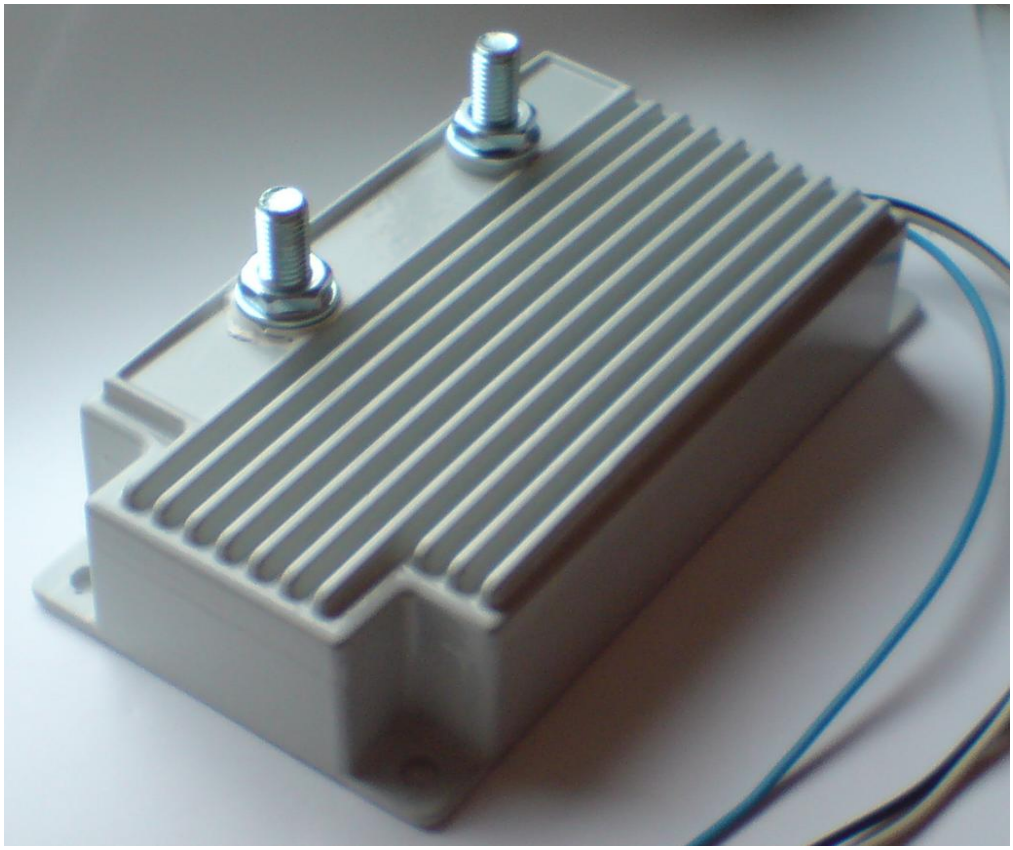
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LEAB CDR 200 40A / 100A



General description

This Primepower product is designed to separate batteries in a dual battery system. When connected to an alternator or other charging device the charging current is highly effectively distributed with almost no voltage drop at all.
The product is suitable both in marine and automotive applications.

