

# VRLA-Gel Battery

## Sun Station OPzV

340307 - 340334 • EN • 03/2020

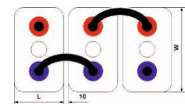
Phaesun Sun Station batteries are the ideal solution for storage of regenerative energy in home systems and in the industrial sectors. Robustness and reliability are characteristic for Sun Station. In addition, they do not require any refilling of water during the whole battery life time and are maintenance-free. Convenient installation due to supplied cell connectors and accessories. The special electrode design with tubular electrodes and the fixed gel electrolyte distinguish the Sun Station batteries and lead to high security and reliability as well as high cycle life time.

Sun Station OPzV Phaesun		L x W x H mm	weight kg	System VDC	capacity			Terminal
					Ah (C10)	Ah (C20)	Ah (C100)	
340307	2 OPzV 140	105x208x420	12,4	2	121	134	157	M10
340308	3 OPzV 210	105x208x420	17,1	2	182	202	236	M10
340309	4 OPzV 280	105x208x420	19,4	2	243	268	314	M10
340310	5 OPzV 350	126x208x420	23,3	2	304	336	393	M10
340311	6 OPzV 420	147x208x420	27,4	2	364	404	472	M10
340312	5 OPzV 550	126x208x535	31,4	2	447	506	583	M10
340313	6 OPzV 660	147x208x535	36,9	2	529	598	686	M10
340314	7 OPzV 770	168x208x535	42,4	2	610	688	788	M10
340315	6 OPzV 900	147x208x710	49,5	2	729	834	968	M10
340316	7 OPzV 1050	215x193x710	60,4	2	858	980	1140	M10
340317	8 OPzV 1200	215x193x710	67,3	2	970	1106	1280	M10
340318	9 OPzV 1350	215x235x710	75,5	2	1090	1252	1450	M10
340319	10 OPzV 1500	215x235x710	82,5	2	1200	1382	1600	M10
340320	11 OPzV 1650	215x277x710	90,8	2	1320	1512	1750	M10
340321	12 OPzV 1800	215x277x710	97,7	2	1440	1644	1900	M10
340322	11 OPzV 2090	215x277x855	108,2	2	1570	1772	2070	M10
340323	12 OPzV 2280	215x277x855	116,5	2	1710	1918	2230	M10
340324	13 OPzV 2470	215x400x815	131,4	2	1890	2120	2490	M10
340325	14 OPzV 2660	215x400x815	141,2	2	2070	2320	2740	M10
340326	15 OPzV 2850	215x400x815	147,9	2	2170	2420	2840	M10
340327	16 OPzV 3040	215x400x815	156,2	2	2300	2580	3000	M10
340328	17 OPzV 3230	215x490x815	173,6	2	2480	2780	3260	M10
340329	18 OPzV 3420	215x490x815	181,4	2	2610	2920	3420	M10
340330	19 OPzV 3610	215x490x815	189,6	2	2740	3080	3590	M10
340331	20 OPzV 3800	215x490x815	197,8	2	2870	3220	3750	M10
340332	22 OPzV 4180	215x580x815	219,1	2	3210	3600	4220	M10
340333	24 OPzV 4560	215x580x815	235,4	2	3470	3900	4550	M10

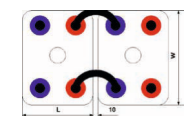


Made in Germany

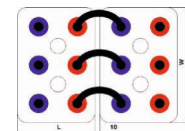
### Terminal positions:



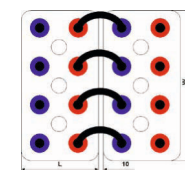
2 OPzV 140 to 6 OPzV 900



7 OPzV 1050 to 12 OPzV 2280



13 OPzV 2470 to 16 OPzV 3040



17 OPzV 3230 to 26 OPzV 4940

**Installation:** Terminals are designed as female poles with brass inlay M10 for flexible insulated copper cables with cross-section 25, 35, 50, 70, 95 or 120 mm<sup>2</sup> or insulated solid copper connectors with cross-section 90, 150 or 300 mm<sup>2</sup>. Phaesun OPzV Solar batteries are designed for indoor applications. For outdoor applications please contact Phaesun.

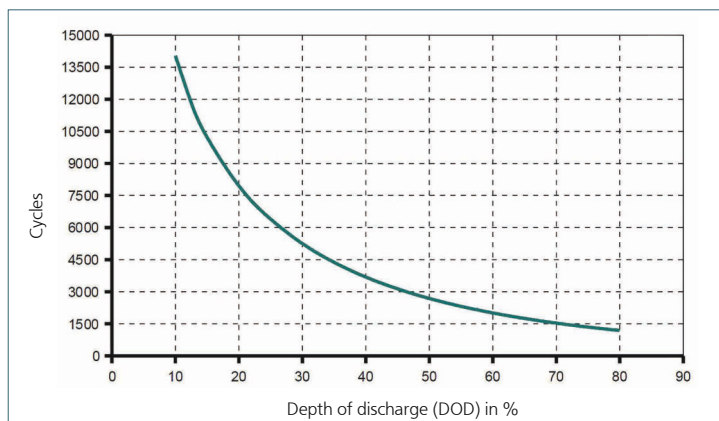
**Accessories:** Pole screw with isolated head M10  
Cell combiner  
final terminal conductors for complete battery

**Design:**  
Positive electrode: Tubular-plate with woven polyester gauntlet and solid grids in a corrosion-resistant PbCaSn-alloy  
Negative electrode : Grid-plate in PbCaSn-alloy with long-life expander material  
Separation: Microporous separator  
Electrolyte: Sulphuric acid with a density of 1.24 kg/l (20 °C), fixed as GEL by fumed silica  
Container and lid: High impact ABS (Acrylonitrile butadiene styrene), grey coloured (colour may vary slightly from given image), UL-94 rating: HB, on request also in UL-94 rating: V-0  
Valve: Valve with flame arrestor, opening pressure approx. 120 mbar  
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  
Horizontal operation: Please use Phaesun special type OPzV "horizontal"

**Maintenance:**  
Every 6 months: Check battery voltage, pilot cell voltages and temperatures  
Every 12 months: Check connections, record battery voltage, cell voltages and temperatures

**Operational data:**  
Depth of discharge (DOD): Max. 80 % (U<sub>e</sub> = 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 1.5 A/100 Ah C10  
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: 2.25 V/cell  
Adjustment of charge voltage: No adjustment necessary if battery temperature is kept between 10 °C and 45 °C (50 °F and 113 °F) in the monthly average, U/T = -0.003 V/cell per K below 10 °C (50 °F)  
Recharge to 100 %: Within a period of 1 up to 4 weeks  
Battery temperature: -20 °C to 45 °C (-4 °F to 113 °F), recommended temperature range 10 °C to 30 °C (50 °F to 86 °F)  
Self-discharge: Approx. 2 % per month at 20 °C (68 °F)  
IEC 61427 cycles: >3,000 (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 Provisions 598 and 238 (Chapter 3.3) are observed. Phaesun cells/batteries are conform to the IMDG-Code, therefore these products are no dangerous goods on sea transport.

**Standards:**  
Test standards: IEC 60896-21, IEC 61427  
Safety standard, ventilation: IEC 62485-2