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LEAB Voltage converter 0037195



General description

This LEAB Voltage conditioner is designed for use with nominal 12V DC systems. The Voltage Booster converting the input voltage from a battery or an alternator (or other dc supply) to an output level with appropriate voltage level to supply the connected load.
The product is suitable both in marine, automotive and industrial applications.

Features

- High efficiency, Cool running normal operation
- Overheat protection
- Waterproof and shock resistant, IP67
- Compact metal enclosure
- Small and easy to install

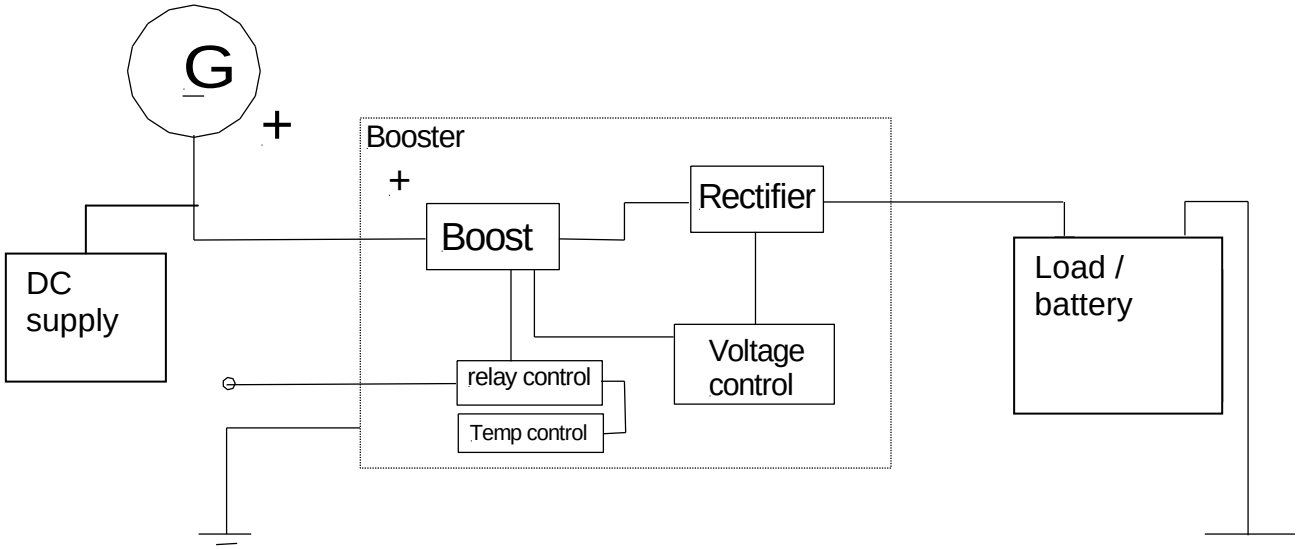
Part number / order information

Primepower part number	Max current in	Nom voltage in / out
0037195	16A	12V / output 28,2V/8A

Theory of operation

The input voltage is converted to the output voltage level. This conversion is made by a step up construction and works with a very high efficiency. The output voltage is kept stable within the input voltage specification. If a battery is connected on output the charging characteristics is defined as a IU. Depending on the input voltage condition, the output current can reach up to 8 amp.
The Voltage converter is turned on and off by an internal relay. The relay is controlled by the thin red lead.

Block Diagram



Descriptions of features

The normal operation is very effective and cool running. The cooling is convection only. If mounted in poor ventilated or airtight compartments the surface heat may raise significant. The unit has a build in overheat protection. This will turn the unit off if the surface temperature reaches approx 60 degrees.

The complete electronics is mounted in the metal enclosure and totally sealed in polyurethane. Water, oil or other substances will thereby be effectively kept out. The Voltage conditioner can be mounted in very harsh environment such as engine-compartment due to the encapsulation.

