

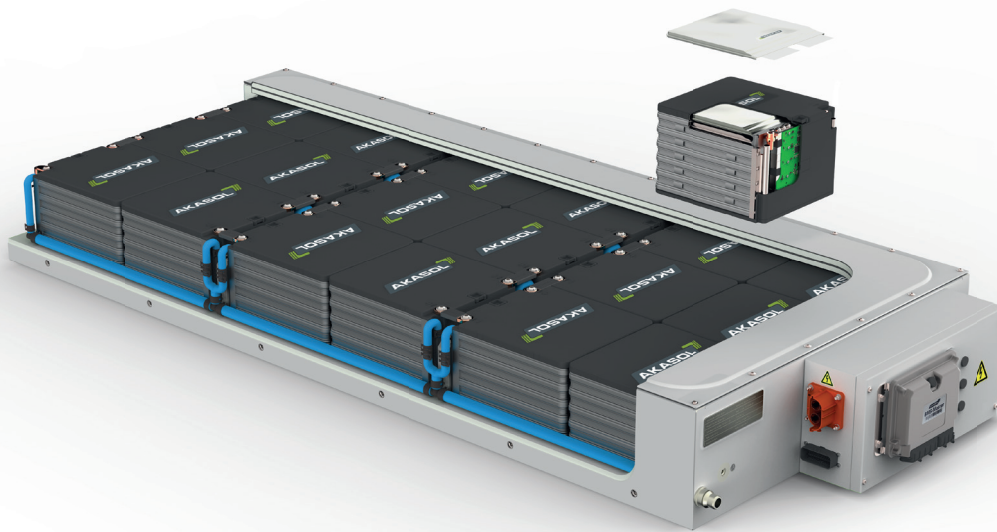
AKASYSTEM

18 AKM 53 POC

487 kW • 36.8 kWh • 799 V • 445 kg (NANO)*
324 kW • 42.4 kWh • 799 V • 421 kg (NMC)*

Typical product configuration. Appearance and interfaces may vary.

*All technical data depending on HV Fuse, connector, DoD / SOC and cooling.



CERTIFIED ACCORDING TO AUTOMOTIVE STANDARDS.

- > Development according to ISO 26262 up to ASIL C / EN 61508 SIL 2 possible
- > Tested safety (USABC, IEC, SAE, UN 38.3) and "real world" experience
- > Multi-level short circuit protection on system level
- > Additional operating safety due to redundant battery management system
- > Suitable for multi-string systems with monitoring on single-string and full system level
- > Protection classes IP67 to IP6K9K possible
- > Robust and proven control unit BMS master (SIL2 compatible hardware)
- > SOC / SOH analysis
- > Single cell voltage monitoring and balancing

SCALABLE. VALIDATED. DURABLE.

- > Freely scalable system with any number of AKAMODULEs
- > Flexible Packaging (conversion design, purpose design)
- > High energy and performance density
- > Easy system connectivity / ready-to-install (aligned connection points, standardized CAN bus, optional VDA / SAE cooling connections)
- > Excellent price-performance ratio as a result of the development for serial production
- > Liquid cooling for even temperature distribution
- > Compact and lightweight solution, significant volume reduction due to liquid cooling
- > Long service life due to active and passive thermal management
- > Exceptionally robust, stainless steel battery case
- > Serial production, ISO 9001 compliant
- > Passive cell balancing
- > Maintenance-free operation

