BAE SECURA OGi BLOCK

Technical Specification for Stationary VLA – Block Batteries

1. Application

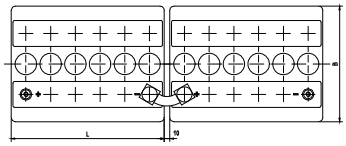
The OGi Series flooded flat-plate 6-12V multi-cell blocks are robust and optimized for high discharge performance and capable of long duration capacity. This battery has an excellent one-minute discharge rate. It also has an IEC 896-2 cycle rating of 1000 to 80% DOD, and is used for backup power in the applications listed below:

Application Uses:
UPS and Data Centres
Electrical utilities applications
Emergency Lighting
Diesel generating starting
Railroad signal systems

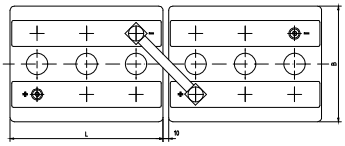
2. Types, capacities, dimensions, mass

Type	C10 20°C	C8 25°C	C5 25°C	C3 25°C	C1 25°C	C_{30min} 25°C	C_{10min} 25°C	R_i 1)	I_{Ks} 2)	length	width	height (Max)	Mass 3)	Mass 4)
	Ah	Ah	Ah	Ah	Ah	Ah	Ah							
U_e V / cell	1.80	1.75	1.75	1.75	1.75	1.65	1.65	mΩ	kA	inch	inch	inch	lbs	lbs
12V 1 OGi 25	31	43	37	32	22	15	11	16.8	0.73	10.71	8.07	15.16	48.5	72.8
12V 2 OGi 50	59	62	56	50	37	28	19	8.40	1.46	10.71	8.07	15.16	66.4	90.4
12V 3 OGi 75	88	82	74	66	51	40	28	5.60	2.20	10.71	8.07	15.16	84.2	108.0
12V 4 OGi 100	101	102	93	84	66	53	37	4.20	2.93	10.71	8.07	15.16	104.3	127.9
12V 5 OGi 125	135	130	118	107	85	69	47	3.36	3.66	14.96	8.07	15.16	137.3	172.0
12V 6 OGi 150	163	150	137	125	100	82	56	2.80	4.39	14.96	8.07	15.16	155.4	189.6
6V 7 OGi 175	205	184	166	149	112	88	61	1.20	5.13	10.71	8.07	15.16	83.1	108.0
6V 8 OGi 200	235	203	184	166	127	99	69	1.05	5.86	10.71	8.07	15.16	92.4	116.8
6V 9 OGi 225	264	242	218	196	149	118	81	0.93	6.59	14.96	8.07	15.16	113.8	149.9
6V 10 OGi 250	293	262	236	213	164	130	89	0.84	7.32	14.96	8.07	15.16	122.8	158.7
6V 11 OGi 275	323	281	254	230	179	142	97	0.76	8.05	14.96	8.07	15.16	129.6	165.3
6V 12 OGi 300	352	301	272	247	192	154	105	0.70	8.79	14.96	8.07	15.16	138.9	174.2

1,2) internal resistance and short - circuit current from IEC 60 896-11, 3) dry-charged 4) filled and charged



12V 1 OGi 25 to 12V 6 OGi 150



6V 7 OGi 175 to 6V 12 OGi 300

Technical Specification for BAE *SECURA OGi BLOCK*

3. Design

Positive electrode	round-grid flat plate with low antimony alloy (1,6%), circular bars high lead weight solid grids in a corrosion-resistant PbSb1.6SnSe - alloy
Negative electrode	round-grid flat 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 color, UL-94 rating: HB
Blocks with blind cells	4V, 8V and 10V
Flame arrestors	includes standard ceramic arrestors with optional ceramic flip-top funnel arrestors acc. DIN 40 740 available
Pole bushing	100% gas- and electrolyte-tight, sliding, injection moulded “Panzerpol”
Kind of pole	M10 copper insertion
Intercell connectors	insulated PVC coated solid copper connectors with cross-sections of 90, 150 or 300 mm² depending upon application
Inter-tier connectors	flexible insulated copper cables
Connector screw	M10 stainless steel with insulated cap
Kind of protection	IP 25 regarding DIN 40050, touch protected according 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) $\Delta U/\Delta T$ = +/- 0.003 V/K below 10°C in the monthly average
Float current	15mA/100Ah, increasing to 45mA/100Ah at the end of life
Equalize charge	U = 2.33 to 2.40V/cell, time limited
Charging time up to 90%	6h with $1.5*I_{10}$ initial current, 2.23 V/cell, 80% C3 discharged

5. Discharge characteristics

Reference temperature	25°C (77 °F)
Initial capacity	100% at time of delivery
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 cell voltage and temperature
Every 12 months	record battery voltage, cell voltages and temperatures

7. Operational data

Operational life	20 years in stand-by operation, float at 20 to 25 °C (68 °F to 77 °F)
Water - refilling - interval	more than 3 years at 25°C (77 °F)
IEC 60 896-1 cycles	> 1000
Self-discharge	app. 3% per month at 20°C (68 °C)
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 40 736 part 1
Tests according	IEC 60 896 - 11
Safety standard, ventilation	DIN EN 50 272-2
Transport	Batteries are not subject to ADR (road transport), if the conditions of the special rule (chapter 3.3) are observed.

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