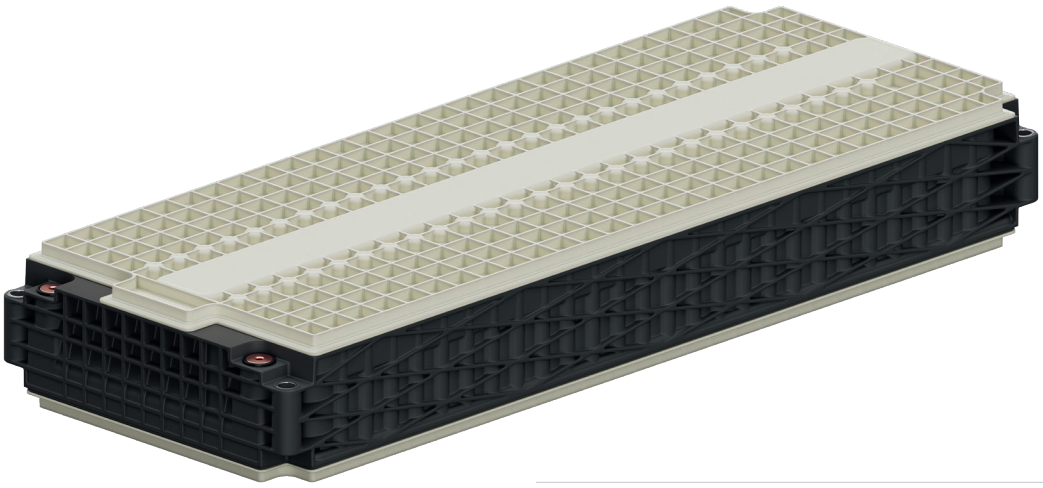
FACT SHEET

Performance – Battery module

The cylindrical cell lithium-ion battery module from ElringKlinger AG in cooperation with Piëch Automotive AG represents a high-performance application for traction batteries. Due to the immersion cooling concept the module achieves a high electrical performance under constant temperature without derating. This power module can be connected in series up to an integrated system voltage of up to 1,000 V. The module meets the most demanding safety requirements that apply in the automotive industry.



High-performance application for traction batteries
Battery modules from ElringKlinger based on cylindrical cells

Technology

+ Laser welded plastic module frame and cover
+ Due to the inherent rigidity structure, no support frame is required
+ Wireless cell monitoring board (wCMB) integrated (cabled optional)
+ Integrated conductivity sensor
+ Assembly of components with production ready 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

+ Connection in series possible up to an integrated system voltage of 1,000 V
+ Battery system power > 1 MW possible
+ Nominal energy content of battery pack > 100 kWh feasible
+ Connection in parallel possible to increase the capacity

Benefits

+ High performance immersion cooling concept
+ Nürburgring under race conditions without thermal derating
+ Wireless Battery Management System
+ Individual modules allow flexible system configuration
+ Very low overall height enables a low seating position

Specifications

12s27p POWER-MODULE

CELL TECHNOLOGY	Lithium Ion (NCA), cylindrical cells 21700
MODULE SET UP	12s27p
NOMINAL VOLTAGE (V)	43.2
NOMINAL CAPACITY (AH)	121.5
NOMINAL ENERGY (KWH)	5.25
NOMINAL SPECIFIC ENERGY (WH/L)	304
NOMINAL GRAVIMETRIC ENERGY (WH/KG)	176
MAX. CONTINUOUS CHARGE CURRENT (A)	500 / 4.1 C
MAX. CONTINUOUS DISCHARGE CURRENT (A)	600 / 4.9 C
MAX. PULSE DISCHARGE CURRENT (180S) (A)	800 / 6.6 C
MAX. PULSE DISCHARGE CURRENT (30S) (A)	1,215 A / 10 C
MAX. PULSE DISCHARGE CURRENT (10S) (A)	1,823 A / 15 C
DIMENSIONS (MM)	682 x 260 x 98
WEIGHT (FILLED WITH OIL) (KG)	29.8
LIFE TIME (UNTIL 80 % CAPACITY)	1,000 cycles / depending on operating strategy & DOD
THERMAL MANAGEMENT	Immersion cooling (dielectric fluid)
THERMAL INTERFACE	Small quick connectors on one face side
CONFORMITY	According to: UN 38.3, ECE R100, LV123, LV124, IP6K9K, IPx7

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