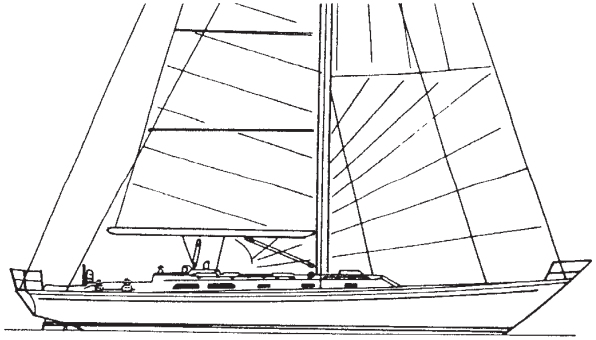
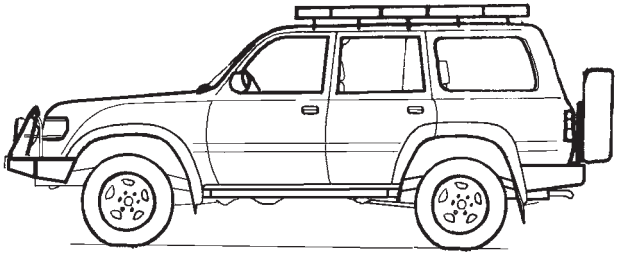


IBS Intelligent Battery System

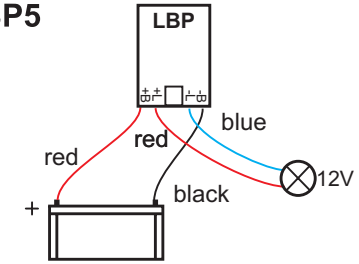
the ultimate Battery System

Low Battery Protection



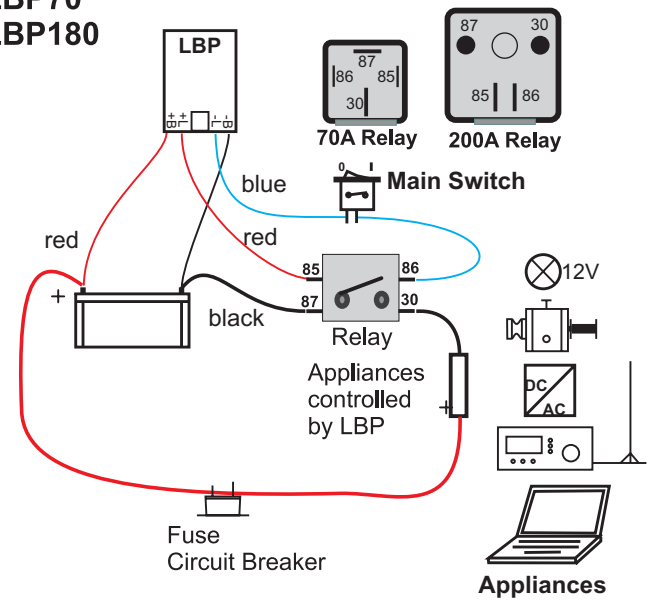
Installation

Wiring LBP5



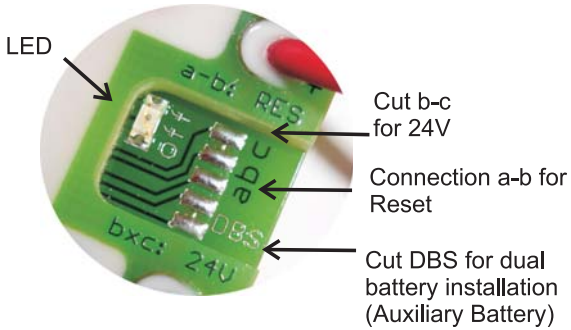
Appliances:
- 12V energy light
- heating system
- charger
- uP-input (pull up)

Wiring LBP70 LBP180



Users Manual

Features
The Low Battery Circuit disconnects the load at 11.6V, the red **LED off** turns **on**. If the battery is recharged the load is turned on automatically if the voltage reaches 12.1V, the red **LED off** turns off.



Interface

Change Voltage Setting 12V=>24V
If the junction between the two **solder pads b and c** is cutted the unit works in 24V.

