

FACT SHEET

48 V Battery system



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

The lithium-ion battery system from ElringKlinger represents a 48 V setup 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

- » Integrated BMS, battery junction box (BJB), communication interface: three 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: ASIL B
- » Passive cooling
- » Interface (traction, LV) to vehicle: 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

- » 48 V system based on standard ElingKlinger modules (1S2P)
- » ElingKlinger standard modules based on cylindric cells (12S48P)
- » Connection in parallel possible to increase the capacity
- » Connection in series possible to increase the voltage level

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

1s2p BATTERY SYSTEM

CELL TECHNOLOGY	Lithium-ion (NMC)
CELL TYPE	21700 cylindrical cells
SYSTEM SET UP	12s 48p (2P)
DIMENSIONS (MM)	1200 x 670 x 210
WEIGHT (KG)	141
MECHANICAL INTERFACE	12 x M10
NOMINAL VOLTAGE SYSTEM (V)	44.3
NOMINAL CAPACITY (AH)	474
NOMINAL ENERGY (KWH)	20.9
NOMINAL SPECIFIC ENERGY (WH/L)	358 (module basis)
NOMINAL GRAVIMETRIC ENERGY (WH/KG)	207.5 (module basis)
MAX. CONTINUOUS CHARGE (A / C-RATE / KW)	250 / 0.5 / 11
MAX. CONTINUOUS DISCHARGE (A / C-RATE / KW)	550 / 1.2 / 24.4
MAX. PULSE DISCHARGE CURRENT (60S) (A / C-RATE / KW)	700 / 1.5 / 31
OPERATING TEMPERATURE (°C)	Operating temperature cells: -20 to +55
THERMAL MANAGEMENT	Passive cooled
COMMUNICATION INTERFACE	CAN
ELECTRICAL INTERFACE	6 x M6 (DC+/-)
SAFETY FEATURES	Pressure Equalizing Unit, Fire-resistant Steel Housing, Hydrogen Gas Sensor, Temp. Sensor, ASIL-B Certificate, Bond wire fuse, central fuse
LIFE-TIME (UNTIL 80% CAPACITY)	> 1,000 cycles / depending on operating Strategy & DoD
CONFORMITY	UN 38.3, ECE R10, ECE R100

YOUR CONTACT

ElingKlinger AG
E-mail: info@elringklinger.com

ElingKlinger AG | Daimlerstr. 6-8 | 72639 Neuffen | Germany
www.elringklinger.com

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