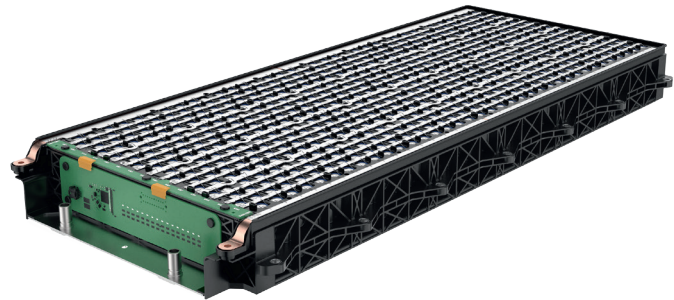


FACT SHEET

60 V Battery module

The cylindrical cell lithium-ion battery module from ElringKlinger represents a 60 V standard for traction batteries.

This battery module can be connected in series up to an integrated system voltage of 500 V. In addition, the module can be adjusted for the customer needs (module variations). The certified module meets the most demanding safety requirements that apply in the automotive industry.



Technology

- + Highly automated module assembly of the 21700-cell format
- + Assembly of components with production ready technology
- + Failsafe isoSPI communication
- + Integrated voltage and temperature measurement via isoSPI
- + Integrated passive cell balancing via isoSPI
- + Wire bonding (single cell fuse)
- + Hot spot redundancy cell temperature measurement
- + Module mounting (stackable, underbody mounting)
- + Plastic module frame (inhouse competence)
- + Integrated cooling

Process reliable and flexible

Battery modules from ElringKlinger based on cylindrical cells

Parameters

- + 60 V standard module comprised of 576 cylindrical lithium-ion cells (21700)
- + Cell voltage tapping via bonded connections made in fully automated production
- + Connection in series possible up to an integrated system voltage of 500 V
- + Depiction of various module voltage levels (48 V, 60 V and 120 V)
- + High module part variation (optional without integrated cooling, cell contacting system 48 V, 60 V or 120 V, optional cover)



**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

Benefits

- + Maximum reliability due to function integration (voltage and temperature measurement)
- + Flexible parameterization of the slave for adaption to the master BMS
- + Failsafe simple two core ring cable harness the slave controller module
- + High energy density
- + Single cell propagation passed

Specifications

16s36p BATTERY MODULE

CELL TECHNOLOGY	Lithium ion (NMC)
CELL TYPE	21700
NOMINAL VOLTAGE (V)	59
NOMINAL CAPACITY (AH)	178.2
NOMINAL ENERGY (KWH)	10.5
NOMINAL SPECIFIC ENERGY (WH/L)	358
NOMINAL SPECIFIC ENERGY (WH/KG)	210
MAX. CONTINUOUS CHARGE CURRENT (A)	125 / 0.7 C
MAX. CONTINUOUS DISCHARGE CURRENT (A)	191 / 1.1 C
MAX. PULSE DISCHARGE CURRENT (10 S) (A)	606 / 3.4 C
DIMENSIONS (MM)	886 x 407 x 81
WEIGHT (KG)	< 50
SAFETY FEATURES	Bond wire fuse, temperature measurement
LIFE TIME (UNTIL 80 % CAPACITY)	> 1,000 cycles / depending on operating strategy & DoD
THERMAL MANAGEMENT	coolant mixed in a 50/50 ratio to water (w/ cooling)
THERMAL INTERFACE	VDA Compact QC Ø14
COMMUNICATION INTERFACE	Active PCB: integrated CSC with isoSPI Bus communication Passive PCB: analog cell voltage and temperature signal interface
ELECTRICAL INTERFACE	Screw terminal for busbars and cables up to 95 mm ² (000 AWG)
MECHANICAL INTERFACE	14 x M6
OPERATING TEMPERATURE (°C)	All components except cells: -20 to +80 Operating temperature cells: -20 to +55
STORAGE TEMPERATURE (°C)	1 month: -20 to +55 3 months: -20 to +45 1 year: -20 to +25
IMPULSE VOLTAGE (V)	2500
CONFORMITY	UN 38.3

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