

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

<b>CELL TECHNOLOGY</b>	Lithium-ion (NMC)
<b>CELL TYPE</b>	21700 cylindrical cells
<b>SYSTEM SET UP</b>	12s 48p (2P)
<b>DIMENSIONS (MM)</b>	1200 x 670 x 210
<b>WEIGHT (KG)</b>	141
<b>MECHANICAL INTERFACE</b>	12 x M10
<b>NOMINAL VOLTAGE SYSTEM (V)</b>	44.3
<b>NOMINAL CAPACITY (AH)</b>	474
<b>NOMINAL ENERGY (KWH)</b>	40.9
<b>NOMINAL SPECIFIC ENERGY (WH/L)</b>	358 (module basis)
<b>NOMINAL GRAVIMETRIC ENERGY (WH/KG)</b>	207.5 (module basis)
<b>MAX. CONTINUOUS CHARGE (A / C-RATE / KW)</b>	250 / 0.5 / 11
<b>MAX. CONTINUOUS DISCHARGE (A / C-RATE / KW)</b>	550 / 1.2 / 24.4
<b>MAX. PULSE DISCHARGE CURRENT (60S) (A / C-RATE / KW)</b>	700 / 1.5 / 31
<b>OPERATING TEMPERATURE (°C)</b>	Operating temperature cells: -20 to +55
<b>THERMAL MANAGEMENT</b>	Passive cooled
<b>COMMUNICATION INTERFACE</b>	CAN
<b>ELECTRICAL INTERFACE</b>	6 x M6 (DC+/-)
<b>SAFETY FEATURES</b>	Pressure Equalizing Unit, Fire-resistant Steel Housing, Hydrogen Gas Sensor, Temp. Sensor, ASIL-B Certificate, Bond wire fuse, central fuse
<b>LIFE-TIME (UNTIL 80% CAPACITY)</b>	> 1,000 cycles / depending on operating Strategy & DoD
<b>CONFORMITY</b>	UN 38.3, ECE R10, ECE R100

### YOUR CONTACT

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The strategic direction of  
the ElingKlinger Group

