

## Technical specification for vented lead-acid batteries (VLA)

### 1. Application

BAE Secura BLOCK PVS S OLAR Batteries are the optimal solution for a reliable and robust storage of regenerative energy in extreme conditions in the industrial sector.

The special electrode design with tubular electrodes distinguishes the BAE Secura BLOCK PVS S OLAR batteries that provide high safety and reliability, as well as a long service life.



Similar to the illustration

### 2. Technical data (reference temperature 20 ° C)

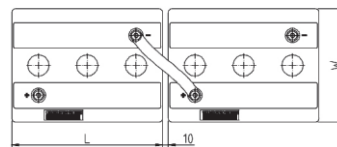
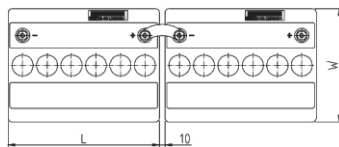
Type	C 1 hour	C 10 h	C 20 h	C 72 h	C 100 h	C 120 h	C 240 hours	R <sub>int</sub>	I <sub>sc</sub>	Length	Width	Height	Weight	Weight (L)
OR	Ah	Ah	Ah	Ah	Ah	Ah	Ah	1)	2)	mm	mm	mm	dry	full
V / C <sub>100h</sub> Ana	1,671.80		1.80	1.80	1.80	1.80	1.80	meter V	kA	mm	mm	mm	kg	kg
12V 1 PVS 70	31	56	64	70	71	72	74	16.62	0.75	272	205	385	30.5	43.2
12 V 2 PVS 140	63	109	125	137	140	140	144	8.91	1.40	272	205	385	39.1	51.4
12 V 3 PVS 210	95	167	192	211	215	217	222	6.27	1.99	380	205	385	53.7	71.4
6 V 4 PVS 280		223	254	282	287	289	295	2.47	2.52	272	205	385	34.8	47.6
127 6 V 5 PVS		279	318	352	359	361	369	2.09	2.98	380	205	385	43.0	61.8
159 6 V 6 PVS 420		334	382	424	431	434	444	1.82	3.42	380	205	385	49.5	67.5
191														

1, 2) Internal resistance R<sub>i</sub> and short-circuit current I<sub>k</sub> according to IEC 60896-11

Height (H) is the maximum height between the bottom of the container and the top of the bolts in the assembled state. BAE Secura S OLAR PVS BLOCK The batteries are also available in a pre-charged dry version. They are titled with additional "TG", for example 12V 3 PVS 210 TG.

All the values published in the table correspond to 100% discharge current based on the capacity without voltage drop of the connectors. Consider point 7.

### Terminal positions



12 V 1 PVS 70 to 12 V 3 PVS 210 6 V 4 PVS 280 to 6 V 6 PVS 420

Terminals are designed as M10 brass inlay female poles for flexible insulated copper cables with cross section of 25, 35, 50, 70, 95 or 120 mm<sup>2</sup> or insulated solid copper connectors with cross section of 90, 150 or 300 mm<sup>2</sup>.



**3.Design**

Positive electrode Tubular plate with woven polyester gauntlet and solid grids in a corrosion resistant low antimony PbSbSnSe alloy

Electrode negative Low antimony alloy grating plate with long expander material

Separation duration Microporous separator

Electrolyte Sulfuric acid with a density of 1.24 kg / l at 20 ° C (68 ° F)

Container High Impact Clear SAN (Styrene Acrylonitrile) UL-94 Rating: HB

Top High Impact Gray SAN (color may vary slightly from given image), UL-94 rating: HB

Plugs on request also in ABS (acrylonitrile butadiene styrene), classification UL-94: V-0 Labyrinth plugs are recommended for stopping aerosols, funnel plugs

Post bushing BAE ceramic according to DIN 40740 or BAE ceramic plugs

Protection type 100% gas- and electrolyte-tight, sliding, "Panzerpol" plasticized IP 25 according to EN 60529, with tactile protection according to BGV A3

**4. Installation**

BAE *Secura BLOCK PVS S smell* The batteries are designed for indoor applications. For outdoor applications, contact BAE.

