SUSTAINABLE GREEN
ENERGY SOLUTIONS

**SIRIUS ENERGY STORAGE MODULE**
**TECHNICAL DATA SHEET**

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|---|---|---|
| Nominal Voltage | 48VDC | |
| Voltage Range | 44VDC – 54VDC | |
| Capacity | 3550Wh | |
| Maximum Charge Rate (0% -100% SOC) | 100A | |
| Maximum Discharge Rate (100% - 0% SOC) | 100A | |
| Maximum Charging Voltage | 54VDC | |
| Internal Resistance | ≤3mΩ | |
| DC to DC Roundtrip efficiency (@100A) | 99.1% | |
| Operating Temperature | -30°C to 85°C | |
| Galvanic Isolation | 1500V | |
| Projected Cycle Life[3] | 1,000,000 | |
| Projected Calendar Life[1,3] | Supercap cell | 45 years |
| | Module Control Electronics | 10 - 15 years |
| Shelf Life[2] | 10 years | |
| Warehousing | Can be stored at any SOC without affecting cycle life | |
| Communication Port | TCP/IP RJ45 Ethernet | |
| Monitoring Data | Temperature, Voltage, Current, Energy, Supercap Balancing | |
| Remote Control Input | Battery Self-Check | |
| Safety | Shutdown on - Over-Charge, Over-Discharge, Over-Current, OverTemperature, Reverse Polarity, Cell Imbalance | |
| Anti-theft | Password Protected | |
| Terminal Type | F12 | |
| Module Casing Material | Aluminium | |
| Dimensions (w x d x h) | 600mm x 534mm x 200mm | |
| Weight | Approx.75kg | |
| Self-discharge[4] | 5% after 25 days | |
| CE Certification[5] | EN55022:2010/AC:2011,EN61000-3-2:2006+A2:2009, EN61000-3-3:2008, EN55024:2010 | |
| **Precautions** | | |
| Physical Damage | In case the module is physically damaged due to any event, do not install and energize the module under any circumstances and contact an authorized technician | |
| Short Circuit | Ensure precautions to prevent short-circuit under all circumstances | |
| Galvanic isolation | When connecting to external devices ensure that galvanic isolation does not exceed 1500V | |

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|---|---|
| Charge / Discharge Current | Under no circumstances must the charge / discharge current exceed 100A |
| Charging Voltage | Under no circumstances must the charging voltage exceed 54VDC for more than 60 seconds. |
| Charge Cycle | During charge cycle ensure never to exceed constant voltage of 54VDC and constant current of 100A |
| Series Connection | To connect modules in series, ensure all modules are at 100% SOC before connecting. Do not connect otherwise |
| Maximum number of modules that can be connected in series | 18 |

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|---|---|
| Maximum number of modules that can be connected in parallel | No limit |
| Series – Parallel Connection | Modules cannot be connected in a series – parallel combination under any circumstances |
| **SiriusX – Monitoring Software** | |
| Individual Cell | Monitoring of voltage |
| Module | Monitoring of current, max. & min. voltage, temperature, DOD, SOC, rate of charge, rate of discharge, time to discharge, balance energy, total energy delivered over lifetime, graphs |
| System | Monitoring of all modules connected together |