BAE *SECURA OGiV BLOCK*

Technical Specification for Stationary VRLA-GEL-Block Batteries

1. Application

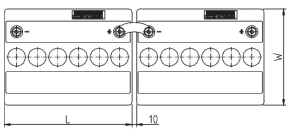
BAE *SECURA OGiV BLOCK* batteries belong to the highest EUROBAT classification for maintenance-free lead-acid batteries: >12 years long life.
In applications with high requirements of operational safety and autonomy times of 15 min to several hours, BAE *SECURA OGiV* Blocks are the right choice.
They are used as reserve power in telecommunications, radio relay systems, switching stations of utilities, emergency light equipment and uninterrupted power supplies.

2. Types, capacities, dimensions, weights

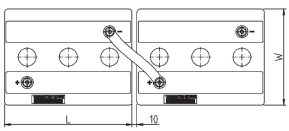
Type	$C_{10\,h}$ 20 °C Ah	$C_{5\,h}$ 20 °C Ah	$C_{3\,h}$ 20 °C Ah	$C_{1\,h}$ 20 °C Ah	$C_{30\,min}$ 20 °C Ah	$C_{10\,min}$ 20 °C Ah	$C_{8\,h}$ 25 °C Ah	R_i 1) mΩ	I_k 2) kA	Length (L) mm	Width (W) mm	Height (H) mm	Weight kg
U_e V/cell	1.80	1.79	1.78	1.74	1.70	1.60	1.75						
12 V 1 OGiV 25	26	24	22	18	15	11	26	17.96	0.71	272	205	385	35.0
12 V 2 OGiV 50	52	48	45	36	31	22	52	9.70	1.32	272	205	385	44.0
12 V 3 OGiV 75	78	72	67	55	47	34	79	6.77	1.90	272	205	385	53.0
12 V 4 OGiV 100	105	96	90	73	62	45	104	5.27	2.44	272	205	385	62.0
12 V 5 OGiV 125	131	121	112	92	78	57	131	4.38	2.93	380	205	385	84.0
12 V 6 OGiV 150	157	145	135	110	94	68	157	3.75	3.43	380	205	385	93.0
6 V 7 OGiV 175	183	169	157	128	110	79	184	1.66	3.86	272	205	385	53.0
6 V 8 OGiV 200	210	193	180	147	125	89	210	1.49	4.31	272	205	385	57.0
6 V 9 OGiV 225	236	217	202	165	141	100	236	1.37	4.69	380	205	385	73.0
6 V 10 OGiV 250	262	242	225	184	156	110	263	1.26	5.08	380	205	385	78.0
6 V 11 OGiV 275	288	266	247	203	172	121	289	1.18	5.46	380	205	385	81.0
6 V 12 OGiV 300	315	290	269	221	187	131	316	1.10	5.82	380	205	385	85.0
2 V 24 OGiV 600	630	580	540	442	376	269	632	0.16	12.91	205	272	385	57.0
2 V 30 OGiV 750	787	725	675	553	470	333	790	0.13	15.39	205	380	385	78.0
2 V 36 OGiV 900	945	870	807	664	563	395	944	0.12	17.63	205	380	385	85.0

1, 2) Internal resistance R_i and short circuit current I_k from IEC 60896-21
Height (H) is the maximum height between container bottom and top of the bolts in assembled condition.
All values given in the table correspond to 100 % DOD without voltage drop of connectors. Please consider item 6.

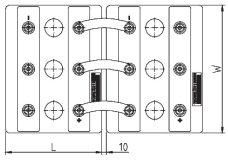
3. Terminal positions



12 V 1 OGiV 25 to 12 V 6 OGiV 150



6 V 7 OGiV 175 to 6 V 12 OGiV 300



2 V 24 OGiV 600 to 2 V 36 OGiV 900

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4. Design

Positive electrode	grid-plate with circular bars in a corrosion-resistant PbCaSn-alloy
Negative electrode	grid-plate in PbCaSn-alloy with long-life expander material
Separation	microporous separator
Electrolyte	sulphuric acid with a density of 1.24 kg/l, fixed as GEL by fumed silica
Container and lid	high impact SAN (Styrol-Acrylic-Nitrile), grey coloured (colour may vary slightly from given image), UL-94 rating: HB on request also in ABS (Acrylonitrile-Butadiene-Styrene), UL-94 rating: V-0
Blocks with blind cells	4 V, 6 V, 8 V, 10 V
Valve	one valve per cell with flame arrestor, opening pressure approx. 120 mbar
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 mm^2, on request: insulated solid copper connectors with cross-section 90, 150 or 300 mm^2
Connector screw	M10, steel, insulated, with measuring point
Kind of protection	IP 25 regarding EN 60529, touch protected according to VBG 4
Horizontal operation	Please use BAE special type OGiV “horizontal”. The construction and production of this type is adapted to the horizontal operation.

5. Charging

IU-characteristic	I_{max} without limitation U = 2.25 V/cell ± 1 %, between 10 °C and 45 °C (50 °F and 113 °F) in the monthly average, $\Delta U/\Delta T$ = -0.003 V/cell per K below 10 °C (50 °F)
Float current	20 - 30 mA/100 Ah C_{10}
Boost charge	U = 2.33 to 2.40 V/cell, time limited
Charging time up to 92 %	6 h with 1.5 x I_{10} initial current, 2.25 V/cell, 50 % C_{10} discharged

6. Discharge characteristics

Reference temperature	20 °C (68 °F)
Initial capacity	according to IEC 60896-21: 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

7. Maintenance

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

8. Operational data

Classification according to EUROBAT	12 years and longer - long life
Service life	15 years in stand-by operation, float at 20 °C to 25 °C (68 °F to 77 °F)
Maintenance-free	no topping-up during life
IEC 60896-21 cycles	>800
Self-discharge	approx. 2 % per month at 20 °C (68 °F)
Battery temperature	-20 °C to 45 °C (-4 °F to 113 °F) recommended 10 °C to 30 °C (50 °F to 86 °F) short time 45 °C to 55 °C (113 °F to 131 °F)
Standard	dimensions according to DIN 40737-3
Tests according to	IEC 60896-21, -22
Safety standard, ventilation	EN 50272-2, Ventilation requirements are reduced to 20 % compared to those for vented batteries of the same capacity.
Transport	Batteries are not subject to ADR (road transport), if the conditions of Special Provisions 598 and 238 (Chapter 3.3) are observed. BAE cells/batteries are conform to the IMDG-Code, therefore these products are no dangerous goods on sea transport.

12/2012 4804037 Technical details may be subject to alterations.

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