



Introducing SineStack

At Rimac, pushing boundaries is in our DNA. When we made the world's fastest electric car we changed perceptions of electric vehicles, now we're changing the way we power our planet with next generation Battery Energy Storage Systems (BESS). We deployed a novel electrical architecture to create SineStack – a fully integrated BESS that offers exceptional efficiency, lifetime, and redundancy, all within a class-leading compact footprint.

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LOWEST LCOS

With precise control of every module, SineStack enables higher energy extraction per cycle, driving down the levelized cost of storage by combining a 12,000 cycle lifetime with a class-leading 92% round-trip efficiency.

SMART CONTROL

With Active Health Control, SineStack's software maximizes system lifespan and performance by fine-tuning module power output, extending longevity by up to 30%.

COMPACT FOOTPRINT

SineStack's compact design maximizes revenue per square meter, while integrated power conversion and liquid thermal management optimize battery use and extend lifetime.

SAFETY AT EVERY LEVEL

SineStack prioritizes safety from design to maintenance. Advanced early protection measures and modular topology minimize downtime, allowing multiple modules to be offline without compromising full power capability.

SINESTACK DATA SHEET

ITEM

SINESTACK SPECIFICATION

GENERAL

| | |
|-------------------------------------|--------------------------------|
| Rated Energy Capacity | 830 kWh |
| Voltage Output | 3 Phase AC – 400 Vac |
| 3-Phase AC Voltage Range | 320 Vac - 480 Vac |
| Nominal P-rate | 0.5 (2 hour system) |
| Calendar Life | Up to 25 years |
| Cycle Life (25 degC, 0.5P, 70% SoH) | Up to 12.000 Cycles at 95% DoD |
| Cell Chemistry | LFP |

ELECTRICAL

| | |
|--|---|
| Stack Rated Apparent Power | 420 kVA (2 hr system) |
| Adjustable power factor | -1.0 to +1.0 |
| AC Round trip efficiency at BOL (0.5C) | >92% |
| Max. THD of current | 3% @ rated power |
| Nominal grid frequency | 50Hz, 60Hz |
| Integration method to MV grid | No Central Inverter Required |
| Auxiliary load voltage | 3-Phase 400Vac |
| Communication interfaces | TCP-IP ethernet network, Modbus TCP, IEC 61508 |

MECHANICAL

| | |
|----------------------------------|-----------------------|
| Weight per stack | <8250 kg |
| Dimensions per stack (H x L x W) | 2650 x 2150 x 1420 mm |
| Operating temperature | -30 to 50 degC |
| Coolant type | Water/Glycol |
| Noise (from 10m distance) | <<60 dBs |
| Enclosure Type / Rating | IP65 |

COMPLIANT

| | |
|---|---|
| Codes & Compliance | CE marking, UN 38.3, IEC62619, IEC62477-1/-2 UL1973, UL 9540, UL 9540a |
| Grid compliant in the following countries | UK, EU |
| Fire Suppression System | Integrated active multi-layer protection |