

# 800 V Battery system



## GENERAL FUNCTION

The prismatic lithium-ion battery system from ElringKlinger represents a 800 V standard for traction batteries. The certified system meets the most demanding safety requirements that apply in the automotive industry so it can also be used in off-highway applications such as industrial trucks, leisure applications or stationary storage units.



## TECHNOLOGY

- Failsafe reversible isoSPI communication between BMS and battery modules
- Integrated BMS, high voltage junction box (HVJB), communication interface: four CAN channels, integrated thermal runaway sensor, monitoring abilities: SoC, SoH, SoF. Safety functions: over-current protection, cell over- and undervoltage protection, over-temperature protection. PEU (Pressure Equalizing Unit). FuSi level: SW ASIL B, HW ASIL C
- Bonded cooling plate
- Interface (HV, LV, cooling) to vehicle: coolant inlet- and outlet temperature, TP sensor information, diagnostic- and drive-information via CAN
- Production-ready assembly technology



## PARAMETERS

- 800 V standard system comprised of 16 prismatic lithium-ion modules (16S1P)
- Connection in parallel possible to increase the capacity (up to eight systems)



## BENEFITS

- Maximum reliability due to functional integration (BMS, CSC, HVJB, PEU, BU)
- Full system supply
- Long service life for the system and integrated modules due to sturdy cell clamping concept, high number of charge /discharge cycles
- Optimized CO<sub>2</sub> footprint





## SPECIFICATIONS

### 16S1P BATTERY SYSTEM

|   |   |
|---|---|
| CELL TECHNOLOGY                         | Lithium ion (NMC)   |
| MODULE TYPE                             | 12s1p, prismatic (PHEV2)  |
| NOMINAL VOLTAGE (V)                     | 700   |
| NOMINAL CAPACITY (Ah)                   | 51  |
| NOMINAL ENERGY (kWh)                    | 35.7  |
| MAX. CONTINUOUS CHARGE CURRENT (A)      | 76.5  |
| MAX. CONTINUOUS DISCHARGE CURRENT (A)   | 102   |
| MAX. PULSE DISCHARGE CURRENT (10 s) (A) | 240   |
| DIMENSIONS (mm)                         | 1,644 x 990 x 155   |
| WEIGHT (kg)                             | 288   |
| SAFETY FEATURES                         | PEU, TP sensor, BU (Burst Unit), fire-resistant steel housing           |
| LIFE TIME (UNTIL 80 % CAPACITY)         | 1,500 @ 1 C @ 25°C, up to 4,000 depending on operating strategy & DoD   |
| THERMAL MANAGEMENT                      | Solution for liquid cooling integrated                                  |
| ENVIRONMENTAL TEMPERATURE (°C)          | Charge: -20 / 45<br>Discharge: -30 / 60<br>Storage, transport: -20 / 35 |
| MAX. SYSTEM VOLTAGE (V)                 | 800   |
| CONFORMITY                              | ECE R100, LV124, DIN EN 60664-1, ECE R10, CE, IP6K5, IPXXD              |



## ELRINGKLINGER – YOUR PARTNER FOR E-MOBILITY SOLUTIONS WITH BATTERY TECHNOLOGY

Cell Expertise – Module and System Design – Installation Space Optimization –  
Simulation and Testing – Certification – Prototyping – Process Engineering – Industrialization –  
Integrated Solutions and Components – Recycling



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