

# VLA Battery Sun Station OPzS

340335 - 340390 • EN • 03/2020

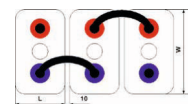
Phaesun Sun Station are the optimal solution for a reliable and robust storage of regenerative energy under extreme conditions in the industrial sector. Convenient installation due to supplied cell connectors and accessories. The special electrode design with tubular electrodes distinguishes the Sun Station batteries leading to high security and reliability as well as high cycle life time.



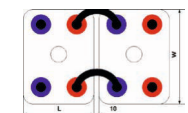
 Made in Germany

Sun Station OPzS Phaesun	GUG	weight	TV	weight	L x W x H	System	capacity			Terminal
	Art. no.	kg	Art. no.	kg	mm		VDC	Ah (C10)	Ah (C20)	
2 OPzS 140	340335	14,5	340363	9,1	105x208x420	2	111	127	143	M10
3 OPzS 210	340336	16,4	340364	11,2	105x208x420	2	167	191	215	M10
4 OPzS 280	340337	18	340365	12,8	105x208x420	2	223	254	287	M10
5 OPzS 350	340338	21,7	340366	15,3	126x208x420	2	279	318	359	M10
6 OPzS 420	340339	25,7	340367	18,1	147x208x420	2	334	382	431	M10
5 OPzS 550	340340	28,8	340368	20,0	126x208x535	2	389	432	496	M10
6 OPzS 660	340341	34	340369	23,5	147x208x535	2	467	518	595	M10
7 OPzS 770	340342	39,1	340370	26,8	168x208x535	2	544	604	694	M10
6 OPzS 900	340343	47,4	340371	33,0	147x208x710	2	665	748	877	M10
7 OPzS 1050	340344	61,5	340372	42,1	215x193x710	2	777	872	1020	M10
8 OPzS 1200	340345	65,4	340373	46,6	215x193x710	2	886	996	1160	M10
9 OPzS 1350	340346	75,4	340374	51,4	215x235x710	2	991	1116	1300	M10
10 OPzS 1500	340347	79,4	340375	56,0	215x235x710	2	1100	1240	1450	M10
11 OPzS 1650	340348	89,6	340376	61,0	215x277x710	2	1210	1362	1590	M10
12 OPzS 1800	340349	93,4	340377	65,4	215x277x710	2	1320	1486	1740	M10
11 OPzS 2090	340350	105,9	340378	72,7	215x277x855	2	1470	1636	1870	M10
12 OPzS 2280	340351	110,4	340379	77,4	215x277x855	2	1600	1784	2040	M10
13 OPzS 2470	340352	137,8	340380	90,8	215x400x815	2	1740	1938	2210	M10
14 OPzS 2660	340353	142,4	340381	95,3	215x400x815	2	1880	2080	2380	M10
15 OPzS 2850	340354	146,9	340382	100,2	215x400x815	2	2010	2220	2550	M10
16 OPzS 3040	340355	151,6	340383	105,4	215x400x815	2	2140	2380	2710	M10
17 OPzS 3230	340356	175,1	340384	117,7	215x490x815	2	2290	2540	2910	M10
18 OPzS 3420	340357	179,1	340385	121,9	215x490x815	2	2420	2680	3080	M10
19 OPzS 3610	340358	183,6	340386	126,8	215x490x815	2	2560	2840	3250	M10
20 OPzS 3800	340359	188,3	340387	132,0	215x490x815	2	2690	2980	3420	M10
22 OPzS 4180	340360	213,9	340388	145,4	215x580x815	2	2950	3280	3750	M10
24 OPzS 4560	340361	223	340389	155,2	215x580x815	2	3220	3560	4090	M10
26 OPzS 4940	340362	232	340390	165,0	215x580x815	2	3480	3860	4420	M10

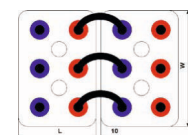
## Terminal positions:



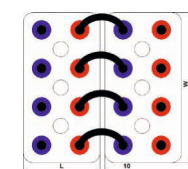
2 OPzS 140 to 6 OPzS 900



7 OPzS 1050 to 12 OPzS 2280



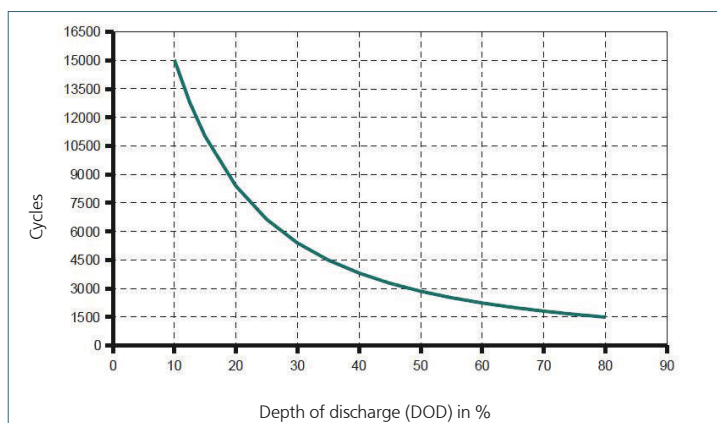
13 OPzS 2470 to 16 OPzS 3040



17 OPzS 3230 to 26 OPzS 4940

<b>Installation:</b>	Phaesun OPzS Solar batteries are designed for indoor applications. For outdoor applications please contact Phaesun.
<b>Accessories:</b>	Pole screw with isolated head M10 Cell combiner final terminal conductors for complete battery
<b>Design:</b>	
Positive electrode:	Tubular-plate with woven polyester gauntlet and solid grids in a corrosion-resistant PbSbSnSe-low antimony alloy
Negative electrode :	Grid-plate in a low antimony alloy with long-life expander material
Separation:	Microporous separator
Electrolyte:	Sulphuric acid with a density of 1.24 kg/l at 20 °C (68 °F)
Container and lid:	High impact, transparent SAN (Styrene acrylonitrile), UL-94 rating: HB, High impact SAN in dark grey colour (colour may vary slightly from given image), UL-94 rating: HB
Plugs:	Labyrinth plugs for arresting aerosols, ceramic funnel plugs according to DIN 40740 or ceramic plugs are recommended
Pole bushing:	100 % gas- and electrolyte-tight, sliding, plastic-coated "Panzerpol"
Kind of protection:	IP 25 regarding EN 60529, touch protected according to BGV A3
<b>Maintenance:</b>	
Every 6 months:	Check battery voltage, pilot cell voltages and temperatures
Every 12 months:	Check connections, record battery voltage, cell voltages and temperatures
Every 3 years:	Average water-refilling interval (depending on utilization and ambient temperature)
<b>Operational data:</b>	
Depth of discharge (DOD):	Max. 80 % ( $U_e = 1.91$ V/cell for discharge times >10 h; 1.74 V/cell for 1 h), deep discharges of more than 80 % DOD have to be avoided
Initial charge current (I- or bulk phase):	Unlimited, the minimal charge current has to be 5 A/100 Ah $C_{10}$
Charge voltage at cyclic operation:	Restricted from 2.30 V to 2.40 V per cell, operating instruction is to be observed
Float voltage/non cyclic operation:	2.23 V/cell
Adjustment of charge voltage:	No adjustment necessary if battery temperature is kept between 10 °C and 30 °C (50 °F and 86 °F) in the monthly average, $U/T = -0.003$ V/cell per K
Recharge to 100 %:	Within a period of 1 up to 4 weeks
Battery temperature:	-20 °C to 55 °C (-4 °F to 131 °F), recommended temperature range 10 °C to 30 °C (50 °F to 86 °F)
Self-discharge:	Approx. 3 % per month at 20 °C (68 °F)
IEC 61427 cycles:	>3,150 (A+B) at 40 °C (104 °F)
IEC 60896-21 cycles:	>1,500 at 20 °C (68 °F)

**Number of cycles as function of Depth of discharge:**



**Transport:** Batteries are not subject to ADR (road transport), if the conditions of Special Provision 598 (Chapter 3.3) are observed. These cells/batteries are dangerous goods on sea transport. Declaration and packaging must comply with the requirements of IMDG-Codes.

**Standards:**  
 Test standards: IEC 60896-11, IEC 61427  
 Safety standard, ventilation: IEC 62485-2