**5. Maintenance**

to Every6 months Every 12 months

Check battery voltage, pilot block voltages, temperatures

Check connections, record battery voltage, lock out voltages and temperatures

**6.Operational data**

Discharge depth (DOD) Max. 80% ( $U_e = 1.91 \text{ V / cell}$  for discharge times > 10h;  $1.80 \text{ V / cell}$  for 1 h), deep discharges of more than 80% DOD should be avoided

Charging current initial (I or massive phase) Unlimited, the minimum charge current must be  $5 \text{ A / } 100 \text{ Ah C}_{10}$

Charging voltage in cyclic operation Restricted from 2.30V to 2.40V per cell, operating instructions must be observed Floating voltage / non-cycling voltage 2.23 V per cell

Chargevoltage setting in No adjustment is necessary if the battery temperature is between 10 ° C and 30 ° C (50 ° F and 86 ° F)

100% recharge the monthly average; otherwise  $re U / re T = -0.003 \text{ V / cell per K}$  Within a period of 1 to 4 weeks

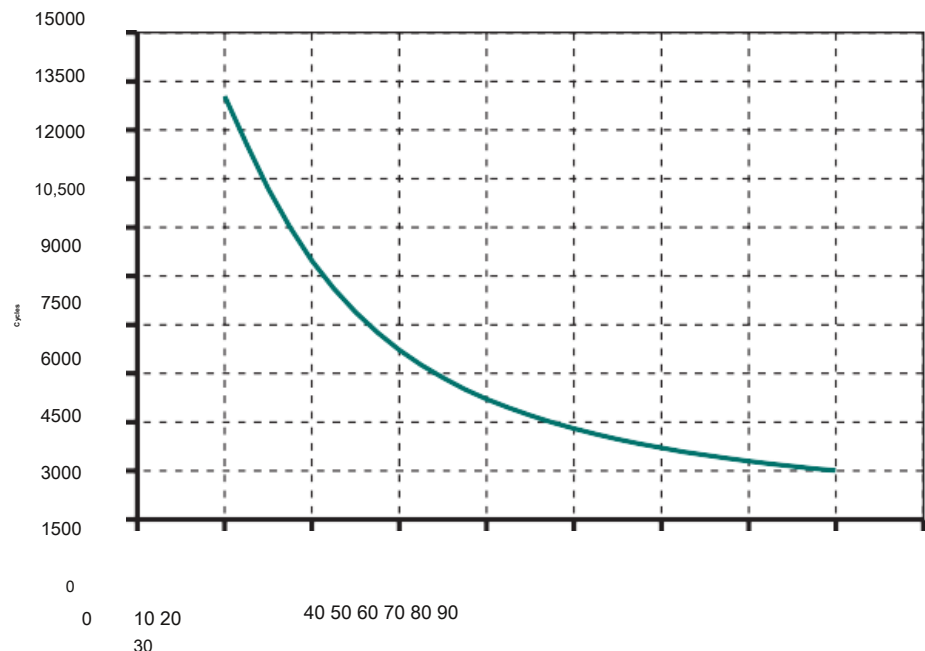
Battery temperature - 20 ° C to 55 ° C (-4 ° F to 131 ° F), recommended temperature range 10 ° C to 30 ° C (50 ° F to 86 ° F) Approx. 3% per month at 20 ° C (68 ° F)

Self discharge IEC61427 cycles 2700 (A + B) at 40 ° C (104 ° F)

IEC60896-11cycles > 1200 at 20 ° C (68 ° F)

**7. Number of**

**cycles in function of Depth of download**



## 8. Transport

### 10.standard

Test standards

Safety standard, ventilation

Depth of Discharge (DOD) in%

Batteries are not subject to ADR (road transport), if the conditions of Special Provision 598 (Chapter 3.3).