Electrical specifications

ABSOLUTE MAXIMUM RATINGS

Maximum ratings establish the maximum electrical rating to which the unit may be subjected without damage

Parameter	Value	Notes:
Max Current		
Model 0037195 Nom current	20Amp (restricted by fuse) 8Amp at output voltage 28,2V when input voltage is between 12-15V.	
Fuses, mounted on cable	20Amp	
Stand off voltage	40V	Note 1
Enclosure Temperature	60°C	
Operating Temperature Range Storage Temperature Range	-30°C - +60°C -55°C- 85°C	

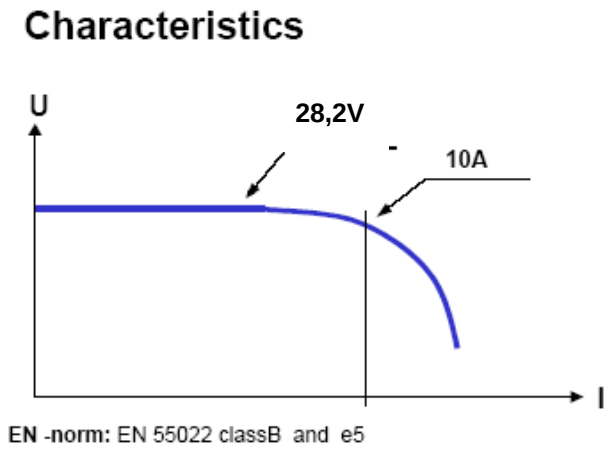
1. This is maximum voltage applied between INPUT and GND that the unit will standoff without causing damage to the unit. 0037141

Electrical Characteristics

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

Characteristic	**MIN**	**TYP**	**MAX**	**Unit**	**Notes:**
Input Voltage Turn ON Input Voltage Turn OFF	9 9	12 12	16 16	V V	
Input Over Voltage			29	V	
Output Voltage	28,0	28,2	28,4	V	
Quiescent Current off			< 1	mA	
Quiescent Current on			170	mA	

Output characteristics at input 9V-15V



Environmental Specifications

Parameter	Level	Conditions / Notes
Humidity	0 – 100 %RH	
Splash	Yes, IP67	
Pressure Wash	Yes, IP67	
Mechanical Vibration	40G	according to standard IEC 60068-2-6
Handling Shock	Will Show Damage	

Mechanical specifications

Terminals:
The unit utilizes three 1,5mm2 cupper cables to make the power connections. Each cable is fitted with cable shoe 1,5 x 8.
The control connection on/off are 0,75mm2 RK cupper cable with cable shoe 1,5 x 8
Overall cable lengths is 1500mm.

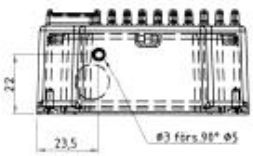
Finish: Grey RAL 7035 powder coated aluminium enclosure

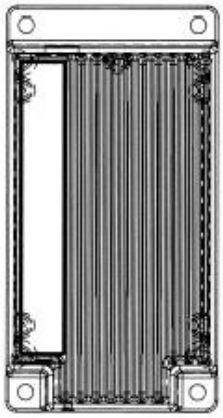
Potting material: Polyurethane

Mounting Slots: 4X, Accepts M4-M6 (6mm diam)

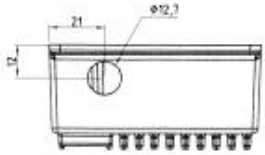
Weight: 1,2Kg

Unit Dimensions: 198 x 98 x 46





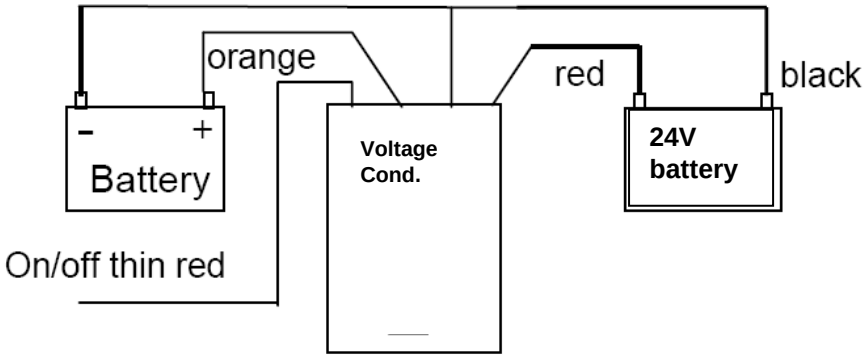




Connection and installation:

Starter battery or alternator – the "giving side"

Charged battery



Install the Voltage conditioner if possible vertical with the cable connectors down.

Approvments acc : EN 55022 CE and **e** mark e5 0086

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