

Doc Nr.: *BCZ-0019*

Justification

IEC62933-5-2

Electrical energy storage systems

Safety requirements for grid-integrated EES systems

The table below provides validation of GL314-1P104S-4S12P battery system manufactured by Gaz Energy a.s. against IEC 62933-5-2. Relevant chapters are covered by test reports and certificates according to applicable standards.

Test	Test	Applicable Standard	Covered by
8.2.1.1	Short-circuit protection	UL1973	Certificate
8.2.1.2	Overcharge, high current charge and earth fault protection	UL1973	Certificate
8.2.1.3	Impulse withstand voltage protection	IEC 62477-1 IEC60664	Certificate
8.2.1.4	Dielectric Voltage	IEC 62477-1 IEC60664	Certificate
8.2.1.5	Insulation Resistance	UL1973	Certificate
8.2.1.6	Earthing and bonding system check	UL1973	Certificate
8.2.1.7	Anti-Islanding	n/a	Considered
8.2.2.1	Enclosure impact	IEC62477-1	Certificate
8.2.2.2	Static force	IEC62477-1	Certificate
8.2.2.3	Earthquake impact and vibration	N/a	N/a
8.2.3.1	Specification of flammable gas	UL9540A	Test report
8.2.3.2	Gas detection	VdS	Declaration
8.2.3.3	Ventilation	IEC60730-1	Certificate
8.2.4	Hazards arising from electric, magnetic, and electromagnetic fields	IEC61000	Certificate
8.2.5	Fire hazards (propagations)	UL9540A	Test report
8.2.6.1	Verification of thermal control operation	IEC60730-1	Certificate
8.2.6.2	Abnormal operations of subsystems for ventilation	IEC60730-1	Certificate
8.2.6.3	Temperature under normal operations test	IEC60730-1	Certificate
8.2.7.1	Specification of toxic fluids	Regulation (EC) 1907/2006 (REACH)	Safety data sheet
8.2.7.2	Fluids detection	IEC60730-1	Certificate
8.2.7.3	Protective measures against hazardous fluids	UL1973	Certificate
8.2.8	Hazards arising from auxiliary, control and communication system malfunctions	IEC60730-1	Certificate
8.2.9.2	Resistance to moisture ingress	IEC60529	Certificate
8.2.9.3	Exposure to marine environments (salt fog)	IEC62477-1	Certificate
8.2.10	IP rating of BESS enclosure and protective guards	IEC60529	Test report

Table 1: Overview of validation and testing for BESS 5MW/h

Conclusion

We declare that GL314-1P104S-4S12P battery system complies with IEC 62933-5-2.