BORDLINE® Battery Module
For high performance applications

BORDLINE® BPW is a high-power Lithium-ion battery module designed for reliable operation in harsh environments. It is suitable for use as a traction or as an auxiliary battery and designed for use in road and railway vehicles.

Applications
- Railway rolling stock
- Electrically propelled road vehicles
  - eBus
  - eTrucks
- Off-road vehicles
  - Mining trucks
  - Utility vehicles

Key characteristics
- High level of inherent safety
- Very high cycle life
- High power density
- High energy efficiency
- Excellent fast charging capability
- Precise and stable cell connection with low contact resistance (laser welding)
- Efficient liquid cooling

Modularity and scalability
The modular battery design allows easy scalability in terms of installed energy and allows mechanical integration either on the roof, in the machine room or underfloor of the vehicle.
System arrangement
Up to sixteen battery modules can be connected in series to form a battery string and multiple strings can be connected in parallel. The series connection of modules are realized with insulated quick coupling power connectors and with a wired serial bus between the modules and the master control unit.

Technical data
Cell technology
Lithium-ion (LTO)

Cell format
prismatic metal can

Nominal voltage
55 V

Configuration
24S2P

Typical energy
2.6 kWh

Typical cycle life (80% DoD), 25°C
> 20’000 cycles

Specific energy
104 Wh/l

Energy density
79 Wh/kg

Power interface
BCC-S10

Test voltage
2.8 kVac / 10s

Thermal management
liquid cooled

Operating temperature range
-30°C to +45°C

Conformity
UN 38.3
IEC 62928
ISO 12405