

**PowerSafe®**  
*Sustainable solutions*

## PowerSafe® PV Bloc



The PowerSafe® PV Bloc range has been specifically developed for renewable energy applications and in particular solar energy systems.

These bloc batteries are optimised for repeated deep cycling and high reliability. This balanced combination of features makes PV blocs the ideal solution for many of the most demanding applications and particularly for unmanned or remote installations where the highest level of reliability is essential.

The design brings together Valve Regulated Lead Acid (VRLA) technology and grid plates with a special alloy to produce an exceptional combination of benefits.

VRLA technology has been enhanced to withstand the repeated, deep discharge of cells and blocs used for solar energy storage. It avoids the water loss associated with conventional lead acid batteries and therefore eliminates the need for topping-up. The use of a gel electrolyte means there is no free acid inside the cell.

### Key Benefits

- Capacities from 70Ah to 225Ah at the 120 hour rate (C120)
- Up to 1410 cycles to 25% depth of discharge
- Maintenance free VRLA technology eliminates periodic water refilling
- No electrolyte stratification (Gel electrolyte)
- No equalization charging required
- New plate technology improves battery design life even under deep discharge conditions
- Low self discharge
- Ensures reliable service, support and quality.

**EnerSys.**  
*Power/Full Solutions*

## General Specifications

Type	Technology	Nominal Voltage (V)	Number of Terminals	Nominal Capacity (Ah)		Nominal Dimensions						Short Circuit Current (A)	Internal Resistance (mΩ)		
				10 hr rate to 1.80Vpc @20°C	120 hr rate to 1.85Vpc @25°C	Length		Width		Height				Typical Weight	
				mm	in	mm	in	mm	in	kg	lbs				
12 PVB 70	Flat plate Gel	12	2	57	70	277	10.9	175	6.9	189	7.4	21.0	46.3	1517	8.07
12 PVB 91	Flat plate Gel	12	2	75	91	354	13.9	175	6.9	189	7.4	25.0	55.1	1700	7.29
12 PVB 121	Flat plate Gel	12	2	109	121	344	13.5	172	6.8	276	10.9	38.0	83.7	1885	6.62
6 PVB 225	Flat plate Gel	6	2	195	225	244	9.6	190	7.5	270	10.6	31.0	68.3	2048	3.11

**Notes:** The electrical values shown in the table relate to performance from a fully charged condition at ambient temperature of +25°C. Height shown is overall height, including connectors and shrouds.

## Installation and Operation

- Optional racking offers easy installation and space saving accommodation.

## Standards

- Cycle life in accordance with IEC 60896-21/22.
- Low ventilation requirements according to EN 50272-2.
- Manufactured in EnerSys® ISO 9001 and ISO 14001 certified production facilities.

