RPST RemotePro™

DATA SHEET

Outdoor Remote Power Systems

Features

- **Complete Remote Power Solution for Off-Grid Operation**
- **Weatherproof Outdoor Enclosure with up to 200Ah Battery**
- **Enclosures can be Wall or Pole Mounted**
- **High Performance Sealed Lead Acid Batteries**
- **PWM Charge Controllers**
- **Thermostatically Controlled Ventilation**

Applications

- **Wireless Base Stations**
- **Wireless Bridge and Repeaters**
- **Remote Lighting**
- **Surveillance Cameras**
- **Off Grid Power**
- **Backup Power Systems**

Description

The RPST RemotePro™ series outdoor power systems are designed for applications that require a primary off-grid power source to run various equipment. The vented weatherproof enclosures have generous space available inside for mounting customer equipment. Multiple DIN Rail mount features are provided.

All enclosures are hinged and gasket sealed with tamper resistant locks for security. 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 panel come with a side of pole mounting bracket for mounting to a pole or wall.

There are 12V and 24V battery configurations with 24V and 48V PoE outputs up to 30W. There are also systems which feature a 20A output unregulated solar controller for higher output power. Enclosures have four cable gland ports for CAT5/6 cable, antenna cables/connectors or other cabling. The enclosures include a thermostatically controlled fan assembly which turns on automatically when the temperature exceeds 45°C.

Batteries are a Non-Spillable Valve Regulated Sealed Lead Acid Advance Glass Matt (AGM) type which have excellent temperature and deep discharge performance. Expected battery life exceeds 5years.

The systems come with all cabling required to connect the batteries to the controller and 20’ outdoor rated cable to connect the solar panels to the controller.

RPST with 100Ah of battery

RPST with 200Ah of battery

80W Solar Mount

160W / 320W Solar Mount

RPST12-24 RemotePro™ Series

Specifications

	RPST12xx-100-80	RPST12-100-160	RPST12xx-100-160	RPST24-50-160	RPST24xx-50-160	RPST12-200-320	RPST24-100-320	RPST24xx-100-320
Rated Power Generation	20W	35W	35W	35W	35W	65W	65W	65W
Reserve Time @ Rated Power	30hrs	21hrs	21hrs	21hrs	21hrs	19hrs	19hrs	19hrs
PoE Output Voltage (DC) 30W	24V or 48V	No PoE	24V or 48V	No PoE	24V or 48V	No PoE	No PoE	24V or 48V
Load Out (DC)	11V-15V 1.5A	11V-15V 20A	11V-15V 1.5A	22V-29V 20A	24V 1.5A Regulated	11V-15V 20A	22V-29V 20A	24V 1.5A Regulated
12V Battery Capacity (Amp Hrs)	100Ah	100Ah	100Ah	100Ah	100Ah	200Ah	200Ah	200Ah
Battery Voltage (DC)	12V	12V	12V	24V	24V	12V	24V	24V
Battery Type	Maintenance Free Non-Spillable Valve Regulated Sealed Lead Acid AGM							
Battery Life	5+years							
Solar Controller Type	PWM (Pulse Width Modulated)							
Overcharge Protection	14.4V	14.4V	14.4V	28.6V	28.6V	14.4V	28.6V	28.6V
Over-discharge protection	11.0V	11.0V	11.0V	22V	22V	11.0V	22V	22V
Over-discharge recovery volts	12.0V	12.0V	12.0V	24.8V	24.8V	12.0V	24.8V	24.8V
Controller Self Consumption	<0.5W							
Enclosure Type	Pole/Wall Mount, Powder Coat Steel							
Enclosure External Size	24 x 15 x 14" (610 x 381 x 356mm)							
Enclosure Internal Size	23 x 14 x 12" (584 x 356 x 305mm)							
Internal Mount Features	Din Rail Mounts (3)							
Solar Panel Dims	34" x 26" (855x666mm)	67" x 26" (1710 x 666mm)				67" x 52.4" (1710 x 1332mm)		
Operating Temperature	-30°C to +60°C (-22°F to 140°F)							
System Weight (no batteries)	86lb (39kg)	109lb (49kg)				136lb (62kg)		
Battery Weight	81 lb (37kg)					161 lb (73kg)		
Wind Speed Rating	90MPH							
Warranty	2 Years							

RPST 12xx-200-320

Enclosure Type
ST - Powder Coat Steel

Battery Voltage
12 - 12V
24 - 24V
xx = PoE Voltage (24 or 48)

Storage Capacity
50 - 50Ah @ Rated Volts
100 - 100Ah @ Rated Volts
200 - 200Ah @ Rated Volts

Solar Panel Output
80 - 80 Watt
160 - 160 Watt
320 - 320 Watt

RPST12-24 RemotePro™ Series

System Ordering:

Model #	Continuous Power Generation (6hrs peak sun)	Backup Time	Battery Voltage	PoE Output Voltage	12V Battery Capacity	Solar Panel Size
RPST1224-100-80	20W	>30hrs	12VDC	24V	100Ah	80W
RPST1248-100-80	20W	>30hrs	12VDC	48V	100Ah	80W
RPST12-100-160	35W	>21hrs	12VDC	---	100Ah	160W
RPST1224-100-160	35W	>21hrs	12VDC	24V	100Ah	160W
RPST1248-100-160	35W	>21hrs	12VDC	48V	100Ah	160W
RPST24-50-160	35W	>21hrs	24VDC	---	100Ah	160W
RPST2424-50-160	35W	>21hrs	24VDC	24V	100Ah	160W
RPST2448-50-160	35W	>21hrs	24VDC	48V	100Ah	160W
RPST12-200-320	65W	>19hrs	12VDC	---	200Ah	320W
RPST24-100-320	65W	>19hrs	24VDC	---	200Ah	320W
RPST2424-100-320	65W	>19hrs	24VDC	24V	200Ah	320W
RPST2448-100-320	65W	>19hrs	24VDC	48V	200Ah	320W

