Power Capabilities	
Continuous Power at (Hrs Peak Sun)	160W Max (6hrs), 80W Max (3hrs)
Max Instantaneous Load	20A Max
Autonomy at 100W	48hrs Typ
Batteries	
12V Battery Capacity	720Ah (360Ah @ 24V)
Battery Voltage	24VDC
Battery Type	Maintenance Free Non-Spillable Valve Regulated Sealed Lead Acid AGM
Battery Life	5+years
Solar Panels	
Type	24VDC 650W, Polycrystalline 72 Cell Modules, 25year Life
Array Size	77" x 78" (1956 x 1984mm)
Solar Controller	
Type	MPPT – Temperature Compensated, 40A Solar Input, 20A Load Output
Self Consumption	<1W
Overcharge Protect	32V
Equalize Charge	29.2V
Bulk Charge	28.8V
Float Charge	27.6V
Over-discharge protect	22V
Over-discharge recover	24V
Remote Access	Bluetooth 4.0, 50' (15m) max range
AC Charging	
Input	110VAC, 50/60Hz, 10A
Recharge Time	50% discharged, 5 hrs typ
Remote Monitoring	
Type	Web Based, SNMP, 4 Channel
Parameters Monitored	Solar Panel Volts and Current, Battery Volts and Current, Load Current, Temperature
Controls	Connect / Disconnect Load Output, manually or automated based on programmable rules.
Alerts	Email alerts based on programmable rules

Extension Mast	
Type	Pneumatic Locking Aluminum
Lock Positions (4)	8', 11', 14', 17' (2.4, 3.4, 4.3, 5.2m)
Time to full extension	1 Minute Typ (using included integrated air pump)
Top Mounting Area	32" x 2.1" diameter (813 x 53mm)
Top of Mast Enclosure	
Type	Aluminum Die Cast
Interior Size	10 x 7.75 x 3" (254 x 197 x 76mm)
Voltages Available	56VDC 5A Regulated 24VDC 15A Unregulated
PoE Ports	5 Port Layer 2 Gigabit PoE Switch Port 1 = 60W High PoE Port 2-4 = 802.3at 30W PoE+ Port 5 = 24VDC 12W Passive PoE
Equipment Enclosure	
Type	Vented Locking Aluminum Diamond Plate
Internal Size	64.5" x 17.5" x 19.5" (1638 x 444 x 495mm)
Mobile Trailer	
Construction	Welded Tubular Steel, Powder Coat Painted. Aluminum diamond plate decking.
Overall Size (LxW)	126" x 82.5" (3200 x 2096mm)
Deck Size (LxW)	65" x 82" (1651 x 2083mm)
Tongue length	44" (1118mm)
Ball Size	2" (50.8mm)
Ground Clearance	13" (330mm)
Solar Panel Height	63" above deck (1600mm)
Wheels	16" (406mm) Chrome
Suspension	Leaf Spring
Stabilizing Lifts (4)	2000lb (907kg), 3 Position Extension: 0", 15" 30" (0, 381, 762mm)
Tongue Weight	350lbs (159kg)
Misc	
Total System Weight	1640lbs (744kg)
Operating Temp	-22°F to 140°F (-30°C to +60°C)
Wind Speed Rating	90 MPH (40 m/sec)
Warranty	3 Years

System Ordering: RPMS24-360-650 160W Continuous Power Mobile Solar Pro™ Trailer

For further information contact:

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