No compromise on battery charging!

POWERBOX charger solutions for demanding applications

With more than 3,500 implemented power supply solutions we own one of the most comprehensive libraries of circuit layouts, specifications, mechanics and specialized expertise. This allows us to develop customized and efficient power solutions in a shorter time, reducing Time-To-Market to demanding applications such as battery charging for industry, medical, transport and defense. Battery charging requires a combination of high efficiency switching utilizing an optimized topology that integrates control and monitoring, while encompassing high flexibility in order to charge different types of batteries with the highest level of safety. Powerbox' platforms for battery charging and energy storage management solutions include a wide range of products which can be adapted to meet specific demands.

Charger solutions highlights:

→ Charger systems maximizing battery lifetime, taking in consideration individual battery conditions

→ Flexible charger able to adjust charging conditions to a growing number of new types of batteries

→ Including smart-control charging/discharging for large number of batteries

→ Robust and reliable battery management and control, maintenance free, for a large range of temperature

→ Built-in telemetry and communication for remote battery powered equipment
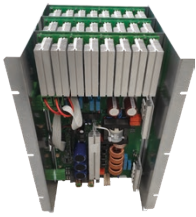

Multi charger system

→ Individual condition of each battery in a system for 192 batteries

→ Battery conditioning: charging, discharging or cycle charging

→ Active communication with BMS (Battery Management System) of each battery

→ Optimized battery protection by communication with BMS Battery capacity check

→ All operation control by touch panel PC Lifetime performance history for each battery

Charger for Industry 4.0

→ Automatic battery type detection

→ Lead Acid or lithium-ion battery

→ Battery impedance test

→ Cable losses automatic compensation

→ Ethernet and Wi-Fi connection to factory management systems

→ Remote software update

→ 2kW natural convection cooled

→ IP54 housing

No compromise on battery charging!

Charger forTraction Battery Test equipment

→ 6kW for charging / 1kW for discharging
→ 0 to 800VDC / 0 to 40ADC
→ 3-phase or single phase input
→ Communication over Ethernet or SPI-Bus
→ Remote software update option

Modular 19" Charger for signaling

→ Flexible in power and level of redundancy
→ Redundant battery string for higher reliability
→ Automatic batter test Automatic battery present test
→ Automatic battery cable present test
→ Shortest Mean time to repair (MTTR) (plug and play for each module and for complete rack)

Charger for extreme environments

→ Robust design in IP64 rated housing
→ Ideal for all kind of outdoor and vehicle applications
→ Extreme wide temperature range, suitable for military vehicles
→ Baseplate cooled

Emergency Power for traffic lights

→ Stabilization of 24VDC supply line for controlled shut-down after interruption of regular source
→ Extreme wide temperature range, ideal for outdoor environments
→ Compact design
→ Build-in decoupling diode
→ Could be integrated into any 24VDC supply line
→ Maintenance free

Supercapacitors Boost Charger for X-ray tube

→ Charger for Super capacitor units used to boost supplied voltage to a X-Ray generator
→ 200VDC input / 100VDC output
→ Constant peak current control
→ Designed for controlled environment

Charger for Lion battery in medical applications

→ 50 VDC input / 200 VDC output
→ Controlled by PWM from system CPU
→ Designed for forced air cooling

2022.05.23