Instal manual Reset
At the two **solder pads a and b** a remote reset switch may be installed. If the LBP did disconnect the load the unit can be resetted by actuating the remote reset switch. The load stays on until the low battery level is reached again. If the unit is not resetting anymore the battery level is low and the battery has to be recharged first.

Dual Battery Set-up
The low battery protection device may be installed ons the starter battery (SBS = Single Battery System) on the auxiliary battery in a Dual Battery System (DBS) with a 0.3V lower cut off level. Therefore the solder bridge DBS on the interface has to be cutted.

Cutting/reconnecting solder bridges on interface
The solder bridges on the print should be cutted with a fine cutter. A cutted linkage may be reconnected annytime with a soldering iron (placing a solder bridge). If you are not familiar with such work, please contact your dealer or IBS.

Installation Instructions

General note
A 10A switch in the red supply wire (+B) may be used as main switch to shut-down all accessories if not in use. (Recommended in applications with LBP70 and LBP180). Depending on battery size and condition an automatic reset may occure until the propre shut-down level is reached.

LBP5
The LBP is configured for the supplied wiring length of +B (red) and -B (black). Use this two wires to do the connection to the battery without shortening. If the wiring has to be extended cut this two wires +B and -B close to the module and extend with 1.5mm2 (for 3m extension) or 2.5mm2 (for 5m extension). The wires **+L** and **-L** can be shortened or extended without any restrictions. The module is fully protected with electronic circuitry against overload and short circuit.

LBP70 und 180 with Main Switch
No restriction apply to the LBP wiring. Use adequate power wiring for the load current: 80A => 16mm2, 120A=> 25mm2, 150A=> 35mm2. The power wiring should be fused or equipped with a circuit breaker. **If vehicle is left unatended for longer period, use the main switch to disconnect all load.**

IBS Intelligent Battery System
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www,ibs-dual-battery.ch
www.ibs-inverters.ch

MADE IN SWITZERLAND

Distributor:

LBP_e_5 / 14.08.2006

Applications

LBP5
Low battery protection for loads up to 5A.
The output -L (open collector) can used to drive a load (light, small appliances) directly. Additionally this output can be used in combination with a pull up resistor to send an alarm signal to a uP system or SMS box. For various applications the switching levels can be adjusted. Restricted to technical people with required equipment,

LBP70 and LBP180 with Main Switch
With this protection circuits heavy loads can be supervised and disconnected if energy levels are getting low.

Technical features
The LBP is equipped with a time delay to protect the LPB from turning off while a heavy load (fridge) surges. The LBP is protected against wrong polarity, over load, short circuit, reverse feeding and spike pulses. The unit is manufactured in Surface Mount Technology (SMT) in combination with the latest Hybrid Cooling Technology (HCT).

Additional IBS Products:
Dual battery systems for vehicle applications
Ultra Sine Inverter 150W-800W 12V and 24V
Mobile and portable solar systems

Warranty: 2 year

This warranty shall not apply to any product which has been subject to any misuse, negligence, accident or has been used (or opened, broken seal) for any other purpose than was designed

Warranty is restricted to the repair or replacement of a defective unit.

Specifications

Supply Voltage	8-16V u. 16-32V
System Voltage	12V/24V
Consumption Modul LBPxx	1mA
LBP5 12V or 24V	
Load current electronically protected	7A
Switch level SBS (off/on)	11.6V/12.2V
Switch level DBS (off/on)	11.3V/11.9V
LBP70/12V with relay	
Load current relay	70A
Switch level SBS (off/on)	11.4V/12.0V
Switch level DBS (off/on)	11.1V/11.7V
Coil current relay 70A	0,13A
LBP180/12V with relay	
Load current relay	200A
Switch level SBS (off/on)	11.4V/12.0V
Switch level DBS (off/on)	11.1V/11.7V
Coil current relay 180A	0,6A
Recommended battery types	deep cycle
Temperature range	-20°..+80° C
Casing	GFK, Silicone
Dimensions	78x41x8 [mm]
Sealing	IP65

Wires:

+B red:	Battery Plus
+L red:	Load Plus
-B black:	Battery Minus
-L blue:	Load Minus, OC, Relay-control

CE

Protection Circuits:
- wrong polarity
- overload, short circuit
- reverse feeding
- surge and spike pulses

No liability for damages as a result of misuse, negligence, accident or wrong installation will be accepted from IBS!