

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 (C₁₀/1.80Vpc/20°C)
- C₁₀ capacities exceed the DIN standard values
- Excellent cyclability
- 18 year design life (20°C)
- High operational reliability
- Low maintenance
- 3 year topping-up interval
- DIN 40736-1 compliant



EnerSys®

Power/Full Solutions

RESERVE
POWER

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

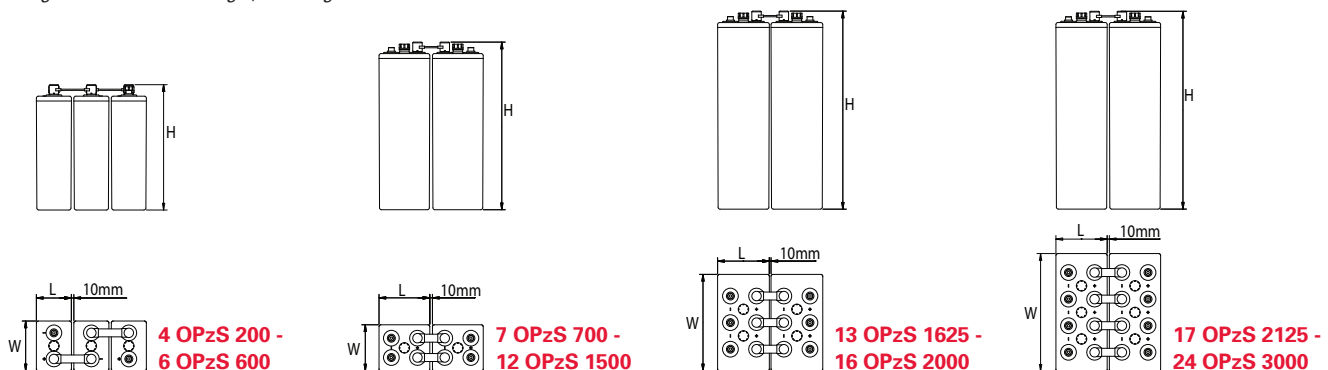
Installation & Operation

- 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 (mm) | | | Typical Weight (kg) | | Electrolyte Volume (Litres) | Short Circuit Current (A) | Internal Resistance (mΩ) |
|----------------------------|---------------------|---------------------|------------------------------|-----------------------------|-------------------------|-------|---------|---------------------|-------------|-----------------------------|---------------------------|--------------------------|
| | | | 10 hr rate to 1.80Vpc @ 20°C | 8 hr rate to 1.75Vpc @ 77°F | Length | Width | Height* | Dry | Acid Filled | | | |
| 4 OPzS 200 | 2 | 2 | 216 | 217 | 103 | 206 | 403 | 12.4 | 17.2 | 3.9 | 2400 | 0.85 |
| 5 OPzS 250 | 2 | 2 | 270 | 266 | 124 | 206 | 403 | 14.8 | 20.8 | 4.9 | 3000 | 0.68 |
| 6 OPzS 300 | 2 | 2 | 324 | 319 | 145 | 206 | 403 | 17.1 | 24.3 | 5.8 | 3600 | 0.57 |
| 5 OPzS 350 | 2 | 2 | 390 | 388 | 124 | 206 | 520 | 19.0 | 26.9 | 6.7 | 3400 | 0.60 |
| 6 OPzS 420 | 2 | 2 | 468 | 466 | 145 | 206 | 520 | 22.1 | 31.5 | 8.0 | 4075 | 0.50 |
| 7 OPzS 490 | 2 | 2 | 546 | 543 | 166 | 206 | 520 | 25.2 | 36.1 | 9.3 | 4750 | 0.43 |
| 6 OPzS 600 | 2 | 2 | 660 | 648 | 145 | 206 | 695 | 31.9 | 44.8 | 11.1 | 5000 | 0.40 |
| 7 OPzS 700 | 2 | 4 | 817 | 798 | 210 | 191 | 695 | 40.4 | 57.6 | 14.8 | 5800 | 0.34 |
| 8 OPzS 800 | 2 | 4 | 880 | 856 | 210 | 191 | 695 | 44.4 | 61.3 | 14.5 | 6650 | 0.30 |
| 9 OPzS 900 | 2 | 4 | 1040 | 1013 | 210 | 233 | 695 | 49.6 | 70.9 | 18.4 | 7475 | 0.27 |
| 10 OPzS 1000 | 2 | 4 | 1100 | 1071 | 210 | 233 | 695 | 53.5 | 74.6 | 18.1 | 8300 | 0.24 |
| 11 OPzS 1100 | 2 | 4 | 1260 | 1227 | 210 | 275 | 695 | 58.9 | 84.4 | 20.8 | 9150 | 0.22 |
| 12 OPzS 1200 | 2 | 4 | 1320 | 1293 | 210 | 275 | 695 | 62.8 | 88.0 | 20.6 | 9950 | 0.20 |
| 11 OPzS 1375 | 2 | 4 | 1590 | 1631 | 210 | 275 | 845 | 74.5 | 109.0 | 27.6 | 8800 | 0.22 |
| 12 OPzS 1500 | 2 | 4 | 1680 | 1730 | 210 | 275 | 845 | 80.2 | 114.3 | 27.3 | 9600 | 0.21 |
| 13 OPzS 1625 | 2 | 6 | 1910 | 1969 | 214 | 399 | 820 | 91.2 | 140.0 | 39.6 | 10400 | 0.19 |
| 14 OPzS 1750 | 2 | 6 | 2040 | 2092 | 214 | 399 | 820 | 95.8 | 144.0 | 39.6 | 11200 | 0.18 |
| 15 OPzS 1875 | 2 | 6 | 2150 | 2208 | 214 | 399 | 820 | 101.0 | 149.0 | 38.9 | 12000 | 0.16 |
| 16 OPzS 2000 | 2 | 6 | 2240 | 2307 | 214 | 399 | 820 | 105.0 | 151.5 | 39.0 | 12800 | 0.15 |
| 17 OPzS 2125 | 2 | 8 | 2470 | 2546 | 212 | 487 | 820 | 119.0 | 180.0 | 48.5 | 13600 | 0.14 |
| 18 OPzS 2250 | 2 | 8 | 2600 | 2669 | 212 | 487 | 820 | 125.0 | 184.0 | 47.8 | 14400 | 0.14 |
| 19 OPzS 2375 | 2 | 8 | 2710 | 2785 | 212 | 487 | 820 | 130.0 | 189.0 | 47.5 | 15200 | 0.13 |
| 20 OPzS 2500 | 2 | 8 | 2800 | 2884 | 212 | 487 | 820 | 134.0 | 193.0 | 47.6 | 16000 | 0.12 |
| 22 OPzS 2750 | 2 | 8 | 3150 | 3238 | 212 | 576 | 820 | 153.0 | 225.0 | 57.8 | 17600 | 0.11 |
| 24 OPzS 3000 | 2 | 8 | 3360 | 3543 | 212 | 576 | 820 | 163.0 | 234.5 | 56.4 | 19200 | 0.10 |

* Height shown is overall height, including connectors and shrouds



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