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## RANGE SUMMARY

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The EnerSys® range of PowerSafe™ V batteries has been designed specifically for use in applications that demand the highest levels of security and reliability. With proven compliance to the most rigorous international standards, PowerSafe V batteries are recognised worldwide as a premium solution for Telecom applications. The reputation of PowerSafe V batteries for long service life, together with excellent high rate performance, also makes it the number one choice for high integrity, high specification UPS systems.

PowerSafe V cells and monoblocs deliver superior performance whilst occupying less space than conventional standby power batteries. The use of V-0 rated, flame retardant, ABS plastic for the thick wall containers and lids offers high mechanical strength with excellent safety features.

PowerSafe V batteries are designed using proven gas recombination technology that removes the need for regular water addition by controlling the evolution of hydrogen and oxygen during charging. Oxygen evolved at the positive plates diffuses through microporous separators to the negative plates and, by a series of chemical reactions within the cell, recombines to form water. Each cell incorporates its own safety valve that allows the controlled release of gas when pressure builds up within the cell.

The use of gas recombination technology for lead acid batteries has totally changed the concept of standby power. This technology provides the user with the freedom to use lead acid batteries in a wide range of applications.

### Features & Benefits

- Capacity range: 46Ah - 518Ah
- Available in 2, 4, 6 and 12 volt blocs
- UL94 V-0 flame retardant case and lid
- Designed for a wide range of applications
- High reliability
- Proven long service life



## Construction

- Positive and negative plates in lead-tin-calcium alloy
- Separators in low resistance microporous glass fibre. The electrolyte is absorbed within this material, preventing acid spills in case of accidental damage
- Containers and lids in flame retardant ABS material, highly resistant to shock and vibration
- Terminals with brass insert for maximum conductivity and with high compression grommet for long life
- Self-regulating pressure relief valves prevent ingress of atmospheric oxygen

## Installation & Operation

- The PowerSafe™ V battery range is designed for installation in cabinets or on stands. A separate battery room is not necessary
- PowerSafe V cells and blocs can be mounted in vertical or horizontal orientation
- Recommended float charge voltage 2.280Vpc at 20°C (68°F) or 2.265Vpc at 25°C (77°F)
- Six months shelf life at 20°C
- Reduced maintenance: no water addition required

## Standards

- In compliance with the requirements of the international IEC 60896-21/22 standard
- Classified as “Long Life” according to the Eurobat Guide
- Designed to meet Telcordia SR-4228 requirements
- Recognised by UL (UL Standard 1989)
- Approved to be shipped as non-hazardous cargo in accordance with the requirements of IMDG (International Maritime code for Dangerous Goods) and OICA (Organisation of International Civil Aviation)
- EnerSys® manufacturing facilities worldwide are ISO 9001:2000 certified

## General Specifications

Type	Number of Cells	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions						Terminals					
			10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 77°F	Length		Width <sup>(1)</sup>		Overall Height <sup>(2)</sup>		Typical Weight		Short Circuit Current (A) <sup>(3)</sup>	Internal Resistance (mΩ) <sup>(3)</sup>	Type	Layout
12V45	6	12	46	47	218	8.6	164	6.5	220	8.7	18.9	41.7	1783	6.94	M6 Female	V1
12V55	6	12	56	59	271	10.7	164	6.5	220	8.7	22.9	50.5	1962	6.31	M6 Female	V1
12V70	6	12	68	70	314	12.4	164	6.5	220	8.7	26.7	58.9	2440	5.07	M6 Female	V1
12V80	6	12	79	82	360	14.2	164	6.5	228	9.0	31.5	69.5	2717	4.55	M6 Female	V1
4V105	2	4	103	103	191	7.5	202	8.0	235	9.3	16.5	36.4	2740	1.51	M8 Male	V2
6V105	3	6	103	103	191	7.5	202	8.0	235	9.3	22.0	48.5	2740	2.26	M8 Male	V2
6V130	3	6	132	134	243	9.6	206	8.1	234	9.2	27.9	61.5	4348	1.43	M8 Female	V2
4V155	2	4	154	155	202	8.0	202	8.0	228	9.0	23.0	50.7	4800	0.80	M8 Male	V4
6V155	3	6	154	155	292	11.5	202	8.0	228	9.0	33.0	72.8	4800	1.20	M8 Male	V5
6V165/2	3	6	173	172	296	11.7	204	8.0	234	9.2	34.1	75.2	5136	1.21	M8 Female	V2
2V200	1	2	200	194	110	4.3	208	8.2	260	10.2	13.9	30.6	5295	0.39	M8 Female	V3
4V230	2	4	231	232	292	11.5	202	8.0	228	9.0	32.5	71.7	6082	0.68	M8 Male	V4
2V275	1	2	275	267	142	5.6	208	8.2	260	10.2	18.5	40.8	6596	0.32	M8 Female	V3
2V310	1	2	308	309	202	8.0	202	8.0	228	9.0	23.0	50.7	9259	0.22	M8 Male	V4
2V320	1	2	320	329	195	7.7	208	8.2	242	9.5	22.0	48.5	9675	0.22	M8 Female	V4
2V400/2	1	2	400	388	195	7.7	208	8.2	260	10.2	26.2	57.8	8836	0.24	M8 Female	V3
2V460/4	1	2	462	464	292	11.5	202	8.0	228	9.0	32.5	71.7	10929	0.18	M8 Male	V4
2V460/6	1	2	462	464	292	11.5	202	8.0	228	9.0	33.0	72.8	10929	0.18	M8 Male	V5
2V500/2	1	2	500	484	238	9.4	208	8.2	260	10.2	32.5	71.7	9237	0.22	M8 Female	V3
2V500/6	1	2	518	516	296	11.7	204	8.0	240	9.4	34.7	76.5	14857	0.14	M8 Female	V5

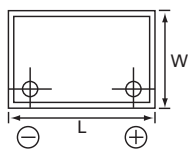
Notes:

<sup>(1)</sup> In horizontal installation, the width of PowerSafe V top terminal blocs becomes the height, irrespective of positive and negative polarities.

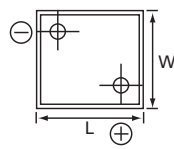
<sup>(2)</sup> Overall height includes insulating covers.

<sup>(3)</sup> Figures obtained via IEC 60896-21 method (±10%)

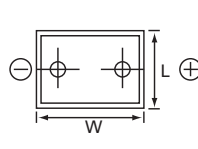
## Terminal Layouts



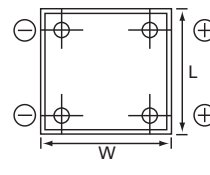
V1



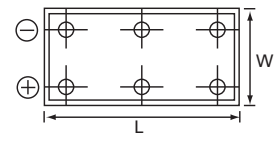
V2



V3



V4



V5



www.enersys-emea.com

**EnerSys**  
P.O. Box 14145  
Reading, PA 19612-4145  
USA  
Tel: +1-610-208-1991  
+1-800-538-3627  
Fax: +1-610-372-8613

**EnerSys Europe**  
Zurich, Switzerland  
Tel: +41 (0)44 215 74 10  
**EnerSys Asia**  
Guangdong, China  
Tel: +86-755-2689 3639

**EnerSys Ltd.**  
Rake Lane,  
Clifton Junction,  
Swinton, Manchester  
M27 8LR, UK  
Tel: +44 (0)161 794 4611  
Fax: +44 (0)161 727 3809

Contact:

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