## Construction

**Positive electrode:** flat plate with lead calcium tin grid

**Negative electrode:** lead calcium grid

**Separators:** low resistance microporous material

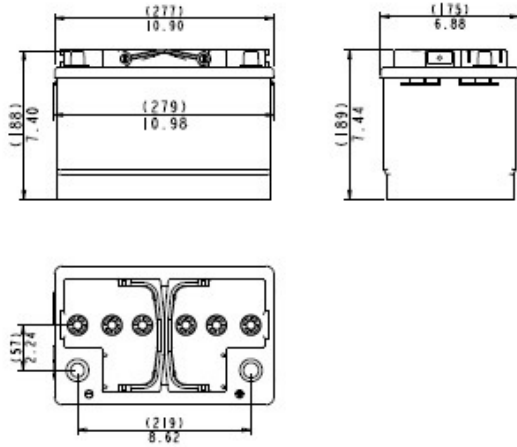
**Container and lid:** polypropylene

**Electrolyte:** sulphuric acid immobilised as a gel

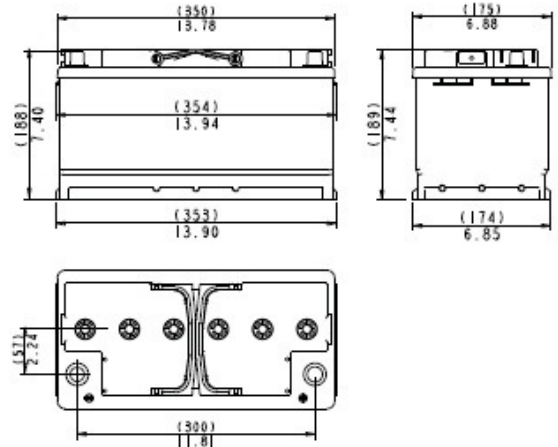
**Terminals:** automotive type

**Pressure relief valve:** one way valve with flame arrestor

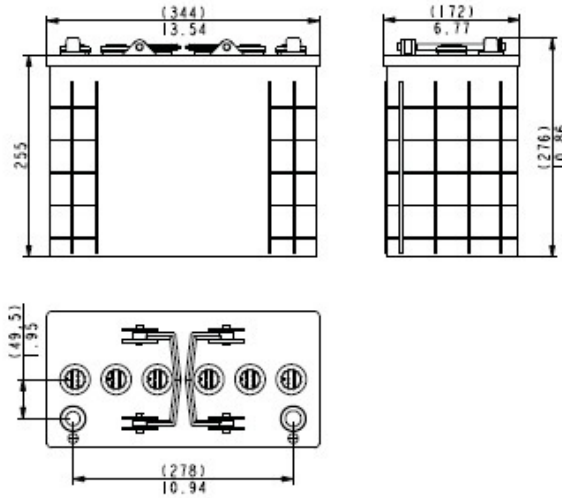
12 PVB 70



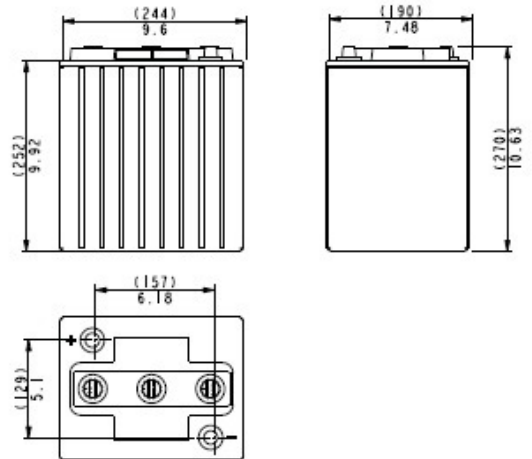
12 PVB 91



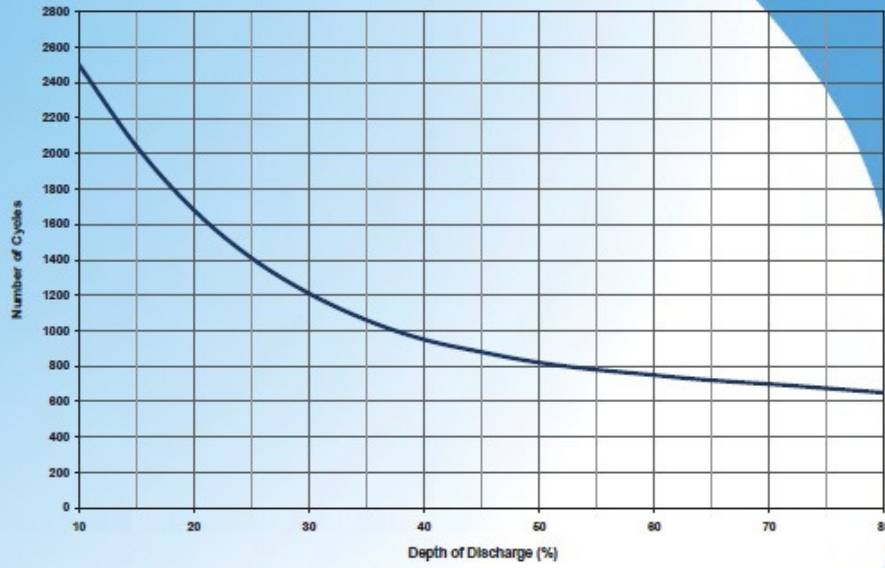
12 PVB 121



6 PVB 225



PowerSafe® PV Bloc Renewable Energy Applications  
Number of Cycles vs Depth of Discharge (25°C)



Batteries for renewable energy applications  
Derating factor for number of cycles vs average cell temperature

