TYCON systems

RemotePro™

DATA SHEET

Outdoor Remote Power Systems

Features

- **Complete Remote Power Solution for Off-Grid operation**
- **Weatherproof, UV resistant, outdoor enclosures**
- **Enclosures can be Wall or Pole Mounted**
- **High Performance Valve Regulated Sealed Lead Acid Batteries**
- **Advanced battery charge controller protects against overcharge and over discharge**

RemotePro™ PL Series

Applications

- **Wireless Base Stations and Clients**
- **Wireless Bridge and Repeaters**
- **Remote Lighting**
- **Surveillance Cameras**
- **Remote Sensors**
- **Backup Power Systems**

Description

The RemotePro™ series 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 extra space available inside for 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 larger solar panels can be mounted to a 51mm to 101mm (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. Most of 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.

RemotePro™ DC Series

RemotePro™ ST Series

Specifications

	RPDC12-9-05	RPDC12-9-10	RPPL12xx-36-30	RPPL24xx-18-30	RPST12xx-100-70	RPST12xx-100-140	RPST24xx-50-140	RPST24xx-100-280	RPST12-200-280	RPST24-100-280
Rated Power Generation	1.25W	2.5W	8W	8W	17W	32W	32W	65W	65W	65W
Reserve Time @ Rated Power	40hrs	21hrs	27hrs	27hrs	35hrs	24hrs	24hrs	24hrs	24hrs	24hrs
POE Output Voltage (DC)	No POE Out		12V1A 18V1.7A 24V1.2A 48V.62A	24V 1A 48V .62A	12V1A 18V1.7A 24V1.2A 48V.62A	12V1A 18V1.7A 24V1.2A 48V.62A	24V 1A 48V .62A		No POE Out	
Secondary Volts Out (DC)	12V 20A		12V 1.5A	24V 1.5A	12V 1.5A	12V 1.5A	24V 1.5A		12V 20A	24V 20A
Battery Capacity (Amp Hrs)	9Ah		36Ah	18Ah	102Ah	102Ah	51Ah	102Ah	204Ah	102Ah
Battery Voltage (DC)	12V			24V	12V	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	14.4V	28.6V		14.4V	28.6V
Over-discharge protection	11.0V			22.0V	11.0V	11.0V	22.0V		11.0V	22.0V
Over-discharge recovery volts	12.0V			24.8V	12.0V	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)		3 x 5 x 3” (76x127x76mm)		12 x 12 x 12" (305 x 305 x 305mm)			3” X 10” X 20” (76 X 254 X 508mm)		
Solar Panel Dims	11” X 9” (279 x 228 mm)	14”X12” (355 x 305mm)	21” X 20” (533 x 508mm)		30” X 27” (762 x 686mm)	61” X 27” (1549 x 686mm)		61” X 54” (1549 x 1372mm)		
Operating Temperature	-30°C to +60°C (-22°F to 140°F)									
System Weight (no batteries)	10lb (4.5kg)		22lb (10kg)		84lb (38kg)	105lb (48kg)		131lb (59kg)		
Battery Weight	5.5lb (2.5kg)		22lb (10kg)		78lb (35kg)			156lb (71kg)		
Wind Speed Rating	110MPH (49m/s)					90MPH (40m/s)				
Warranty	2 Years									

RoHS compliant

System Ordering:

