

The EnerSys® range of PowerSafe® OPzS batteries has been designed for use in all standby power applications that demand the highest levels of reliability and security.

PowerSafe OPzS cells benefit from an optimised plate design that results in increased capacity compared to the requirements of the internationally recognised DIN standard. In addition, the tubular plate technology offers excellent cycling performance together with a proven long life under float voltage conditions, for a truly flexible solution.

The specification of the PowerSafe OPzS cells make it ideal for a wide range of applications such as telecommunications, telephony, power generation and distribution, railway, airport and seaport signalling, computing, emergency lighting, automation and measuring systems.

### Features & Benefits

- Capacity range: 216Ah – 3360Ah (C<sub>10</sub>/1.80Vpc/20°C)
- C<sub>10</sub> capacities exceed the DIN standard values
- Excellent cyclability
- 20 year design life (20°C)
- High operational reliability
- Low maintenance
- 3 year topping-up interval
- DIN 40736-1 compliant



## Construction

- Positive electrodes – die-cast tubular plates with low antimony lead alloy for longer life
- Negative electrodes – pasted flat plates provide perfect balance with the positive plates to give maximum performance
- Separators – special microporous material
- Containers – moulded from durable, transparent styrene acrylonitrile (SAN) to allow electrolyte level and cell condition to be monitored visually
- Cell lids – made of opaque ABS sealed to container to ensure no electrolyte leakage
- Electrolyte – diluted sulphuric acid with a specific gravity of 1.240 ±0.010 (maximum level) at 20°C for a fully charged cell

- Terminals – lead alloy leakproof pole with brass insert designed to give minimum resistance and maximum current flow
- Vent plugs – safety plugs equipped with flame arrestors. Special vent plugs allowing topping-up and S.G. reading without the need to remove them, are available on request
- Connectors – fully insulated, solid copper inter-cell connectors allow voltage measurements

- Topping-up intervals of about 3 years in standby operation mode thanks to large electrolyte reserve
- Can be installed on steel or wooden racks

## Standards

- Compliant with both the international standard IEC 60896-11 and the DIN standard 40736-1
- Batteries must be installed in accordance with safety standard EN 50272-2 and national regulations
- Manufactured in EnerSys® ISO 9001:2000 and ISO 14001:2004 certified production facilities

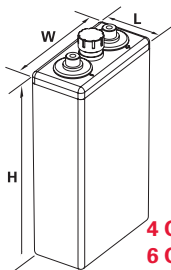
## Installation & Operation

- Recommended float charge voltage: 2.23Vpc (20°C/68°F - 25°C/77°F)
- Recommended temperature range: +10°C/+50°F to +30°C/+86°F (preferred value 20°C/68°F)

