LEHMANN MARINE

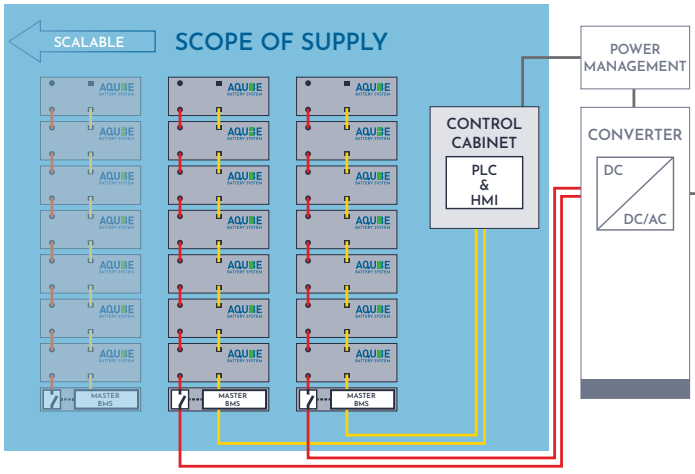
AQUBE BATTERY SYSTEM

DATA SHEET



System specifications	
Cell chemistry	Lithium Ferrophosphate (LFP)
Cooling	Liquid
C-rate peak disch./char.	2 C
C-rate cont. disch./char.	1.5 C
Communication interface	Modbus TCP or others
Energy	scalable up to several MWh
Module specifications	
Energy	12.5 kWh
Voltage	min. 60 | nom. 77 | max. 87 VDC
Weight	96 kg
Dimensions	H 248 | W 395 | D 580 mm
Gravimetric energy density	130 Wh/kg | 7.68 kg/kWh
Volumetric energy density	220 Wh/l
Protection grade	IP65
Switch unit (string controller)	
Master battery management system	Integrated
Pre-charge functionality	Integrated
DC fuses and contactor	Integrated

Control cabinet (multi-string controller)	
Power supply	24 VDC or 230 VAC
No. of strings in parallel	Up to 16 strings
Display	7” touch panel
Safety specifications	
Thermal runaway protection	No propagation on cell level
Short circuit protection	HV-fuses on string and module level
Gas detection	Included on module level
Emergency stop	Hard-wired
Temperature monitoring	Redundant on module level
Gas exhaust	<200°C during thermal runaway
Balancing funcionality	Included on cell & module level
Isolation monitoring	Included in switch unit



AQUBE configurations

Modules per string	3	4	5	6	7	8	9	10	11
Energy (kWh)	37.5	50.0	62.5	75.0	87.5	100.0	112.5	125.0	137.5
Min. voltage (VDC)	180	240	300	360	420	480	540	600	660
Nom. voltage (VDC)	230	307	384	461	538	614	691	768	845
Max. voltage (VDC)	263	350	438	526	613	700	788	876	964