Features

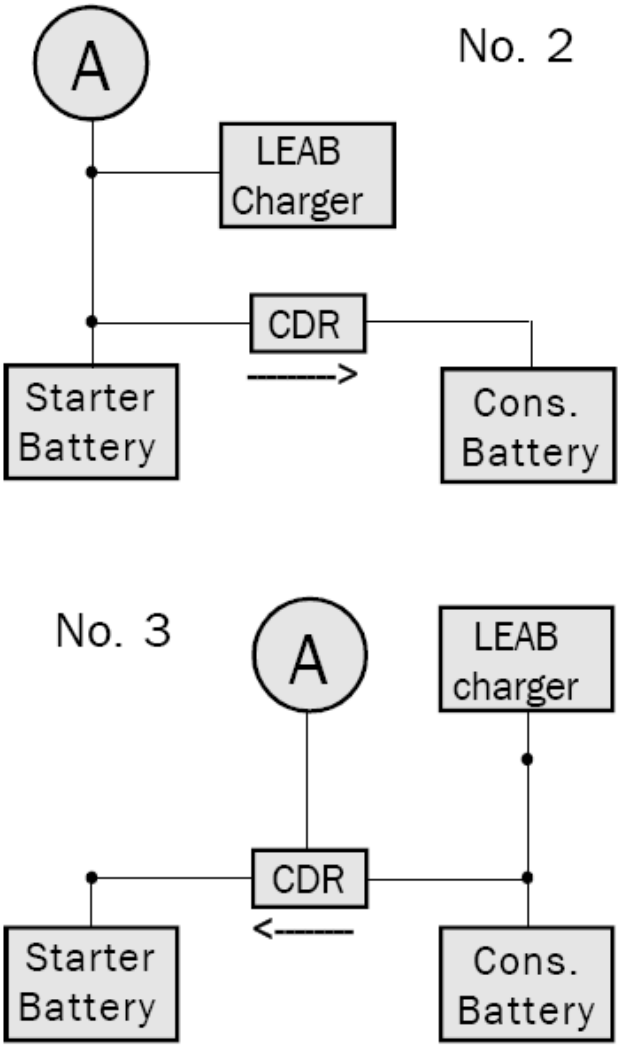
- Latest MosFET technology
- Micro controlled function
- Current limited
- Automatic selection between 12V or 24V systems
- Low voltage drop, Cool running normal operation
- Cross over function
- External indication
- Starting current supply to alternator
- Waterproof and shock resistant, IP67
- Powder coated Metal enclosure
- Small and easy to install

Part number / order information

Primepower part number	Max current (Alternator size)
0171450	40A (200A)
0171460	100A (200A)

Theory of operation

The Primepower CDR is a highly effective device when using a double battery system. The voltage drop occurred by use of a conventional diode splitter is eliminated by the use of a more sophisticated technology based on Mos FET transistors. The result is maintained charging voltage in amplitude and a cool running system with very high efficiency.



Block Diagram

Descriptions of features

Cross over function:
If starter battery become low the Battery 2 can be used to start the engine.
By connect the blue wire through a momentary switch to minus a current will flow backwards from battery 2 into battery 1. After a short while there will be enough energy in starter battery to engage the starter engine.

Remote Indication
If the grey wire is connected to an LED it will be illuminated when the device is active

Descriptions of features (cont.)

Waterproof and shock resistant, IP67:
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 CDR can be mounted in very harsh environment such as engine-compartment due to the encapsulation.

The CDR has an internal temperature fuse. If a higher load than nominal current (40/100A) is applied on the secondary side or if the surrounding temperature is more than 40 degrees, this temperature fuse may trip, and the unit stops to function. As soon as the unit is cooled down internally the device will start.

Electrical specifications

ABSOLUTE MAXIMUM RATINGS

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

Parameter	Value	Notes:
Output Current Model CDR 200	200Amp	Note 1
Stand off voltage	32V	Note 2
Heat Sink Temperature	95°C	
Operating Temperature Range Storage Temperature Range	-20°C - +50°C -55°C- +85°C	Note 3

Note
1. The current through the unit is limited to 40A(0171450) or 100A(0171460)
2. This is maximum voltage applied between INPUT and GND that the unit will standoff without causing damage to the unit.

3. The unit generates a significant amount of heat . When determining a mounting location it is important to account for this heat. Adequate ventilation must be provided.

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	13,0/26	13,5/27	13,7/27,4	V	
Input Over Voltage			32	V	
Quiescent Current off			<1	mA	
Quiescent Current on			<25	mA	
Current handling capacity		40		A	0171450
		100		A	0171460
Max. voltage drop 30A:		30		mV	0171450
Max. voltage drop 100A :		150		mV	0171450
Max. voltage drop 30A:		30		mV	0171460
Max. voltage drop 100A :		150		mV	0171460

Environmental Specifications

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

Mechanical specifications

The unit utilizes two M8 bolts to making power connections. Each bult is designed to accommodate a cable shoe with a thickness of maximum 8mm.
The maximum torque when mounting the hexnut is 7Nm This prevents rotation of the head when tightening the nut.
The control connections are 0,75mm2 RK cupper cable with loose ends. Length 0,5M