Model #	Continuous Power Generation	Enclosure Type	Battery Voltage	PoE Output Voltage	Battery Capacity	Solar Panel Size
RPDC12-9-05	1.25W	Die Cast	12VDC	---	9Ah	5W
RPDC12-9-10	2.5W	Die Cast	12VDC	---	9Ah	10W
RPPL1212-36-30	8W	Polycarbonate	12VDC	12VDC	36Ah	30W
RPPL1218-36-30	8W	Polycarbonate	12VDC	18VDC	36Ah	30W
RPPL1224-36-30	8W	Polycarbonate	12VDC	24VDC	36Ah	30W
RPPL1248-36-30	8W	Polycarbonate	12VDC	48VDC	36Ah	30W
RPPL2424-18-30	8W	Polycarbonate	24VDC	24VDC	18Ah	30W
RPST1212-100-70	17W	Steel	12VDC	12VDC	102Ah	70W
RPST1218-100-70	17W	Steel	12VDC	18VDC	102Ah	70W
RPST1224-100-70	17W	Steel	12VDC	24VDC	102Ah	70W
RPST1248-100-70	17W	Steel	12VDC	48VDC	102Ah	70W
RPST1212-100-140	32W	Steel	12VDC	12VDC	102Ah	140W
RPST1218-100-140	32W	Steel	12VDC	18VDC	102Ah	140W
RPST1224-100-140	32W	Steel	12VDC	24VDC	102Ah	140W
RPST1248-100-140	32W	Steel	12VDC	48VDC	102Ah	140W
RPST2424-50-140	32W	Steel	24VDC	24VDC	51Ah	140W
RPST2448-50-140	32W	Steel	24VDC	48VDC	51Ah	140W
RPST12-200-280	65W	Steel	12VDC	---	204Ah	280W
RPST24-100-280	65W	Steel	24VDC	---	102Ah	280W
RPST2424-100-280	65W	Steel	24VDC	24VDC	102Ah	280W
RPST2448-100-280	65W	Steel	24VDC	48VDC	102Ah	280W

RPST 12 48-100-70

Enclosure Type
DC - Die Cast Aluminum
PL - Polycarbonate Plastic
ST - Powder Coat Steel

Battery Voltage
12 - 12V
24 - 24V

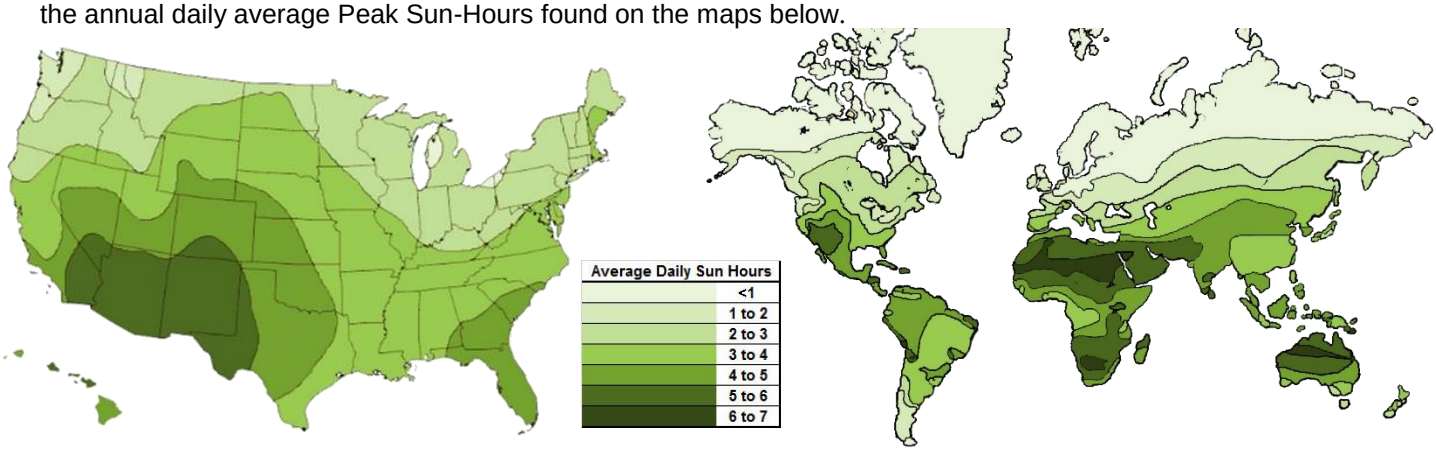
PoE Out Voltage
12 - 12V
18 - 18V
24 - 24V
48 - 48V

Storage Capacity
9 - 9Ah
36 - 36Ah
50 – 51Ah
100 - 102Ah

Solar Panel Output
05 - 5 Watt
10 - 10 Watt
30 - 30 Watt
70 - 70 Watt
140 - 140 Watt
280 – 280 Watt

Design tools:

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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