Must Have Accessories:

Tycon BreezePro® 400W Wind Turbine

(pn TPW-400DT-12/24)

- Generates power on stormy days when there is limited sun.
- Auto ranging 12VDC or 24VDC
- Integrated controller and dump load

Tycon Remote Monitoring and Control

(pn TPDIN-Monitor-WEB2)

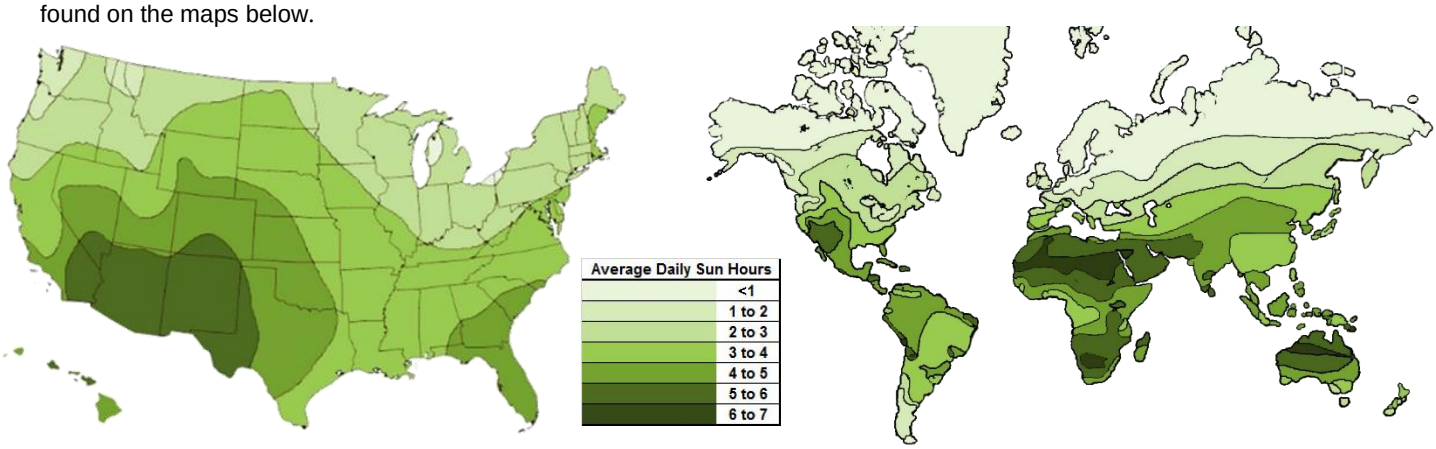
- Remotely monitor battery levels and overall system performance. Measure 4 voltages, 4 currents and 2 temperatures.
- Turn various equipment off or on remotely
- HTTP WEB interface, SNMP
- DIN Rail mounting, PoE or wire terminal powered

Tycon also manufactures a comprehensive line of voltage conversion and PoE Switch products that work with our RemotePro™ Systems.

RPST12-24 RemotePro™ Series

Design tools: *Use http://tyconsystems.com/index.php/resources/tools for simplified calculations.*

Utilize the below map to help determine the average Peak Sun-hours in a location and the calculation tables to determine the right system. Specific system may need to be larger to account for fewer Peak Sun-hours in certain locations. Minimum Peak Sun-hour/day generally occur in the winter months and tend to be approximately one half of the annual daily average Peak Sun-Hours found on the maps below.



			A	B	C	D	A x B	A x B x D
	Item (PD)	Model Number	Quantity	Power(W)	Voltage (V) *should be consistant for all devices	hrs/day	Total Power (W)	Energy/day (Wh/day)
Example 1	Camera	X	2	2.4	24	12	4.8	57.6
Example 2	Access Point	EZGO-0214	1	5.5	24	24	5.5	132
							E	F
						Total		
						Example total	10.3W	189.6 Wh/day

		Example	Actual	
Minimum Peak Sun-hours *winter estimate approximation = Average x 0.5 [1]	G	3		Sun-hours/day
Days of Autonomy (days with little or no sun)	H	3		Days
System DC voltage	I	24		Volts
Minimum Solar module size (Watts)	(F ÷ G) x 2	126.4		Watts
* It is recommended for the module to supply enough energy to power the system for a day, plus 1 extra day, thus the "x 2", less conservative: x 1, more conservative: x 3				
Minimum Battery bank (amp hours)	(F ÷ I) x 2xH	47.4		Ah
* Be sure the voltage requirements of all Powered Devices are the same. If DC-DC or DC-AC conversions are required, be sure to go back and add those devices to the system power requirements. "2x" limits batteries to 50% maximum discharge.				

For best performance, make sure the RemotePro™ system chosen meets the minimum module and battery bank for the system.
Maps are for reference only. Check with local resources for more accurate data on solar insolation for the install site.
[1]More solar irradiance information can be found at *www.nrel.gov*

For further information contact:

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RoHS compliant

TYCON systems

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