Finish: Grey RAL 7035 powder coated aluminium

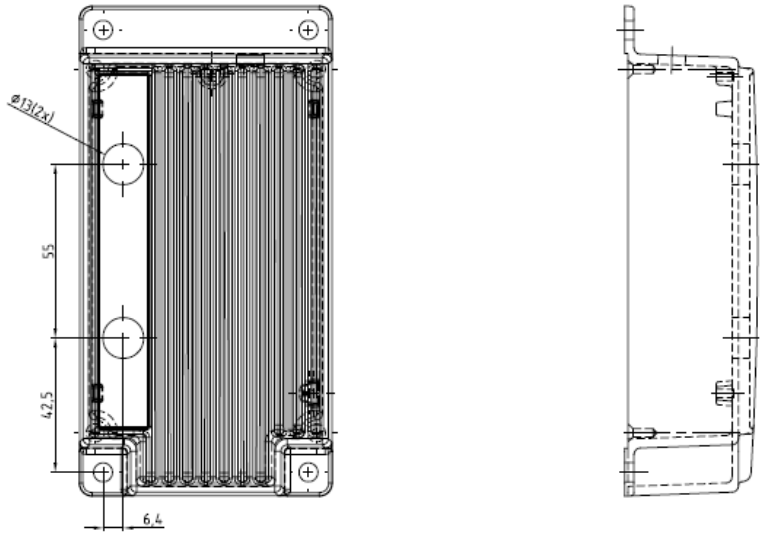
Potting material: Polyurethane

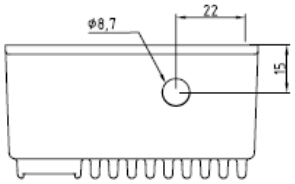
Terminals: Galvanized steel bolt with hex nut.

Hardware Included: Bolts – 3X, M8 Hex Head, Galvanized Steel

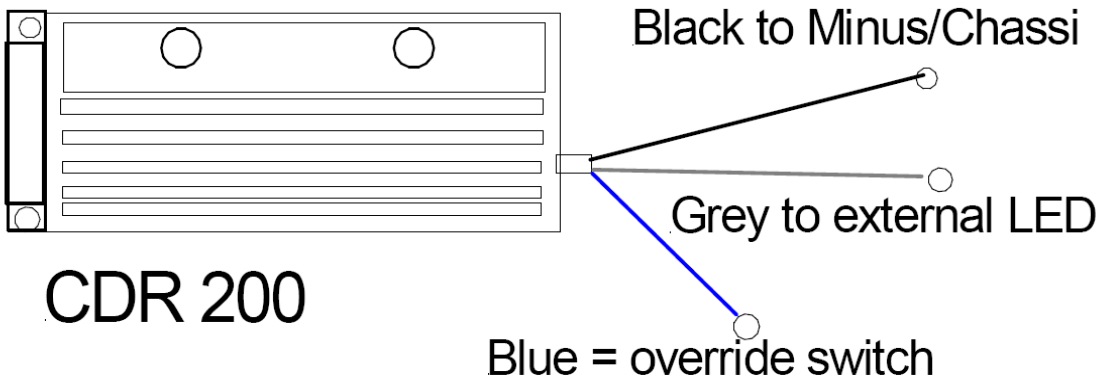
Washers – 3X, M8, Galvanized Steel

Maximum Torque: 7NM
Mounting Slots: 4X, Accepts M4-M6 (6mm diam) Hardware (not included)
Weight: 1,1Kg
Unit Dimensions: 155 x 80 x 43 (Height 63mm including bolts)





Connection and installation:



English

Always connect the black lead to minus. If not there will be no function

The external LED will lit up when the secondary battery is charged.
This function needs an external LED -not included . (Output 5V / 5mA)

Blue -if found applicable- shall be connected via a momentary switch to minus/chassi. When activated the internal channel is open and the primary and secondary side will be connected. This will enable use of the secondary battery for starting the engine.

Installation hints:

The device has an internal temperature fuse. If a higher load than nominal current (40/100A) is applied on the secondary side or if the surrounding temperature is more than 40 degrees, this temperature fuse may trip, and the unit stops to function. As soon as the unit is cooled down internally the device will start.
The unit can -with high loads- generate significant amount of heat. When determining a mounting location it is important to account for this heat. Adequate ventilation must be provided.

Safety regulations and measures

Install the device according to the stated instructions.
Never use the CDR at a location where there is danger of gas or dust explosions.
Connections and safety features must be executed according to the locally applicable regulations.
Use cables with appropriate size wire and keep the cable connections as short as possible. Use reliable terminals and fasten the bolts tightly, but do not over torque

Approvments according to
Low Voltage Directive, 2006/95/EC, the EMC Directive, 2004/108/EC, including amendments by the CE marking Directive, 93/68/EEC

CE