

GUARDIAN OUTDOOR

Outdoor BESS
11 KWh

EticaAG's **modular design** enables easy customization and scalability for a wide range of project needs. With **immersion cooling**, advanced fire suppression mechanisms, and a proprietary MBMU, it's the **safest and most efficient** option for Battery Energy Storage.

ETICAAG



KEY FEATURES



Patented Immersion Cooling

Battery cells are submerged in non-toxic dielectric oil for direct active thermal management, fire suppression, and propagation prevention.



Integrated BMS & EMS

Our non-Chinese BMS and EMS ensure optimal performance, safety, and efficiency, offering unmatched reliability and control.



Thermal Management

Liquid immersion cooling offers superior thermal management by enhancing heat transfer efficiency through direct contact with the cooling liquid.



Enhanced Durability

Our battery modules have an IP67 rating while our cabinet is rated at IP54, ensuring reliable performance in demanding environments.

GENERAL

Dimensions	712 x 750 x 578.6 mm (WxDxH)
Weight	< 170 kg
IP Rating	Container: IP54 Module: IP67
Operating Temperature	-40°C to +60°C
Relative Humidity	10% ~ 90% RH, non-condensing
Altitude ¹	≤ 2000m
Thermal Control	Immersion cooling circulated system & HVAC
DC Efficiency	>=93.5% @ 0.5P, >=95.2% @ 0.25P

CELL CHARACTERISTICS

Chemistry	Lithium-ion Cell
Warranty ³	10 Years
Depth of Discharge ⁵	80% to 100%

PERFORMANCE

Energy Capacity (max) ⁴	11 KWh
Rated Duration of Discharge	2 Hours
DC Power @ Rated Duration ¹	5.5 KW
DC Capacity @ Rated Duration ¹	11 KWh
Operating Voltage	39 V to 53.3 V

SAFETY

Explosion Prevention	Immersion cooling circulated patented to prevent cell propagation
Fire Detection	Heat, smoke, and gas detectors
Fire Suppression	Fire-fighting aerosol gas
Compliances & Certifications	UN38.3, UL1973, UL60730-1, UL9540A, UL9540

SOFTWARE

Communication Interface	Ethernet Modbus/TCP protocol
Operating System	Modbus/TCP Side controller
Operations & Maintenance	Cloud IoT

HVAC

Cooling System	Air Conditioner (HVAC)
	Power Consumption 182 W
	Cooling Capacity 300 W
	Heating Capacity 300 W

Contact EticaAG for a project-specific estimates, final values depend on system design, location, and user application.

1. OS may automatically derate power as necessary to maintain proper cell temperatures.

2. Test ambient temperature at 25°C.

3. The end-of-life (EOL) of a Battery Energy Storage System (BESS) is influenced by its age, usage application, and environmental temperature, which may result in an actual lifespan of less than 10 years.

4. Assumes 1 cycle per day in fresh cell period, not including aging situation.

5. DOD 80% is the recommended specification to delay aging.