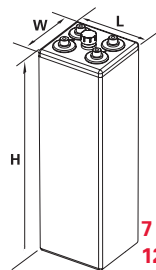
## General Specifications

PowerSafe® OPzS Cell Types	Nominal Voltage (V)	Number of Terminals	Nominal Capacity (Ah)		Nominal Dimensions					Typical Weight				Electrolyte Volume US gal	Short Circuit Current (A)	Internal Resistance (mΩ)		
			10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 77°F	Length mm	Length in	Width mm	Width in	Height Over Vent Plug mm	Height Over Vent Plug in	Dry kg	Dry lbs	Acid Filled kg				Acid Filled lb	Litres
4 OPzS 200	2	2	216	217	103	4.1	206	8.1	394	15.5	12.4	27.3	17.2	37.9	3.9	1.0	2400	0.85
5 OPzS 250	2	2	270	266	124	4.9	206	8.1	394	15.5	14.8	32.6	20.8	45.9	4.9	1.3	3000	0.68
6 OPzS 300	2	2	324	319	145	5.7	206	8.1	394	15.5	17.1	37.7	24.3	53.6	5.8	1.5	3600	0.57
5 OPzS 350	2	2	390	388	124	4.9	206	8.1	510	20.1	19.0	41.9	26.9	59.3	6.7	1.8	3400	0.60
6 OPzS 420	2	2	468	466	145	5.7	206	8.1	510	20.1	22.1	48.7	31.5	69.4	8.0	2.1	4075	0.50
7 OPzS 490	2	2	546	543	166	6.5	206	8.1	510	20.1	25.2	55.6	36.1	79.6	9.3	2.5	4750	0.43
6 OPzS 600	2	2	660	648	145	5.7	206	8.1	685	27.0	31.9	70.3	44.8	98.8	11.1	2.9	5000	0.40
7 OPzS 700	2	4	817	798	210	8.3	191	7.5	685	27.0	40.4	89.1	57.6	127.0	14.8	3.9	5800	0.34
8 OPzS 800	2	4	880	856	210	8.3	191	7.5	685	27.0	44.4	97.9	61.3	135.1	14.5	3.8	6650	0.30
9 OPzS 900	2	4	1040	1013	210	8.3	233	9.2	685	27.0	49.6	109.3	70.9	156.3	18.4	4.9	7475	0.27
10 OPzS 1000	2	4	1100	1071	210	8.3	233	9.2	685	27.0	53.5	118.0	74.6	164.5	18.1	4.8	8300	0.24
11 OPzS 1100	2	4	1260	1227	210	8.3	275	10.8	685	27.0	58.9	129.9	84.4	186.0	20.8	5.5	9150	0.22
12 OPzS 1200	2	4	1320	1293	210	8.3	275	10.8	685	27.0	62.8	138.4	88.0	194.0	20.6	5.4	9950	0.20
11 OPzS 1375	2	4	1590	1631	210	8.3	275	10.8	835	32.9	74.5	164.2	109.0	240.3	27.6	7.3	8800	0.22
12 OPzS 1500	2	4	1680	1730	210	8.3	275	10.8	835	32.9	80.2	176.8	114.3	252.0	27.3	7.2	9600	0.21
13 OPzS 1625	2	6	1910	1969	214	8.4	399	15.7	811	32.0	91.2	201.1	140.0	308.7	39.6	10.5	10400	0.19
14 OPzS 1750	2	6	2040	2092	214	8.4	399	15.7	811	32.0	95.8	211.2	144.0	317.5	39.6	10.5	11200	0.18
15 OPzS 1875	2	6	2150	2208	214	8.4	399	15.7	811	32.0	101.0	222.7	149.0	328.5	38.9	10.3	12000	0.16
16 OPzS 2000	2	6	2240	2307	214	8.4	399	15.7	811	32.0	105.0	231.5	151.5	334.0	39.0	10.3	12800	0.15
17 OPzS 2125	2	8	2470	2546	212	8.3	487	19.2	811	32.0	119.0	262.3	180.0	396.9	48.5	12.8	13600	0.14
18 OPzS 2250	2	8	2600	2669	212	8.3	487	19.2	811	32.0	125.0	275.6	184.0	405.7	47.8	12.6	14400	0.14
19 OPzS 2375	2	8	2710	2785	212	8.3	487	19.2	811	32.0	130.0	286.6	189.0	416.7	47.5	12.5	15200	0.13
20 OPzS 2500	2	8	2800	2884	212	8.3	487	19.2	811	32.0	134.0	295.4	193.0	425.5	47.6	12.6	16000	0.12
22 OPzS 2750	2	8	3150	3238	212	8.3	576	22.7	811	32.0	153.0	337.3	225.0	496.0	57.8	15.3	17600	0.11
24 OPzS 3000	2	8	3360	3543	212	8.3	576	22.7	811	32.0	163.0	359.4	234.5	517.0	56.4	14.9	19200	0.10

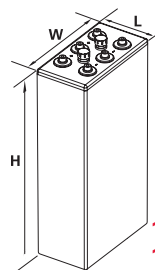
Cells with lead-calcium alloy positive plates (OPzSC types) are available upon request



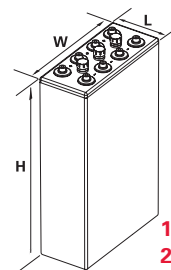
4 OPzS 200 -  
6 OPzS 600



7 OPzS 700 -  
12 OPzS 1500



13 OPzS 1625 -  
16 OPzS 2000



17 OPzS 2125 -  
24 OPzS 3000



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