



Product Presentation

LIBALc-BPU100™

COMPACT BATTERY POWER DISCONNECT

Key advantages



The c-BPU100™ essentially handle 4 key battery functions in one PCB and thus reduce component cost, battery integration cost and significantly reduce battery pack size and complexity



Identical function with
20 times lower volume



c-BPU + c-BMS, volume 400 cm³

Traditional solution, volume 14.400 cm³

cBPU key functions



4 functions in one:

- Battery Power disconnect in charge and discharge
- Current measurement sensor
- Auto-off function
- On board DC/DC power supply



WE MAKE BATTERIES WORK!

Core value



Simplicity in design

- Fewer components
- Easy to install

Compactness

- Size: 150 x 70 x 20 mm
- Weight: 100g

System Cost

- Conventional design: INDEX 100
- C-BPU with c-BMS: INDEX 90



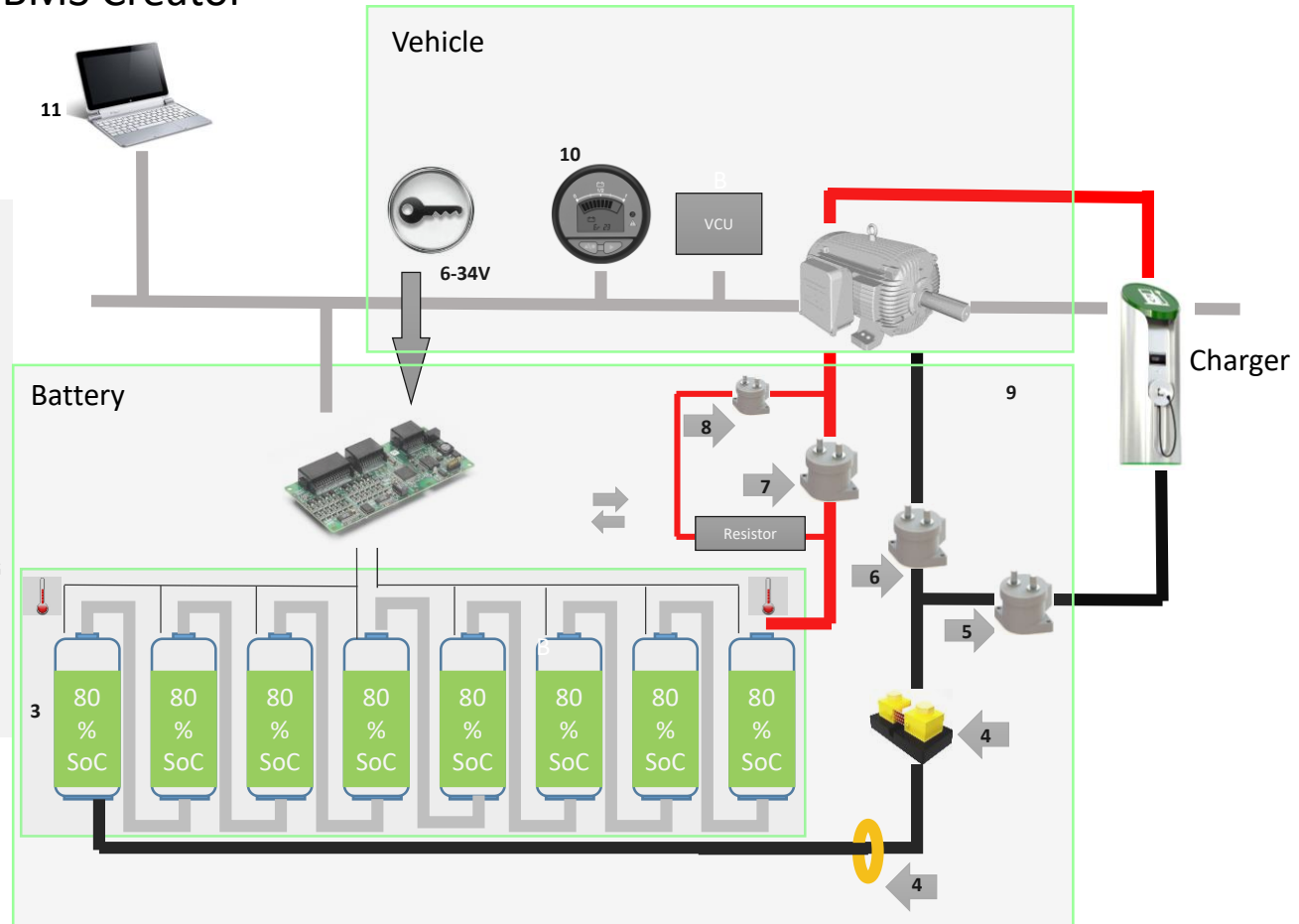
c-BPU
inside

Conventional System



BMS Creator™

- 1. cBMS
 - 3. BATTERY PACK
 - 4. SHUNT/HAL
 - 5. CHARGE CONTACTOR
 - 6. HV- MAIN CONTACTOR
 - 7. HV+ MAIN CONTACTOR
 - 8. PRE CHARGE CONTACTOR
 - 9. CHARGER (CAN or PWM)
 - 10. CAN DISPLAY
 - 11. DIAGNOSTIC TOOL
-
- HV +
 - HV -
 - CELL MONITORING
 - TEMPERATURE MONITORING
 - CAN 1
 - CAN 2
 - ← INPUT SIGNALS
 - OUTPUT SIGNALS
 - KEY SWITCH

