

Technical specifications	MGLFP240280 25.6 V / 280 Ah
Technology	Lithium-Ion next generation LiFePo4
Cell configuration	8S1P
Nominal voltage	25.6 V
Nominal capacity	280 Ah
Nominal energy	7.2 kWh
Cycle Life DOD 80% <sup>1</sup>	> 3500
Specific energy <sup>2</sup>	136 Wh/kg
Weight	53 kg
<b>Discharge</b>	
Discharge cut-off voltage	21.6 V
Recommended discharge current	140 A (0.5C)
Continuous discharge current	280 A (1.0 C)
Maximum discharge current <sup>3</sup>	560 A (2.0 C)
Fuses <sup>4</sup>	300A, fuse inside
<b>Charge</b>	
Maximum charge voltage	29.2 V
Recommended charge voltage	28.4 V
Recommended charge current	140 A (0.5C)
Continuous charge current	280 A (1.0 C)
Maximum charge current (10 s) <sup>3</sup>	560 A (2.0 C)
<b>Configuration</b>	
Series configuration	Yes, up to 16
Parallel configuration	Yes, unlimited
Redundant mode	Yes Using multiple Master BMSs
<b>Environmental</b>	
Operating temperature charge	0 to +45°C
Operating temperature discharge	-20 to +55°C
Storage temperature	-20 to +45°C
Humidity (non-condensing)	≤ 95 %
<b>Mechanical</b>	
Power connections	M8 stud, Max. 15 Nm
IP-Protection class	IP40
Cooling	Air, convection
Dimensions ( l x h x w )	652 x 294 x 193 mm
<b>Safety</b>	
Battery Management System (BMS)	Integrated slave BMS
Balancing	Passive
Compatible BMS master controller	MG Master LV, MG Master HV <sup>5</sup>
Communication	CAN-Bus ( RJ45 or M12 connection)
<b>Standards</b>	
EMC: Emission	EN-IEC 61000-6-3:2007/A1:2011/C11:2012
EMC: Immunity	EN-IEC 61000-6-1:2007
Low voltage directive	EN 60335-1:2012/AC:2014

<sup>1</sup> End-of-Life is 70% of initial capacity at 25 °C.

<sup>2</sup> Including BMS and enclosure.

<sup>3</sup> Duration is depending on battery temperature.

<sup>4</sup> Fuses can be replaced with dummy fuses for high power and high voltage applications. In this case the batteries need to be fuse elsewhere in the circuit.

<sup>5</sup> For systems >144 V, order the M12, HV version.

# LFP Series

## 25.6 V Lithium-Ion batteries



- ▶ Next generation LiFePo4 chemistry
- ▶ Low voltage solutions: Up to 96 V
- ▶ High voltage solutions: Up to 470 V
- ▶ Plug and Play installation: Automatic configuration
- ▶ High charge and discharge rate
- ▶ Redundant option
- ▶ NMEA2000 compatible



**Marine**  
Electric propulsion  
Aux. battery bank

**Industrial**  
Peak shaving  
UPS systems

**Off-grid/Solar**  
Self-consumption  
Off-grid solutions

**Automotive**  
Mobile power sources  
Electric mobility

## 🔋 LFP Series

This robust battery is based on the next generation LiFePo4 chemistry. The advantage of this next generation chemistry is the higher energy density. The modules are very compact and light weight with high charge and discharge capability. The LFP series can be used for a wide range of applications. For example small systems with using only one module or large systems with 16 modules in series.



LFP battery modules 25.6 V - 7.2 kWh

- ▶ Next generation LiFePo4 chemistry
- ▶ Low voltage solutions: Up to 96 V
- ▶ High voltage solutions: Up to 470 V
- ▶ Plug and Play installation: Automatic configuration
- ▶ Extended cycle life
- ▶ High charge and discharge rate



## ⚡ Applications

The LFP series is designed for use in a large range of applications such as mobile, marine and off-grid. For example to power electric motors for hydraulic power packs or electric-hybrid propulsion systems.

## 🔧 Easy installation

Combining the LFP series batteries with the MG Master LV or MG Master HV creates a compact system with reduced wiring and external components. The MG Master LV combines battery monitoring and control, DC distribution, fuse box and shunt in one device which saves installation time and space.



## 🛡️ Safety

Each battery module comes with an integrated battery management system (BMS). This is an intelligent electronic module (slave BMS), that measures all cell voltages and temperatures to control balancing on both battery cell and module level. The battery modules communicate by a galvanic isolated CAN-Bus with the MG Master LV or HV (master BMS), which collects and monitors the status of all battery modules. If the measured values from a battery module exceed the limit, the MG Master will automatically take action to protect the connected battery modules.

## 🔌 Battery management controllers

Protecting, monitoring and controlling a battery system is very important to create a safe, reliable and easy-to-use system. The MG Master LV or HV is the safety and control unit of the battery system. It protects the connected battery modules against over-charging, over-discharging, over-temperature, under-temperature and controls the balancing of the battery cells. Besides a safety function, the MG Master LV or HV monitors and tracks other important parameters to give insight in the battery status and energy consumption. MG's battery system CAN-bus protocol can be used to communicate with other equipment and multi functional display's (MFD's) by NMEA2000 and web interface. The MG Master LV and HV ensure an easy and proper installation. Thanks to the built-in safety components a reliable installation is guaranteed.

### MG Master LV



12 V to 96 V  
150 A to 1000 A

### MG Master HV



144 V to 800 V  
300 A and 500 A

## 🔌 Energy storage systems

System flexibility is one of the main key features of all MG products. Combining LFP series batteries together with one of the Master BMSs creates a powerful system for a complete range of applications. Redundant systems can be made by connecting multiple Master BMSs in parallel to increase system reliability and capacity.

## ⚙️ System example: 25.6 V / 560 Ah / 14.4 kWh / 106 kg

