

BA 비에이에너지 | LFP BESS

컴팩트 올인원 BESS

372
kWh

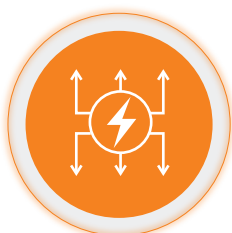
Compact All-in-One BESS



배터리와 전력변환장치 및 안전관리시스템을
일체화한 통합 에너지저장시스템



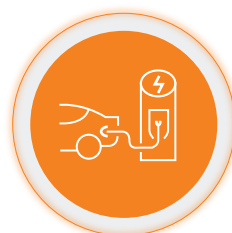
피크저감



분산형 전원



마이크로 그리드



전기차 충전 연계

End-to-End 지원 솔루션

- All-in-One 결합형 제품 구성
- 설계(Engineering) → 조달(Procurement) → 구축(Construction) → 운영(O&M) 완벽 지원
- 다양한 산업 분야 적용

LFP 배터리 안전성 및 경제성

- NCM 배터리 대비 낮은 화재 위험 및 긴 수명
- 높은 운영 효율성
- 고온, 저온 등 다양한 환경에서 안정적인 성능 유지(IP54)

안전 특화 시스템

- 배터리 화재 감지 및 대응 시스템 'SMS 3.0' 적용
- 화재·온도 이상 감지 및 원격 모니터링을 통한 사고 예방

시스템 사양

Compact BESS System			120kW - 372kWh LFP BESS	
Functionality	Applications		Peak Shift/Cut, Renewable support, Microgrid	
	Rated (continuous) power		120 kW	
	DC/Battery side	Voltage range	DC 650 - 1500V	
		Maximum Current	205 Adc	
	DC short circuit current		3 kAdc	
	AC/Grid side	Voltage / Frequency range	AC 380 - 690V (3-phase 3-wire) / 50/60Hz	
		Maximum Current	205 Arms	
	Max. conversion efficiency		> 98% at rated DC power (one-way)	
	Charging Control mode		Active power, Freq-watt droop(IEEE1547), Freq-watt curve (Freq-LUT), Const-current, Reactive power, Volt-var, Power-factor, Watt-pF curve, Watt-var curve, Volt-watt droop(UL1741), Volt-watt curve	
	Max. ramp rate		16.67ms	
	Emergency control	Input	On board E-stop (Push button)	
	Man-machine interface	Indication	AC line On, ACCB, Run/Fault	
	Communication		HMI (PCS level) - Quantum (ESS level) - S-quantum (Site level, option)	
	H/W Protective Functions		Over/Under Voltage, Over/Under Frequency, Over Current, Over Temperature, Ground Fault, Fire alarm(Ext. battery)	
Battery System	Storage Capacity		372.7 kWh	
	Voltage range		DC 1164.8 - 1497.6 Vdc (1331.2 Vdc nominal)	
	Operation power	Rated	186.4 kW (0.5C)	
		Peak	372.7 kW (1.0C)	
	Battery type		Lithium-iron-phosphate(LFP)	
	Cell type		280 Ah/ Cube type	
	Protective Functions		Temperature, Humidity, Smoke & H2	
	Communication		Modbus/TCP, Modbus-RTU, CAN	
Frame Container	Energy Storage efficiency		> 92% (Round Trip)	
	Dimension (W x H x D)		4300 x 3120 x 3000 mm	
	Weight (Approx.)		6500 kg (TBC)	
Environment	Enclosure protection rating		IP54 (Outdoor installation)	
	Ambient operating temperatures		-20~+50 deg C	
	Humidity		< 95% RH (Non-condensing)	
	Max. audible noise		< 75dB with cooling fan activation, < 60dB as fan-less operation	
	Max. installation altitude (from sea-level)		under 1000 m	
Compatible Standards	EMC		IEC/KN 61000-6-2, CISPR/KN 11	
	Safety		IEC 62477-1, IEEE 1547, IEC 62619, UL 1741SA, UL 9540A, UL1973, UN38.3/3840	
	Performance		SPS-SGSF-025-4-1972: 2019, SPS-C KBIA-10104-02, -03	

시스템 구조

