

Technical specifications	E-Rack Master 25.5 V / 15 kWh	E-Rack Master 50.4 V / 15 kWh	E-Rack Slave 25.5 V / 15 kWh	E-Rack Slave 50.4 V / 15 kWh
Technology	Lithium-Ion NMC (MG HE 300Ah battery)			
Cell configuration	1S2P	2S1P	1S2P	2S1P
Nominal voltage	25.2 V	50.4 V	25.2 V	50.4 V
Nominal capacity	600 Ah	300 Ah	600 Ah	300 Ah
Nominal energy	15 kWh	15 kWh	15 kWh	15 kWh
Specific energy ¹	118 Wh/kg	118 Wh/kg	122 Wh/kg	122 Wh/kg
Weight ⁵	127 kg	127 kg	123 kg	123 kg
Cycle life ²				
DOD 75 % - Default mode	3000			
DOD 95 % - Performance mode	2000			
Discharge				
Discharge cut-off voltage	21.0 V	42.0 V	21.0 V	42.0 V
Recommended discharge current	120 A (0.2 C)	60 A (0.2 C)	120 A (0.2 C)	60 A (0.2 C)
Continuous discharge current	420 A (0.7 C)	210 A (0.7 C)	420 A (0.7 C)	210 A (0.7 C)
Maximum discharge current ³	900 A (1.5 C)	450 A (1.5 C)	900 A (1.5 C)	450 A (1.5 C)
Internal battery fuses ⁴	300 A			
Charge				
Maximum charge voltage	29.4 V	58.8 V	29.4 V	58.8 V
Recommended charge current	120 A (0.2 C)	60 A (0.2 C)	120 A (0.2 C)	60 A (0.2 C)
Continuous charge current	420 A (0.7 C)	210 A (0.7 C)	420 A (0.7 C)	210 A (0.7 C)
Maximum charge current ³	600 A (1.0 C)	300 A (1.0 C)	600 A (1.0 C)	300 A (1.0 C)
Configuration				
Series configuration	No			
Parallel configuration	Yes, unlimited			
Redundant mode	Yes Using multiple Master E-Racks			
Environmental				
Operating temperature charge	0 to +45°C			
Operating temperature discharge	-20 to +55°C			
Storage temperature	-20 to +45°C			
Humidity (non-condensing)	≤ 95 %			
Mechanical				
Power connections	M8 stud, max. 15 Nm			
IP-Protection class	IP40			
Cooling	Air, convection (no fans)			
Dimensions (l x w x h)	690 x 480 x 500 mm			
Safety				
Battery Management System	Integrated slave and master BMS		Integrated slave BMS	
Balancing	Passive			
Compatible BMS master	MG Master LV 150 A, 400 A, 600 A, 1000 A			
Communication	CAN-Bus (RJ45 or M12 connection)			
Standards				
EMC: Emission	EN-IEC 61000-6-3:2007/A1:2011/C11:2012			
EMC: Immunity	EN-IEC 61000-6-1:2007			
Low voltage directive	EN-IEC 60335-1:2012/A11:2014			

¹ Including BMS and enclosure.

² End-of-Life is 70% of initial capacity at 25 °C.

³ Duration is depending on battery temperature.

⁴ Fuses in the Master BMSs are not included.

⁵ Weight includes: 2x MGHE240300, 1x MGMLV480150, 1x E-Rack empty and cables.

E-Rack Series

Mobile and stationary energy storage



- ▶ Modular system design of 15 kWh building blocks
- ▶ Superior energy density
- ▶ Plug and Play installation
- ▶ Redundant option
- ▶ Remote monitoring by MG Energy Portal
- ▶ Bluetooth connection
- ▶ NMEA2000 compatible

Safe. Easy. Reliable

Industrial
Peak shaving
ESS
UPS systems

Off-grid/Solar
Self-consumption
Off-grid solutions
Grid connected systems

Automotive
Mobile power sources
Electric mobility
Special vehicles

E-Rack Series

The new E-rack system is a modular energy storage system based on the HE Series. Each E-Rack can hold up to two HE 300 Ah battery modules. The stackable design gives flexibility and scalability. The racks can be mounted on top of each other up to 4 high to create 60 kWh of energy storage. By connecting multiple racks in parallel energy storage capacity will be extended and adds redundancy to the system.

The E-Rack system can be used for solar energy storage applications, peak-shaving, backup systems and mobile energy supply. The system is scalable from small residential up to large industrial systems.



- ▶ Compact design
- ▶ Integrated battery management system
- ▶ Easy installation
- ▶ Solar energy storage and peak-shaving
- ▶ Scalable and flexible in integration
- ▶ Suitable for stationary and mobile applications

Flexibility and scalability

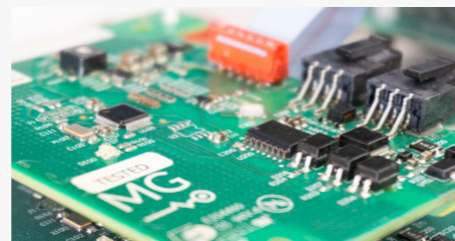
System flexibility is one of the key features of MG E-Rack. The combination of the modular rack and the HE batteries creates a powerful system for a wide range of applications with system voltages of 25.2 V and 50.4 V. Redundant systems of several MWh's can be created when racks are set in parallel.

Redundancy

Reliability of energy storage becomes more important as it is used in off-grid and backup power systems. E-racks can be set up to provide redundancy. In that case each E-Rack contains a master battery management system which is digitally combined to control chargers and inverters. Should one E-Rack fail, it goes to fail safe and the system will keep operating with the other E-Racks.

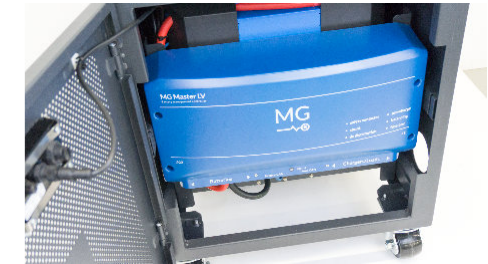
Safety

To ensure a safe operation of the energy storage system, MG developed a sophisticated and innovative battery system. The safety features are implemented by the combination of software, electronics (BMS) and mechanical design. All MG batteries comply with the latest test standards and quality requirements.



Battery management controllers

Protecting, monitoring and controlling a battery system is very important to create a safe, reliable and easy-to-use system. The E-Rack series includes the MG Master LV as battery management controller to ensure safety and control 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 monitors and tracks other important parameters to provide insight in the battery status and energy consumption.



In control of *your* energy

The MG Energy app can connect with the MG Master LV by bluetooth to monitor and control your battery system.

Remote and local monitoring

The MG Energy Monitor is a display that optionally can be added to the rack. This shows all relevant battery information. The integrated WiFi in the MG Energy Monitor connects to the MG Energy Portal to show remotely the status of the battery system and to provide insight in the energy consumption and production.



System example: 50.4 V / 600 Ah / 30 kWh / 248 kg

MG battery system can be connected by CAN-bus to communicate with chargers, inverters and power management systems. The system integrate seamlessly with Victron Energy equipment. Integration with other equipment is also possible, for example with SMA.

