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## DCDC Equalizer IP 67



Art 0060370 IP  
Art 0060372 IP

2016-05-01	Utg 2	P101-053				
MH	DCDC Equalizer IP67				006037X IP	

## General description

The Primepower DCDC Converters is a high efficient, intelligent and very compact DCDC converter. Suitable for all applications where a highly efficient conversion of DCDC voltage are required. The switch mode design includes the latest component and technology in power conversion. The internal electronics controls the output and input current and prevents the device from overcurrent, short circuit and overload.

The product is suitable in marine, automotive, industrial applications.

## Features

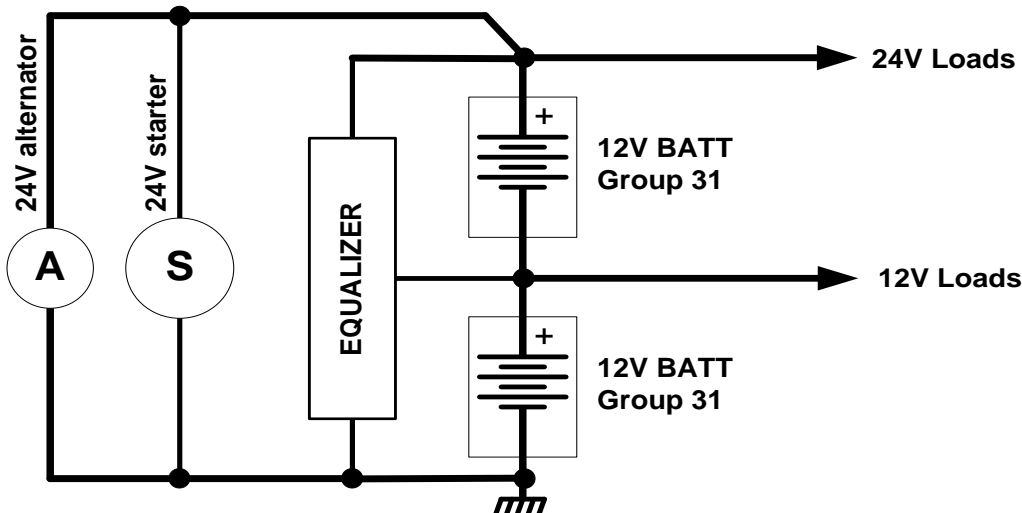
- Latest MosFET technology
- High efficiency, >96%, 98% at full power, cool running
- Quiescent current < 6mA
- IP67
- Small and easy to install

## Part number / order information

Primepower part number	Specification
0060370IP	24V-12V 30A 500W
0060372IP*	24V-12V 100A 1500W
*Q4 2017	

## Theory of operation

The Primepower DCDC equalizer will keep the charging balance between 12Volts battery serial connected in a 24Volts system. The output voltage will always be kept at a level of 50% of the supplying voltage.



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The input DC voltage conversion is done by a high end topology with high end components. This secure the high efficiency of >96%. The low weight and small size keeps the installation simple. The efficiency results in a very low surface temperature (less 55 degrees) on the casing.

All models can have an on/off function to remotely control of the operation. Easy to install with loose cable ends, suitable connector can be connected.

## Descriptions of features

The complete electronics is mounted in an aluminium housing. The electronics are sealed completely with potting resin. Water, oil or other substances will thereby be effectively kept out. The converter can be mounted in harsh environment. With stand vibration and environment according to automotive standard ISO 16750.

## Electrical specifications

Equalizer 24-12 20Amp			0060372 24V-12V 300W	Unit
Characteristics		Conditions	Typ	
$V_o$	Output voltage	50% of V in	(14,4) +/- 0,5%	
$V_{in}$	Input voltage	$V_{i\ nom}, I_{o\ nom}$	17,0	40.0
$I_o\ L$	Output current limit	20Amp	Yes	

