

400 V Battery system



GENERAL FUNCTION

The prismatic lithium-ion battery system from ElringKlinger represents a 400 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

- 400 V standard system comprised of 16 prismatic lithium-ion modules (8S2P)
- 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 CO₂ footprint





SPECIFICATIONS

8S2P BATTERY SYSTEM

CELL TECHNOLOGY	Lithium ion (NMC)
MODULE TYPE	12s1p, prismatic (PHEV2)
NOMINAL VOLTAGE (V)	350
NOMINAL CAPACITY (Ah)	102
NOMINAL ENERGY (kWh)	35.7
MAX. CONTINUOUS CHARGE CURRENT (A)	153
MAX. CONTINUOUS DISCHARGE CURRENT (A)	204
MAX. PULSE DISCHARGE CURRENT (10 s) (A)	480
DIMENSIONS (mm)	1,644 x 990 x 155
WEIGHT (kg)	289
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 Discharge: -30 / 60 Storage, transport: -20 / 35
MAX. SYSTEM VOLTAGE (V)	400/800
CONFORMITY	ECE R100, LV124, DIN EN 60664-1, ECE R10, CE, IP6K5, IPXXD



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Simulation and Testing – Certification – Prototyping – Process Engineering – Industrialization –
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