AKASOL

High Performance Battery Systems

AKARACK

50 PRC

48 V • 150 Ah • 6.6 kWh • 56 kg*

Typical product configuration. Appearance and interfaces may vary.
*All technical data depending on HV Fuse, connector, DoD/SOC and cooling.

AVAILABLE
2020

CERTIFIED ACCORDING TO AUTOMOTIVE STANDARDS.

- Automotive NMC li-ion technology
- Excellent life, high level of intrinsic safety
- Up to 25 kW continuous power with one master rack
- Up to 50 kW peak power with one master rack
- Automotive BMS technology for reliability and safety
- Developed to meet stringent safety standards
- Environmental rating up to IP67 / IP6K9K

SCALABLE. VALIDATED. DURABLE.

- Modular and flexible energy storage system for mobile applications
- Multiple strings can be connected in parallel for large energy storage systems
- Compact, easy to handle base unit (manual handling)
- Designed to fit 19" racks (3U, 600 mm depth)
- Integrated contactor, cell monitoring and fuse
- Liquid or air cooling within the same package envelope

FEATURES

- High energy and power density
- Excellent price-performance ratio as a result of the development for mass production
- Optional liquid cooling for high performance applications
- Long service life due to active and passive thermal management
- Exceptionally robust, maintenance-free operation
- EMI (Electro Magnetic Interference) compliant for many applications
- Passive cell balancing (low loss)
- Multi-level short circuit protection on module and rack level
- Robust and proven control unit (BMS master)
- Redundant safety control unit in addition to BMS master
- Voltage and temperature monitoring
- Multiple 48 V racks can be connected in parallel

CONFIGURATION

- Freely scalable system with up to 6 **AKA**RACKs per masterrack
- Flexible packaging (conversion design, purpose design)
- Easy system connectivity / ready-to-install (aligned connection points, standardized CAN bus)
- High availability in redundant parallel string configuration (optional)
- Suitable for multi-string systems with full monitoring on single-string and full system level

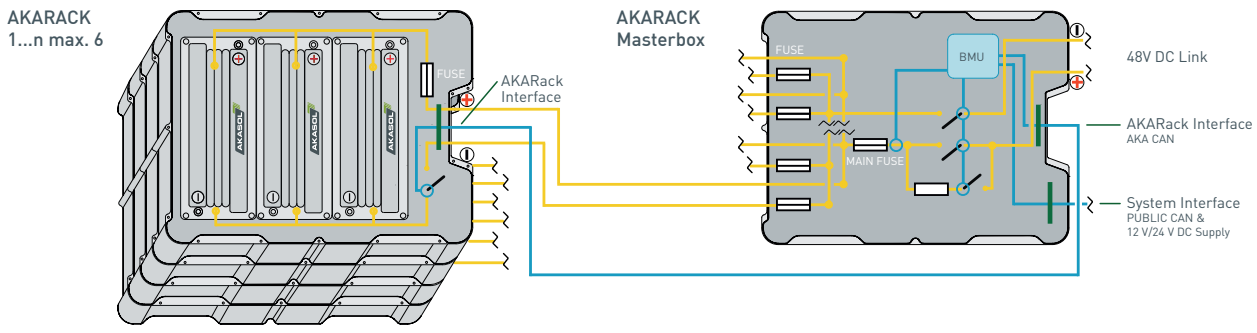
ELECTRICAL DATA	AKARACK 48 V	nP AKARACK 48 V
Capacity*	150 Ah	n*150 Ah
Energy*	6.6 kWh	n*6.6 kWh
Technology	Li-Ion NMC	Li-Ion NMC
Nominal voltage*	44 V	44 V
Voltage (max.)	50.4 V	50.4 V
Voltage (min.)	36 V	36 V
Discharging power max. (10 s)**	9 kW	up to 50 kW
Charging power max. (10 s)**	9 kW	up to 50 kW
Continuous power (RMS) > 15 min**	5.5 kW	up to 25 kW
Power consumption in standby mode	8 W	n*8 W + 25 W
Cycle life***	1,600...3,000 cycles	1,600...3,000 cycles

* 0,33C reference discharge cycle **Depending on SOC and temperature ***Depending on individual use profile, especially DoD, temperature and power

MECHANICAL DATA	AKARACK 48 V	nP AKARACK 48 V
Coolant pressure max.	2.5 bar	2.5 bar
Coolant pressure drop per rack (water/glycol=50/50)	typ. 400 mbar @ 150 l/h nom. 25 °C	typ. 400 mbar @ 150 l/h nom. 25° C
Operating temperature range	- 30 to 60 °C	- 30 to 60 °C
Recommended operating temperature	15 to 35° C	15 to 35° C
Protection classes****	IP67 (IP6K9K possible)	IP67 (IP6K9K possible)
Weight (excl. masterbox)**** typical	56 kg	n*56 kg
Dimension (L x W x H)**** in mm (nominal, excl. masterbox)	590 x 448 x 135	590 x 448 x n*135

**** Masterbox specification: similar dimensions, weight typically 30 kg

AKARACK - SYSTEM TOPOLOGY



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HIGH PERFORMANCE BATTERY SYSTEMS.
MADE IN GERMANY WITH 30 YEARS OF EXPERIENCE.

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 30 years of German engineering, testing and manufacturing experience, AKASOL delivers safe battery systems for major players in the commercial transport sector.