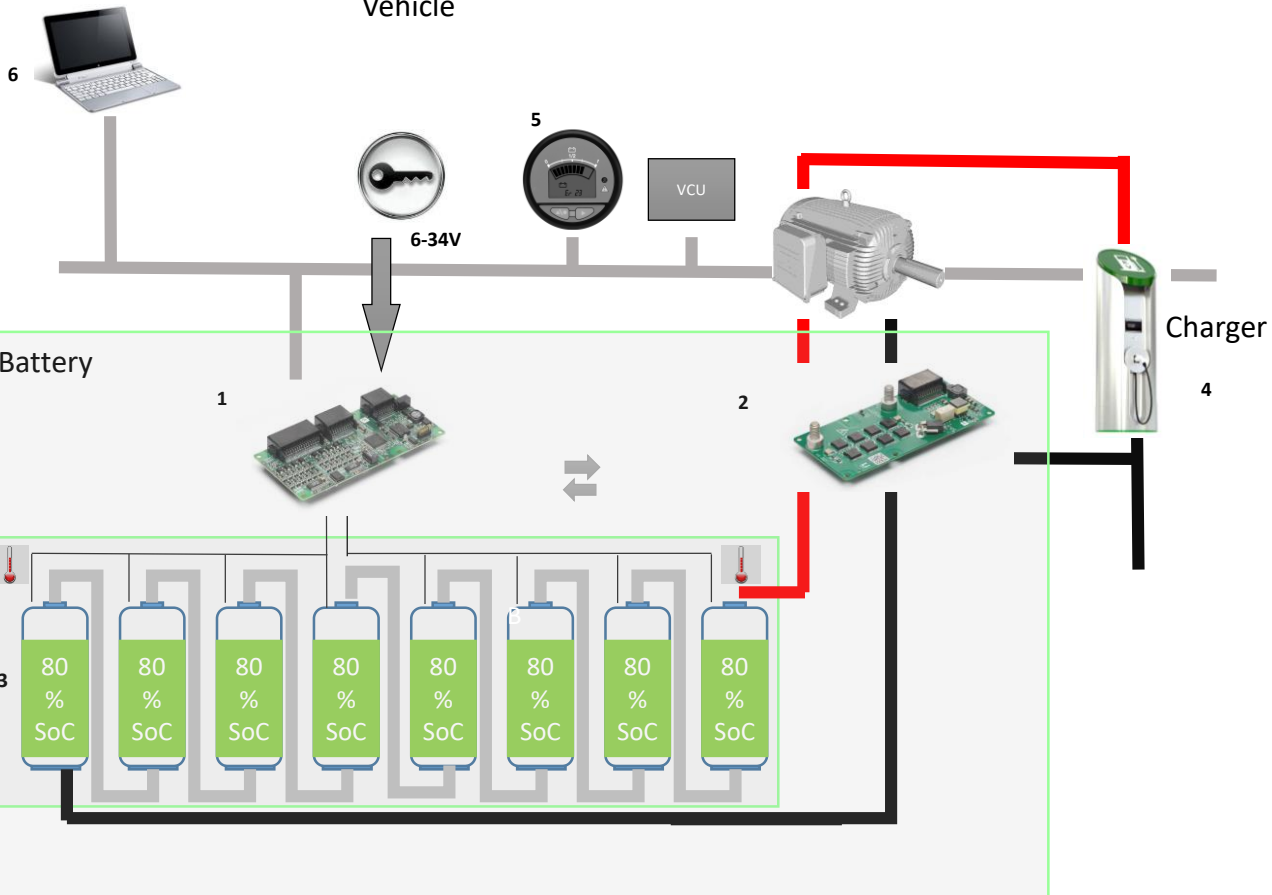


System with c-BPU



BMS Creator™

Vehicle



1. cBMS
2. c-BPU
3. BATTERY PACK
4. CHARGER (CAN or PWM)
5. CAN DISPLAY
6. DIAGNOSTIC TOOL

- HV +
- HV -
- CELL MONITORING
- TEMPERATURE MONITORING
- CAN 1

INPUT/OUTPUT SIGNALS

Battery

Charger

3

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

80 % SoC

Use cases

Compact robot battery for STOW (Belgium)

- Keep footprint and increase battery capacity



3-wheeler delivery truck for Delhi based Euler Motor

- Reduce cost
- Reduce footprint
- Remove complexity



Specifications



PARAMETERS	SPECIFICATIONS
Maximum battery pack voltage	95 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 μ Processor)	YES
Maximum Current (Continuous)	100 A
Maximum Current (MAX pulse in 10 seconds)	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	$\pm 0,5\%$
Sleep mode consumption	48 mW