

RelyEZ VenturePro 250 | Engineering Technical Specification

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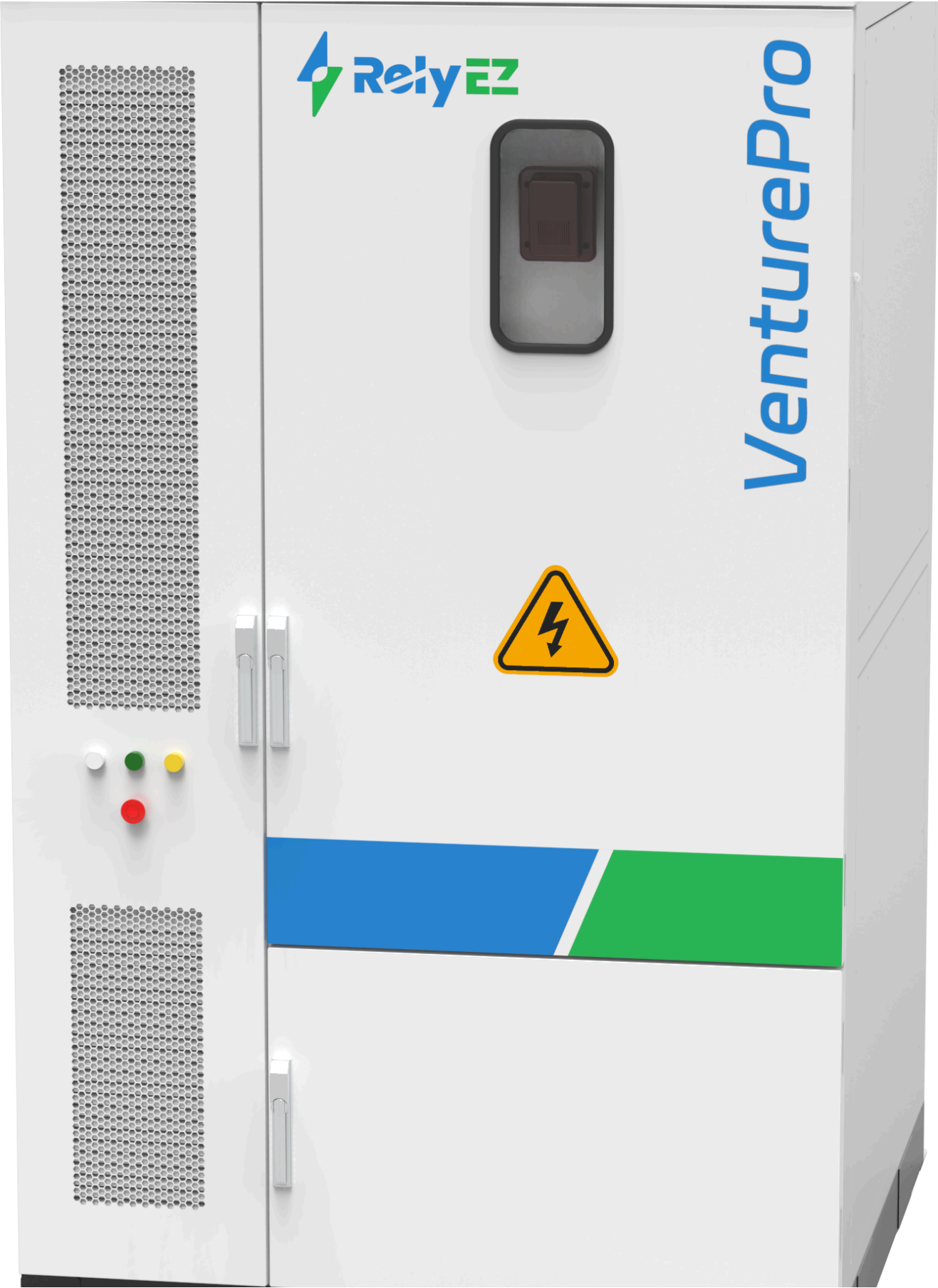
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Engineering basis: *VenturePro 250, model YXYK-125K/552314-M · 125 kW / marketed 250 kWh · 480 Vac, 60 Hz.*



VenturePro 250 product image.

