



### INTRODUCTION

The LiBAL c-BPU100™ is a PCB based Battery protection unit, which combines 4 essential functions in one compact unit:

1. Monitor the current
2. Provide the correct power for the BMS through a DC/DC converter
3. Disconnect the battery when the BMS detect a safety critical error
4. A separate auto-off relay to enable the sleep mode function

By combining the 4 functions in one compact unit that integrate directly with LiBAL c-BMS24™, the total solution provide a powerful, compact and highly cost efficient system.

The size of the c-BMS with LiBAL c-BMS24, compared with a traditional PDU solution, is 20 times smaller. This makes it an ideal choice for small compact vehicles.

For small vehicles with relative small capacity battery packs, the “sleep mode” current consumption becomes critical. By integrating the DC/DC in the c-BPU the result is an extremely low consumption of 2,5 mW. This combined with the c-BMS build in auto-off functionality makes it an ideal system for the small robots, 2w vehicles and AGV's. The auto-off function can be re-engaged by a physical push button, which can be ordered separately.

### SAFETY

- HV MAIN – contactor mosfets
- HV CHARGE – contactor mosfets

### PERFORMANCE

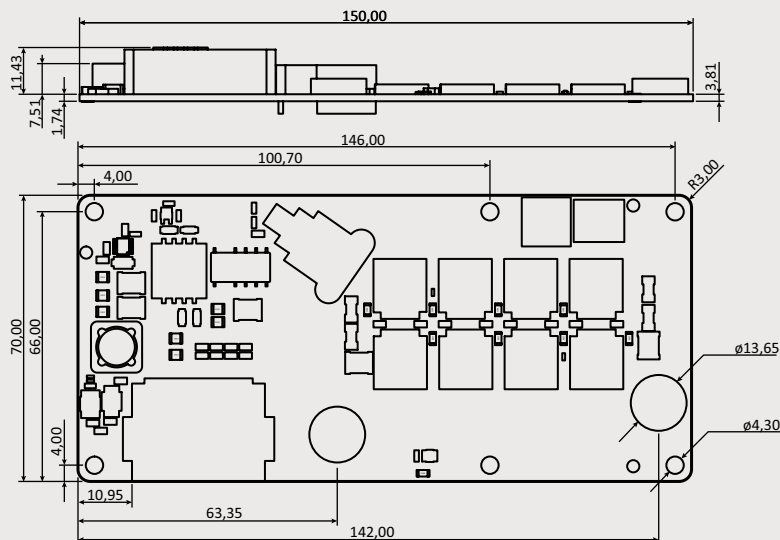
- Integrated Hall Effect sensor securing an SOC accuracy of +/-0,5%
- Isolated 12V DC/DC included
- Maximum voltage support 100V
- Maximum pulse current 200A
- Maximum continuous current 100A

### USABILITY

- Integrate seamlessly with LiBAL c-BMS24™

### Applications





**c-BMS Compact Battery Management System for 24 cells**

Dimensions in MM

### PARAMETERS

Maximum battery pack voltage	100 V
Minimum battery pack voltage	13 V
Isolated DC/DC 12V output (for BMS)	YES
AUX DC/DC output (for other use)	YES (25 mA)
DC/DC shut-off functionality (Auto-off supported)	YES
Galvanic isolation (Bat to µProcessor)	YES
Maximum Current (Continuous)	100 A
Maximum Current (MAX pulse)	200 A
Current measurement (Hall sensor)	200 A
Current accuracy	1 % (0-200A)
Bi-direction currents protection	YES
Switch off (open 'contactor') time	0.5 – 1.0 ms
Internal on-board temperature sensor	2
Dimensions	170 x 50 x 20 mm
Weight (w/o heat sink)	90 – 100 g
SOC accuracy with c-BMS	Better than +/-0,5%
Sleep mode consumption	48 mW

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Identical function with  
20 times lower volume



**c-BPU + c-BMS, volume 400 cm<sup>3</sup>**

**Traditional solution, volume 14.400 cm<sup>3</sup>**

