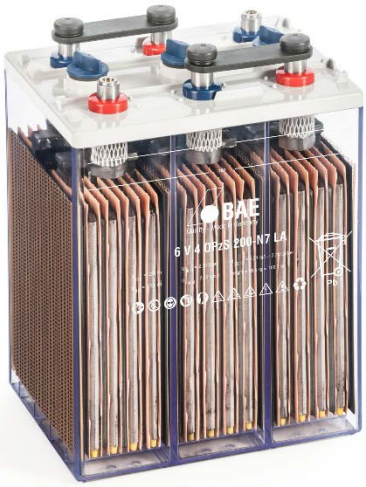
BAE SECURA OPzS BLOCK-N7

Technical Specification for Stationary VLA – Raised Post Block Batteries

1. Application

The OPzS Series flooded tubular plate 6-12V multi-cell blocks are one of the most enduring lead acid batteries on the market today. They are ideally suited for stand-by operations as well as for capacitive loads. They perfectly meet requirements for bridging times between 1h to more than 10h. The raised-post "N7" design permits individual intercell connection resistance testing.



This battery has an IEC 896-2 cycle rating of 1200 to 80% DOD, and is great for backup power in the applications listed below:

Application Uses:

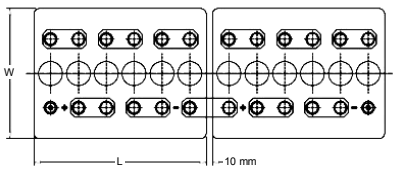
Power generation plants
Electrical utilities applications
Telecommunications
Microwave radio systems
Emergency lighting
Outdoor enclosures
Photovoltaic applications

2. Types, capacities, dimensions, weights

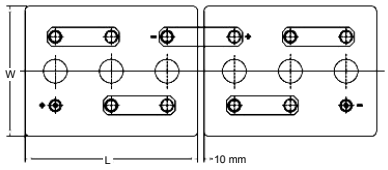
Type	1 min 25°C	C_1 25°C	C_4 25°C	C_8 25°C	C_{12} 25°C	R_i 1)	I_k 2)	Length (L)	Width (W)	Height (H)	Weight dry	Weight filled	Lead mass
U_e V/cell	Amps 1.75	Ah 1.75	Ah 1.75	Ah 1.75	Ah 1.75	mΩ	kA	inch	inch	inch	lbs	lbs	lbs
12V 1 OPzS 50-N7	90.8	29	45	53	60	19.20	0.64	10.71	8.07	15.16	65.6	90.4	55.1
12V 2 OPzS 100-N7	167	58	90	104	118	9.60	1.28	10.71	8.07	15.16	82.1	105.8	77.1
12V 3 OPzS 150-N7	235	87	137	159	180	6.40	1.92	14.96	8.07	15.16	117.0	153.0	107.4
6V 3 OPzS 150-N7	233	87	137	159	180	3.10	1.92	10.71	8.07	15.16	62.9	92.6	53.7
6V 4 OPzS 200-N7	294	115	182	212	240	2.40	2.56	10.71	8.07	15.16	75.9	102.5	69.0
6V 5 OPzS 250-N7	345	142	228	265	300	1.92	3.20	14.96	8.07	15.16	91.2	133.2	84.2
6V 6 OPzS 300-N7	393	169	274	318	360	1.60	3.84	14.96	8.07	15.16	104.2	143.1	99.5

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 bolts in assembled condition.

3. Terminal positions



12V 1 OPzS 50-N7 to 12V 3 OPzS 150-N7



6V 3 OPzS 150-N7 to 6V 6 OPzS 300-N7

BAE BATTERIES CANADA

Technical Specification for BAE *SECURA OPzS BLOCK-N7*

4. Design

Positive electrode	Tubular - plate with a polyester gauntlet and 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 40740 available
Pole - bushing	100% gas and electrolyte tight, sliding, injection-moulded ”Panzerpole”
Kind of pole	M10 brass insertion
Intercell connector	Insulated 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
Kind of protection	IP 25 regarding DIN 40050, touch protected according VBG 4.

5. 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	20mA/100Ah, increasing to 30mA/100Ah at the end of life
Equalize charge	U = 2.33 to 2.40V/cell, time limited
Charging time up to 90%	6h with $1.5 \cdot I_{10}$ initial current, 2.23 V/cell, 80% C3 discharged

6. 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

7. Maintenance

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

8. 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 sheet for details

BAE BATTERIES CANADA

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