

Deep Cycle Solar Batteries

SUN~XTENDER®

Concorde has been supplying the solar and wind industry for over 14 years, providing products with excellent performance and reliability. Applications include installations for telecommunications, village power, medical refrigeration, remote home, supervisory control & data acquisition, cathodic protection, telemetry, residential homes & offices, navigation aids (sea & air), street lights and many more uses.

SUN~XTENDER®

The SUN~XTENDER® range of batteries from Concorde Battery Corporation have been developed for use in renewable energy applications where long life, deep cycle, low internal resistance, superior charge acceptance and energy density are required.

In the SUN~XTENDER® Absorbent Glass Mat (AGM) battery technology, the electrolyte remains liquid and is absorbed (suspended) in a micro fibrous glass mat. Some other batteries use a gel, which is a highly viscous (semi-solid) silica gel/electrolyte mixture. The SUN~XTENDER® batteries outperform Gel batteries by reducing the time required for recharging. This is the result of reduced electrolyte viscosity resulting in faster gas recombination.

By design, the SUN~XTENDER® produce less than 1% hydrogen gas under extreme overcharge conditions at elevated temperatures. For flammability a concentration of greater than 4.1% is required. As tested by the US military to MIL specification 8565J, hydrogen emissions were less than 30% of the maximum allowable limit, making them ideal for use in confined applications or equipment enclosures.

Additionally, the tightly packed plate construction provides a very high degree of shock and vibration resistance, making the product ideal for mobile applications.

Standard terminals and handles

All Batteries now incorporate copper alloy (brass) M8 terminals for all but the PVX-340T which is M6 and the PVX2120L which incorporates L terminals as standard. There are no exposed lead terminals.

All batteries are supplied with silicon bronze bolts, nuts, and washers as required for installation.

All batteries include lifting handles except the PVX-2240T.

Warranty

BP Solar warrants these products 12 months from date of purchase. Contact your local representative for full terms of this warranty.

Key Features:

- Copper alloy terminals for improved electrical connections.
- Threaded insert terminals are recessed to prevent short circuits across battery connections.⁽¹⁾
- New cover is flat top design.
- No protruding or exposed vent valves.
- Reinforced container walls to reduce bulging.
- Completely sealed valve regulated construction.
- Non-spillable immobilized electrolyte.
- Maintenance free design - never requires watering.
- Absorbent Glass Mat (AGM) micro-fibrous glass separators retain electrolyte and allow the battery to be mounted on it's side without spilling.
- Positive plate - Proprietary lead calcium alloy - Negatives plates - lead calcium.
- Classified as "Non-spillable battery" for transport.



Deep Cycle Solar Batteries SUN~XTENDER[®] – Technical Specification

Charging Instructions

Initial charge:	2.37 to 2.40 volts per cell at 25°C (77°F).
Float charge:	2.20 to 2.22 volts cell at 25°C (77°F).
Equalise charge:	2.40 Volts per cell at 25°C (77°F) (if required, application dependant).
Temperature compensation:	± 3.75mV per cell per degree C [reference to 25°C (77°F)].

This is for battery temperature (not ambient temperature) and is useful for battery temperatures from 0°C (32°F) to 40°C (104°F). Contact BP Solar for temperatures that exceed this range.

PVX Model	340T	690T	890T	1040T	2120L	2240T	5340T	6480T
-----------	------	------	------	-------	-------	-------	-------	-------

Electrical data

Battery voltage (V DC):	12	12	12	12	12	6	2	2
Capacities to 1.75 volts per cell ⁽²⁾ (Ah):								
1 Hour	21	42	55	65	136	143	330	408
2 Hours	27	53	70	82	172	180	420	516
4 Hours	28	55	72	85	176	185	432	528
8 Hours	30	60	79	93	194	204	474	582
24 Hours	34	69	89	104	212	224	534	648
48 Hours	36	73	95	112	235	246	570	708
72 Hours	37	76	98	116	244	256	591	732
120 Hours	38	79	102	120	253	263	612	756
Short circuit current (A):	1220	1810	2120	2260	4390	4680	12,720	13,800

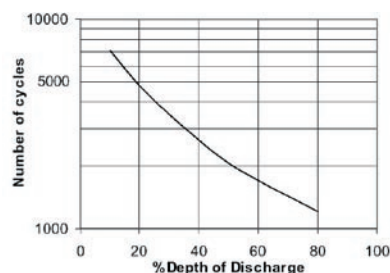
General data

Dimensions (mm):								
Length	196	259	328	305	527	261	328	328
Width	132	168	172	168	221	181	171	171
Height	175	227	228	227	248	260	228	228
Weight (kg):	11.4	23.2	28.2	30.0	62.7	30.4	28.2	31.8
Terminal connection:	M6	M8	M8	M8	L to suit M8	M8	M8	M8
Lifting handles:	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Operating temperature range	-40°C (-40°F) to 72°C (160°F)							
Self discharge	1% per month at 25°C (77°F)							
Battery case and cover material:	High impact strength copolymer polypropylene.							

Notes

1. Indicates T type feature terminals.
2. Capacity ratings are stated at 25°C (77°F).
3. Cycle life tested to IEC specification 896-2

Cycle life curve⁽³⁾



This publication summarises product warranty and specifications, which are subject to change without notice and should not be used as the definitive source of information for the final system design. Additional warranty and technical information may be obtained from your local BP Solar representative or by calling 1800 802 762 in Australia.