BAE SECURA OPzS BLOCK

Technical Specification for Stationary VLA – Block Batteries

1. Application

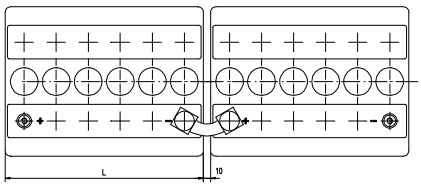
BAE OPzS - Batteries belong to the most enduring lead acid batteries. They are suitable for stand - by operations as well as for capacitive loads. They perfectly meet requirements for autonomy times between 30 min and more than 10 h.

Fields:
Telecommunications
Emergency lighting
Microwave radio systems
Power generation plants

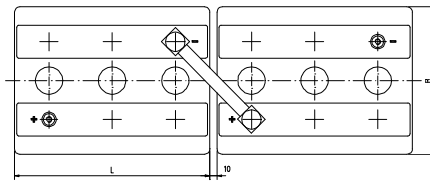
2. Types, capacities, dimensions, weights

Type	$C_{10\,h}$ 20 °C Ah	$C_{5\,h}$ 20 °C Ah	$C_{3\,h}$ 20 °C Ah	$C_{1\,h}$ 20 °C Ah	$C_{8\,h}$ 25 °C Ah	R_i 1) mΩ	I_k 2) kA	Length (L) mm	Width (W) mm	Height (H) mm	Weight dry kg	Weight filled kg
Ue V/cell	1.80	1.77	1.75	1.67	1.75							
12 V 1 OPzS 50	57.1	49.8	43.5	33.3	56.4	19.20	0.64	272	205	385	29.5	41.0
12 V 2 OPzS 100	109	95.5	84.0	64.1	108	9.60	1.28	272	205	385	38.0	47.6
12 V 3 OPzS 150	171	149	130	99.9	168	6.40	1.92	380	205	385	51.0	69.4
6 V 4 OPzS 200	228	199	174	133	225	2.40	2.56	272	205	385	33.0	46.5
6 V 5 OPzS 250	285	249	217	166	281	1.92	3.20	380	205	385	41.7	60.4
6 V 6 OPzS 300	343	298	261	199	338	1.60	3.84	380	205	385	48.5	66.5

1, 2) internal resistance and short circuit current according to IEC 60896-11



12 V 1 OPzS 50 to 12 V 3 OPzS 150



6 V 4 OPzS 200 to 6 V 6 OPzS 300

3. Design

positive electrode	tubular - plate with a polyester gauntlet and solid grids in a corrosion-resistant PbSb1.6SnSe - alloy
negative electrode	grid - plate in low antimony alloy with long - life expander material
separation	microporous separator
electrolyte	sulphuric acid with a density of 1.24 kg/l
container	high impact, transparent SAN (Styrol-Acrylic-Nitrile), UL-94 rating: HB
lid	high impact SAN in dark grey colour, UL-94 rating: HB
blocks with blind cells	4 V, 6 V, 8 V, 10 V
Plugs	labyrinth plugs for arresting aerosol, optional ceramic plugs or ceramic funnel plugs according to DIN 40740

Technical Specification for BAE *SECURA OPzS BLOCK*

pole - bushing	100 % gas- and electrolyte-tight, sliding, plastic coated “Panzerpol”
kind of pole	M10 brass insertion
connectors	flexible insulated copper cables with cross-section of 25, 35, 50, 70, 95 or 120 mm²; on request: insulated solid copper connectors with cross-section 90, 150 or 300 mm²
connector screw	M10, steel, insulated, with measuring point
kind of protection	IP 25 regarding DIN 40050, touch protected according to VBG 4

4. Charging

IU – characteristic	I_{max} without limitation U = 2.23 V/cell ± 1 %, between 10 °C and 30 °C (50 °F and 86 °F) in the monthly average otherwise $\Delta U/\Delta T$ = -0.003 V/K
float current	approx. 15 mA/100 Ah, increasing to 30 mA/100 Ah at the end of operational life
boost charge	U = 2.33 to 2.40 V/cell, time limited
charging time up to 90 %	6 h with 1.5xI_{10} initial current, 2.23 V/cell, 50 % C10 discharged

5. Discharge characteristics

reference temperature	20 °C (68 °F)
initial capacity	According to IEC 60896 – 11: 95 % at the 1st cycle, 100 % at the 5th cycle
depth of discharge (DOD)	normally up to 80 %
deep discharges	more than 80 % DOD or discharges beyond final discharge voltages (dependent on discharge current) have to be avoided

6. Maintenance

every 6 months	check battery voltage, pilot block voltages, temperatures
every 12 months	record battery and block voltages and temperatures

7. Operational data

operational life	18 years in stand-by operation, float at 20 °C to 25 °C (68 °F to 77 °F)
water - refilling - interval	> 3 years, float at 20 °C to 25 °C (68 °F to 77 °F)
IEC 60896-11 cycles	> 1200
self-discharge	approx. 3 % per month at 20 °C (68 °F)
operational temperature	-20 °C to 55 °C (-4 °F to 131 °F) recommended 10 °C to 30 °C (50 °F to 86 °F)
standard	DIN 40737 part 3
tests according to	IEC 60896 - 11
safety standard, ventilation	EN 50272-2
transport	Batteries are not subject to ADR (road transport), if the conditions of special rule 598 (chapter 3.3.) are observed.

BAE Batterien GmbH
Wilhelminenhofstrasse 69/70
12459 Berlin - Germany
P.O.Box 9 - 12442 Berlin
Tel.: +49 30 53001-0
Fax: +49 30 5354949
E-mail:info@bae-berlin.de
www.bae-berlin.de

11/2008 4804034 Technical details may be subject to alterations.