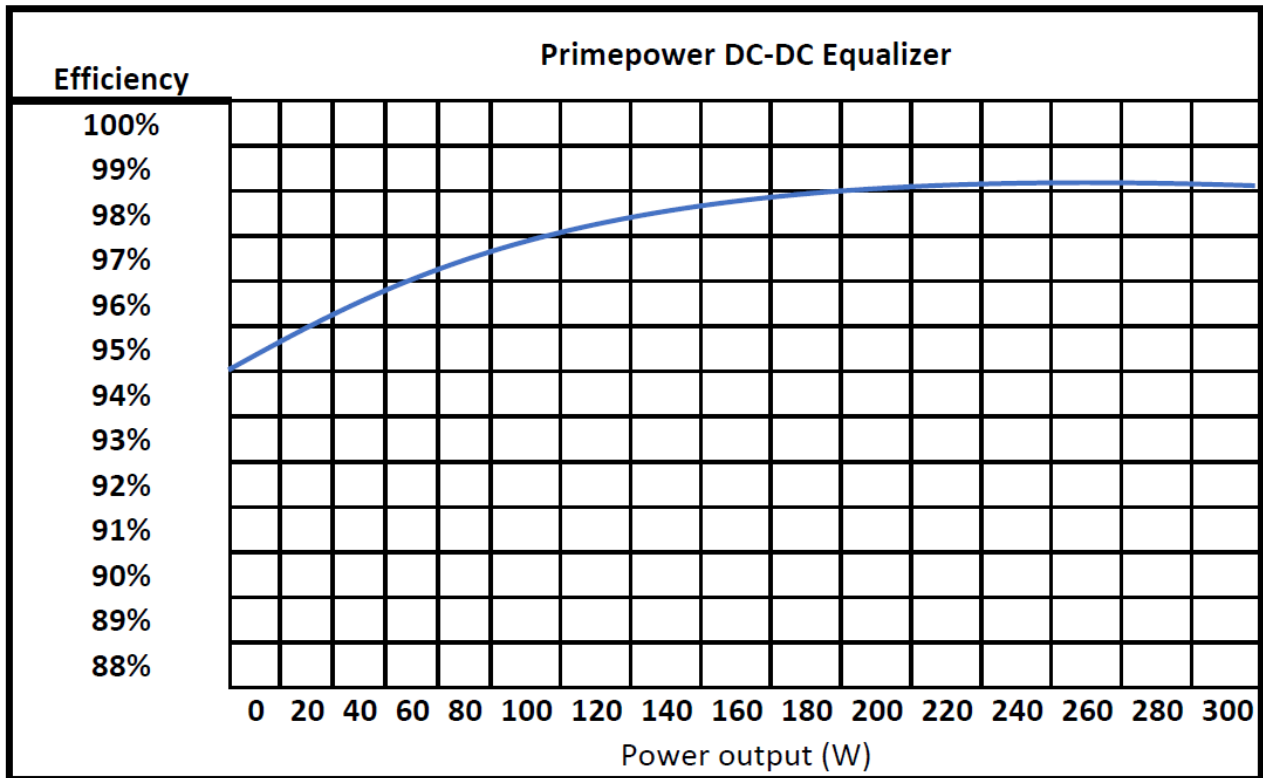
Equalizer 24-12 30Amp			0060373 24V-12V 400W	Unit
Characteristics		Conditions	Typ	
$V_o$	Output voltage	50% of V in	(14,4) +/- 0,5%	
$V_{in}$	Input voltage	$V_{i\ nom}, I_{o\ nom}$	17,0	40.0
$I_o\ L$	Output current limit	30Amp	Yes	

Equalizer 24-12 60Amp			0060374 24V-12V 750W	Unit
Characteristics		Conditions	Typ	
$V_o$	Output voltage	50% of V in	(14,4) +/- 0,5%	
$V_{in}$	Input voltage	$V_{i\ nom}, I_{o\ nom}$	17,0	40.0
$I_o\ L$	Output current limit	60Amp	Yes	

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## Electrical Characteristics

Unless otherwise stated, conditions apply to full temperature range and full input voltage range.



## Environmental Specifications

Parameter	Level	Conditions / Notes
Operating temperature	-40°C to +70°C	reduced output from +50°C
Storage temperature	-40°C to +95°C	
Humidity	0 – 100 %RH	
Water	IP67	
Mechanical Vibration	40G	according to standard IEC 60068-2-6
Handling Shock		may show damage
Transient voltage		meets ISO7637-2
Isolation voltage (isolated versions only)		>500Vrms

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## Mechanical specifications

### Models:

The unit utilizes loose end cables, 6mm<sup>2</sup>, 50cm  
Four mounting holes with diameter of 8,2 mm.

**Finish:** RAL 6007, Aluminium housing

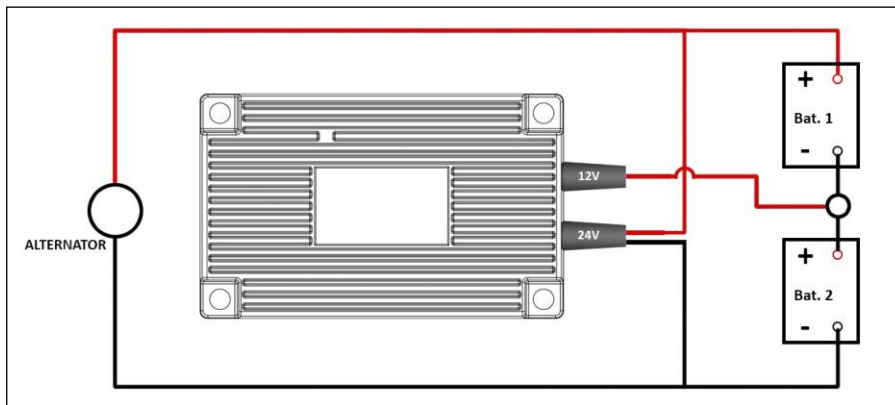
**Mounting Slots:** 4x, Accepts M8

**Weight:** 820gr

**Unit Dimensions:** 150 x 93 x 31 in mm

## Connection and installation:

Mount the DCDC with cable downwards. This will maintain an efficient cooling and a maximum output current during the use.

