

Technical Specification for Stationary VLA-Block Batteries

1. Application

BAE SECURA OGi-Block batteries are robust and for high discharge performances optimised lead-acid batteries. They are particularly suitable for autonomy times of a few minutes to one hour.

BAE OGi are used for uninterrupted power supplies (UPS), to start diesel engines and for emergency power supplies in switch stations of utilities, in signal systems of railway applications or in other stations.



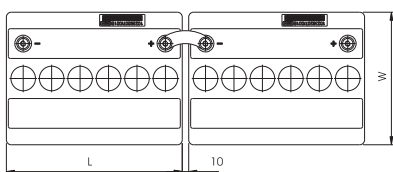
2. Types, capacities, dimensions, weights

Type	C _{10h} 20 °C Ah	C _{3h} 20 °C Ah	C _{1h} 20 °C Ah	C _{30min} 20 °C Ah	C _{10min} 20 °C Ah	C _{5min} 20 °C Ah	C _{8h} 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
U _e V/cell	1.80	1.75	1.70	1.65	1.65	1.65	1.75							
12V 1 OGi 25	31.6	25.5	19.0	15.3	10.3	7.17	31.3	16.80	0.73	272	205	385	22.0	35.0
12V 2 OGi 50	60.8	49.2	36.7	29.7	20.1	14.0	60.3	8.40	1.46	272	205	385	30.0	42.0
12V 3 OGi 75	91.3	74.1	55.1	44.6	30.3	21.0	90.4	5.60	2.20	272	205	385	37.2	47.5
12V 4 OGi 100	120	97.8	73.0	59.0	40.1	28.0	119	4.20	2.93	272	205	385	44.5	54.2
12V 5 OGi 125	152	123	91.9	74.0	50.5	35.2	150	3.36	3.66	380	205	385	54.5	71.5
12V 6 OGi 150	175	142	106	86.0	59.0	41.5	173	2.80	4.39	380	205	385	60.7	74.7
6V 7 OGi 175	213	172	128	104	70.8	49.3	210	1.20	5.13	272	205	385	34.8	48.0
6V 8 OGi 200	243	197	147	119	81.0	56.4	240	1.05	5.86	272	205	385	40.0	51.0
6V 9 OGi 225	273	222	165	134	91.0	63.4	271	0.93	6.59	380	205	385	46.0	63.3
6V 10 OGi 250	304	246	183	148	101	70.5	301	0.84	7.32	380	205	385	50.0	67.0
6V 11 OGi 275	334	271	202	163	111	77.5	331	0.76	8.05	380	205	385	54.0	71.0
6V 12 OGi 300	365	296	220	178	121	84.5	361	0.70	8.79	380	205	385	57.6	72.5
2V 24 OGi 600	730	591	441	357	243	169	723	0.12	17.57	205	272	385	40.0	51.0
2V 30 OGi 750	913	741	551	446	303	211	904	0.09	21.96	205	380	385	50.0	67.0
2V 36 OGi 900	1,090	888	662	536	364	253	1,080	0.08	26.36	205	380	385	57.6	72.5

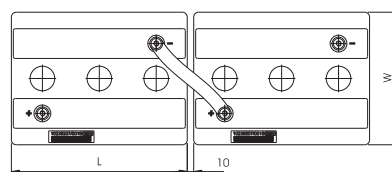
1, 2) Internal resistance and short circuit current according to IEC 60896-11

BAE SECURA OGi-Blocks as dry charged version are marked with „TG“, e.g. 12 V 6 OGi 150 TG.

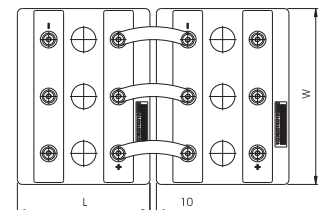
All values given in the table correspond to 100 % DOD. Please consider item 5.



12 V 1 OGi 25 to 12 V 6 OGi 150



6 V 7 OGi 175 to 6 V 12 OGi 300



2 V 24 OGi 600 to 2 V 36 OGi 900

Technical Specification for BAE *SECURA OGi BLOCK*

3. Design

Positive electrode	grid-plate with circular bars 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 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
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 measurement point
Kind of protection	IP 25 regarding DIN EN 60529, touch protected according to VBG 4

4. Charging

IU-characteristic	I_{max} without limitation $U = 2.23 \text{ V/cell} \pm 1 \%$, between 10 °C and 30 °C (50 °F and 86 °F) in the monthly average; otherwise $\Delta U/\Delta T = -0.003 \text{ V/cell per K}$
Float current	approx. 20 mA/100 Ah, increasing to approx. 60 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 $1.5 \times I_{10}$ initial current, 2.23 V/cell, 50 % C_{10} discharged

5. Discharge characteristics

Reference temperature	20 °C (68 °F)
Initial capacity	according to IEC 60896-11: 95 % at the 1 st cycle, 100 % at the 5 th 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	16 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	>1,000
Self-discharge	approx. 3 % per month at 20 °C (68 °F)
Battery temperature	-20 °C to 55 °C (-4 °F to 131 °F) recommended 10 °C to 30 °C (50 °F to 86 °F)
Standard	dimensions according to DIN 40737-3
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.



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