1. Product identity and use

ITEM	ENGINEERING BASIS
Manufacturer	RelyEZ Energy Storage Technology Co., Ltd.
Product / model	VenturePro 250 / YXYK-125K/552314-M
System class	Integrated liquid-cooled outdoor C&I AC BESS
Nominal rating	125 kW / marketed 250 kWh

2. Electrical and battery data

PARAMETER	TECHNICAL VALUE
Battery chemistry	Lithium iron phosphate (LFP)
Cell manufacturer / model	Xiamen Hithium / LFP71173207/314Ah
Cell rating	3.2 V / 314 Ah / 1.0048 kWh
Pack manufacturer / model	RelyEZ Pack 52 / YXYP-52314-E
Pack arrangement	Five 1P52S packs in series; system configuration 1P260S
Pack rating	166.4 V / 314 Ah / 52.2496 kWh each; IP65
Pack charge / discharge limits	200 A maximum; 189.8 V maximum charge; 140.4 V discharge cut-off
Nominal DC voltage	832 Vdc
Installed pack nameplate energy	261.248 kWh
Product rated energy	250 kWh
Rated AC power	125 kW
UL 9540 certificate maximum continuous power	145.5 kW
AC output	480 Vac, 150 A, 60 Hz
Off-grid output	125 kW at 480 V / 60 Hz
Maximum system efficiency	90%, excluding auxiliary power

The five 52.2496 kWh battery-pack nameplates total **261.248 kWh**. The certified product designation and marketed system rating are **250 kWh**.

3. Mechanical and environmental data

PARAMETER	TECHNICAL VALUE
System enclosure	IP54 outdoor
Battery-pack enclosure	IP65
Dimensions	1,350 × 1,400 × 2,250 mm
Completed system mass	3,500 kg

PARAMETER	TECHNICAL VALUE
System operating ambient temperature	–30 to +55 °C
Pack charge temperature	0 to +55 °C
Pack discharge temperature	–20 to +55 °C
Cooling	Liquid cooling
Fire suppression	Aerosol

4. Integrated product boundary

The integrated cabinet includes:

- RelyEZ Rack 250 with five liquid-cooled battery packs
- High-voltage control box and BMS
- 125 kW PCS
- Liquid-cooling system
- Auxiliary power system
- Aerosol fire-suppression system
- Local control/communication equipment
- Internal power and communication wiring

5. External project scope

The following equipment and work are external to the cabinet:

- Transformer, site switchgear, external disconnect and protection
- Revenue-grade meter and CTs
- Site EMS/SCADA, zero-export controls, transfer controls and microgrid integration
- External fire-alarm panel and AHJ-required site fire systems
- Foundation, drainage, clearances, grounding and external cables
- Logistics, unloading, rigging, installation and commissioning
- Permitting, utility coordination, HMA and EOR services

6. Controls and communications

- Physical interfaces: CAN, RS-485 and Ethernet
- Protocols stated: CAN, Modbus TCP and Modbus RTU
- Off-grid output requires a complete site isolation, grounding, source-coordination and load-management design

7. Certification and compliance evidence

LEVEL	STANDARD / EVIDENCE	CERTIFICATE OR REPORT	ISSUER / DATE
Complete system	ANSI/ CAN/UL 9540:2023, Third Edition	Certificate SGSNA/24/SH/00273; listing report SHES240500994931	SGS; 2024-08-12
Complete system	ANSI/ CAN/UL 9540A:2019 unit-level thermal- runaway test	CQES240600052701	SGS-CEC; 2024-07-19
Complete system	ANSI C63.4 and 47 CFR Part 15B electromagnetic compatibility verification	Verification SHEM240900630001BAC; report SHEM240900630001	SGS-CSTC; 2024-10-09
Transport	UN Manual of Tests and Criteria, Rev.7 Amend.1, Section 38.3	RZUN2024-4676-M1; summary RZUN2024-4676-M1-TS	CVC; 2024-10-30
Battery pack	ANSI/ CAN/UL 1973, Third Edition	SGSNA/24/CQ/00003U; model YXYP-52314-E	SGS; 2024-03-05
Battery cell	ANSI/ CAN/UL 1973:2022	CU 72302476 01; model LFP71173207/314Ah	TÜV Rheinland; 2023-11-01
Battery cell	IEC 62619:2022	JPTUV-152897; report CN23YUR9 001	TÜV Rheinland; 2023-10-30

8. UL 9540A unit-level results

OBSERVED PARAMETER	REPORTED RESULT FOR YXYK-125K/552314-M
External flaming	No external flaming observed
Flame extension	No flame extension observed
Flying debris	No flying debris observed
Explosion	No explosion observed
Thermal-runaway containment	Contained by the unit design
Maximum target-module surface temperature	39.8 °C
Maximum wall-surface temperature rise	7.3 °C
Heat flux at center of egress	0.057 kW/m ²

9. Regional model certification boundary

MODEL	ELECTRICAL CONFIGURATION	MODEL-SPECIFIC EVIDENCE
YXYK-125K/552314-M	480 Vac, 60 Hz	ANSI/CAN/UL 9540 system certificate, UL 9540A unit-level report, FCC Part 15B verification and UN 38.3 transport evidence listed above
YXYK-125K/552314-L	230/400 Vac, 50 Hz	IECEE CB IEC 62477-1 certificate SG SGS-00437/A1; EN 62477-1 LVD verification LVD CQES2410000941BA; EN IEC 61000-6 EMC verification SDEM240900630101BAC

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