General

RATED POWER	3.5 MW
BOL DURATION [a]	0.9 h
DOUBLE CONVERSION EFFICIENCY	95% at typical loading point
AUXILIARY POWER	<65 kVA
AUXILIARY CONFIGURATION	480 V, 4W, 3Ph + N
COMMUNICATION	Modbus TCP/IP
COMPLIANCE	UL 9540 compatible, UL 9540A, UL 1973, UN 38.3, UL 1741, C22.2 No. 107.1-16, IEEE 1547, NFPA 8055 2026, IEC 62040-3 Class 1 (UPS Power Quality Requirements)
ARCHITECTURE	Medium Voltage Series-Connected Double Conversion

Physical

ENCLOSURE SPECIFICATION	NEMA 3R
AMBIENT TEMPERATURE (OPERATION) [b]	-40°C to +50°C
AMBIENT TEMPERATURE (STORAGE)	-40°C to +60°C
RELATIVE HUMIDITY	0 to 95% (non-condensing)
CORROSION RATING [c]	ISO 12944 C3 (C4 optional)
OPERATING ALTITUDE [d]	Up to 2000 m
COOLING	PCS: Forced air Battery: Liquid-cooled Transformers: Non-Mineral Oil - Air Natural (KNAN)

Input

INPUT VOLTAGE	Up to 34.5 kV
VOLTAGE TOLERANCE	± 10%
FREQUENCY	50 / 60 Hz (configurable)
POWER FACTOR	Operating: 1 grid support (Q power): upon request

Output

OUTPUT VOLTAGE	Up to 34.5 kV (3Ph 4W)
STEADY STATE VOLTAGE	Per ITIC & IEC 62040-3
VARIATION	± 0.5%
FREQUENCY ACCURACY	± 0.5%
POWER FACTOR	0.95 lag.
MAXIMUM FAULT CURRENT CONTRIBUTION	125% of rated current
THDV	<1%

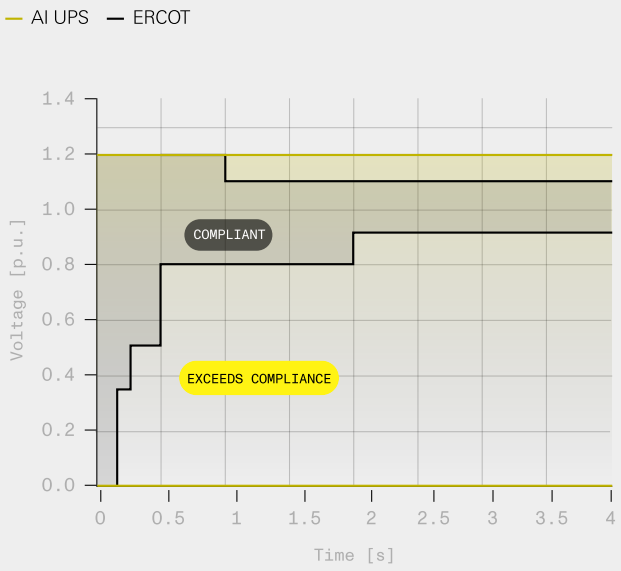
Battery System

TECHNOLOGY	LI-ION (LFP)
CATALOG CAPACITY	3.79 MWh DC
DC VOLTAGE RANGE	1250 - 1500 VDC
CHARGING/DISCHARGING RATE	1 C

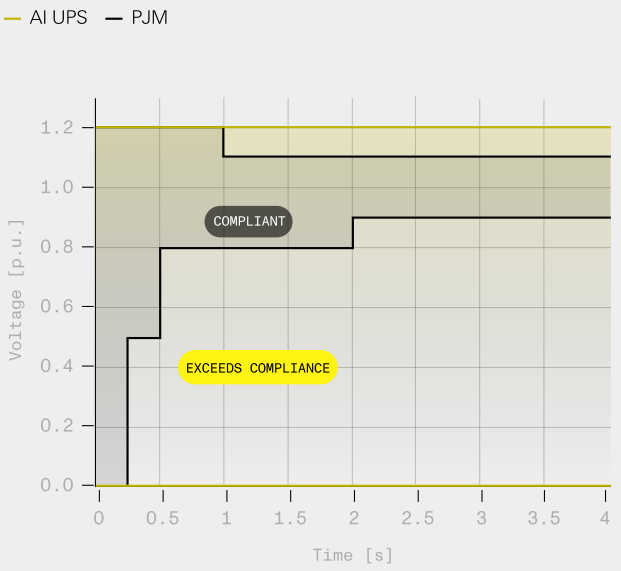
Grid Code Compliance

Minimum Voltage Ride-Through Duration

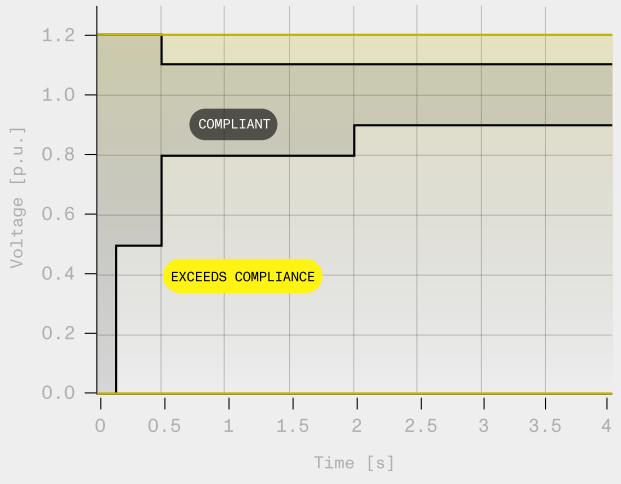
AI UPS (MV UPS) vs ERCOT (NOGRR 282)



AI UPS (MV UPS) vs PJM (Proposed)



AI UPS (MV UPS) vs MISO (Proposed)



Footnotes

[a] 0.9hr Beginning of Life (BOL). Times will vary based on load profile and grid code required ramp rate.
[b] De-rates above 45°C, consult ON.energy.
[c] All control (sensitive electronics) enclosures are NEMA 4, power enclosures are NEMA 3R.
[d] De-rates above 2000 m, consult ON.energy.

All parameters to be confirmed during final contracting.
Contact: sales@on.energy

NOTICE: This document contains information, including design and specification details, regarding the patented and patent pending AI UPS product. It is intended only for evaluation purposes. Unauthorized use is prohibited. For more information on patents, visit ON.energy/patents.

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