

SOLAR PREMIUM LINE BATTERIES

for Renewable Energy / Hybrid System / Backup Power Applications

PRODUCT LINE SHEET



8 Years Battery Life Based on IEC 61427



Renewable energy applications operate under challenging conditions such as fluctuating or extreme temperatures, remote locations and the intermittent nature of solar and wind power generation. Designed to deliver long battery life, Trojan Battery's Solar Premium Line of flooded deep-cycle batteries is specifically engineered to withstand the rigorous conditions of renewable energy applications. The Solar Premium Line incorporates advanced battery features such as Trojan's DuraGrid™, MaxGuard® XL separator and Alpha Plus® Paste technologies that provide superior performance, rugged durability and exceptional long life. In addition, Trojan has addressed the issue of partial state of charge (PSOC) by introducing our proprietary new technology, Smart Carbon™, to our Solar Premium Line of deep-cycle batteries. Trojan's product strategy is focused on one simple objective – manufacture the highest quality battery available in the industry, which is why Trojan's Solar Premium Line is tested to IEC standards.

PRODUCT SPECIFICATION

BCI GROUP SIZE	ТҮРЕ	VOLTAGE	CAPACITY ^A Amp-Hours (Ah)				ENERGY (kWh)	Default	DIMENSIONS ^B Inches (mm)			WEIGHT E	HvdroLink	
			10-Hr Rate	20-Hr Rate	48-Hr Rate	72-Hr Rate	100-Hr Rate	100-Hr Rate	TERMINAL	Length	Width	Height ^c	lbs. (kg)	or SPWK
SOLAR PREMIUM LINE - DEEP-CYCLE FLOODED BATTERIES - DESIGNED FOR 1600 CYCLES AT 50% DOD														
N/A	SPRE 12 225	12	179	204	212	216	225	2.70	6	14.97 (380)	6.91 (176)	14.71 (374)	132 (60)	SPWK
N/A	SPRE 06 255	6	211	229	244	249	255	1.53	16	10.30 (262)	7.13 (181)	11.74 (298)	67 (30)	SPWK
N/A	SPRE 06 415	6	346	377	401	410	415	2.50	5	11.66 (296)	6.94 (176)	17.55 (446)	118 (54)	SPWK
N/A	SPRE 02 1255	2	1039	1130	1203	1232	1255	2.51	5	11.66 (296)	6.94 (176)	17.55 (446)	119 (54)	SPWK

A. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 86°F (30°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.

Dimensions may vary depending on type of handle or terminal. Batteries should be mounted with 0.5 inches (12.7 mm) spacing minimum.

Trojan's Solar Premium Line is tested to BCI and IEC 61427 standards.

C. Height taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal. D. Terminal images are representative only. E. Weight may vary.

EXPECTED LIFE VS. TEMPERATURE

Chemical reactions internal to the battery are driven by voltage and temperature. The higher the battery temperature, the faster chemical reactions will occur. While higher temperatures can provide improved discharge performance the increased rate of chemical reactions will result in a corresponding loss of battery life. As a rule of thumb, for every 10°C increase in temperature the reaction rate doubles. Thus, a month of operation at 35°C is equivalent in battery life to two months at 25°C. Heat is an enemy of all lead acid batteries, FLA, AGM and gel alike and even small increases in temperature will have a major influence on battery life.

OPERATIONAL DATA

Operating Temperature	Self Discharge
-4°F to 113°F (-20°C to +45°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%.	5 – 15% per month depending on storage temperature conditions.

Solar Premium Line batteries manufactured prior to March 2012 have 1.260 SG value.

PERCENT CAPACITY VS. TEMPERATURE



Deep-cycle batteries used in off-grid and unstable grid applications are heavily cycled at partial state of charge (PSOC). Operating at PSOC on a regular basis can quickly diminish the overall life of a battery, which results in frequent and costly battery replacements. To address the impact of PSOC on deep-cycle batteries in renewable energy (RE), inverter backup and telecom applications, Trojan Battery has now included Smart Carbon[™] as a standard feature in its Solar Industrial and Solar Premium flooded battery lines.

SMART CARBON™

DOD VS CYCLE LIFE IN A STATIONARY APPLICATION



TERMINAL CONFIGURATIONS

5	u	L-Terminal	6 DT	Automotive Post & Stud Terminal	16	SLT	Small L-Terminal
0	9	Terminal Height Inches (mm) 1.72 (44) Torque Values: in-Ib (Nm) 95 – 105 (11 – 12) Bolt: 5/16″ - 18	ê.	Terminal Height Inches (mm) 1.10 (28) Torque Values: in-lb (Nm) Stud: 95 – 105 (11 – 12) / AP: 50 – 70 (6 – 8) Bolt: 5/16" - 18	R		Terminal Height Inches (mm) 1.28 (32.5) Torque Values: in-Ib (Nm) 95 – 105 (11 – 12) Bolt: 5/16" - 18

VENT CAP OPTIONS





Trojan batteries are available worldwide. We offer outstanding technical support, provided by full-time application engineers. call 800.423.6569 or + 1.562.236.3000 or visit trojanbattery.com/GoSolar

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