

Technical Specification for Stationary VLA - Cells

1. Application

BAE OGi - cells are suitable for backup power applications where operational safety and long service-life is a top priority. The OGi performs extremely well where discharge currents are required for short duration discharge times. It also works very well when these short discharge demands are coupled with continuous loads over longer duration discharge times.

BAE uses a round-grid flat-plate design for its OGi cells. Due to its excellent lead-mass and grid plate a long operational life and a very good high-current performance is realized. The sleek straight-walled containers and bridge- supported plates provide a high power-density in a compact footprint. The transparent container allows visibility and control for easier maintenance and service.

They are used as a stand-by energy source in transmission and/or distribution substations, as well as in data centres for UPS; for emergency lighting equipment and other applications requiring higher short duration rates.

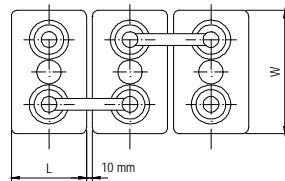


2. Types, capacities, dimensions, weights

Type	1 min 25°C	C ₁ 25°C	C ₄ 25°C	C ₈ 25°C	C ₁₂ 25°C	R _i 1)	I _k 2)	Length (L)	Width (W)	Height (H)	Weight dry	Weight filled	Lead mass
U _e V / cell	Amps	Ah	Ah	Ah	Ah	mΩ	kA	inch	inch	inch	lbs	lbs	lbs
8 OGi 200	599	146	196	227	237	0.49	4.24	4.06	8.11	15.95	31.7	41.4	27.9
10 OGi 250	702	181	243	280	293	0.39	5.31	4.88	8.11	15.95	38.0	49.8	33.8
12 OGi 300	839	216	290	333	349	0.33	6.36	5.71	8.11	15.95	43.9	58.3	39.7
14 OGi 350	944	250	335	385	402	0.28	7.43	5.71	8.11	15.95	49.3	63.3	45.6

1) Internal resistance from IEC 60896-11; 2) Short circuit current from IEC 60896-11; All data is subject to change. Height (H) is the maximum distance between container bottom and top of the bolts in assembled condition.

3. Terminal positions



8 OGi 200 to 14 OGi 350

Technical Specification for BAE *SECURA OGi*

3. Design

Positive electrode	Round-grid flat plate with low antimony alloy, circular bars, high lead weight solid grids in a corrosion-resistant PbSbSnSe - 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
Flame arrestors	Includes standard ceramic arrestors with optional ceramic flip-top funnel arrestors acc. DIN 40740 available
Pole - bushing	100% gas and electrolyte tight, sliding, injection-moulded "Panzerpole"
Kind of pole	M10 brass insertion
Intercell connectors	Insulated solid copper connectors with cross-sections of 90, 150 or 300 mm ² 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 $U = 2.23 \text{ V/cell} \pm 1\%$, between 10°C and 30°C (50°F and 86°F) $\Delta U/\Delta T = \pm 0.003 \text{ V/K}$ below 10°C in the monthly average 15mA/100Ah, increasing to 45mA/100Ah at the end of life
Float current	$U = 2.33$ to 2.40V/cell, time limited
Equalize charge	6h with 1.5· I_{10} initial current, 2.23 V/cell, 80% C3 discharged
Charging time up to 90%	

5. Discharge characteristics

Reference temperature	25°C (77°F)
Initial capacity	95% or better 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 and record battery voltage, pilot cell voltage and temperature
Every 12 months	Check and record battery voltage, cell voltages and temperatures

7. Operational data

Operational life	20 years in stand-by operation, float at 20°C to 25°C (68°F to 77°F)
Water - refilling - interval	Up to 3 years, float at 20°C to 25°C (68°F to 77°F)
IEC 60 896-2 cycles	> 1200
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)
Battery according to	DIN 40737 part 3
Tests according to	IEC 60896-11
Safety standard, ventilation	DIN EN 50272-2
Transport	Subject to DOT Regulations – See SDS for details

