Product Data Sheet

2026-07-07

MG Master LV 24-48V/400A (M12)

MGMLV482400

Description

The Master LV is the BMS for low voltage systems. The main function is protecting the connected batteries. The internal BMS collects the data and monitors all essential battery parameters. This way, the Battery Management System preserves the health of your system. The BMS will always make sure that the parameters will stay within a safe operating window. When exceeding the safe operating window, the internal safety contactor opens automatically. This will disconnect all chargers and loads. As a result, the Master LV guarantees a safe and reliable operation.

In addition, the Battery Management System balances the cells of the entire battery installation. This maximizes the capacity and increases the battery cell lifetime. Each MG battery has a built-in slave BMS. This monitors all individual cells in the battery module. The Master LV collects all this data, and intervenes when needed. This way it protects all batteries.

Product downloads

https://downloads.mgenergysystems.eu/masterlv

Specifications

Environmental

Humidity (Non-Condensing)	≤ 95 %
Operating Temperature Range	-20 to +50 °C

IO

Allow-to-Charge (Relay Output)	0.8 A at 60 Vdc, potential free
Allow-to-Charge (Switched Voltage)	13.5 V / 1 A Overcurrent protection Short circuit protection
Allow-to-Discharge (Relay Output)	0.8 A at 60 Vdc, potential free
Allow-to-Discharge (Switched Voltage)	13.5 V / 1 A Overcurrent protection Short circuit protection
Aux. Output	13.5 V / 1 A Overcurrent protection Short circuit protection
Emergency Switch Connection	Emergency shutdown to open main contactor hardwired.
External Status Signal	13.5 V / 140 mA Overcurrent protection Short circuit protection
Programmable Contact (Relay Output)	0.8 A at 60 Vdc, potential free

Mechanical

Data Connection	CAN Bus M12
Enclosure Material	ABS
Height	117 mm
IP-Protection Class	IP22
Length	426 mm
Weight	4.9 kg
Width	225 mm

Standards

Approvals	IEC-EN62619 (ES-TRIN)
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
RoHs	EN 50581:2012

Technical Specifications

Main Safety Contactor Current	400 A
Maximum Number of Batteries Connected	48 battery modules of type RS 96 battery modules of type LFP, HE, UHE, HP
Maximum Pre-Charge Capacity	1 F at 24 V 250 mF at 48 V
Power Usage Active	8.7 W
Power Usage Standby	73 mW at 26.2 V, 138 mW at 52.4 V
Supply Voltage Range	18 - 58 Vdc
System Voltage	24 V 48 V

The specifications provided are for informational purposes only and are subject to change without notice. While every effort has been made to ensure the accuracy and completeness of the specifications, MG Energy Systems assumes no responsibility for any errors or omissions.

Logistics

HS code	8537109199
Country of origin	Netherlands
Shipping weight	5.5 kg
Classified as dangerous goods	No