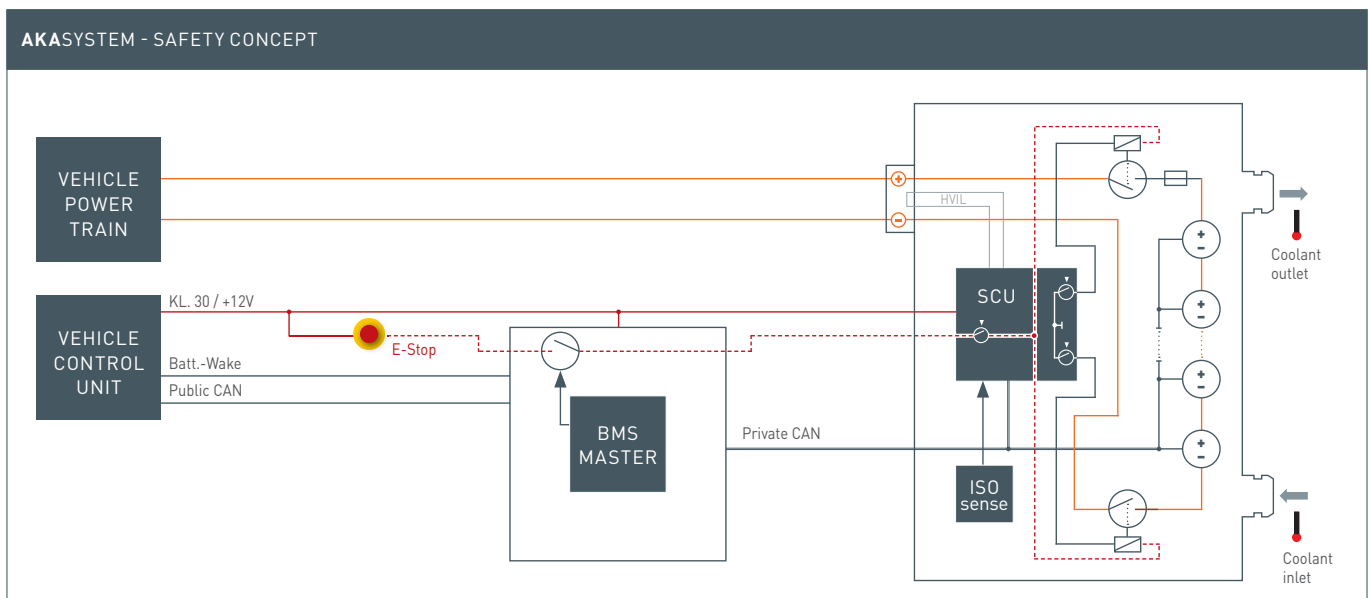


Bavarian National Award
for the best energy
storage solution

ELECTRICAL DATA	AKASOL SYSTEM 18 AKM 53 NMC		AKASOL SYSTEM 18 AKM 46 NANO NMC	
	12s1p	6s2p	12s1p	6s2p
Cell connection in module	12s1p	6s2p	12s1p	6s2p
Capacity	53 Ah	106 Ah	46 Ah	92 Ah
Energy	42.4 kWh	42.4 kWh	36.8 kWh	36.8 kWh
Technology	Li-Ion NMC	Li-Ion NMC	Li-Ion NANO	Li-Ion NANO
Nominal voltage	799 V	400 V	799 V	400 V
Voltage (max.)	907 V	454 V	907 V	454 V
Voltage (min.)	583 V	292 V	583 V	292 V
Discharging power max. (10s)*	324 kW	320 kW	487 kW	320 kW
Charging power max. (10s)*	127 kW	127 kW	184 kW	184 kW
Continuous power (RMS)	72 kW	72 kW	92 kW	92 kW
Power consumption in standby mode	9.0 W	9.0 W	9.0 W	9.0 W
Cycle life (at 80 % DoD, 25 C°)	> 3,100 cycles	> 3,100 cycles	> 7,000 cycles	> 7,000 cycles

* Peak rating depending on fuse and cable / connector configuration / SOC and temperature

MECHANICAL DATA	AKASOL SYSTEM 18 AKM 53 NMC		AKASOL SYSTEM 18 AKM 46 NANO NMC	
	1.0 bar	1.0 bar	1.0 bar	1.0 bar
Coolant pressure (max.)	1.0 bar	1.0 bar	1.0 bar	1.0 bar
Coolant pressure loss at nominal throughput and Tcoolant = 25 °C (Water/glycol=50/50) @ throughput quantity	520 mbar @ 1.200 l/h	520 mbar @ 1.200 l/h	520 mbar @ 1.200 l/h	520 mbar @ 1.200 l/h
Operating temperature range during discharging	-15 to 55 °C	-15 to 55 °C	-15 to 55 °C	-15 to 55 °C
Operating temperature range during charging	0 to 45 °C	0 to 45 °C	0 to 45 °C	0 to 45 °C
Protection classes	IP67 (IP6K9K possible)	IP67 (IP6K9K possible)	IP67 (IP6K9K possible)	IP67 (IP6K9K possible)
Weight (incl. contactor box) (min)	421 kg	421 kg	445 kg	445 kg
Dimension (L x W x H) in mm	1,844 x 750 x 216	1,844 x 750 x 216	1,844 x 750 x 216	1,844 x 750 x 216



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HIGH PERFORMANCE BATTERY SYSTEMS.
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AKASOL is a leading European manufacturer of lithium-ion battery systems that are market ready to deliver safe, reliable and compliant power at scale for global electric transport. With nearly 30 years of German engineering, testing and manufacturing experience, AKASOL delivers safe battery systems for major players in the commercial transport sector.

Configuration and images exemplary. Values depend on SOC, SOH and temperature. Subject to amendment when technical changes and/or innovations are made. No liability for printing errors. Version: May 2019