FACT SHEET

800 V Battery system

Process reliable and flexible
Battery systems from ElringKlinger based on prismatic cells

The prismatic lithium-ion battery system from ElringKlinger represents an 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

+ isoSPI BMS communication
+ Integrated BMS, high voltage junction box (HVJB), communication interface: four CAN channels, 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 (Controlled Area Network), IL (Integrated Logic), Master-Slave-Option
+ Production-ready assembly technology

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

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_2 footprint

Specifications

16S1P BATTERY SYSTEM

CELL TECHNOLOGY	Lithium ion (NMC)
MODULE TYPE	12s1p, prismatic (PHEV2)
NOMINAL VOLTAGE (V)	700
NOMINAL CAPACITY (AH)	51
NOMINAL SPECIFIC 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)	~ 290
SAFETY FEATURES	PEU, TP sensor, BU (Burst Unit), fire-resistant steel housing
LIFE TIME (UNTIL 80 % CAPACITY)	1,500 cycles @ 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 Discharge: -30 / 60 Storage, transport: -20 / 35
MAX. SYSTEM VOLTAGE (V)	800
CONFORMITY	ECE R100, LV124, DIN EN 60664-1, ECE R10, CE, IP6K9K

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