

DC-DC converter Magic (24/24-20)



PN 81300200

Efficient cooling (microprocessor controlled fan)

Stabilisation of the voltage

Longer life span of halogen lights

Battery charger function

Dimmer function for atmospheric lighting

Galvanic isolation of the input and output

Completely interference-proof

Programmable via a desktop or laptop PC

Description

This DC-DC converter Magic provides both full galvanic isolation between different systems onboard and a controlled output voltage. The difference between our Mac and Magic range of DC-DC converters is the galvanic isolation. This is indicated by the addition of 'gi' in the name Magic compared to Mac.

The converter uses switch-mode technology, which results in a lightweight, safe, reliable and efficient unit. Built in a rugged aluminium extrusion body, the converter is completely shock proof. The unit generates little heat, which makes it easy to find a convenient location for installation. The corrosion-proof casing takes care of cooling together with a temperature-controlled fan. The inlets and outlets feature complete galvanic isolation which makes them completely interference-proof. If you have many power-consuming devices onboard, the parallel use of several units can allow capacities of 40, 60 or more Amps.

The Magic model can be used to operate in step up mode and step down mode. But it brings you even more benefits, like light dimming and battery charging. The output voltage can be controlled by an external button (not supplied) to be use for the dimming of lights. Battery charging is also possible, for example to charge a small 24V battery bank from a large 24V bank.

Specifications

INPUT SPECIFICATIONS

Nominal input voltage	24V
Input range (full output specs)	19-32V DC
Input range (3-stage charge mode)	24-32V DC
Input range (no defects)	0-35V DC
Lower input (set point)	20V DC (adjustable with MasterAdjust software)
Delay lower input set point	30 sec. (adjustable with MasterAdjust software)

OUTPUT SPECIFICATIONS

Nominal voltage	27.2V DC (adjustable with MasterAdjust software)
Voltage adjustable	24-28.5V DC (adjustable with MasterAdjust software)
Output voltage dimmer	8-26V DC (adjustable with MasterAdjust software)
Stabilised	2% at extremes of temperatures, load and input
Ripple	max. 1% peak peak
Maximum power	580W
Nominal power	540W
Current max. (derating >40°C, 5%/°C)	20A
Charge current - 3-step mode	16A

GENERAL SPECIFICATIONS

Ambient operating temperature	0°C to 60°C (derating above 40°C, 5% per °C); in practice: 20°C to 60°C
Storage temperature	-25°C to 85°C
Operating humidity	95% max. (non condensing)
Galvanic isolation	yes
Voltage limited	yes

3-step battery charge option yes (DIP switch setting)

Efficiency 90% (at nom. input voltage, full load); 92% peak

No load consumption <115mA

PROTECTIONS

Over current yes

Over heat yes

OPTIONS

Dimmer function yes (by external momentary switch via push on connection, to be activated by DIP switch setting)

Alarm contact yes (push on connector)

Communication quasi RS232, modular RJ12 connector to alter setpoints and to change characteristics (optional interface required)

MECHANICAL

Connections input/output screw terminals (max. wire size 16 mm²/AWG5)

Dimensions (H x W x D) 227 x 154 x 81 mm

Weight 1.8 kg

Cabinet anodised aluminium (Strapton ABS blend)

IP-rating IP21

Accessories



Serial PC Link



Serial PC Link (galvanically isolated)



MasterBus-Serial Interface