

FACT SHEET

400 V Battery system



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

The lithium-ion battery system from ElringKlinger represents a 400 V setup for traction batteries.

Technology

- » Integrated BMS, battery junction box (BJB), communication interface: CAN (master/slave opt.), monitoring abilities: SoC, SoH, SoF. Safety functions: over-current protection, cell over- and undervoltage protection, overtemperature protection.
- » PEU (Pressure Equalizing Unit). FuSi level: ASIL B
- » Active cooling
- » Interface (traction, LV) to vehicle: diagnostic- and drive-information via CAN (Controlled Area Network), IL (electrical interlock), Master-Slave-Option
- » Production-ready assembly technology

Parameters

- » 400 V system based on standard EK modules (3S1P)
- » EK Standard modules based on cylindric cells (36s16p)
- » Connection in parallel possible to increase the capacity

Benefits

- » Maximum reliability due to functional integration (BMS, CSC, BJB, PEU)
- » Full system supply
- » High number of charge/discharge cycles
- » High continuous discharge current
- » Easy integration

Specifications

400V SYSTEM

CELL TECHNOLOGY	Lithium Ion (NMC)
CELL TYPE	21700 cylindrical cells
SYSTEM SET UP	108s 16p
DIMENSIONS (MM)	1385 x 1203 x 114
WEIGHT (KG)	225
MECHANICAL INTERFACE	16 x M10
NOMINAL VOLTAGE SYSTEM (V)	394.2
NOMINAL CAPACITY (AH)	76.8
NOMINAL ENERGY (KWH)	30.2
NOMINAL SPECIFIC ENERGY (WH/L)	358 (module basis)
NOMINAL GRAVIMETRIC ENERGY (WH/KG)	207.5 (module basis)
MAX. CONTINUOUS CHARGE (A / C-RATE / KW)	54 / 0.8 / 21
MAX. CONTINUOUS DISCHARGE (A / C-RATE / KW)	130 / 2 / 51
MAX. PULSE DISCHARGE CURRENT (30S) (A / C-RATE / KW)	225 / 3.4 / 89
MAX. PULSE DISCHARGE CURRENT (10S) (A / C-RATE / KW)	280 / 4.2 / 110
OPERATING TEMPERATURE (°C)	Operating temperature cells: -20 to +55
THERMAL MANAGEMENT	Active cooled (water / glycol)
THERMAL INTERFACE	Straight VDA NW12 Connector
COMMUNICATION INTERFACE	CAN
ELECTRICAL INTERFACE	Amphenol 8mm HV Connector (DC+/-)
SAFETY FEATURES	Pressure Equalizing Unit, Fire-resistant Steel Housing, Hydrogen Gas Sensor (opt.), Temp. Sensor, ASIL-B Certificate, Bond wire fuse, central fuse
LIFE-TIME (UNTIL 80 % CAPACITY)	> 1,000 cycles / depending on operating Strategy & DoD
CONFORMITY	ECE R10

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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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