

# Magic 12/12-20



Product code: 81300400

The Magic models can regulate the voltage both up and down to ensure an optimal voltage stabilisation, even when the battery voltage fluctuates due to heavy loads. The galvanic isolation between input and output prevents disruptions to, for instance, communication equipment.

- Professional use.
- Converter and 3-step battery charger.
- Parallel switchable.
- Adjustable and programmable output voltage.
- Voltage stabilisation for a longer lifespan of halogen lights, etc.
- Dimmer function for Mac & Magic models.

The isolated Magic models provide galvanic isolation between input and output circuits.

Features:

- Extra touch-proof.
- Interference suppression for sensitive equipment.
- Available with negative or positive grounding.

### **Programmable via desktop or laptop or PC**

Remote control the Magic via your laptop or PC or configure your personal preferences. The device has a communication port and easy installation with a PC-Link and MasterAdjust software.

### **Energy-saving dimmer function**

Many standard light dimmers convert part of the energy to heat and also lose unnecessary energy. The Magic converters regulate the power supply efficiently and without excessive heat build-up, for optimal safety (multiple converters can be used for multiple lamps).

### **Parallel operation**

Lots of consumers on board?

The parallel configuration of several units will provide you over 100 amperes. Advanced high-frequency technology with modern microprocessors ensures minimum power loss when switching from 24 to 12 V and vice versa.

### **For the toughest tasks**

The Magic DC-DC converters are designed for the toughest conditions for professional, semi-professional and recreational purposes. Even under the most extreme conditions, these DC-DC converters operate faultlessly, giving you round-the-clock output when necessary. The sustainability and technologies that underpin the Mastervolt concept have long been proven in practice. With an MTBF of 280,000 hours at full capacity and 24/7 use, the DC-DC converters are ideal for the toughest tasks and any situation that requires a reliable power supply.

### **Magic as power supply**

The Magic models can be fully used as a stabilised power supply: From 12 to 24 V, from 24 to 12 V or from 24 to 24 V. Inputs and outputs are galvanically isolated.

### **Solid Connections**

Galvanized brass connection block with screw terminal or chrome-plated fast-on for DC in/out for the Mac/Magic models.

### **3-Step battery charger**

Connected to the 12 or 24 V service battery, the Mac/Magic series can also be used as an advanced 3-step battery charger for Gel, AGM, flooded or Lithium Ion batteries.

# Specifications

## General specifications

Output voltage	10-15 V
Nominal output voltage (adjustable with MasterAdjust)	13.6 V
Output voltage dimmer (adjustable with MasterAdjust)	4-13 V
Output voltage stabilisation	2 % at extremes of temperatures, load and input
Output voltage ripple (peak peak)	max. 1 %
Max. output power	300 W
Nominal output power	300 W
Max. output current	20 A
Output charge current (3-step mode)	16 A
Nominal input voltage	12 V
Input voltage range	11-16 V
Input voltage range (3-step charge mode)	12-16 V
Lower input set point (adjustable with MasterAdjust)	10 V
Delay lower input set point (adjustable with MasterAdjust)	30 sec.
Galvanic isolation	yes
Voltage limited	yes
Efficiency	>90 % (nom. input voltage, full load); peak 92 %
Parallel configuration	yes
Dimmer function	yes, by external momentary switch via fast-on connection, to be activated by DIP switch setting
Alarm contact	yes, through MasterBus
Dimensions, hwxwx	227 x 154 x 81 mm 8.9 x 6.1 x 3.2 inch
Weight	1.8 kg 4.0 lb
Compliance	CE

## Technical specifications

No-load consumption	< 2 mA
Battery types	flooded, Gel, AGM, spiral, Lithium Ion, traction, user defined
3-Step charge option	yes (DIP switch settings)
DC consumption	< 115 mA
Connections	screw terminals (max. wire size 16 mm <sup>2</sup> / AWG5)
Temperature range (ambient temp.)	-25 °C to 60 °C, derating > 40 °C -13 to 140 °F
Cooling	maintenance free vario fans
Protection degree	IP21
Protections	against over load & over temperature
MasterBus compatible	yes, in combination with a MasterBus Serial Interface