

Technical Specification Vented Lead-Acid Batteries (VLA)



1. Product attributes

BAE *SECURA PVSB solar* monobloc batteries are vented lead acid batteries and are used to store electric energy in photo voltaic systems.

This range was designed for high cycling capability.

2. Applications

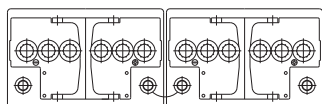
Solar-Photovoltaic power supply for

- remote weekend homes, caravans, boats, mountain huts, etc.
- off-grid traffic lights and signals
- data measuring stations, water pump stations, street and park illuminations, etc.

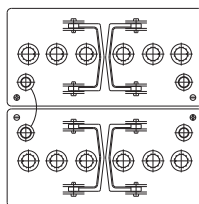
3. Technical data (Reference temperature: 20 °C)

Type	C _{5 h} Ah	C _{10 h} Ah	C _{20 h} Ah	C _{72 h} Ah	C _{100 h} Ah	C _{120 h} Ah	C _{240 h} Ah	R _i mΩ	Length mm	Width mm	Height mm	Weight (dry) kg	Weight (filled) kg
12V PVSB 60	43	48	53	59	60	60	62	4.8	211	175	190	11	14
12V PVSB 100	72	80	88	98	100	100	103	3.5	353	175	190	18	25
12V PVSB 130	94	104	114	127	130	131	134	2.9	352	175	232	20	29
12V PVSB 140	101	112	123	137	140	141	144	2.8	513	189	223	27	37
12V PVSB 180	130	144	158	176	180	181	185	2.5	513	223	223	31	44
12V PVSB 240	173	192	211	236	240	241	247	2.2	518	275	242	41	61

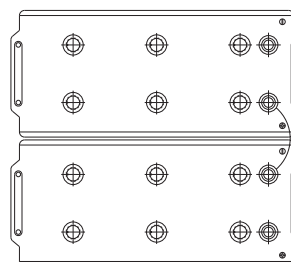
All values given in the table correspond to 100 % DOD. Please consider item 7.



12V PVSB 60 to 12V PVSB 100



12V PVSB 130



12V PVSB 140 to 12V PVSB 240

Technical Specification of BAE *SECURA PVSB solar*

4. Design

Positive plates	flat corrosion resistant grid type
Negative plates	flat corrosion resistant grid type
Separation	micro porous separator
Electrolyte	sulphuric acid with a density d_n (20 °C) = 1.26 kg/l
Pole bushing	100 % gas and acid tight
Terminals	conic in accordance DIN EN 50342-2
Container and lid	impact resistant polypropylene

5. Installation

BAE *SECURA PVSB solar* batteries are designed for indoor applications and should be kept away from direct UV light.

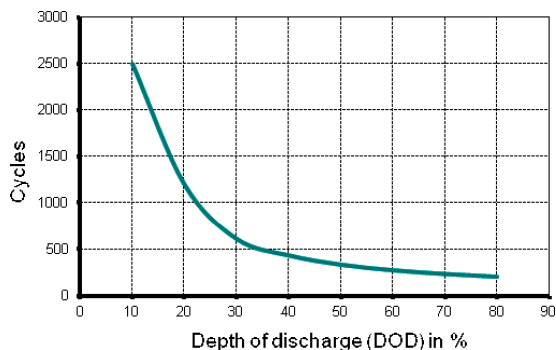
6. Maintenance

Monthly	check electrolyte level and electrolyte temperature during cycling
Every 12 month	check connections, record battery voltage as well as temperature

7. Operational data

Depth of discharge (DOD)	Subjected to operation the maximum DOD is limited to 80 %. Independent of discharge times down to the recommended final voltage of $U_g = 1.91$ V/cell (11.5 V for 12 V block)
Charge current	initial current at IU - characteristic without limitation, recommended minimal I_{10}
Charging voltage	2.40 V/cell ± 1 %, between 10 °C and 30 °C (50 °F and 86 °F) in the monthly average (no time limit during solar panel charging)
Boost charge	2.5 V/cell, max. 4 hours
Adjustment of voltage	otherwise $\Delta U/\Delta T = -0.004$ V/K, maximum of 2.60 V/cell must not be exceed
Float voltage	2.25 V/cell minimum
Battery temperature	-20 °C to +55 °C recommended +10 °C to +30 °C short-time +45 °C to +55 °C
Self discharge	max. 5 % per month at 20 °C

8. Number of cycles as function of the depth of discharge (DOD)



9. Standards

Test standard	IEC 60896-11 and EN 50342
Safety standard, ventilation	EN 50272-2



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