

## Battery Range Summary



### Features and Benefits

- **Capacity range: 31Ah - 190Ah**
- **Front terminal connections for fast and easy installation and maintenance**
- **Suitable for 19", 23" and ETSI racking**
- **UL94 V-0 flame retardant containers and lids**
- **High energy density**
- **Fast charge acceptance capability**
- **High reliability**
- **Long design life (12+ years at 20°C)**

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 compliance to the most rigorous international standards, PowerSafe V-FT batteries are recognised worldwide as a premium solution for Telecom applications. The reputation of PowerSafe V-FT batteries for long service life, together with excellent high rate performance, also makes it ideal for high integrity, high specification UPS systems.

PowerSafe V-FT 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.

PowerSafe V-FT batteries benefit from EnerSys' state-of-the-art Thin Plate Pure Lead manufacturing platform. Monoblocs are designed using gas recombination technology which 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.

## Construction

- Pure lead grid design 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
- Containers and lids 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

## Installation & Operation

- Designed for operation in reliable grid, grid assist and unreliable grid (low risk of partial state of charge)
- 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® V Front Terminal batteries are installed on their base. Please consult your EnerSys representative about any other installation orientation
- Recommended float charge voltage: 2.29Vpc at 20°C  
2.27Vpc at 25°C
- 24 months shelf life at 20°C
- Reduced maintenance: no water addition required
- Wide operating temperature range: -30°C to +45°C

## Standards

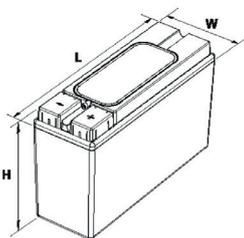
- Designed to be compliant with IEC 60896-21/22
- Classified as "Very Long Life" (> 12 years) according to the Eurobat Guide 2015
- UL recognised component
- Batteries must be installed in accordance with IEC 62485-2 and local/national regulations
- Classified as non-spillable battery and approved as non-hazardous cargo for land, sea and air transportation in accordance with the requirements of ADR / RID, IMDG and IATA respectively
- The management systems governing the manufacture of PowerSafe V-FT products are ISO 9001, ISO 14001 and ISO 45001 certified

## General Specifications

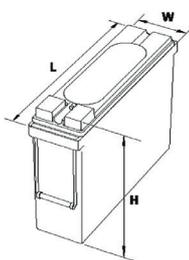
Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions (mm)			Typical Weight (Kg)	Short Circuit Current (A) <sup>(2)</sup>	Internal Resistance (mΩ) <sup>(2)</sup>	Terminals
		10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 77°F	Length	Width	Overall Height				
<b>12V30F</b> <sup>(3)</sup>	12	31	31	280	97	159	10.8	1327	9.87	M8 F
<b>12V38F</b> <sup>(3)</sup>	12	38	38	280	97	184	11.8	1415	8.88	M8 F
<b>12V62F</b> <sup>(3)</sup>	12	62	62	280	97	264	19.2	2080	5.98	M8 F
<b>12V92F</b> <sup>(1)(3)</sup>	12	92	92	395	105	264	27.6	2410	5.19	M8 F
<b>12V100FC</b> <sup>(1)(3)</sup>	12	100	100	395	108	288	31.0	1930	6.46	M8 F
<b>12V101F</b> <sup>(1)(4)</sup>	12	100	101	510	110	235	32.2	2351	5.35	M8 F
<b>12V125F</b> <sup>(1)(4)</sup>	12	125	126	561	105	316	44.5	2355	5.30	M6 M
<b>12V155FS</b> <sup>(1)(4)</sup>	12	150	155	561	125	283	48.5	3325	3.80	M6 M
<b>12V170FS</b> <sup>(1)(4)</sup>	12	170	170	561	125	283	50.8	3360	3.75	M6 M
<b>12V190F</b> <sup>(1)(4)</sup>	12	190	190	561	125	316	57.3	3625	3.50	M6 M

Notes: <sup>(1)</sup> With built-in or rope handles <sup>(2)</sup> Figures obtained via IEC method <sup>(3)</sup> With built-in manifold <sup>(4)</sup> Manifold available as an option (increases product height by 12mm)

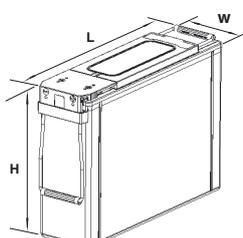
## Outline Drawings



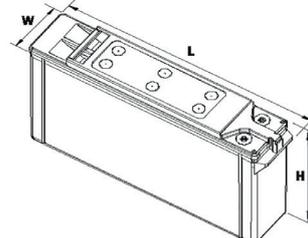
**12V30F, 12V38F  
& 12V62F**



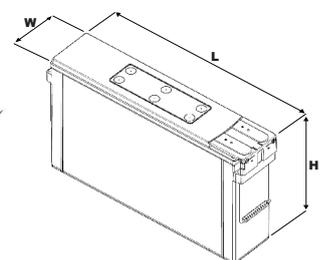
**12V92F**



**12V100FC**



**12V101F**



**12V125F,  
12V155FS,  
12V170FS &  
12V190F**



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