2 Battery and DC Powered Series

2.1 ML-PB-DC-LI

The ML-PB-DC-LI -Power Board is a multifunctional, high efficiency, low noise, power supply. It consists of a single PCB, to be mounted in YDOC ML-type Data Logger (It is delivered with a cover)

A D-Size 3.6V Lithium battery powered is best suitable for monitoring with longer log intervals >=1h and transfer intervals >=4h.

Equipped with D-size holders to host up to 3 Lithium SAFT LSH20 batteries safely, with a combined lossless capacity of 39000mAh.

Properties:

1) 8 - 28 Volts DC auxiliary input power option
2) Lithium Battery option

2.1.1 8- 28 Volts DC auxiliary input power (Lithium Power Backup)

The power supply is converting the input source to a, stable and clean, output voltage.
A special super-low-loss diode is mounted, for isolation of the batteries. I.E., that no current is drawn, accidentally, from the batteries, into the attached power supply. The output voltage of the power supply is slightly higher than the unloaded voltage of the lithium battery, so no current is taken from the battery, when the board has input power.
A green LED indicates the presence of the input power.

So:

1) When both, (lithium)battery and auxiliary power are connected, the power will be taken from the auxiliary power only, and thus saving the battery.
2) When the power board is connected, but NOT powered, the ML- Data Logger will still continue to work, and draw it's current from the Lithium battery. No extra current is wasted into the power supply, by means of the diode.

So to increase the availability of your system it is advised to use both battery and Auxiliary power.

Protection

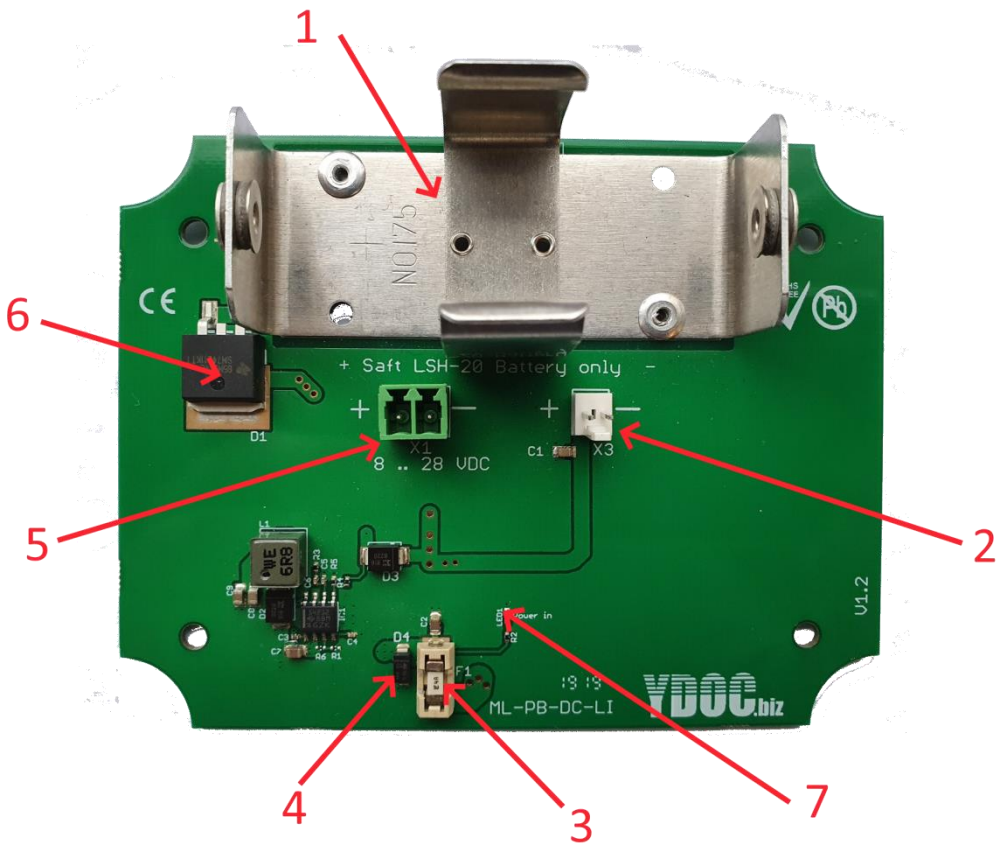
The power board input circuit is equipped with a transzorp of 30 Volts, and a fuse of 4 Amp. This protects the connected Data Logger from high input voltages.

Beware of exposing power board to high voltages, as it will damage the fuse. Also, when the polarity of the input-source is wrong, the fuse will blow. But your connected Data Logger is protected in both cases.

Normally the fuse will never blow, during the lifetime of the instrument.

2.1.2 Overview ML-PB-DC-AA (Lithium and Auxiliary) Power Board

Underneath, a picture is shown of a ML-PB-DC-AA Power Board with Lithium Battery and auxiliary DC power option.



1) Battery holder for Lithium Battery (Saft LSH-20)
2) Power output for powering Data Logger
3) Main fuse
4) Transzorp for protection
5) 8 - 28 VDC auxiliary power input connector
6) Super low loss diode
7) Input power LED

Spare parts:

- Input fuse (F1): 2A Fast Acting Littlefuse 0453002.

2.1.3 Specifications ML-PB-DC-LI

Power Supply	
Protection	Fuse 4A
Input Power	8 - 28 VDC
Power out	1 Amp (Rms)
General Enviroment	
Temperature	Operating: -30 ~ + 85 °C; Storage -40 ~ +85 °C
Humidity	5 ~ 100 % RH
Electrical	
Switch Frequency	1 Mhz typical
Quiesent Current	<1 mA @12V (3.6 Volts power supply active)
3.6 V output	
Output current	2 Amp Rms
Connector	Molex 22-27-2021
Galvanic Isolation	No
Ripple & Noise	5% pk-pk, 20 MHz bandwidth
Overload Protection	Yes, by means of fuse
CE Complient	Yes
Rohs Complient	Yes
Dimensions	
W X D x H	106 mm X 82 mm X 40 mm
Weight	
Netto Weight	110 Grams