

The PowerSafe<sup>®</sup> V Front Terminal range of valve regulated lead acid 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 ideal for high integrity, high specification UPS systems.

PowerSafe V batteries deliver superior performance while occupying less space than conventional standby power batteries. A range of compact designs, suitable for 19", 23" and ETSI racking, provides users with the benefit of increased energy density. With all electrical connections at the front, installation and inspection are both quicker and easier.

The 12V170FS front terminal monobloc is the latest addition to the hugely successful EnerSys<sup>®</sup> PowerSafe V battery range. Its large capacity and compact design enable EnerSys to satisfy customers' ever increasing demand for superior energy density products. The 12V170FS offers a minimum of 10-15% space savings compared with other products available in the market. Reduced freight costs and easier handling and installation are just some of the benefits provided by the 12V170FS.

### Features & Benefits

- 12V, 170Ah monobloc (C<sub>10</sub>/1.80Vpc/20°C)
- Compact design & superior energy density: more back-up power in same space
- Front terminal connections for fast and easy installation and maintenance
- Ideal for use in industry-standard power cabinets
- UL94 V-0 flame retardant case and lid
- Long design life



## Construction

- Positive plates designed to prolong service life and enhance corrosion resistance
- Separators in low resistance microporous glass fibre. The electrolyte is absorbed within this material, preventing acid spills in case of accidental damage
- Case and lid in flame retardant ABS material, highly resistant to shocks and vibrations
- Terminal with brass insert for maximum conductivity and with high compression grommet for long life
- Self-regulating pressure relief valve prevents ingress of atmospheric oxygen

- Flame arrestors built into each bloc for increased operational safety
- Rope handles fitted as standard for ease of handling

## Installation & Operation

- Monoblocs are designed for installation in cabinets or on stands, close to the point of use. A separate battery room is not necessary
- It is recommended that PowerSafe® 12V170FS batteries are installed on their base
- Recommended float charge voltage: 2.280Vpc at 20°C (68°F) 2.265Vpc at 25°C (77°F)
- Six months shelf life at 20°C
- Reduced maintenance: no water addition required

## Standards

- Tested according to international standard IEC 60896-21 and compliant to defined requirements of IEC 60896-22
- Classified as "Long Life" according to the Eurobat Guide 1999
- 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)
- Manufactured in EnerSys® ISO 9001:2000 and ISO 14001:2004 certified production facilities

## General Specifications

	Nominal Capacity (Ah)				Nominal Dimensions						Typical Weight		Short Circuit Current (A)	Internal Resistance (mΩ)	Terminals
	Number of Cells	Nominal Voltage (V)	10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 77°F	Length		Width		Overall Height		kg	lbs			
					mm	in	mm	in	mm	in					
12V170FS	6	12	170	170	561	22.1	125	4.9	283	11.1	50.5	111.3	2950	4.30	M6 M

## Discharge Currents (Amperes) at 20°C

Voltage (V)	Standby Time (Minutes)										
	5	10	15	20	25	30	35	40	45	50	55
1.85	270.0	270.0	240.6	221.1	194.3	174.7	160.7	146.6	135.5	126.3	117.9
1.80	297.9	297.9	265.1	239.7	209.8	187.5	169.8	155.2	143.1	132.9	124.0
1.75	322.6	322.6	283.4	254.0	220.9	196.1	176.7	161.0	148.1	137.2	127.9
1.71	339.1	339.1	296.0	263.8	228.3	201.8	181.3	164.8	151.3	140.1	130.5
1.67	352.8	352.8	306.8	272.0	234.6	206.6	185.1	168.0	154.0	142.3	132.4
1.65	358.2	358.2	311.2	275.4	237.1	208.5	186.6	169.2	155.0	143.2	133.2

Voltage (V)	Standby Time (Hours)													
	1	1.5	2	2.5	3	4	5	6	7	8	9	10	12	24
1.85	110.6	81.7	65.5	54.7	47.0	36.7	30.3	25.8	22.5	20.0	18.0	16.4	13.9	7.63
1.80	116.4	85.6	68.0	56.6	48.6	38.0	31.3	26.7	23.3	20.6	18.6	17.0	14.4	7.82
1.75	119.9	87.7	69.5	57.7	49.5	38.6	31.8	27.1	23.7	21.0	18.9	17.2	14.6	7.95
1.71	122.2	89.0	70.4	58.4	50.0	39.0	32.1	27.4	23.9	21.2	19.1	17.3	14.7	8.02
1.67	123.9	90.0	71.1	58.9	50.4	39.3	32.3	27.6	24.0	21.4	19.2	17.5	14.9	8.08
1.65	124.6	90.3	71.3	59.0	50.5	39.4	32.4	27.6	24.1	21.4	19.2	17.5	14.9	8.10

## Constant Power Discharge (Watts per cell) at 20°C

Voltage (V)	Standby Time (Minutes)										
	5	10	15	20	25	30	35	40	45	50	55
1.85	527.6	527.6	470.3	433.1	384.3	345.0	316.8	292.5	269.8	251.6	235.7
1.80	571.6	571.6	510.8	463.5	409.5	366.5	333.1	305.6	282.2	262.1	245.2
1.75	607.6	607.6	535.2	485.2	425.5	379.5	343.4	314.1	289.5	268.4	250.8
1.71	623.1	623.1	551.8	498.2	435.3	386.7	349.4	319.0	293.5	272.1	254.1
1.67	623.1	623.1	564.7	509.0	444.1	393.9	354.7	323.5	297.4	274.6	255.5
1.65	623.1	623.1	570.0	512.7	447.0	396.3	355.9	323.6	297.4	274.6	255.5

Voltage (V)	Standby Time (Hours)													
	1	1.5	2	2.5	3	4	5	6	7	8	9	10	12	24
1.85	221.5	163.0	132.5	110.2	95.4	74.6	61.4	52.4	45.8	40.6	36.6	33.3	28.4	15.3
1.80	230.7	170.3	136.0	113.3	97.6	76.4	63.0	53.8	47.0	41.7	37.5	34.1	29.1	15.6
1.75	235.7	173.5	138.2	115.0	98.9	77.4	63.7	54.4	47.5	42.2	38.0	34.6	29.4	15.9
1.71	238.3	175.3	139.2	116.0	99.4	77.7	64.0	54.6	47.7	42.0	38.2	35.0	29.6	16.0
1.67	239.5	175.6	140.2	116.3	100.0	78.2	64.4	54.9	48.0	42.6	38.3	34.9	29.6	16.0
1.65	239.5	175.6	140.2	116.4	100.1	78.2	64.4	54.9	48.0	42.6	38.3	34.9	29.6	16.0



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