

Battery Range Summary

The PowerSafe GFM battery range offers the solution for large capacity, valve regulated lead acid battery requirements. PowerSafe GFM battery's modular design concept, with its integral racking system, provides a cost effective, compact battery solution combined with a quick, simple on site installation process. PowerSafe GFM batteries provide excellent performance and service life across an extensive range of applications including, telecommunications, power generation sites, both low and high rate UPS and emergency lighting.

Features & Benefits

- Capacity range: 200Ah - 2000Ah
- 15 years design life at 20°C
- Front connections provide excellent maintenance access
- 100% nominal C₁₀ capacity check prior to despatch
- Proven in service

PowerSafe GFM batteries are designed using proven gas recombination technology which removes the need for regular water addition by regulating the emission 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 completely 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.

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
- Cells container and lid in polypropylene material as standard; optional flame retardant available (UL94 V-0)
- Cells housed in steel modules complete with integral racking system
- Terminals with a large surface area copper insert to provide maximum conductivity
- Self-regulating pressure relief valves with integral flame arrestor

- Ring burn terminal seal or grommet with secondary epoxy resin seal
- Optional intensity 9 anti-seismic approved racking available upon request

Installation & Operation

- Recommended float charge voltage 2.25-2.27Vpc at 20°C or 2.23-2.25Vpc at 25°C
- The PowerSafe GFM range is designed for horizontal installation and can be installed safely within equipment rooms. A separate dedicated battery room is not necessary
- Six months shelf life at 20°C-25°C, after which a freshening charge is required
- Reduced maintenance: no water addition required throughout operation life

Standards

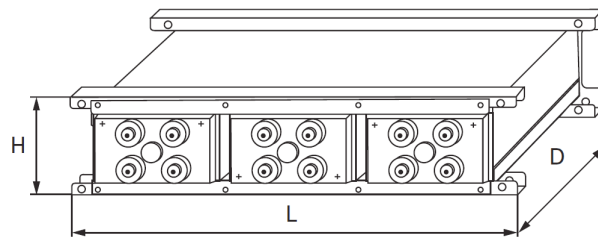
- Compliant with the international standard IEC 60896-21/22 standard
- Classified as "Very Long Life" (> 12 years) according to the Eurobat guide 2015
- Batteries must be installed in accordance with the IEC 62485-2 standard and national regulations
- Classified as non-spillable batteries and approved as non-hazardous cargo for land, sea and air transportation in accordance with the requirements of ADR/RID, IMDG and IATA respectively
- The management system governing the manufacture of PowerSafe GFM products is ISO 9001 certified

General Specifications

GFM Model Type ⁽¹⁾	Nominal Voltage (V)	Nominal Capacity (Ah)		Module Information				Cell Information			
		10hr rate to 1.80Vpc @ 25°C	8 hrs rate to 1.75Vpc @ 25°C	Length (mm)	Depth ⁽²⁾ (mm)	Overall Height ⁽³⁾ (mm)	Typical Weight (kg) ⁽⁴⁾	Short Circuit Current (A) ⁽⁵⁾	Internal Resistance (mOhm) ⁽⁵⁾	Terminal Type	No. of pillars Pos/Neg
6GFM200	12	200	200	570	406	218	88	2750	0.76	M8 F	1/1
6GFM250	12	250	250	683	406	218	101	3438	0.61	M8 F	1/1
6GFM300	12	300	300	683	406	218	119	4125	0.51	M8 F	1/1
6GFM350	12	350	350	683	554	218	148	3706	0.56	M8 F	1/1
6GFM420	12	420	420	683	554	218	161	4447	0.47	M8 F	1/1
6GFM500	12	500	500	859	554	218	194	4644	0.45	M8 F	1/1
6GFM600	12	600	600	957	561	218	223	4860	0.43	M8 F	1/1
3GFM800	6	800	800	681	561	218	151	5971	0.35	M8 F	2/2
3GFM1000	6	1000	1000	801	554	218	183	7207	0.29	M8 F	2/2
3GFM1200	6	1200	1200	915	561	218	235	8400	0.25	M8 F	2/2
3GFM1500	6	1500	1500	872	605	278	305	8708	0.24	M8 F	2/2
3GFM2000	6	2000	2000	1069	605	278	396	11000	0.19	M8 F	3/3

- Note:**
- (1) Model with end "-FR" represent flame retardant version
 - (2) The depth shown in the table is for overall depth including pillars. For front protection panel, add an additional 46mm.
 - (3) To calculate the total height of a battery stack multiply the module height by the number of modules in the stack and add 80mm for the base support except for GFM1500 and GFM2000 modules where 100mm must be added
 - (4) The typical weight of the module excludes the connectors, terminal plates and base support
 - (5) Values refer to 2V cells

Typical Outline Drawing



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