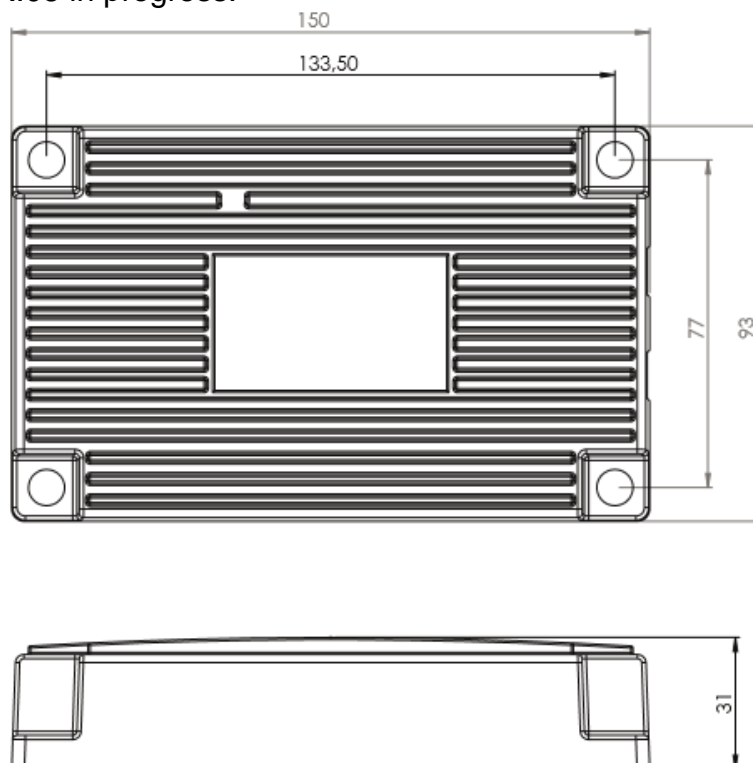


## Approvments

EMC Directive, 2014/35/EC

MIL 461, 1275 in progress.

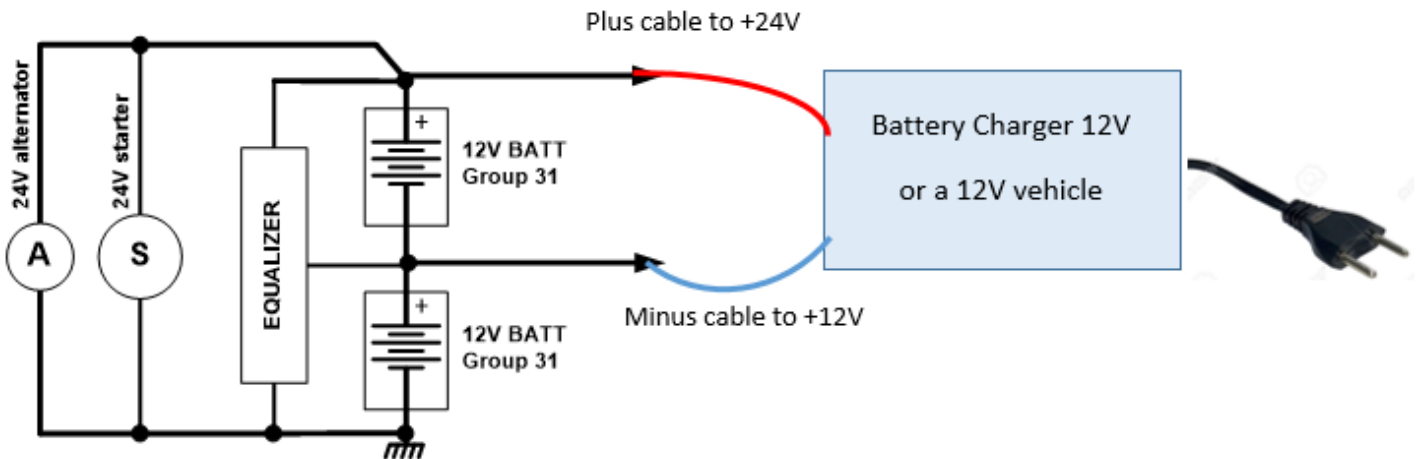
E mark ECE10R.05 in progress.



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## Jumpstart function from 12Volt

The Equalizer has an inverted function which allows to fully charge both batteries from a single 12V source. Simply connect a 12V charger to the HSB battery as showed below. Both batteries will be equally charged. This feature will also allow to jump start a 24V vehicle by connect it to a 12V vehicle. The current is limited to 30Amp.



### Cable connections:

**Single RED** Cable 6mm<sup>2</sup> to + HSB (+ 24V)

**Paired RED and BLACK** 6mm<sup>2</sup> to LSB (12V)

**Green thin** cable "open collector" will be active when internal temperature is reducing the output (>30Amp), condition appears when overloaded. 10mA maximum current.

**RED thin** lead: on/off function, looped at delivery. If cut the EQ will turn off. Only in use if the device needs to be remotely controlled.

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